DRAFT

SWMU 54 MONITORED NATURAL ATTENUATION SAMPLING YEAR TEN REPORT

RADFORD ARMY AMMUNITION PLANT
RADFORD, VIRGINIA

Contract No. W912DR-15-D-0022
Delivery Order No. W912DR18F0492

Prepared For:

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT
Baltimore, MD

and

RADFORD ARMY AMMUNITION PLANT
Radford, VA

Prepared By:

WESTON SOLUTIONS, INC.
2 Eaton Street, Suite 603
Hampton, VA 23669

MARCH 2023

W.O. 03886.552.500.1001

TABLE OF CONTENTS

Section **Page**

1. INTRODUCTION 1-1
1.1 PURPOSE AND SCOPE 1-2
1.2 SITE DESCRIPTION AND BACKGROUND 1-2

2. PHYSICAL CHARACTERISTICS 2-1
2.1 TOPOGRAPHY 2-1
2.2 SURFACE WATER 2-1
2.3 GEOLOGY 2-1
2.3.1 Regional Geology 2-1
2.3.2 Site-Specific Geology 2-1
2.4 HYDROGEOLOGY 2-2
2.4.1 Regional Hydrogeology 2-2
2.4.2 Site-Specific Hydrogeology 2-3

3. PREVIOUS INVESTIGATIONS 3-1

4. FIELD ACTIVITIES 4-1
4.1 THIRTY-SEVENTH GROUNDWATER SAMPLING (OCTOBER 2021) 4-1
4.1.1 Groundwater Elevation Measurements 4-1
4.1.2 Groundwater Sampling 4-2
4.1.3 Quality Control Samples 4-4
4.2 THIRTY-EIGHTH GROUNDWATER SAMPLING (APRIL 2022) 4-4
4.2.1 Groundwater Elevation Measurements 4-5
4.2.2 Groundwater Sampling 4-5
4.2.3 Quality Control Samples 4-6

5. CHEMICAL ANALYTICAL RESULTS 5-1
5.1 SELECTION OF COMPARISON CRITERIA 5-1
5.2 THIRTY-SEVENTH EVENT GROUNDWATER RESULTS (OCTOBER 2021) 5-1
5.3 THIRTY-EIGHTH GROUNDWATER RESULTS (APRIL 2022) 5-3
5.4 YEAR ONE THROUGH YEAR TEN SAMPLE RESULTS 5-5
5.4.1 Groundwater 5-6
5.5 LABORATORY ANALYSIS, DATA VALIDATION, AND REPORTING 5-12
5.5.1 Precision 5-13
5.5.2 Representativeness 5-13
5.5.3 Comparability 5-13
5.5.4 Completeness 5-14
5.5.5 Accuracy 5-14
5.5.6 Sensitivity 5-15

TABLE OF CONTENTS (CONTINUED)

Section **Page**

6. MNA EVALUATION OF SWMU 54 6-1
6.1 FIRST LINE OF EVIDENCE: OCCURRENCE OF CONTAMINANT TRENDS 6-1
6.2 SECOND LINE OF EVIDENCE: GEOCHEMICAL CONDITIONS 6-7
7. SUMMARY AND CONCLUSIONS 7-1
8. REFERENCES 8-1

LIST OF TABLES

Title **Page**

Table 1-1 SWMU Groundwater Remedial Goals 1-4
Table 3-1 2002 Area A Direct-Push Groundwater Analytical Results with Remedial Goals 3-5
Table 3-2 2003-2004 Area A Groundwater Analytical Results with Remedial Goals 3-7
Table 3-3 2006-2007 Area A Quarterly Groundwater Monitoring Results with Remedial Goals 3-8
Table 3-4 2003 Area B Groundwater Analytical Results with Remedial Goals 3-11
Table 3-5 2006-2007 Area B Quarterly Groundwater Monitoring Results with Remedial Goals 3-12
Table 3-6 2006 New River Surface and Sediment Pore Water Sample Results with Remedial Goals 3-14
Table 4-1 Thirty-Seventh Event Groundwater Elevations at SWMU 54 4-7
Table 4-2 Year Ten Semiannual Monitoring Analytical Suite 4-7
Table 4-3 Thirty-Seventh Semiannual Water Quality Parameters at SWMU 54 4-7
Table 4-4 Thirty-Eighth Event Groundwater Elevations at SWMU 54 4-8
Table 4-5 Thirty-Eighth Semiannual Water Quality Parameters at SWMU 54 4-8
Table 5-1 SWMU 54 Summary of Thirty-Seventh Event Groundwater Samples 5-17
Table 5-2 SWMU 54 Detected Analytes in Thirty-Seventh Monitoring Event Groundwater Samples 5-18
Table 5-3 SWMU 54 Summary of Thirty-Eighth Monitoring Event Groundwater Samples 5-21
Table 5-4 SWMU 54 Detected Analytes in Thirty-Eighth Monitoring Event Groundwater Samples 5-22
Table 5-5 Summary of Samples and Analyses 5-25
Table 5-6 Analytical Methods 5-26
Table 5-7 Data Qualifiers 5-27
Table 5-8 Holding Time Exceedances 5-27
Table 5-9 Field Duplicate Precision Exceedances 5-28
Table 5-10 Laboratory Duplicate Precision Exceedances 5-28
Table 5-11 MS/MSD RPD Exceedances 5-28
Table 5-12 RPD Between Two Columns Exceedances 5-29

LIST OF TABLES (CONTINUED)

Title **Page**

Table 5-13 MS/MSD Recovery Exceedances 5-30
Table 5-14 Calibration Exceedances 5-30
Table 5-15 Blank Flags 5-30
Table 6-1 Analytical Results for Groundwater Performance Monitoring at SWMU 54 6-16
Table 6-2 Water Quality Parameters for Groundwater for Performance Monitoring at SWMU 54 6-18

LIST OF FIGURES

Title **Page**

Figure 1-1 SWMU 54 Site Location Map 1-5
Figure 2-1 SWMU 54 Cross Section 2-4
Figure 2-2 SWMU 54 Cross Section A-A' 2-5
Figure 2-3 SWMU 54 Cross Section B-B' 2-6
Figure 3-1 SWMU 54 June 5, 2007 Groundwater Contour Map 3-17
Figure 4-1 SWMU 54 Monitoring Well Sample Locations 4-9
Figure 4-2 SWMU 54 October 2021 (Thirty-Seventh Event) Groundwater Contour Map ... 4-10
Figure 4-3 SWMU 54 April 2022 (Thirty-Eighth Event) Groundwater Contour Map 4-11
Figure 5-1 SWMU 54 October 2021 Groundwater Sample Results Exceeding RGs 5-31
Figure 5-2 SWMU 54: 54MW1 Explosives Concentrations First Quarter through Thirty-Eighth Event 5-32
Figure 5-3 SWMU 54: 54MW10 Explosives Concentrations First Quarter through Thirty-Eighth Event 5-33
Figure 5-4 SWMU 54: 54MW12 Explosives Concentrations First Quarter through Thirty-Eighth Event 5-34
Figure 5-5 SWMU 54: 54MW13 Explosives Concentrations First Quarter through Thirty-Eighth Event 5-35
Figure 5-6 SWMU 54: 54MW1 2,4,6-TNT to Amino-DNT Correlation 5-36
Figure 5-7 SWMU 54: 54MW10 2,4,6-TNT to Amino-DNT Correlation 5-37
Figure 5-8 SWMU 54: 54MW12 2,4,6-TNT to Amino-DNT Correlation 5-38
Figure 5-9 SWMU 54: 54MW13 2,4,6-TNT to Amino-DNT Correlation 5-39
Figure 6-1 SWMU 54: 54MW10 Contaminant Concentration to Groundwater Elevation Correlation 6-33
Figure 6-2 SWMU 54: 54MW12 Contaminant Concentration to Groundwater Elevation Correlation 6-34
Figure 6-3 SWMU 54: 54MW13 Contaminant Concentration to Groundwater Elevation Correlation 6-35
Figure 6-4 SWMU 54: Specific Conductivity 6-36
Figure 6-5 SWMU 54: 54MW10 Ferrous Iron, Dissolved Manganese, Nitrate, and Sulfate Concentrations 6-37
Figure 6-6 SWMU 54: 54MW12 Ferrous Iron, Dissolved Manganese, Nitrate, and Sulfate Concentrations 6-38

LIST OF FIGURES (CONTINUED)

Title **Page**

Figure 6-7 SWMU 54: 54MW13 Ferrous Iron, Dissolved Manganese, Nitrate, and Sulfate Concentrations 6-39
Figure 6-8 SWMU 54: 54MW10 TOC, DO, and ORP Concentrations 6-40
Figure 6-9 SWMU 54: 54MW12 TOC, DO, and ORP Concentrations 6-41
Figure 6-10 SWMU 54: 54MW13 TOC, DO, and ORP Concentrations 6-42

LIST OF APPENDICES

Appendix A-1 Field Sampling Logs

Appendix A-2 Calibration Forms

Appendix B-1 Laboratory Analytical Reports

Appendix B-2 Data Validation Reports

Appendix C Mann-Kendall Test Results

ACRONYMS AND ABBREVIATIONS

%	percent
<	less than
ºC	degrees Celsius
µg/L	micrograms per liter
µS/cm	microsiemens per centimeter
1,3,5-TNT	1,3,5-trinitrotoluene
2,3,7,8-TCDD	2,3,7,8-tetrachlorodibenzodioxin
2,4,6-TNT	2,4,6-trinitrotoluene
2,4-DNT	2,4-dinitrotoluene
2,6-DNT	2,6-dinitrotoluene
2-NT	2-nitrotoluene
2ADNT	2-amino-4,6-dinitrotoluene
4ADNT	4-amino-2,6-dinitrotoluene
amsl	above mean sea level
bgs	below ground surface
BTOC	below top of casing
C/N	carcinogenic/noncarcinogenic
CAS	Chemical Abstracts Service
CB&I	CB&I Environmental & Infrastructure, Inc.
CCV	continuing calibration verification
CMO	corrective measures objective
CMS	Corrective Measures Study
COC	chain-of-custody
COD	chemical oxygen demand
COI	chemical of interest
COPC	chemical of potential concern
DL	detection limit
DNT	dinitrotoluene
DNX	hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine
DO	dissolved oxygen
DoD	U.S. Department of Defense
FE^{2+}	dissolved ferrous iron
ft	feet
ft/day	feet per day
ft/ft	feet per foot
ft/year	feet per year
GC	gas chromatography
HHRA	human health risk assessment
HI	Hazard Index
HPLC	high-performance liquid chromatography
ICV	initial calibration verification
ID	identifier
IDW	investigation-derived waste
IM	Interim Measure

ACRONYMS AND ABBREVIATIONS (CONTINUED)

IMWP	Interim Measures Work Plan
IT	IT Corporation
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantitation
LQ	laboratory qualifier
LTM	long-term monitoring
MCL	maximum contaminant level
MDL	method detection limit
mg/L	milligrams per liter
mL	milliliters
mL/min	milliliters per minute
Mn	manganese
MNA	monitored natural attenuation
MNX	hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine
mS	millisiemens
MS	matrix spike
mS/cm	millisiemens per centimeter
MSD	matrix spike duplicate
mV	millivolts
MWP	Master Work Plan
ND	not detected
NG	nitroglycerin
No.	Number
NT	not tested
NTU	nephelometric turbidity unit
ORP	oxidation reduction potential
Parsons	Parsons Engineering Science, Inc.
PDS	post digestion spike
pH	potential of hydrogen
PID	photoionization detector
ppm	parts per million
QA	quality assurance
QC	quality control
r	reason code
RBC	Risk-Based Concentration
RCRA	Resource Conservation and Recovery Act
RDX	cyclotrimethylenetrinitramine
RFAAP	Radford Army Ammunition Plant
RFI	RCRA Facility Investigation
RG	remedial goal
RL	reporting limit
RPD	relative percent difference

ACRONYMS AND ABBREVIATIONS (CONTINUED)

RSL	regional screening level
Shaw	Shaw Environmental, Inc.
SL	screening level
SU	standard unit
SWMU	solid waste management unit
TIC	total inorganic carbon
TNT	trinitrotoluene
TNX	hexahydro-1,3,5-trinitroso-1,3,5-triazine
TOC	total organic carbon
U.S.	United States
UFP-QAPP	Uniform Federal Policy – Quality Assurance Project Plan
URS	URS Corporation
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
Validata	Validata Chemical Services, Inc.
VDEQ	Virginia Department of Environmental Quality
VI	Verification Investigation
VQ	validation qualifier
WESTON®	Weston Solutions, Inc.
YSI®	Yellow Springs Instrument

1. INTRODUCTION

Weston Solutions, Inc. (WESTON®) has been contracted by the United States (U.S.) Army Corps of Engineers (USACE), Baltimore District, to perform long-term monitoring (LTM) and monitored natural attenuation (MNA) at RAAP-014, Propellant Burning Ash Disposal Area, at Radford Army Ammunition Plant (RFAAP), Radford, VA. This report provides a description of the groundwater sampling activities completed and an analysis of results from the thirty-seventh and thirty-eighth semiannual rounds conducted in 2021 (October) and 2022 (April). Further, this report provides a summary of Year Ten sampling consisting of those two sampling events.

This work was performed under Contract Number (No.) W912DR-15-D-0022, Delivery Order No. W912DR18F0492 in accordance with the *Final Master Work Plan, Quality Assurance Plan, Health and Safety Plan* (RFAAP Final MWP) (URS Corporation [URS], 2003) and with Part II (D)(11-21) Interim Measure (IM) of the RFAAP Resource Conservation and Recovery Act (RCRA) Corrective Action Permit (U.S. Environmental Protection Agency [USEPA], 2000). To maintain consistency with previous LTM and MNA sampling events (i.e., through Year Nine), the LTM and MNA activities followed the technical approach, Sampling and Analysis Plan, and quality assurance/quality control (QA/QC) procedures documented in the Final *SWMU 54 Monitored Natural Attenuation Interim Measures Work Plan* (IMWP) (Shaw Environmental, Inc. [Shaw], 2011a).

Based on the consistency of the data and the fact that quarterly monitoring had been conducted for a full 9 years, groundwater monitoring starting with Year Ten was reduced to a semiannual basis at the well locations. The Virginia Department of Environmental Quality (VDEQ) approved this recommendation, which was presented in the Year Eight report. In October 2021, VDEQ concurred with Radford's Class 1 Modification request for the permit which recommended removal of references to the sampling frequency specified in the Monitored Natural Attenuation Groundwater Monitoring Plan for SWMU-49 contained in Attachment C of the permit.

1.1 PURPOSE AND SCOPE

Soil IMs have been completed at Solid Waste Management Unit (SWMU) 54 to mitigate the threat of a contaminant release, migration, and/or exposure to the public and the environment. The IMs included site preparation, soil excavation, waste characterization and off-site disposal, confirmation sampling, and site restoration. Detailed information concerning the IMs is presented in the *Solid Waste Management Unit 54 RCRA Facility Investigation/Corrective Measures Study Report* (Final SWMU 54 RFI/CMS Report) (URS, 2008).

The corrective measures objectives (CMOs) and remedial goals (RGs) were developed and presented in the Final SWMU 54 RFI/CMS Report (URS, 2008). The site-specific CMOs for SWMU 54 Area A are: to mitigate further leaching of explosives constituents from soil to groundwater at levels that would potentially increase observed concentrations and adversely impact future beneficial use of groundwater; and, to the extent practicable, to restore site groundwater to the most beneficial use. The site-specific CMOs for SWMU 54 Area B are: to mitigate the potential hypothetical future risks that have been identified for exposure to soil under a future construction worker scenario; and to prevent leaching of contaminants of concern from soil to groundwater at levels that would potentially adversely impact future beneficial use of groundwater. The site-specific CMOs for Area A and Area B were met through the excavation and off-site disposal of contaminated soil, which was completed in 2010.

The objectives of the LTM and MNA program are to measure and track the reduction of the following compounds to levels below the RGs, as defined in **Table 1-1**:

- 2,4,6-Trinitrotoluene (2,4,6-TNT)
- Dinitrotoluene (DNT) mixture
- Cyclotrimethylenetrinitramine (RDX)
- Perchlorate

1.2 SITE DESCRIPTION AND BACKGROUND

SWMU 54 is situated in the northeastern section of RFAAP within the easternmost portion of the Horseshoe Area. The SWMU consists of two noncontiguous disposal areas, Area A and Area B. Area A is a triangular-shaped parcel located in the southeast section of SWMU 54 that covers approximately 0.58 acres. Area B is a somewhat round tract located in the northwestern section that covers approximately 1.09 acres. Both areas are open fields covered with grass and are

bordered to the east and north by the RFAAP installation security fence. The site is currently undeveloped. SWMU 54 was reportedly used as an ash disposal area in the late 1970s that received propellant ash from the Waste Propellant Burning Grounds. The location of SWMU 54 is provided in **Figure 1-1**. All figures are placed at the end of each report section.

Table 1-1 SWMU Groundwater Remedial Goals

Chemical of Interest	Groundwater RG* (mg/L)
2,4,6-TNT	0.00782
DNT Mixture	0.000932
RDX	0.0061
Perchlorate	0.0109

Notes:
*RGs were calculated using target risk 1E-5 for the lifetime resident and a target hazard of 1 for the adult and child resident (URS, 2008).
2,4,6-TNT = 2,4,6-trinitrotoluene
DNT = dinitrotoluene
mg/L = milligrams per liter
RDX= cyclotrimethylenetrinitramine
RG = remedial goal
SWMU = Solid Waste Management Unit

Legend

- SWMU 54 Boundary
- Other SWMU Boundary

Aerial Source:
ESRI Imagery Mapping Service, 2019

N

0 150 300 600 Feet

Prepared By:

Baltimore District

FIGURE 1-1
SWMU 54 SITE LOCATION MAP
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU_54_Site_Location_Map.mxd, 10/6/2020 11:42:48 AM, johna

2. PHYSICAL CHARACTERISTICS

2.1 TOPOGRAPHY

SWMU 54 is situated on a gently sloping terrace that leads to the New River to the east. Elevations range from a high of approximately 1,716 feet (ft) above mean sea level (amsl) in the western section of the SWMU to approximately 1,696 ft amsl in the eastern section. East and outside the SWMU boundary, the elevation steepens precipitously as it reaches the New River (at approximately 1,676 ft amsl).

2.2 SURFACE WATER

The New River is situated approximately 150 ft east of SWMU 54, and a small stream is present on the southern boundary. Surface water runoff from the SWMU flows east and possibly south to the New River and the unnamed stream. SWMU 54 is located within the easternmost portion of the Horseshoe Area at RFAAP. As it currently stands, SWMU 54 is positioned within the New River 100-year floodplain.

2.3 GEOLOGY

2.3.1 Regional Geology

SWMU 54 is located in the New River Valley, which crosses the Valley and Ridge Province, approximately perpendicular to the regional strike of bedrock, and cross cuts Cambrian and Ordovician limestone or dolostone. Deep clay-rich residuum is prevalent in areas underlain by carbonate rocks. The valley is covered by river floodplain and terrace deposits; karst topography is dominant throughout the area. A more detailed description of the regional geology is presented in the RFAAP Final MWP (URS, 2003).

2.3.2 Site-Specific Geology

Characterization of the SWMU 54 subsurface lithology was conducted during the advancement of soil and monitoring well borings at the site. Based on the borehole logs, two geologic cross sections were developed and are presented in **Figure 2-1** (plan view of the cross-sectional lines), **Figure 2-2** (cross section A-A'), and **Figure 2-3** (cross section B-B').

Soil and monitoring well borings ranged from 10 to 60 ft in depth. Depths to bedrock, which were reported to be measured directly at the monitoring well borings, ranged in elevation from approximately 1,716 to 1,670 ft amsl. Based on the borehole logs, it was determined that bedrock slopes to the east.

The site lithology consists of unconsolidated sediments comprised of alluvial deposits overlying a thin zone of saprolitic carbonate (i.e., weathered bedrock), which overlies the Cambrian-aged Elbrook Formation. The alluvial deposits consist primarily of silty sand overlying channel deposits of fine- to coarse-grained sand and gravel (river jack). These paleo-channel deposits rest directly on the saprolite, which reportedly reaches 2.5 ft in thickness. It was also reported that some areas of the SWMU contain fill material to depths of 9 to 10 ft below ground surface (bgs).

Depth to competent bedrock at the SWMU ranges from 17 to 24 ft bgs. This competent bedrock belongs to the Elbrook Formation, which is a thickly-bedded, blue-gray dolostone interspersed with blue-gray to white limestone. Locally, the formation is described as interbedded green and maroon shale, yellowish-brown dolostone, and greenish- to grayish-brown limestone and dolostone.

A more detailed discussion of the geology and soil at RFAAP is presented in Sections 3.4 through 3.7 of the RFAAP Final MWP (URS, 2003) and in the *Facility-Wide Background Study* Report (IT Corporation [IT], 2001).

2.4 HYDROGEOLOGY

2.4.1 Regional Hydrogeology

Geologically, the Appalachian Plateaus and Valley and Ridge Province encompass two major tectonic domains: the southern Appalachian Basin and the southeastern part of the Eastern Interior Basin. The hydrogeologic framework is based on generalized stratigraphic succession, with indurated sedimentary rocks of the Paleozoic age forming predominant units.

Groundwater flow paths are typically short, commonly extending no more than several miles in their longest range. The largest groundwater supplies are produced from the carbonate rocks, especially where they are associated with thick regolith, an important storage reservoir throughout

the entire area. The regolith stores recharge that otherwise would be rapidly diverted to overland flow. In addition, this unit slowly releases water to underlying carbonate aquifers. Because of the widespread distribution of carbonate rocks and associated regolith, abundant precipitation in a humid climate, and relatively steep hydraulic gradients, this region (and locally) is one of the major karstlands in the eastern United States.

Groundwater supplies in the Valley and Ridge Province are generally of good quality when compared to surface water supplies (Parsons Engineering Science, Inc. [Parsons], 1996); however, because of extended contact with minerals, many groundwater supplies contain higher levels of dissolved solids than the streams into which they discharge. Because of sinkholes and underground caverns in karst aquifers, there is a high potential for groundwater to be impacted by direct infiltration of contaminated surface water.

2.4.2 Site-Specific Hydrogeology

Monitoring wells installed at SWMU 54 were screened in both the shallow (surficial aquifer) and shallow bedrock aquifers. Water levels were measured in the wells to calculate the groundwater flow direction at the SWMU. Groundwater contour maps have been prepared using water level data collected prior to each round of groundwater sampling. The maps for Year Ten of monitoring are presented in Section 4. Contour lines shown on these figures represent lines of equal elevation of the water table; consequently, groundwater flow direction is always perpendicular to the contour lines and feeds into the New River, which generally runs a south-to-north course. Groundwater at the site tends to flow east and appears to discharge to the New River along the eastern side of the site.

Legend

- Well
- Soil Sample Location
- Fence
- Cross Section
- SWMU 54 Boundary

Aerial Source:
Near Map Imagery, February 2020

N

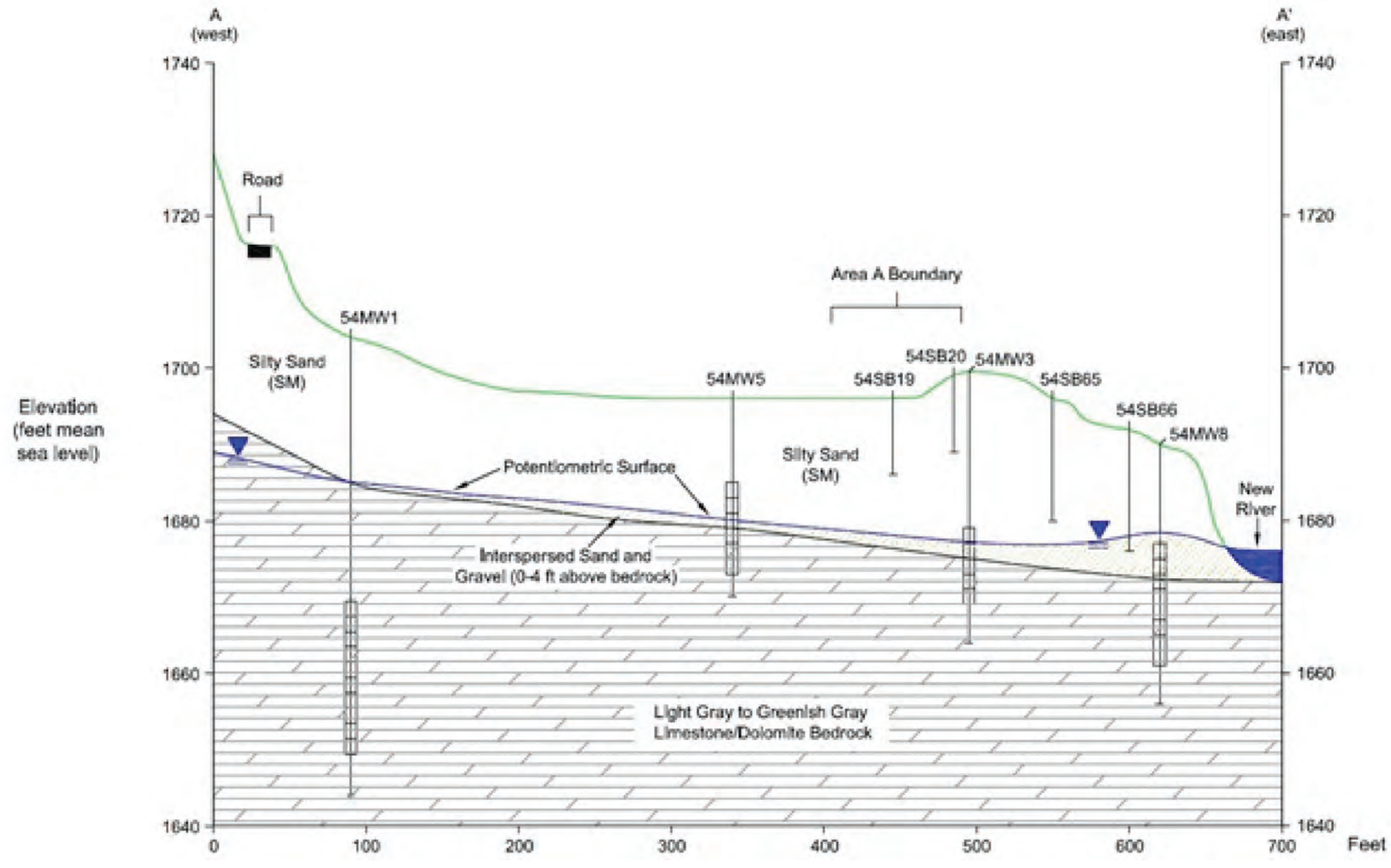
0 30 60 120 Feet

Prepared By:

Baltimore District

FIGURE 2-1
SWMU 54
CROSS SECTION
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU54_Topography_Cross_Section.mxd, 2/26/2021 12:41:19 PM, johna



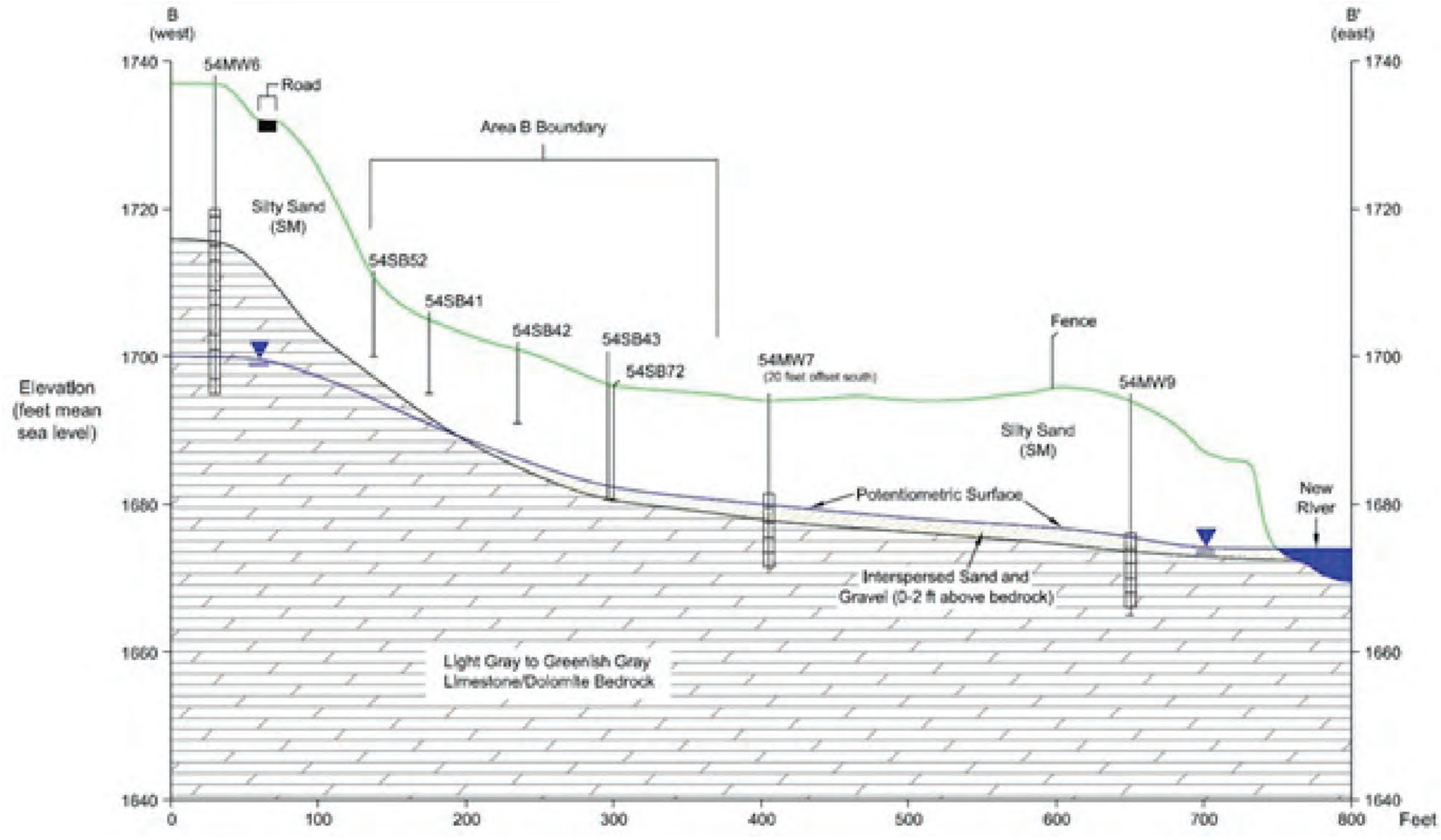
Legend

N

Prepared By:

Baltimore District

FIGURE 2-2
SWMU 54
CROSS SECTION A-A'
RADFORD, VIRGINIA



Legend

N

Prepared By:

Baltimore District

FIGURE 2-3
SWMU 54
CROSS SECTION B-B'
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU54_Cross_Section_B_B_Template.mxd, 10/29/2020 9:55:39 AM, johna

20P-0251

3. PREVIOUS INVESTIGATIONS

Four previous investigations have been conducted at this site prior to completion of an interim removal measure in 1999 by Parallax, Inc. Data obtained from previous site investigations prior to the IM were used to identify site boundaries and characteristics, and to identify chemicals of potential concern (COPCs). In 1992, the Environmental Photographic Interpretation Center provided aerial photographic analysis of SWMU 54, under the direction of USEPA. In addition, Dames & Moore conducted a RCRA Verification Investigation (VI) at the site in 1992 to identify the ash disposal at Area A under authority of the 1984 Hazardous and Solid Waste Amendments. As a follow-up to the 1992 VI, Parsons completed an RFI in 1996, as part of a multiple site investigation to, "define the extent of ash and the limits of soil contamination." In 1998, a Supplemental RFI/CMS was conducted to investigate a flat grassy area ringed by mature pine trees northwest of Area A. This area was defined as Area B within SWMU 54. The purpose of the supplemental RFI was to, "characterize the nature and extent of contamination within SWMU 54." In 1999, Parallax, Inc. completed IMs at Area A and Area B of SWMU 54 consisting of excavation of selected "hot spot" areas of lead and explosives in soil.

In 2008, URS conducted an RFI/CMS investigating both Area A and Area B to confirm the effectiveness of the IM, evaluate and assess current conditions at the sites, and provide recommendations regarding potential corrective measure requirements at the sites. Direct-push soil borings with chemical sampling were used to characterize the nature and extent of constituents in soil at SWMU 54, to identify the lateral and vertical extent of any waste material present, and to characterize soil lithology and depth to groundwater and bedrock. Additionally, monitoring wells were installed at the site, and groundwater samples were collected and analyzed. Details of these investigations are described in Section 3.0 (Field Investigation Program) of the Final SWMU 54 RFI/CMS Report (URS, 2008). A potentiometric map portraying the groundwater levels measured in 2007 is provided as **Figure 3-1**. Historical data listing chemical of interest (COI) concentrations in the on-site groundwater, New River surface water, and New River sediment pore water are provided in **Tables 3-1** through **3-6**.

The nature and extent assessment indicated that the main concern at the site is the fill material and grossly-contaminated soil directly below the material. Area A and Area B were evaluated

separately for the soil and groundwater nature and extent assessments, given the 200-ft separation between the areas, their topographic cross-gradient position, the lack of mobility of the chemicals in soil, and observed distributions of chemicals.

The main parameters of concern in Area A soil are lead, 2,4,6-TNT, DNT, RDX, amino-DNTs, nitroglycerin (NG), heptachlor epoxide, and dioxins/furans. The main parameters of concern in groundwater at Area A are explosives and perchlorate. Concentrations of COIs 2,4,6-TNT, DNT, RDX, and perchlorate in groundwater have decreased since RFI monitoring began in 2003 and 2004. The lateral extent of explosives and perchlorate in groundwater extends from Area A eastward to the New River. Sampling of the groundwater/surface water interface (sediment pore water) and surface water of the New River did not indicate detectable impacts to sediment pore water or surface water from COPCs in groundwater.

Parameters of concern in Area B soils include lead, DNT, amino-DNT, NG, RDX, dieldrin, Aroclor 1254, heptachlor epoxide, and dioxins/furans. No COIs were identified for Area B groundwater.

The human health risk assessment (HHRA) identified 8 COIs at Area A (2,4,6-TNT, DNT, RDX, perchlorate, amino-DNTs, NG, heptachlor epoxide, and 2,3,7,8-tetrachlorodibenzodioxin [2,3,7,8-TCDD]) and 10 COIs at Area B (2,4,6-TNT, DNT, RDX, amino-DNTs, NG, lead, Aroclor 1254, heptachlor epoxide, dieldrin, and 2,3,7,8-TCDD) under both an industrial and residential future-use scenario for total soil at SWMU 54. The HHRA determined that unacceptable risks to potential future residential and industrial receptors were associated with the COIs. As a result of the findings from the HHRA, it was concluded that, based on the levels detected in the soil hot spot areas, COIs could potentially leach from soil to groundwater at levels of concern, although groundwater impacts at levels of concern have not yet been identified at Area B. Because the RFI demonstrated that COI contamination is present at concentrations associated with unacceptable human health concerns, a CMS was performed to address the propellant ash material and grossly contaminated soil under the ash material at SWMU 54.

The alternatives evaluated were as follows:

- Alternative One: No Further Action.
- Alternative Two: Excavation of Soil at Area A and Area B, Off-Site Disposal, and MNA of Groundwater.
- Alternative Three: Excavation of Soil at Area A and Area B, Off-Site Disposal, and Enhanced In Situ Bioremediation of Groundwater.

These three alternatives were evaluated using the selection criteria of effectiveness, implementability, and cost. The site-specific CMO for SWMU 54 is to mitigate further leaching of explosives constituents from soil to groundwater at levels that would potentially increase observed concentrations and adversely impact future beneficial use of groundwater, and to eliminate the potential threats to human health and the environment that exist within materials found in SWMU 54. Observations from the SWMU 54 soil investigations indicate that the propellant ash consisted of a black, ashy material that was evident when encountered. Therefore, identification and removal of the propellant ash and grossly-contaminated soil were partially based on visual observations during excavation, with analytical samples collected to confirm the observations.

Alternative Two, which entails excavation and off-site disposal as the primary remediation process, was found to achieve the CMO. Therefore, Alternative Two was selected as the final alternative for SWMU 54 because it is implementable and provides a greater level of protection to human health and the environment not provided by other alternatives. In addition, Alternative Two is the sole alternative that facilitates RGs without potential adverse effects to groundwater (i.e., degradation of secondary water quality parameters) from remedial implementation activities, which would occur with implementation of Alternative Three.

The CMOs and RGs were developed in the Final SWMU 54 RFI/CMS Report (URS, 2008). The following is a summary of the findings from that process.

The site-specific CMO for SWMU 54 Area A is to mitigate further leaching of explosives constituents from soil to groundwater at levels that would potentially increase observed concentrations and adversely impact future beneficial use of groundwater, and, to the extent practicable, to restore site groundwater to the most beneficial use. The soil CMOs for Area A have

been met, and the purpose of this report is to implement the groundwater IMs to meet the CMOs for groundwater.

The site-specific CMO for SWMU 54 Area B is to mitigate the potential hypothetical future risks that have been identified for exposure to soil under a future construction worker scenario, and to prevent leaching of contaminants of concern from soil to groundwater at levels that would potentially adversely impact future beneficial use of groundwater. The site-specific CMOs have been met through the soil excavation and off-site disposal completed in 2010.

RGs for soil were used at SWMU 54 to confirm that all COIs were removed from soil to levels safe for human health and the environment. Results from the soil remedial action at SWMU 54 can be found in the approved Final *SWMU 54 Interim Measures Completion Report* (Shaw, 2011b). The groundwater RGs, included in **Table 1-1**, will be used to compare results from groundwater monitoring wells to assess the progress of the MNA process.

WESTON has been performing the LTM and MNA at SWMU 54 since October 2019, including the thirty-seventh and thirty-eighth sampling rounds, for Year Ten of sampling at RFAAP, discussed herein. Area B, although not monitored during Year Ten, is expected to have a groundwater flow velocity similar to Area A, as reported in the Year Three MNA Report (CB&I Environmental & Infrastructure, Inc [CB&I], 2014).

Table 3-1 2002 Area A Direct-Push Groundwater Analytical Results with Remedial Goals

Sample ID / Sample Date	CAS	C/N	RG	Units	54DPW1 12/11/2002		DL	RL	54DPW2 12/11/2002		MDL	RL	54DPW3 12/11/2002		MDL	RL	54GP77 10/13/2004		MDL	RL	54GP78 10/11/2004		MDL	RL	54GP78-DUP(DUP-1) 10/11/2004		MDL	RL	54GP79 10/11/2004		MDL	RL
					Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r		
Explosives																																
2,4,6-TNT	118-96-7	N	7.82	µg/L	<7.2	U,R,l	0.73	7.2	1.5	JB,B,z	0.33	3.3	<2.1	U,R,l	0.21	2.1	NT				NT				NT				NT			
DNT Mixture*			0.932		ND				ND				ND				ND				ND				ND				ND			
RDX	121-82-4	C	6.1	µg/L	<7.2	U,R,l	1	7.2	<3.3	U,R,l	0.48	3.3	<2.1	U,R,l	0.31	2.1	NT				NT				NT				NT			
Perchlorate																																
Perchlorate	14797-73-0	N	10.9	µg/L	5.5		0.54	1	27.7		0.54	1	2		0.54	1	3.5		0.1	1	<1	U	0.1	1	<1	U	0.1	1	<1	U	0.1	1

Sample ID / Sample Date	CAS	C/N	RG	Units	54GP80 10/13/2004		MDL	RL	54GP81 10/11/2004		MDL	RL	54GP82 10/11/2004		MDL	RL	54GP83 10/11/2004		MDL	RL	54GP84 10/13/2004		MDL	RL	54GP85 10/14/2004		MDL	RL	54GP86 10/13/2004		MDL	RL
					Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r		
Explosives																																
2,4,6-TNT	118-96-7	N	7.82	µg/L	NT				NT				NT				NT				NT				NT				NT			
DNT Mixture*			0.932		ND				ND				ND				ND				ND				ND				ND			
RDX	121-82-4	C	6.1	µg/L	NT				NT				NT				NT				NT				NT				NT			
Perchlorate																																
Perchlorate	14797-73-0	N	10.9	µg/L	<1	U	0.1	1	1		0.1	1	<1	U	0.1	1	<1	U	0.1	1	<1	U	0.1	1	<1	U	0.1	1	<1	U	0.1	1

Sample ID / Sample Date	CAS	C/N	RG	Units	54GP87 10/14/2004		MDL	RL	54GW56 8/18/2004		MDL	RL	54GW57 8/17/2004		MDL	RL	54GW58 8/24/2004		MDL	RL	54GW59 8/18/2004		MDL	RL	54GW59-DUP(DUP-3) 8/18/2004		MDL	RL	54GW60 8/24/2004		MDL	RL
					Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r		
Explosives																																
2,4,6-TNT	118-96-7	N	7.82	µg/L	NT				160		0.15	1.3	1.7	J,g	0.0749	0.65	15		0.0749	0.65	4.2	L	0.0749	0.65	11	J,g	0.0749	0.65	9.3		0.0749	0.65
DNT Mixture*			0.932		ND				ND				ND	U			ND				ND				ND				ND			
RDX	121-82-4	C	6.1	µg/L	NT				35	J,g	0.164	0.65	0.69		0.164	0.65	3.7		0.164	0.65	1		0.164	0.65	1.7		0.164	0.65	0.8		0.164	0.65
Perchlorate																																
Perchlorate	14797-73-0	N	10.9	µg/L	<1	U	0.1	1	13.5		0.1	1	2		0.1	1	25.8		0.1	1	4		0.1	1	3.6		0.1	1	1.7		0.1	1

Sample ID / Sample Date	CAS	C/N	RG	Units	54GW61 8/24/2004		MDL	RL	54GW62 8/23/2004		MDL	RL	54GW63 8/23/2004		MDL	RL	54GW64 8/23/2004		MDL	RL	54GW64-DUP(DUP-9) 8/23/2004		MDL	RL	54GW65 8/20/2004		MDL	RL	54GW66 8/20/2004		MDL	RL
					Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r		
Explosives																																
2,4,6-TNT	118-96-7	N	7.82	µg/L	74		0.0749	0.65	9		0.0749	0.65	<0.65	U	0.0749	0.65	0.82	J,g	0.0749	0.65	0.76	J,g	0.0749	0.65	3		0.0749	0.65	NT			
DNT Mixture*			0.932		ND				ND				ND				ND				ND				ND				ND			
RDX	121-82-4	C	6.1	µg/L	<0.65	U	0.164	0.65	1.6		0.164	0.65	<0.65	U	0.164	0.65	0.75	J,g	0.164	0.65	0.73	J,g	0.164	0.65	0.7		0.164	0.65	NT			
Perchlorate																																
Perchlorate	14797-73-0	N	10.9	µg/L	3		0.1	1	5.3		0.1	1	<1	U	0.1	1	1.1		0.1	1	0.97	B	0.1	1	1.7		0.1	1	0.94	B,J,m	0.1	1

Table 3-1 2002 Area A Direct-Push Groundwater Analytical Results with Remedial Goals (Continued)

Sample ID Sample Date	CAS	C/N	RG	Units	54GW66 8/23/2004		MDL	RL	54GW67 8/20/2004		MDL	RL	54GW67 8/23/2004		MDL	RL	54GW68 8/20/2004		MDL	RL	54GW69 8/20/2004		MDL	RL	54GW69 8/23/2004		MDL	RL	54GW70 8/20/2004		MDL	RL
					Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r		
Explosives																																
2,4,6-TNT	118-96-7	N	7.82	µg/L	<0.65	U	0.0749	0.65	NT				<0.65	U	0.0749	0.65	2.6	J,g	0.0749	0.65	NT				1.4		0.0749	0.65	<0.65	U	0.0749	0.65
DNT Mixture*			0.932		ND				ND				ND				ND				ND				ND				ND			
RDX	121-82-4	C	6.1	µg/L	<0.65	U	0.164	0.65	NT				<0.65	U	0.164	0.65	<0.65	U	0.164	0.65	NT				0.51	J	0.164	0.65	<0.65	U	0.164	0.65
Perchlorate																																
Perchlorate	14797-73-0	N	10.9	µg/L	NT				0.59	B,J,m	0.1	1	NT				<1	U	0.1	1	0.65	B,J,m	0.1	1	NT				0.76	B	0.1	1

Notes:
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT.
=Exceeds RG
The CMOs and RGs were developed and presented in the Final SWMU 54 RFI/CMS Report (URS, 2008).
RBC values are from the October 11, 2007, RBC Table and November 2020 Alternate RBC Table.

< = less than
µg/L = micrograms per liter
2,4,6-TNT = 2,4,6-trinitrotoluene
C/N = carcinogenic/noncarcinogenic
CAS = Chemical Abstract Service
CMO = corrective measures objective
CMS = Corrective Measures Study
DL = detection limit
DNT = dinitrotoluene
ID = identifier
LQ = laboratory qualifier
MDL = method detection limit
ND = not detected
NT = not tested
r = reason code
RBC = Risk-Based Concentration
RDX = cyclotrimethylenetrinitramine
RG = remedial goal
RFI = RCRA Facility Investigation
RL = reporting limit
RPD = relative percent difference
SWMU = Solid Waste Management Unit
TIC = total inorganic carbon
URS = URS Corporation
USEPA = U.S. Environmental Protection Agency
VQ = validation qualifier

C = Carcinogenic per USEPA RBC Table (October 2007)
N = Noncarcinogenic per USEPA RBC Table (October 2007)

Data Qualifiers:
B = Not detected substantially above the level reported in laboratory or field blanks.
E = Concentration exceeded the upper level of the calibration range of the instrument for that specific analysis.
For TICs, compound not present in calibration standard, calculated using total peak areas ion chromatographs and response factor of 1.
J = Analyte present. Reported value may not be accurate or precise.
L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N = Sample spike recovery is outside of control limits.
P = Greater than 40% difference for detected concentrations between the two gas chromatography (GC) or high-performance liquid chromatography (HPLC) columns.
R = The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected are not usable.
U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
UL = Not detected, quantitation limit is probably higher.
c = Calibration failure.
d = Matrix spike/matrix spike duplicate (MS/MSD) or laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD imprecision.
g = Dual column confirmation imprecision.
l = LCS recovery failure.
m = MS/MSD recovery failure.
o = Calibration blank contamination.
p = Preparation blank contamination.
s = Serial dilution failure.
w = Field and/or equipment blank contamination.
z = Method blank and/or storage blank contamination.

Table 3-2 2003-2004 Area A Groundwater Analytical Results with Remedial Goals

Sample ID Sample Date	CAS	C/N	RG	Units	54MW2 3/4/2003		MDL	RL	54MW3 3/4/2003		MDL	RL	54MW5 3/4/2003		MDL	RL	54MW-8 12/21/2004		MDL	RL	54MW-9 12/21/2004		MDL	RL	54MW-10 12/21/2004		MDL	RL	54MW10-DUP(DUP-1) 12/21/2004		MDL	RL
					Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r		
Explosives																																
2,4,6-TNT	118-96-7	N	7.82	µg/L	<3.6	U	0.365	3.6	38		0.365	3.6	<4.2	U	0.43	4.2	<0.65	U	0.0749	0.65	<0.65	U	0.0749	0.65	62		0.15	1.3	65		0.15	1.3
DNT Mixture*			0.932	µg/L	ND				ND				ND				ND				ND				ND				ND			
RDX	121-82-4	C	6.1	µg/L	<3.6	U	0.526	3.6	32		0.526	3.6	<4.2	U	0.61	4.2	0.2	J,J,g	0.164	0.65	1.1	J,g	0.164	0.65	28		0.164	0.65	29		0.164	0.65
Perchlorate																																
Perchlorate	14797-73-0	N	10.90	µg/L	12		0.54	1	59.2		0.54	1	1.6		0.54	1	0.22	B	0.1	1	0.21	B	0.1	1	9.8		0.1	1	9.1		0.1	1
Field Parameters																																
DO	--	--	--	mg/L	6.97				5.18				2.88				0.25				2.56				1.25				1.25			
ORP	--	--	--	mV	159.5				119.0				95.1				215				234				208				208			
pH	--	--	--	SU	6.37				6.65				7.00				7.20				7.53				7.06				7.06			
Specific Conductivity	--	--	--	mS	0.191				0.341				0.310				0.627				0.706				0.760				0.760			
Temperature	--	--	--	°C	16.24				15.97				12.91				13.6				13.2				13.8				13.8			
Turbidity	--	--	--	NTU	0.80				1.93				12.0				4.17				4.13				3.52				3.52			

Notes:
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT
[ ]=Exceeds RG
The CMOs and RGs were developed and presented in the Final SWMU 54 RFI/CMS Report (URS, 2008).
RBC values are from the October 11, 2007, RBC Table and November 2020 Alternate RBC Table.
< = less than
µg/L = micrograms per liter
°C = degrees Celsius
2,4,6-TNT = 2,4,6-trinitrotoluene
C/N = carcinogenic/noncarcinogenic
CAS = Chemical Abstracts Service
CMO = corrective measures objective
CMS = Corrective Measures Study
DNT = dinitrotoluene
DO = dissolved oxygen
ID = identifier
LQ = laboratory qualifier
MCL = maximum contaminant level
MDL = method detection limit
mg/L = milligrams per liter
mS = millisiemens
mV = millivolts
ND = not detected
NTU = nephelometric turbidity unit
ORP = oxidation-reduction potential
pH = potential of hydrogen
r = reason code
RBC = Risk-Based Concentration
RDX = cyclotrimethylenetrinitramine
RFI = RCRA Facility Investigation
RG = remedial goal
RL = reporting limit
RPD = relative percent difference
SU = standard units
TIC = total inorganic carbon
URS = URS Corporation
USEPA = U.S. Environmental Protection Agency
VQ = Validation Qualifier

C = Carcinogenic per USEPA RBC Table (October 2007)
N = Noncarcinogenic per USEPA RBC Table (October 2007)

Data Qualifiers:
B = Not detected substantially above the level reported in laboratory or field blanks.
E = Concentration exceeded the upper level of the calibration range of the instrument for that specific analysis.
For TICs, compound not present in calibration standard, calculated using total peak areas ion chromatographs and response factor of 1.
J = Analyte present. Reported value may not be accurate or precise.
L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N = Sample spike recovery is outside of control limits.
P = Greater than 40% difference for detected concentrations between the two gas chromatography (GC) or high-performance liquid chromatography (HPLC) columns.
R = The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected are not usable.
U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
UL = Not detected, quantitation limit is probably higher.
c = Calibration failure.
d = Matrix spike/matrix spike duplicate (MS/MSD) or laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD imprecision.
g = Dual column confirmation imprecision.
l = LCS recovery failure.
m = MS/MSD recovery failure.
o = Calibration blank contamination.
p = Preparation blank contamination.
s = Serial dilution failure.
w = Field and/or equipment blank contamination.
z = Method blank and/or storage blank contamination.

Table 3-3 2006-2007 Area A Quarterly Groundwater Monitoring Results with Remedial Goals

First Quarter – November/December 2006																															
Sample ID Sample Date				**54MW1 11/29/2006**				**54MW2 11/29/2006**				**54MW3 12/5/2006**				**54MW5 11/29/2006**				**54MW8 12/1/2006**				**54MW9 12/1/2006**				**54MW10 12/1/2006**			
	CAS	**C/N**	**RG**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**
Explosives (µg/L)																															
2,4,6-TNT	118-96-7	N	7.82	<5	U	0.075	5	5.6		0.075	5	0.85	J	0.075	5	0.29	J	0.075	5	<5	U	0.075	5	<5	U	0.075	5	2.1	J	0.075	5
DNT Mixture*	--	C	0.932	<5				<5				<5				<5				<5				<5				<5			
RDX	121-82-4	C	6.100	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	3.3	J	0.16	5
Perchlorate (µg/L)																															
Perchlorate	14797-73-0	N	10.90	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10
Field Parameters																															
Dissolved Oxygen (mg/L)	--	--	--	11.95				10.29				11.94				10.1				8.94				8.51				8.13			
Oxidation Reduction Potential (mV)	--	--	--	153				159				171				231				32				53				36			
pH (SU)	--	--	--	7.86				7.15				7.26				7.2				7.53				7.65				7.39			
Specific Conductivity (mS)	--	--	--	0.44				0.533				0.580				0.557				0.605				0.790				0.733			
Temperature (°C)	--	--	--	18.6				17.7				18.3				18.5				17.1				19.1				16.3			
Turbidity (NTU)	--	--	--	4.47				1.16				0.07				16.6				11.83				23.5				10.31			

Second Quarter – March 2007																															
Sample ID Sample Date				**54MW-1 3/28/2007**				**54MW-2 3/28/2007**				**54MW-3 3/28/2007**				**54MW-5 3/28/2007**				**54MW-8 3/27/2007**				**54MW-9 3/27/2007**				**54MW10 DUP AVG 3/27/2007**			
	CAS	**C/N**	**RG**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**
Explosives (µg/L)																															
2,4,6-TNT	118-96-7	N	7.82	<5	U	0.1	5	0.25	J,J,d	0.1	5	<5	U	0.1	5	0.84	J,J,g	0.1	5	14		0.1	5	<5	U	0.1	5	6.018		0.1	5
DNT Mixture*	--	C	0.932	<5				1.146				<5				<5				<5				<5				0.898			
RDX	121-82-4	C	6.100	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5	8.1		0.092	5	<5	U	0.092	5	3.87		0.092	5
Perchlorate (µg/L)																															
Perchlorate	14797-73-0	N	10.90	<0.2	U	0.036	0.2	3.6		0.036	0.2	<0.2	U	0.036	0.2	0.52		0.036	0.2	0.26		0.036	0.2	0.24		0.036	0.2	2.9		0.036	0.2
Field Parameters																															
DO (mg/L)	--	--	--	8.06				7.75				6.12				8.38				6.68				6.51				8			
ORP (mV)	--	--	--	-5				44				-11				53				-17				-10				11			
pH (SU)	--	--	--	7.63				6.45				6.94				6.51				7.05				7.18				6.88			
Specific Conductivity (mS)	--	--	--	0.199				0.183				0.311				0.167				0.267				0.960				0.334			
Temperature (°C)	--	--	--	13.44				15.8				15.22				12.73				13.92				14.43				15.95			
Turbidity (NTU)	--	--	--	1.82				0.37				2.13				1.22				13.96				7.71				3.64			

Table 3-3 2006-2007 Area A Quarterly Groundwater Monitoring Results with Remedial Goals (Continued)

Fourth Quarter – September 2007																													
Sample ID Sample Date				**54MW-1 6/5/2007**				**54MW-2 6/5/2007**				**54MW-3 6/5/2007**				**54MW-5 6/5/2007**				**54MW-8 6/5/2007**				**54MW-9 6/5/2007**				**54MW-10 6/5/2007**			
	CAS	**C/N**	**RG**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**
Explosives (µg/L)																													
2,4,6-TNT	118-96-7	N	7.82	<5	U	0.1	5	3.9	J	0.1	5	1	J	0.1	5	0.49	J	0.1	5	<5	U	0.1	5	<5	U	0.1	5	2.4	J	0.1	5
DNT Mixture*	--	C	0.932	ND				ND				ND				ND				ND				0.466				ND			
RDX	121-82-4	C	6.100	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5	6.3		0.092	5	<5	U	0.092	5	1.6	J	0.092	5
Perchlorate (µg/L)																													
Perchlorate	14797-73-0	N	10.90	<0.2	U	0.08	0.2	2		0.08	0.2	0.88		0.08	0.2	0.58		0.08	0.2	0.7		0.08	0.2	0.23		0.08	0.2	0.37		0.08	0.2
Field Parameters																													
DO (mg/L)	--	--	--	7.57				8.46				5.06				8.44				8.82				5.21				7.35			
ORP (mV)	--	--	--	297				268				109				236				285				94				187			
pH (SU)	--	--	--	7.33				6.78				6.2				6.24				6.9				6.25				6.87			
Specific Conductivity (mS)	--	--	--	0.192				0.225				0.003				0.163				0.245				0.003				0.353			
Temperature (°C)	--	--	--	13.58				13.48				15.66				21.68				13.4				15.44				14.51			
Turbidity (NTU)	--	--	--	0.48				0.29				0.36				0.67				0.06				1.67				**9.37**			

Fourth Quarter – September 2007																													
Sample ID Sample Date				**54MW-1 9/19/2007**				**54MW-2 9/19/2007**				**54MW-3 9/19/2007**				**54MW-5 9/19/2007**				**54MW-8 9/18/2007**				**54MW-9 9/18/2007**				**54MW-10 9/18/2007**			
	CAS	**C/N**	**RG**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**	**Result**	**LQ, VQ, r**	**MDL**	**RL**
Explosives (µg/L)																													
2,4,6-TNT	118-96-7	N	7.82	<5	U	0.1	5	0.78	J	0.1	5	1.2	J	0.1	5	0.38	J,J,g	0.1	5	<5	U	0.1	5	<5	U	0.1	5	17		0.1	5
DNT Mixture*	--	C	0.932	ND				ND				ND				ND				ND				ND				0.696			
RDX	121-82-4	C	6.100	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5	8		0.092	5
Perchlorate (µg/L)																													
Perchlorate	14797-73-0	N	10.90	<0.2	U	0.08	0.2	0.57		0.08	0.2	0.31		0.08	0.2	0.34		0.08	0.2	0.37		0.08	0.2	<0.2	U	0.08	0.2	2.9		0.08	0.2
Field Parameters																													
DO (mg/L)	--	--	--	4.03				2.37				6.34				5.53				4.06				3.78				3.89			
ORP (mV)	--	--	--	233				172				205				228				288				237				239			
pH (SU)	--	--	--	8.2				7.01				5.67				6.89				6.82				7.11				6.76			
Specific Conductivity (mS)	--	--	--	0.487				0.637				0.57				0.647				0.711				0.833				0.844			
Temperature (°C)	--	--	--	19.79				15.91				15.6				17.36				14.41				18.05				17.27			
Turbidity (NTU)	--	--	--	0.79				2.19				2.02				1.62				0.43				2.19				7.19			

Table 3-3 2006-2007 Area A Quarterly Groundwater Monitoring Results with Remedial Goals (Continued)

Notes:
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT
=Exceeds RG
The CMOs and RGs were developed and presented in the Final SWMU 54 RFI/CMS Report (URS, 2008).
RBC values are from the October 11, 2007, RBC Table and November 2020 Alternate RBC Table.
< = less than
µg/L = micrograms per liter
°C = degrees Celsius
2,4,6-TNT = 2,4,6-trinitrotoluene
C/N = carcinogenic/noncarcinogenic
CAS = Chemical Abstracts Service
CMO = corrective measures objective
CMS = Corrective Measures Study
DNT = dinitrotoluene
DO = dissolved oxygen
ID = identifier
LQ = laboratory qualifier
MCL = maximum contaminant level
MDL = method detection limit
mg/L = milligrams per liter
mS = millisiemens
mV = millivolts
ND = not detected
NTU = nephelometric turbidity unit
ORP = oxidation-reduction potential
pH = potential of hydrogen
r = reason code
RBC = Risk-Based Concentration
RDX = cyclotrimethylenetrinitramine
RFI = RCRA Facility Investigation
RG = remedial goal
RL = reporting limit
RPD = relative percent difference
SU = standard units
TIC = total inorganic carbon
URS = URS Corporation
USEPA = U.S. Environmental Protection Agency
VQ = Validation Qualifier
C = Carcinogenic per USEPA RBC Table (October 2007)
N = Noncarcinogenic per USEPA RBC Table (October 2007)
Data Qualifiers:
B = Not detected substantially above the level reported in laboratory or field blanks.
E = Concentration exceeded the upper level of the calibration range of the instrument for that specific analysis.
For TICs, compound not present in calibration standard, calculated using total peak areas ion chromatographs and response factor of 1.
J = Analyte present. Reported value may not be accurate or precise.
L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N = Sample spike recovery is outside of control limits.
P = Greater than 40% difference for detected concentrations between the two gas chromatography (GC) or high-performance liquid chromatography (HPLC) columns.
R = The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected are not usable.
U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
UL = Not detected, quantitation limit is probably higher.
c = Calibration failure.
d = Matrix spike/matrix spike duplicate (MS/MSD) or laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD imprecision.
g = Dual column confirmation imprecision.
l = LCS recovery failure.
m = MS/MSD recovery failure.
o = Calibration blank contamination.
p = Preparation blank contamination.
s = Serial dilution failure.
w = Field and/or equipment blank contamination.
z = Method blank and/or storage blank contamination.

Table 3-4 2003 Area B Groundwater Analytical Results with Remedial Goals

Sample ID Sample Date	RG	Units	54MW4 3/4/2003		MDL	RL	54MW6 3/3/2003		MDL	RL	54MW7 3/4/2003		MDL	RL	54MW7-DUP (GW-DUP-1) 3/4/2003		MDL	RL
			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r		
Explosives																		
2,4,6-TNT	7.82	µg/L	<5.4	U	0.55	5.4	<4.2	U	0.43	4.2	<3.6	U	0.365	3.6	<4.8	U	0.487	4.8
DNT Mixture*	0.932	µg/L	ND				ND				ND				ND			
RDX	6.1	µg/L	<5.4	U	0.79	5.4	<4.2	U	0.61	4.2	<3.6	U	0.526	3.6	<4.8	U	0.701	4.8
Perchlorate																		
Perchlorate	10.9	µg/L	<1	U	0.54	1	<1	U	0.54	1	<1	U	0.54	1	<1	U	0.54	1

Notes:
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT
=Exceeds RG
The CMOs and RGs were developed and presented in the Final SWMU 54 RFI/CMS Report (URS, 2008).
RBC values are from the October 11, 2007, RBC Table and November 2020 Alternate RBC Table.
µg/L = micrograms per liter
2,4,6-TNT = 2,4,6-trinitrotoluene
CMO = corrective measures objective
CMS = corrective measures study
DNT = dinitrotoluene
ID = identifier
LQ = laboratory qualifier
MDL = method detection limit
mV = millivolt
mS = milliSiemen
ND = not detected
r = reason code
RBC = Risk-Based Concentration
RDX = cyclotrimethylenetrinitramine
RFI = RCRA Facility Investigation
RL = reporting limit
RG = remedial goal
SU = standard units
TIC = total inorganic carbon
URS = URS Corporation
USEPA = U.S. Environmental Protection Agency
VQ = validation qualifier

Data Qualifiers:
B = Not detected substantially above the level reported in laboratory or field blanks.
E = Concentration exceeded the upper level of the calibration range of the instrument for that specific analysis.
For TICs, compound not present in calibration standard, calculated using total peak areas ion chromatographs and response factor of 1.
J = Analyte present. Reported value may not be accurate or precise.
L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N = Sample spike recovery is outside of control limits.
P = Greater than 40% difference for detected concentrations between the two gas chromatography (GC) or high-performance liquid chromatography (HPLC) columns.
R = The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected are not usable.
U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
UL = Not detected, quantitation limit is probably higher.
c = Calibration failure.
d = Matrix spike/matrix spike duplicate (MS/MSD) or laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD imprecision.
g = Dual column confirmation imprecision.
l = LCS recovery failure.
m = MS/MSD recovery failure.
o = Calibration blank contamination.
p = Preparation blank contamination.
s = Serial dilution failure.
w = Field and/or equipment blank contamination.
z = Method blank and/or storage blank contamination.

Table 3-5 2006-2007 Area B Quarterly Groundwater Monitoring Results with Remedial Goals

First Quarter – November/December 2006															
Sample ID Sample Date	CAS	C/N	Adjusted Tap Water RBC	54MW4 11/30/2006		MDL	RL	54MW6 11/29/2006		MDL	RL	54MW7 12/5/2006		MDL	RL
				Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r		
Explosives (µg/L)															
2,4,6-TNT	118-96-7	N	7.82	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5
DNT Mixture*	--	C	0.932	<5				<5				<5			
RDX	121-82-4	C	6.100	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5
Perchlorate (µg/L)															
Perchlorate	14797-73-0	N	10.90	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10
Field Parameters															
DO (mg/L)	--	--	--	9.9				11.63				10.46			
ORP (mV)	--	--	--	-92				181				170			
pH (SU)	--	--	--	7.77				8				7.56			
Specific Conductivity (mS)	--	--	--	1.13				0.297				0.729			
Temperature (°C)	--	--	--	15				16.6				15.9			
Turbidity (NTU)	--	--	--	2.66				4.87				5.91			

Second Quarter – March 2007															
Sample ID Sample Date	CAS	C/N	RG	54MW-4 3/27/2007		MDL	RL	54MW-6 3/27/2007		MDL	RL	54MW-7 3/27/2007		MDL	RL
				Result	LQ, VQ, r			Result	LQ, VQ, r			Result	LQ, VQ, r		
Explosives (µg/L)															
2,4,6-TNT	118-96-7	N	7.82	<5	U	0.1	5	<5	U	0.1	5	<5	U	0.1	5
DNT Mixture*	--	C	0.932	<5				<5				<5			
RDX	121-82-4	C	6.100	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5
Perchlorate (µg/L)															
Perchlorate	14797-73-0	N	10.90	<0.2	U	0.036	0.2	<0.2	U	0.036	0.2	<0.2	U	0.036	0.2
Field Parameters															
DO (mg/L)	--	--	--	5.97				8.8				6			
ORP (mV)	--	--	--	-95				135				-44			
pH (SU)	--	--	--	7.16				8.21				7			
Specific Conductivity (mS)	--	--	--	1.11				0.314				0.323			
Temperature (°C)	--	--	--	15.68				17.77				14.25			
Turbidity (NTU)	--	--	--	1.54				31.1				6.59			

Table 3-5 2006-2007 Area B Quarterly Groundwater Monitoring Results with Remedial Goals (Continued)

Third Quarter – June 2007															
Sample ID Sample Date				54MW4 DUP AVG 6/5/2007				54MW-6 6/5/2007				54MW-7 6/5/2007			
	CAS	C/N	RG	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL
Explosives (µg/L)															
2,4,6-TNT	118-96-7	N	7.82	<5	U	0.1	5	<5	U	0.1	5	<5	U	0.1	5
DNT Mixture*	--	C	0.932	<5				<5				<5			
RDX	121-82-4	C	6.100	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5
Perchlorate (µg/L)															
Perchlorate	14797-73-0	N	10.90	<0.2	U	0.08	0.2	<0.2	U	0.08	0.2	<0.2	U	0.08	0.2
Field Parameters															
DO (mg/L)	--	--	--	5.15				4.5				7.72			
ORP (mV)	--	--	--	91				76				225			
pH (SU)	--	--	--	6.39				6.03				6.97			
Specific Conductivity (mS)	--	--	--	0.003				0.003				0.302			
Temperature (°C)	--	--	--	14.54				19.28				3.03			
Turbidity (NTU)	--	--	--	0.67				9.96				0.71			
Fourth Quarter – September 2007															
Sample ID Sample Date				54MW4 9/19/2007				54MW6 9/19/2007				54MW7 DUP AVG 9/19/2007			
	CAS	C/N	RG	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL
Explosives (µg/L)															
2,4,6-TNT	118-96-7	N	7.82	<5	U	0.1	5	<5	U	0.1	5	<5	U	0.1	5
DNT Mixture*	--	C	0.932	ND				ND				ND			
RDX	121-82-4	C	6.100	<5	U	0.092	5	<5	U	0.092	5	<5	U	0.092	5
Perchlorate (µg/L)															
Perchlorate	14797-73-0	N	10.90	<0.2	U	0.08	0.2	0.1	J	0.08	0.2	<0.2	U	0.08	0.2
Field Parameters															
DO (mg/L)	--	--	--	4.03				7.47				4.56			
ORP (mV)	--	--	--	-1				236				266			
pH (SU)	--	--	--	7.91				8.13				6.97			
Specific Conductivity (mS)	--	--	--	1.1				0.267				0.766			
Temperature (°C)	--	--	--	16.08				16.69				16.83			
Turbidity (NTU)	--	--	--	0.43				4.37				0.39			

Notes:
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT
=Exceeds RG
The CMOs and RGs were developed and presented in the Final SWMU 54 RFI/CMS Report (URS, 2008).
RBC values are from the October 11, 2007 RBC Table and November 2020 Alternate RBC Table.

< = less than
µg/L = micrograms per liter
°C = degrees Celsius
2,4,6-TNT = 2,4,6-trinitrotoluene
C/N = carcinogenic/noncarcinogenic
CAS = Chemical Abstracts Service
CMO = corrective measures objective
CMS = Corrective Measures Study
DNT = dinitrotoluene
DO = dissolved oxygen
ID = identifier
LQ = laboratory qualifier
MCL = maximum contaminant level
MDL = method detection limit
mg/L = milligrams per liter
mS = millisiemens
mV = millivolts
ND = not detected
NTU = nephelometric turbidity unit
ORP = oxidation-reduction potential
pH = potential of hydrogen
r = reason code
RBC = Risk-Based Concentration
RDX = cyclotrimethylenetrinitramine
RFI = RCRA Facility Investigation
RG = remedial goal
RL = reporting limit
RPD = relative percent difference
SU = standard units
TIC = total inorganic carbon
URS = URS Corporation
USEPA = U.S. Environmental Protection Agency
VQ = Validation Qualifier

C = Carcinogenic per USEPA RBC Table (October 2007)
N = Noncarcinogenic per USEPA RBC Table (October 2007)

Data Qualifiers:
B = Not detected substantially above the level reported in laboratory or field blanks.
E = Concentration exceeded the upper level of the calibration range of the instrument for that specific analysis.
For TICs, compound not present in calibration standard, calculated using total peak areas ion chromatographs and response factor of 1.
J = Analyte present. Reported value may not be accurate or precise.
L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N = Sample spike recovery is outside of control limits.
P = Greater than 40% difference for detected concentrations between the two gas chromatography (GC) or high-performance liquid chromatography (HPLC) columns.
R = The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected are not usable.
U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
UL = Not detected, quantitation limit is probably higher.
c = Calibration failure.
d = Matrix spike/matrix spike duplicate (MS/MSD) or laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD imprecision.
g = Dual column confirmation imprecision.
l = LCS recovery failure.
m = MS/MSD recovery failure.
o = Calibration blank contamination.
p = Preparation blank contamination.
s = Serial dilution failure.
w = Field and/or equipment blank contamination.
z = Method blank and/or storage blank contamination.

Table 3-6 2006 New River Surface and Sediment Pore Water Sample Results with Remedial Goals

Surface Water																											
Sample ID Sample Date				NR-SW-1 11/30/2006				NR-SW-2 11/30/2006				NR-SW-3 11/30/2006				NR-SW-4 11/30/2006				NR-SW-5 11/30/2006				NR-SW-6 11/30/2006			
	CAS	C/N	RG	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL
Explosives (µg/L)																											
2,4,6-TNT	118-96-7	C	7.82	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5
2,4-DNT	121-14-2	N		<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5
2,6-DNT	606-20-2	N		<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5
DNT Mixture*			0.932	<5				<5				<5				<5				<5				<5			
RDX	121-82-4	C	6.100	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5
Perchlorate (µg/L)																											
Perchlorate	14797-73-0	--	10.900	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10
Field Parameters																											
DO (mg/L)	--	--	--	17.05				15.83				14.64				12.93				14.83				15.11			
ORP (mV)	--	--	--	219				118				47				53				32				35			
pH (SU)	--	--	--	8.9				8.1				7.96				7.81				7.67				8.3			
Specific Conductivity (mS)	--	--	--	0.116				0.113				0.118				0.174				0.117				0.155			
Temperature (°C)	--	--	--	10.1				9.9				10.1				10.3				10.2				10.4			
Turbidity (NTU)	--	--	--	71.3				13.7				17.48				9.94				7.66				6.21			

Pore Water																											
Sample ID Sample Date				NR-PW-1 11/30/2006				NR-PW-2 11/30/2006				NR-PW-3 11/30/2006				NR-PW-4 11/30/2006				NR-PW-5 11/30/2006				NR-PW-6 11/30/2006			
	CAS	C/N	RG	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL
Explosives (µg/L)																											
2,4,6-TNT	118-96-7	C	7.82	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5
2,4-DNT	121-14-2	N		<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5
2,6-DNT	606-20-2	N		<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5
DNT Mixture*			0.932	<5				<5				<5				<5				<5				<5			
RDX	121-82-4	C	6.100	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5
Perchlorate (µg/L)																											
Perchlorate	14797-73-0	--	10.900	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10
Field Parameters																											
DO (mg/L)	--	--	--	10.38				10.46				12.2				9.35				10.82				11.34			
ORP (mV)	--	--	--	-109				-174				20				-182				-44				-58			
pH (SU)	--	--	--	7.33				7.21				7.47				7.57				7.44				7.2			
Specific Conductivity (mS)	--	--	--	0.307				0.344				0.248				0.38				0.553				0.353			
Temperature (°C)	--	--	--	12.8				10.7				10.8				10.6				13.2				11.9			
Turbidity (NTU)	--	--	--	16.35				37.9				22.7				4.86				3.63				11.85			

Table 3-6 2006 New River Surface and Sediment Pore Water Sample Results with Remedial Goals (Continued)

Surface Water																						
Sample ID Sample Date				NR-SW-7 12/1/2006				NR-SW-8 12/1/2006				NR-SW-8-DUP(DUP-4) 12/1/2006				NR-SW-9 12/1/2006				NR-SW-10 12/1/2006			
	CAS	C/N	RG	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL
Explosives (µg/L)																							
2,4,6-TNT	118-96-7	C	7.82	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5
2,4-DNT	121-14-2	N		<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5
2,6-DNT	606-20-2	N		<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5
DNT Mixture*			0.932	<5				<5				<5				<5				<5			
RDX	121-82-4	C	6.100	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5
Perchlorate (µg/L)																							
Perchlorate	14797-73-0	--	10.900	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10
Field Parameters																							
DO (mg/L)	--	--	--	13.13				13.27				13.27				13.76				14.69			
ORP (mV)	--	--	--	10				41				41				51				52			
pH (SU)	--	--	--	8.11				7.8				7.8				7.62				7.83			
Specific Conductivity (mS)	--	--	--	0.140				0.124				0.124				0.131				0.114			
Temperature (°C)	--	--	--	11.7				12.5				12.5				11.8				11			
Turbidity (NTU)	--	--	--	148				13.8				13.8				20.5				11.46			

Pore Water																							
Sample ID Sample Date				NR-PW-6-DUP(DUP-3) 11/30/2006				NR-PW-7 12/1/2006				NR-PW-8 12/1/2006				NR-PW-9 12/1/2006				NR-PW-10 12/1/2006			
	CAS	C/N	RG	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL	Result	LQ, VQ, r	MDL	RL
Explosives (µg/L)																							
2,4,6-TNT	118-96-7	C	7.82	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5	<5	U	0.075	5
2,4-DNT	121-14-2	N		<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5	<5	U	0.12	5
2,6-DNT	606-20-2	N		<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5	<5	U	0.27	5
DNT Mixture*			0.932	<5				<5				<5				<5				<5			
RDX	121-82-4	C	6.100	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5	<5	U	0.16	5
Perchlorate (µg/L)																							
Perchlorate	14797-73-0	--	10.900	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10	<10	U	1.84	10
Field Parameters																							
DO (mg/L)	--	--	--	11.34				9.25				9.74				10.55				10.18			
ORP (mV)	--	--	--	-58				-194				-173				-173				-157			
pH (SU)	--	--	--	7.2				7.54				7.36				7.23				7.47			
Specific Conductivity (mS)	--	--	--	0.353				0.517				0.660				0.533				0.479			
Temperature (°C)	--	--	--	11.9				13				12.9				13.2				13.1			
Turbidity (NTU)	--	--	--	11.85				3.72				5.6				15.87				1.66			

Table 3-6 2006 New River Surface and Sediment Pore Water Sample Results with Remedial Goals (Continued)

Notes:
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT
=Exceeds RG
The CMOs and RGs were developed and presented in the Final SWMU 54 RFI/CMS Report (URS, 2008).
RBC values are from the October 11, 2007 RBC Table and November 2020 Alternate RBC Table.
Water – BTAG Freshwater Screening Values (USEPA, 2006).
< = less than
µg/L = micrograms per liter
°C = degrees Celsius
2,4,6-TNT = 2,4,6-trinitrotoluene
BTAG = Biological Technical Assistance Group
C/N = carcinogenic/noncarcinogenic
CAS = Chemical Abstracts Service
CMO = corrective measures objective
CMS = Corrective Measures Study
DNT = dinitrotoluene
DO = dissolved oxygen
ID = identifier
LQ = laboratory qualifier
MCL = maximum contaminant level
MDL = method detection limit
mg/L = milligrams per liter
mS = millisiemens
mV = millivolts
ND = not detected
NTU = nephelometric turbidity unit
ORP = oxidation-reduction potential
pH = potential of hydrogen
r = reason code
RBC = Risk-Based Concentration
RDX = cyclotrimethylenetrinitramine
RFI = RCRA Facility Investigation
RG = remedial goal
RL = reporting limit
RPD = relative percent difference
SU = standard units
TIC = total inorganic carbon
URS = URS Corporation
USEPA = U.S. Environmental Protection Agency
VQ = Validation Qualifier

C = Carcinogenic per USEPA RBC Table (October 2007)
N = Noncarcinogenic per USEPA RBC Table (October 2007)

Data Qualifiers:
B = Not detected substantially above the level reported in laboratory or field blanks.
E = Concentration exceeded the upper level of the calibration range of the instrument for that specific analysis.
For TICs, compound not present in calibration standard, calculated using total peak areas ion chromatographs and response factor of 1.
J = Analyte present. Reported value may not be accurate or precise.
L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N = Sample spike recovery is outside of control limits.
P = Greater than 40% difference for detected concentrations between the two gas chromatography (GC) or high-performance liquid chromatography (HPLC) columns.
R = The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected are not usable.
U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
UL = Not detected, quantitation limit is probably higher.
c = Calibration failure.
d = Matrix spike/matrix spike duplicate (MS/MSD) or laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD imprecision.
g = Dual column confirmation imprecision.
l = LCS recovery failure.
m = MS/MSD recovery failure.
o = Calibration blank contamination.
p = Preparation blank contamination.
s = Serial dilution failure.
w = Field and/or equipment blank contamination.
z = Method blank and/or storage blank contamination.

Legend

- Well (Current MNA Network)
- Well (Removed from Network After Ninth Quarter)
- Groundwater Contour
- Inferred Groundwater Contour
- Groundwater Flow Direction
- Fence
- SWMU 54 Boundary

Aerial Source:
Near Map Imagery, February 2020

N

0 30 60 120 Feet

Prepared By:
Baltimore District

FIGURE 3-1
SWMU 54
JUNE 5, 2007 GROUNDWATER CONTOUR MAP
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU54_2007_Groundwate_ Contour_Map.mxd, 10/26/2021 1:52:35 PM, johna

4. FIELD ACTIVITIES

The following sections provide a discussion of field activities conducted by WESTON in Year Ten of monitoring at SWMU 54.

Year Ten of groundwater monitoring consisted of two semiannual sampling events conducted in October 2021 (thirty-seventh event) and April 2022 (thirty-eighth event). Multiple wells were removed from the monitoring network after the ninth and tenth quarters and were not sampled during Year Ten. Monitoring wells that were included in Year Ten monitoring events comprised 54MW1, 54MW10, 54MW12, and 54MW13, which monitor Area A at SWMU 54, as consistent with the eleventh through thirty-sixth quarterly events. Field activities were conducted in accordance with the Final SWMU 54 MNA IMWP (Shaw, 2011a). Copies of the groundwater sampling forms and meter calibration records are presented in **Appendices A-1** and **A-2**, respectively. The monitoring wells were all in usable condition for the entire year of sampling.

4.1 THIRTY-SEVENTH GROUNDWATER SAMPLING (OCTOBER 2021)

Groundwater elevation measurements and groundwater samples were collected from monitoring wells 54MW1, 54MW10, 54MW12, and 54MW13 during the thirty-seventh event. The thirty-seventh event of groundwater sampling was conducted October 27, 2021. Groundwater elevation measurements were collected prior to sampling activities. A groundwater quality meter was calibrated at the beginning of each day before groundwater sampling was initiated. The locations of monitoring wells sampled during this semiannual event are provided in **Figure 4-1**.

4.1.1 Groundwater Elevation Measurements

Water level elevations were collected during each Year Ten semiannual event from the four monitoring wells at SWMU 54 prior to the collection of groundwater samples. **Table 4-1** provides the measured depth-to-water levels (from the top of the casing) and groundwater elevations amsl collected on October 27, 2021. **Figure 4-2** presents a groundwater elevation contour map developed from the elevation data collected during this quarterly monitoring event. Groundwater contours were derived using Esri ArcGIS Desktop Spatial Analyst 10.7.1 software and creating a spline interpolated continuous surface based on limited groundwater data.

The surface model was executed using default values in most cases and forced to cover an area inclusive of all wells using the extent polygon to define the area of interest. Contour lines were then constructed from the output splined surface at 10-ft and 2-ft intervals, depending on the site, with zero base contour. The results of the automated processing were then reviewed by subject knowledge experts and manually adjusted to accurately represent ground conditions.

Estimated groundwater flow velocity for Area A was calculated based on parameters used in the Final SWMU 54 RFI/CMS Report (URS, 2008). The Area A flow path of approximately 538.4 ft had a groundwater elevation difference of 13.55 ft, resulting in a calculated hydraulic gradient of 0.025 feet per foot (ft/ft). Using an average K value for Area A of 4.86 feet per day (ft/day) and an estimated effective porosity of 0.20, the groundwater flow velocity for Area A is approximately 0.61 ft/day (223.22 feet per year [ft/year]).

Area B, although not monitored during Year Ten as mentioned in Section 3, is expected to have a groundwater flow velocity similar to Area A, as reported in the Year Three MNA Report (CB&I, 2014).

4.1.2 Groundwater Sampling

Groundwater samples were collected from the four monitoring wells on October 27, 2021 and were analyzed for the analytical suites covering explosives, perchlorate, and RDX and its breakdown by-products hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine (DNX), hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine (MNX), and hexahydro-1,3,5-trinitroso-1,3,5-triazine (TNX). The breakdown by-products of RDX are considered MNA indicators. In addition, the following indicator parameters were collected: total organic carbon (TOC), total inorganic carbon (TIC), dissolved ferrous iron, dissolved manganese, chlorate, chloride, chlorite, nitrate, and sulfate. Water quality parameters collected during low-flow sampling included potential of hydrogen (pH), temperature, specific conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity. **Table 4-2** presents the suite of analytes collected for analysis during the thirty-seventh quarterly monitoring event. Groundwater sampling was accomplished without any issues.

Groundwater samples were collected via low-flow peristaltic pumps to obtain representative groundwater samples and to minimize investigation-derived waste (IDW) purge water. The following procedures were adhered to during both semiannual groundwater monitoring events:

1. A photoionization detector (PID) reading was taken upon removing the well cap to determine the presence of potentially hazardous levels of volatile gases. The PID readings were collected during the water elevation sweeps and again during sample collection. All PID readings were within acceptable levels.

2. During the water level sweep, depth-to-water and total depth measurements were recorded to determine the amount of water in the well casing and sand pack. Only approximate total well depths were measured during the semiannual events to confirm that the total depths were consistent with the data from the previous reports.

3. Groundwater samples were collected after all water level elevations had been recorded. The general practice was to lower the peristaltic pump tubing to a depth where the pump inlet was within the screened interval. Ample hydraulic head was maintained above the pump to ensure a sufficient water supply. The pump was connected to a Geocontrol PRO control unit, whereas the discharge tubing was connected to a Yellow Springs Instrument (YSI®) 556 water quality flow cell.

4. Monitoring wells were pumped at a rate of approximately 200 milliliters per minute (mL/min). Flow rate was determined by gauging the time it took to fill a 200-milliliter (mL) vial. Water quality parameters were recorded continuously including temperature, pH, DO, ORP, turbidity, and specific conductivity. Turbidity was measured using a HACH 2100Q turbidity meter, whereas concentrations of dissolved ferrous iron and manganese were measured in the field using a HACH DR900 test kit through Methods 8146 and 8149, respectively.

Table 4-3 presents a summary of the final (stabilized) water quality readings for each well from the thirty-seventh event.

Based on the DO data collected during the thirty-seventh monitoring event, groundwater within Area A exhibits slightly aerobic conditions (i.e., DO greater than 1 part per million [ppm]). The DO levels ranged from a low of 0.42 milligrams per liter (mg/L) at monitoring well 54MW1 to a high of 6.84 mg/L at monitoring well 54MW12. ORP measurements ranged from a low of 123.7 millivolts (mV) in monitoring well 54MW10 to a high of 193.4 mV at monitoring well 54MW12. Measurements of pH ranged from a low of 6.82 standard units (SU) at monitoring well 54MW12 to a high of 7.59 SU at monitoring well 54MW1. Measurements of specific conductivity

ranged from a low of 420 microsiemens per centimeter (µS/cm) at monitoring well 54MW1 to a high of 705 µS/cm at monitoring well 54MW10.

Prior to sampling, the flow cell was disconnected, and the groundwater flow rate was maintained during sample collection. Samples were collected, labeled, and packed in ice until shipment to the laboratory. Chain-of-custody (COC) forms were filled out and shipped with the samples. Copies of the COC forms are provided in **Appendix B-1** along with the raw analytical data packages.

4.1.3 Quality Control Samples

QC samples, including duplicate and temperature blanks, were collected during the thirty-seventh monitoring event.

One duplicate sample was collected during the thirty-seventh monitoring event (rate of 10 percent [%]) at 54MW10 (duplicate as 54TW10) and was analyzed for the same suite of compounds as the parent sample. Further, one matrix spike/matrix spike duplicate (MS/MSD) (at a rate of 5%) was collected at monitoring well 54MW13 (54MW13 MS/MSD) and was analyzed for the same suite of compounds as the parent sample.

In previous sampling years, one equipment rinse blank was collected during each quarter. However, because only disposable equipment was utilized during the sampling, no equipment rinse blanks were warranted. One IDW purge water sample (54-IDW) was collected and analyzed for pH, chemical oxygen demand (COD), and total metals for disposal of IDW purge water in accordance with the Final SWMU 54 MNA IMWP (Shaw, 2011a). Results of the QA/QC samples are presented in the raw analytical data package provided in **Appendix B-1** and summarized in Section 5.7.

4.2 THIRTY-EIGHTH GROUNDWATER SAMPLING (APRIL 2022)

Groundwater elevation measurements and groundwater samples were collected from monitoring wells 54MW1, 54MW10, 54MW12, and 54MW13 on April 25, 2022. Groundwater elevation measurements were collected prior to sampling activities. A groundwater quality meter was calibrated at the beginning of each day before groundwater sampling was initiated. The locations of monitoring wells sampled during this quarterly event are provided in **Figure 4-1**.

4.2.1 Groundwater Elevation Measurements

Table 4-4 provides the measured depth-to-water levels (from the top of the casing) and groundwater elevations collected on April 25, 2022, during the thirty-eighth monitoring event. **Figure 4-3** presents a groundwater elevation contour map developed from the elevation data collected during the quarter.

Estimated groundwater flow velocity for Area A was calculated based on parameters used in the Final SWMU 54 RFI/CMS Report (URS, 2008). The Area A flow path of approximately 538.4 ft had a groundwater elevation difference of approximately 15 ft, resulting in a calculated hydraulic gradient of 0.028 ft/ft. Using an average K value for Area A of 4.86 ft/day and an estimated effective porosity of 0.20, the groundwater flow velocity for Area A is approximately 0.66 ft/day (240.9 ft/year).

4.2.2 Groundwater Sampling

Groundwater samples were collected from monitoring wells 54MW1, 54MW10, 54MW12, and 54MW13 on April 25 and 26, 2022. The thirty-eighth monitoring samples were tested for the same analytes as the thirty-seventh event, which are presented in **Table 4-2**. Groundwater sampling was accomplished without any issues.

Groundwater samples were collected applying the same method and approach used during the thirty-third quarterly monitoring event, specifically, through low-flow peristaltic pumps. Monitoring wells were pumped at a rate of approximately 200 mL/min. **Table 4-5** presents a summary of the final (stabilized) water quality readings for each well from the thirty-eighth event.

Based on the DO data collected during the thirty-eighth monitoring event, groundwater within Area A exhibits aerobic conditions (i.e., DO greater than 1 ppm). The DO levels ranged from a low of 1.81 mg/L at monitoring well 54MW10 to a high of 6.19 mg/L at monitoring well 54MW12. ORP measurements ranged from a low of 52.7 mV at monitoring well 54MW1 to a high of 184.3 mV at monitoring well 54MW12. Measurements of pH ranged from a low of 6.75 SU at monitoring well 54MW10 to a high of 7.44 SU at monitoring well 54MW1. Measurements of specific conductivity ranged from a low of 428 µS/cm in monitoring well 54MW1 to a high of

521.7 µS/cm observed at monitoring well 54MW10. Copies of the COC forms are provided in **Appendix B-1** along with the raw analytical data packages.

4.2.3 Quality Control Samples

QC samples, including duplicate and temperature blanks, were collected during the thirty-eighth monitoring event.

One duplicate sample was collected at 54MW12 (duplicate as 54TW12) and analyzed for the same suite of compounds as the parent sample. Further, one MS/MSD [at a rate of 5%]) was collected at monitoring well 54MW13 (54MW13 MS/MSD) and was analyzed for the same suite of compounds as the parent sample.

In previous sampling years, one equipment rinse blank was collected during each quarter. However, because only disposable equipment was utilized during the sampling, no equipment rinse blanks were warranted. One IDW purge water sample (54-IDW) was collected and analyzed for pH, COD, and total metals. Results of the QA/QC samples are presented in the raw analytical data package provided in **Appendix B-1**.

Table 4-1 Thirty-Seventh Event Groundwater Elevations at SWMU 54

Well ID	Screen Interval (ft bgs)	Screen Length (ft)	Total Depth (ft)	Water Level (ft BTOC)	Elevation (top of casing) (ft amsl)	Water Level (ft amsl)	PID Reading (ppm)
54MW1	34.8 - 54.8	20	56	20.00	1,707.78	1,687.78	0.0
54MW10	12 - 27	15	30	16.95	1,691.10	1,674.15	0.0
54MW12	20 - 30	10	32	26.13	1,702.42	1,676.29	0.0
54MW13	12 – 25	10	25	22.65	1,698.90	1,676.25	0.0

Notes:
Elevation data collected on October 27, 2021.
amsl = above mean sea level
bgs = below ground surface
BTOC = below top of casing
ft = feet
ID = identifier
PID = photoionization detector
ppm = parts per million
SWMU = Solid Waste Management Unit

Table 4-2 Year Ten Semiannual Monitoring Analytical Suite

Well/Sample ID	Frequency	Explosives	Perchlorate	RDX MNA Parameters	MNA Indicator Parameters	Water Quality Parameters
54MW1	Semiannual	X	X	X	X	X
54MW10	Semiannual	X	X	X	X	X
54MW12	Semiannual	X	X	X	X	X
54MW13	Semiannual	X	X	X	X	X

Notes:
ID = identifier
MNA = monitored natural attenuation
RDX = cyclotrimethylenetrinitramine

Table 4-3 Thirty-Seventh Semiannual Water Quality Parameters at SWMU 54

Well ID	pH	Specific Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Temperature (°C)
54MW1	7.59	420.0	39.72	0.42	165.8	13.9
54MW10[1]	7.28	705.0	7.3	0.46	123.7	13.4
54MW12	6.82	470.4	24.22	6.84	193.4	13.2
54MW13	7.14	598.0	8.56	4.39	164.8	13.3

Notes:
Despite appropriate calibration, DO levels were significantly above the saturation value for unknown reasons and consequently are questionable.
[1] Well 54MW10 is located adjacent to the New River.
°C = degrees Celsius
µS/cm = microsiemens per centimeter
DO = dissolved oxygen
ID = identifier
mg/L = milligrams per liter
mV = millivolts
NTU = nephelometric turbidity unit
ORP = oxidation reduction potential
pH = potential of hydrogen
SWMU = Solid Waste Management Unit

Table 4-4 Thirty-Eighth Event Groundwater Elevations at SWMU 54

Well ID	Screen Interval (ft bgs)	Screen Length (ft)	Total Depth (ft)	Water Level (ft BTOC)	Elevation (top of casing) (ft amsl)	Water Level (ft amsl)	PID Readings (ppm)
54MW1	34.8 - 54.8	20	57.4	18.82	1707.78	1688.96	PID = 0.0
54MW10	12 - 27	15	30.03	16.00	1691.10	1675.10	PID = 0.0
54MW12	20 - 30	10	33.85	24.94	1702.42	1677.48	PID = 0.0
54MW13	12 - 25	10	25.31	21.38	1698.90	1677.52	PID = 0.0

Notes:
Elevation data collected on 26 January 2021.
amsl = above mean sea level
bgs = below ground surface
BTOC = below top of casing
ft = feet
ID = identifier
PID = photoionization detector
ppm = parts per million
SWMU = Solid Waste Management Unit

Table 4-5 Thirty-Eighth Semiannual Water Quality Parameters at SWMU 54

Well ID	pH	Specific Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Temperature (°C)
54MW1	7.44	428.0	0.74	2.04	52.7	13.3
54MW10	6.75	521.7	0.28	1.81	126.6	13.8
54MW12	6.68	479.9	0.67	6.19	184.3	13.4
54MW13	6.95	514.4	1.25	4.58	154.3	14.0

Notes:
°C = degrees Celsius
µS/cm = microsiemens per centimeter
DO = dissolved oxygen
ID = identifier
mg/L = milligrams per liter
mV = millivolts
NTU = nephelometric turbidity unit
ORP = oxidation reduction potential
pH = potential of hydrogen
SWMU = Solid Waste Management Unit

Legend

- Well (Current MNA Network)
- Well (Removed from Network After Ninth Quarter)
- Fence
- SWMU 54 Boundary

Aerial Source:
Near Map Imagery, February 2020

N

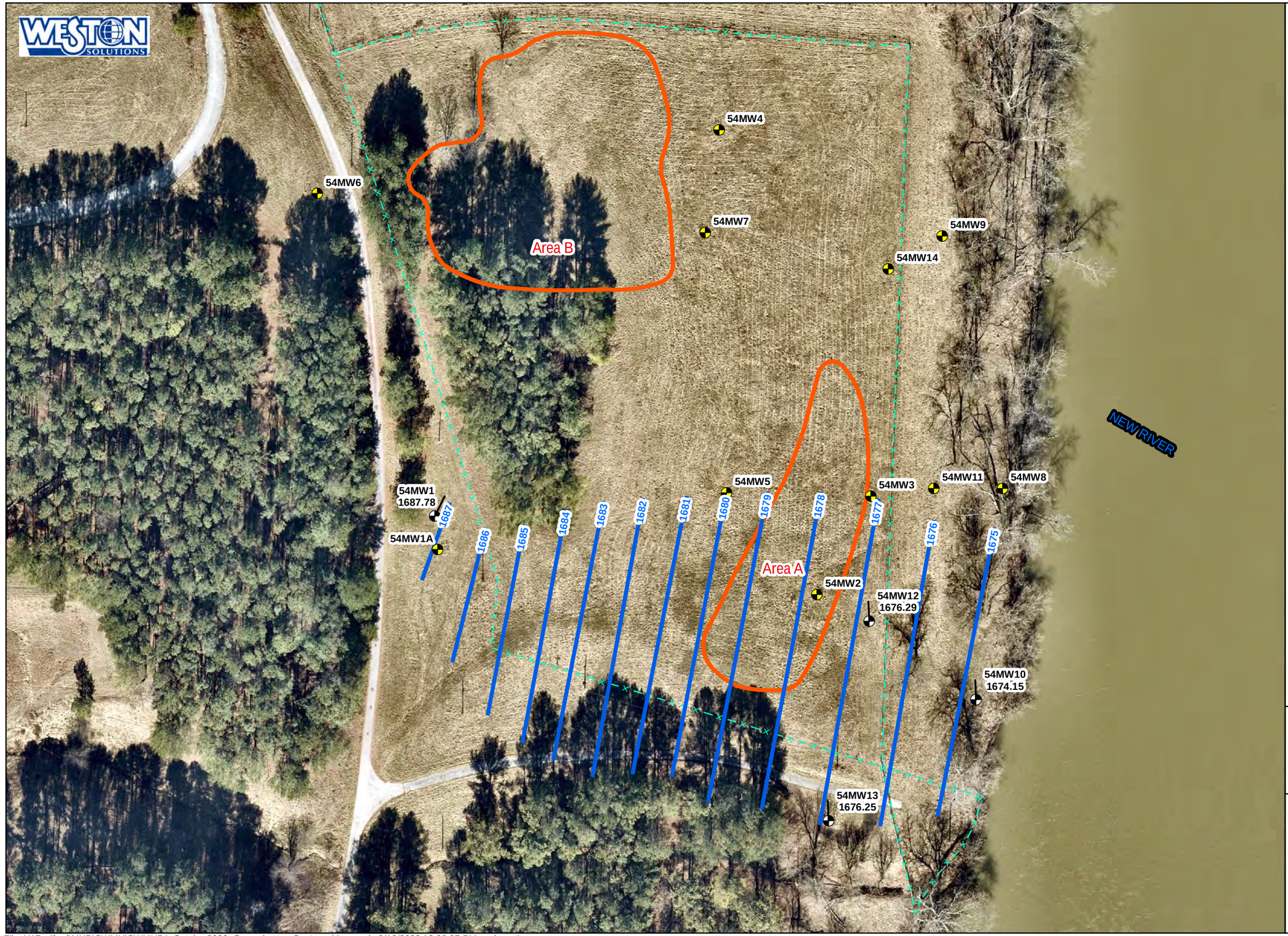
0 30 60 120 Feet

Prepared By:

Baltimore District

FIGURE 4-1
SWMU 54 MONITORING WELL SAMPLE LOCATIONS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU54_Monitoring_Well_Sample_Locations.mxd, 10/26/2021 1:51:02 PM, johna



Legend

- Well (Current MNA Network)
- Well (Removed from Network After Ninth Quarter)
- Groundwater Contour
- Fence
- SWMU 54 Boundary

Note:
Contours are in feet above mean sea level (amsl).

Aerial Source:
Near Map Imagery, February 2020

N

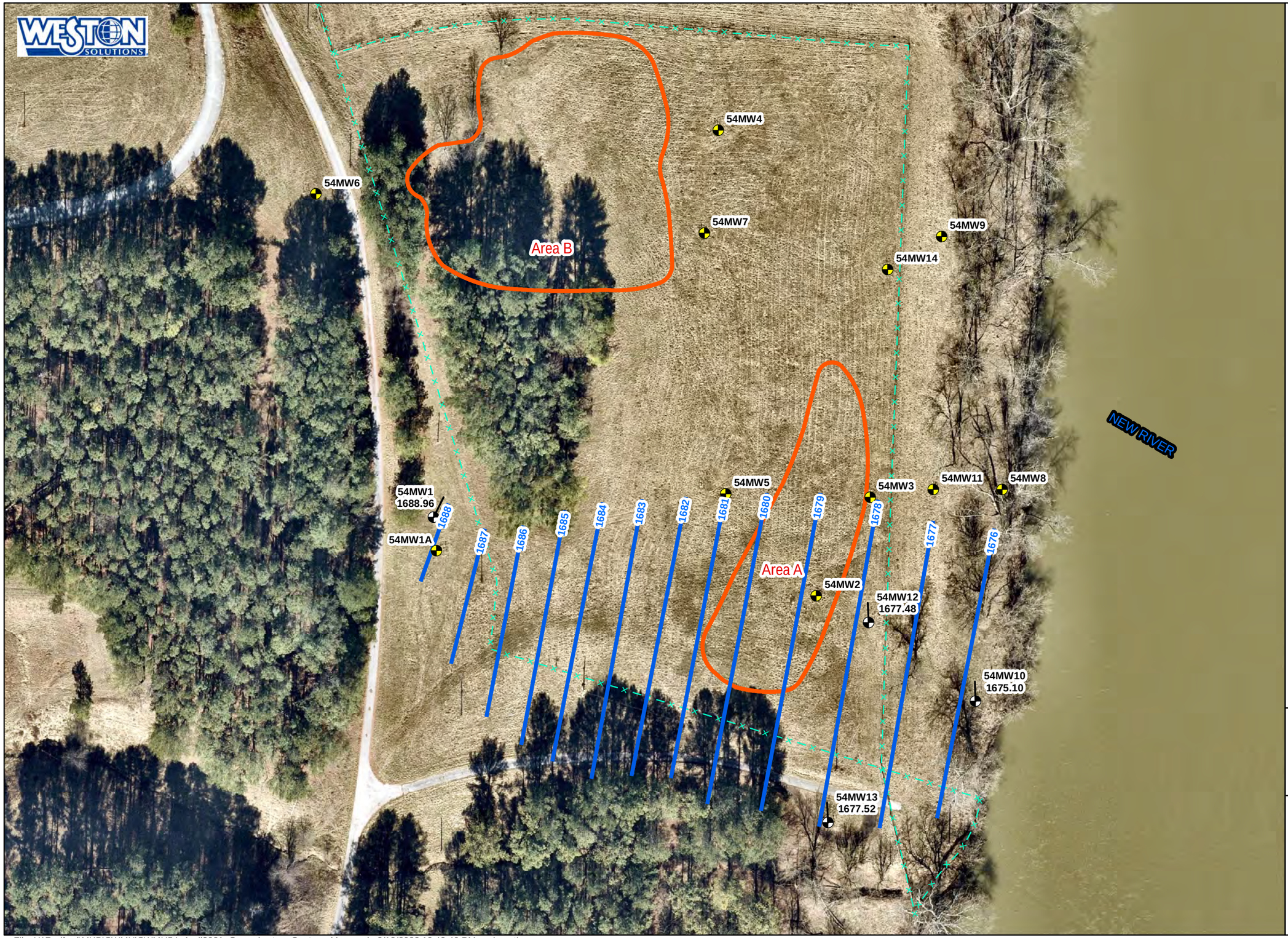
0 30 60 120 Feet

Prepared By:

Baltimore District

FIGURE 4-2
SWMU 54 OCTOBER 2021
(THIRTY-SEVENTH EVENT)
GROUNDWATER CONTOUR MAP
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU54_October2020_Groundwate_ Contour_Map.mxd, 3/13/2023 12:38:27 PM, schwartj



Legend

- Well (Current MNA Network)
- Well (Removed from Network After Ninth Quarter)
- Groundwater Contour
- Fence
- SWMU 54 Boundary

Note:
Contours are in feet above mean sea level (amsl).

Aerial Source:
Near Map Imagery, February 2020

N

0 30 60 120 Feet

Prepared By:

Baltimore District

FIGURE 4-3
SWMU 54 APRIL 2022
(THIRTY-EIGHTH EVENT)
GROUNDWATER CONTOUR MAP
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU54_April2021_Groundwater_ Contour_Map.mxd, 3/13/2023 12:42:40 PM, schwartj

5. CHEMICAL ANALYTICAL RESULTS

5.1 SELECTION OF COMPARISON CRITERIA

The analytical data collected during this investigation were compared to RGs selected in the Final SWMU 54 RFI/CMS Report (URS, 2008). For contaminants that have no RGs, the results are compared in the text to the current USEPA Regional Screening Levels (RSLs) for tap water. Screening levels (SLs) are calculated values that are derived from theoretical risk scenarios. Compounds are grouped as carcinogens or noncarcinogens, and carcinogen SL values are the lower of values calculated to represent an increase of 1E-6 in cancer risk and a Hazard Index (HI) of 0.1. To account for potential cumulative effects of exposure to noncarcinogenic compounds, values for noncarcinogens have been recalculated to an HI of 0.1. **Tables 5-1** through **5-4** present the analytical results and summaries of the thirty-seventh and thirty-eighth semiannual monitoring data, including number of results that exceeded the RGs, frequency of detection, minimum and maximum detected concentrations, and the location of maximum concentration.

5.2 THIRTY-SEVENTH EVENT GROUNDWATER RESULTS (OCTOBER 2021)

Four groundwater monitoring wells, 54MW1, 54MW10, 54MW12, and 54MW13, were sampled during this semiannual monitoring event, with a duplicate sample collected from monitoring well 54MW10. Samples were submitted for explosives, perchlorate, RDX breakdown by-products (DNX, MNX, and TNX), and MNA indicator parameter analyses. Detected constituents are summarized in **Table 5-1**, whereas the complete results are presented in **Table 5-2**. Sample locations are provided in **Figure 4-1**. The complete laboratory analytical reports are included in **Appendix B-1**.

Explosives

Four explosives were detected in groundwater samples: 2,4,6-TNT, 2-amino-4,6-dinitrotoluene (2ADNT), 4-amino-2,6-dinitrotoluene (4ADNT), and RDX. All four explosives were detected in monitoring wells 54MW10 and 54MW13, whereas explosives detected in 54MW12 included only 2,4,6-TNT, 2ADNT, and 4ADNT. No explosives were detected at background monitoring well 54MW1.

The explosive 2,4,6-TNT was detected at monitoring well 54MW10 at concentrations of 5.4. micrograms per liter (µg/L) and 4.0 µg/L (duplicate 54TW10), at monitoring well 54MW12 at a concentration of 9.3 µg/L, and at monitoring well 54MW13 at a concentration of 11.8 µg. The concentrations of 2,4,6-TNT at monitoring wells 54MW10 and 54MW13 exceeded the RG of 7.82 µg/L.

The explosive 2ADNT was detected at monitoring well 54MW10 at an estimated concentration of 1.5 µg/L in the original and duplicate sample, at monitoring well 54MW12 at a concentration of 3.3 µg/L, and at monitoring well 54MW13 at a concentration of 2.3 µg/L. An RG has not been established for 2ADNT. There is no USEPA maximum contaminant level (MCL) (USEPA, 2018); however, the Tap Water RSL for 2ADNT is 39 µg/L (USEPA, 2021).

The explosive 4ADNT was detected at monitoring well 54MW10 at concentrations of 1.6 µg/L and 1.4 µg/L (duplicate), at monitoring well 54MW12 at a concentration of 1.9 µg/L, and at monitoring well 54MW13 at a concentration of 1.3 µg/L. An RG has not been established for 4ADNT. There is no USEPA MCL (USEPA, 2018); however, the Tap Water RSL for 4ADNT is 39 µg/L (USEPA, 2021).

RDX was detected at monitoring well 54MW10 at concentrations of 1.4 µg/L and 1.0 µg/L (duplicate) and at monitoring well 54MW13 at a concentration of 0.58 µg/L. There were no detected concentrations that exceeded the RG of 6.1 µg/L. TNX, an RDX breakdown by-product, was not detected during this semiannual monitoring event.

The monitoring wells with detected concentrations of explosives are typically the same wells with observed hits recorded during previous sampling rounds. The monitoring well locations (54MW12 and 54MW13) where 2,4,6-TNT exceeded the RG are provided in **Figure 5-1**.

Perchlorate

Perchlorate was detected in four groundwater samples collected from monitoring wells 54MW10 and duplicate, 54MW12, and 54MW13 during this semiannual monitoring event. Perchlorate was detected at monitoring well 54MW10 at concentrations of 0.072 µg/L and 0.076 µg/L (duplicate),

at monitoring well 54MW12 at a concentration of 0.30 µg/L, and at monitoring well 54MW13 at a concentration of 0.14 µg/L. All detections were well below the RG of 10.9 µg/L.

Miscellaneous Analytes

Groundwater samples were also analyzed for MNA indicators (TOC, TIC, dissolved ferrous iron, dissolved manganese, chlorate, chlorite, chloride, nitrate, and sulfate) for the purposes of evaluating the effectiveness of the MNA process.

Observed concentrations of TOC in the four monitoring wells ranged from a low of 0.0 mg/L (non-detect) (54MW1, 54MW10, 54MW12, and 54MW13) to an estimated high of 1.5 mg/L (54TW10, duplicate of 54MW10), whereas the concentrations of TIC ranged from a low of 60 mg/L (54MW1) to a high of 91 mg/L (54MW13). Dissolved ferrous iron concentrations ranged from a low of 0.01 mg/L (54MW12) to a high of 0.10 mg/L (54MW10). Dissolved manganese concentrations ranged from a low of 0.0 mg/L (non-detect) (54MW12) to a high of 1.10 mg/L (54MW10). Chloride concentrations ranged from an estimated low of 2.3 mg/L (54MW1) to a high of 7.6 mg/L (54MW13). Detected concentrations of nitrate ranged from an estimated low of 0.25 mg/L (54MW10) to an estimated high of 0.66 mg/L (54MW12). Sulfate concentrations ranged from a low of 28.0 mg/L (54MW1 and 54MW12) to a high of 120.0 mg/L (54MW10 and duplicate). The MNA indicator parameters chlorate and chlorite went undetected during this semiannual monitoring event. **Table 5-2** presents the MNA indicator parameters sample results. A more detailed discussion of the MNA results is provided in Section 6.

5.3 THIRTY-EIGHTH GROUNDWATER RESULTS (APRIL 2022)

Four groundwater monitoring wells, 54MW1, 54MW10, 54MW12, and 54MW13, were sampled during the thirty-eighth monitoring event. Samples were submitted for explosives, perchlorate, RDX breakdown by-products (DNX, MNX, and TNX), and MNA indicator parameter analyses. However, samples for explosives, perchlorate and RDX breakdown by-products for two monitoring wells (54MW1 and 54MW12) were never received by the laboratory due to lost shipment by Federal Express. This was not identified until the receipt of the data for the other samples were evaluated several months later. A summary of detected and non-detected constituents is summarized in **Table 5-3**, and the analytical results are presented in **Table 5-4**.

Sample locations are provided in **Figure 4-1**. The complete laboratory analytical reports are included in **Appendix B-1**.

Explosives

Four explosives were detected in groundwater samples: 2,4,6-TNT, 2ADNT, 4ADNT, and RDX. The explosives 2,4,6-TNT, 2ADNT, 4ADNT, and RDX were detected in both monitoring wells 54MW10 and 54MW13 sampled during this event.

The explosive 2,4,6-TNT was detected at monitoring well 54MW10 at a concentration of 3 µg/L and at monitoring well 54MW13 at a concentration of 5.8 µg/L. The concentrations of 2,4,6-TNT at monitoring wells 54MW10 and 54MW13 did not exceed the RG of 7.82 µg/L.

The explosive 2ADNT was detected in monitoring well 54MW10 at a concentration of 1.1 µg/L and at a concentration of 1.2 µg/L at monitoring well 54MW13. An RG has not been established for 2ADNT. There is no USEPA MCL (USEPA, 2018); however, the Tap Water RSL for 2ADNT is 39 µg/L (USEPA, 2021).

The explosive 4ADNT was detected at monitoring well 54MW10 at a concentration of 4.2 µg/L; at monitoring well 54MW12 at a concentration of 2.0 µg/L; at monitoring well 54MW13 at concentrations of 1.4 µg/L, and 1.6 µg/L (field duplicate 54TW13). An RG has not been established for 4ADNT. There is no USEPA MCL (USEPA, 2018); however, the Tap Water RSL for 4ADNT is 39 µg/L (USEPA, 2021).

The explosive RDX was detected at monitoring well 54MW10 at a concentration of 0.78 µg/L and at monitoring well 54MW13 at a concentration of 0.83 µg/L. There were no detected concentrations that exceeded RG of 6.1 µg/L. No RDX breakdown by-products (DNX, MNX, and TNX) were detected at any of the monitoring wells during this quarterly monitoring event.

The monitoring wells with detected concentrations of explosives are typically the same wells with hits recorded during previous sampling rounds.

Perchlorate

Perchlorate was detected in the groundwater samples collected from monitoring wells 54MW10 and 54MW13. Perchlorate was detected at monitoring well 54MW10 at a concentration of 0.12 µg/L and at monitoring well 54MW13 at a concentration of 0.26 µg/L. Both detections are well below the RG of 10.9 µg/L.

Miscellaneous Analytes

Groundwater samples were also analyzed for MNA indicators (TOC, TIC, dissolved ferrous iron, dissolved manganese, chlorate, chlorite, chloride, nitrate, and sulfate) for the purposes of evaluating the effectiveness of the MNA process.

No TOC was detected in any of the four wells; whereas the concentrations of TIC ranged from a low of 60.0 mg/L (54MW1) to a high of 83.0 mg/L (54MW12 and 54MW13). Dissolved ferrous iron concentrations ranged from a low of 0.01 mg/L (54MW12) to a high of 2.01 mg/L (54MW10). Dissolved manganese concentrations ranged from a low of 0.0 mg/L (non-detect) (54MW10) to a high of 3 mg/L (54MW13). Chloride concentrations ranged from an estimated low of 3.1 mg/L (54MW1) to a high of 5.5 mg/L (54MW12). Detected concentrations of nitrate ranged from a low of 0.13 mg/L (54MW1) to a high of 0.75 mg/L (54MW12). Sulfate concentrations ranged from a low of 27.0 mg/L (54MW1) to a high of 59.0 mg/L (54MW12). The MNA indicator parameter of chlorate and chlorite went undetected during this semiannual monitoring event. **Table 5-4** presents the MNA indicator parameters sample results. A more detailed discussion of the MNA results is provided in Section 6.

5.4 YEAR ONE THROUGH YEAR TEN SAMPLE RESULTS

Samples collected during the first 2 years were analyzed for explosives, perchlorate, and MNA indicators. The Year Two MNA Report (CB&I, 2013) recommended elimination of the wells with no COI exceedances for the first 2 years, based on criteria established in the MNA Work Plan. The ninth quarter of sampling occurred prior to regulatory approval of the Year Two MNA Report, and the original parameters were included in that sampling event. After approval of the Year Two MNA Report, the sampling plan was modified to include RDX MNA indicators in the analytical suite and to reduce the sampling program from 14 monitoring wells to 3 wells with COI

exceedances (54MW10, 54MW12, and 54MW13), and an upgradient well (54MW1) to monitor background conditions. There have been no further modifications to the sampling plan.

Multiple wells were removed from the monitoring network after the ninth and tenth quarters and, therefore, were not sampled during Years Three through Seven. Monitoring wells that were included in these yearly events included 54MW1, 54MW10, 54MW12, and 54MW13, which monitor Area A at SWMU 54. This section discusses the results from the first 9 years (36 quarters) of MNA sampling at these wells. Except for a change from quarterly to semiannually, Year Ten of sampling did not change from Years Three through Nine and included the analyses of explosives, perchlorate, RDX, RDX breakdown by-products (DNX, MNX, and TNX), MNA indicator parameters, and water quality parameters.

5.4.1 Groundwater

Samples from the four monitoring wells within SWMU 54 were analyzed for explosives for 36 quarters and 2 semiannual events of sampling. The trends in number of detections during this period are shown in **Figures 5-3** through **5-6** and are discussed in the paragraphs that follow.

5.4.1.1 Explosives

During the Year Three sampling round (tenth through twelfth quarters), 13 explosives were detected in the samples, including DNX, MNX, and TNX. The limit of quantitation (LOQ) for all explosives during the tenth through twelfth quarters was 0.2 µg/L.

During the Year Four sampling round (thirteenth through sixteenth quarters), the number of explosives detected decreased to five compounds. The explosives included 2,4,6-TNT, 2ADNT, 4ADNT, RDX, and the RDX breakdown by-product DNX. The limit of detection (LOD) during the thirteenth through fifteenth quarters for 2,4,6-TNT, 2ADNT, 4ADNT, and RDX was 0.3 µg/L. The LOQ during the thirteenth through fifteenth quarters was 1.0 µg/L for 2,4,6-TNT and 0.5 µg/L for 2ADNT, 4ADNT, and RDX. The LODs of RDX breakdown by-products of DNX, MNX, and TNX during the thirteenth and fourteenth quarters were 0.2 µg/L, 0.1 µg/L, and 0.2 µg/L, respectively. The LOQs of RDX breakdown by-products of DNX, MNX, and TNX during the thirteenth and fourteenth quarters were 0.4 µg/L, 0.2 µg/L, and 0.4 µg/L, respectively. During the

fifteenth quarter, the LOD and LOQ for all RDX breakdown by-products decreased to 0.1 µg/L and 0.2 µg/L, respectively.

During the Year Five sampling round (seventeenth through twentieth quarters), the number of detected analytes was reduced once more to four compounds: 2,4,6-TNT, 2ADNT, 4ADNT, and RDX. The LOD and LOQ for 2,4,6-TNT, 2ADNT, 4ADNT, RDX, and RDX breakdown by-products during the seventeenth through twentieth quarters were 0.1 µg/L and 0.2 µg/L, respectively. The explosive 2,4,6-TNT was detected at concentrations above the RGs at monitoring wells 54MW12 and 54MW13, whereas RDX was detected above the RGs only at monitoring well 54MW12. The explosive 2,4,6-TNT was detected above the RG at monitoring well 54MW12 during all four quarters (seventeenth through twentieth) and at monitoring well 54MW13 during two sampling quarters (seventeenth and twentieth), whereas RDX was detected above the RG only during the nineteenth quarter at monitoring well 54MW12.

During the Year Six sampling round (twenty-first through twenty-fourth quarters), the number of detected analytes remained at four compounds: 2,4,6-TNT, 2ADNT, 4ADNT, and RDX. The LOD and LOQ for 2,4,6-TNT, 2ADNT, 4ADNT, RDX, and RDX breakdown by-products during the twenty-first through twenty-fourth quarters were 0.1 µg/L and 0.2 µg/L, respectively. The explosive 2,4,6-TNT was detected at concentrations above the RGs at monitoring wells 54MW10, 54MW12, and 54MW13, whereas RDX was detected above the RGs only at monitoring well 54MW12. The explosive 2,4,6-TNT was detected above the RG at monitoring well 54MW12 during all four quarters (twenty-first through twenty-fourth), at monitoring well 54MW10 during one sampling quarter (twenty-first), and at monitoring well 54MW13 during two sampling quarters (twenty-first and twenty-fourth). RDX was detected above the RG during all four quarters (twenty-first through twenty-fourth) at monitoring well 54MW12.

During the Year Seven sampling round (twenty-fifth through twenty-eighth quarters), the number of detected analytes expanded to five compounds: 2,4,6-TNT, 2ADNT, 4ADNT, RDX, and 2,6-DNT (and DNT mixture). The LOD and LOQ for 2,4,6-TNT, 2ADNT, 4ADNT, 2,6-DNT, RDX, and RDX breakdown by-products during the twenty-fifth through twenty-seventh quarters were 0.1 µg/L and 0.2 µg/L, respectively. The LOD and LOQ were 0.094 µg/L and 0.19 µg/L, respectively, in the twenty-eighth quarter. The explosive 2,4,6-TNT was detected at concentrations

above the RG at monitoring wells 54MW10, 54MW12, and 54MW13, whereas RDX was detected above the RG only at monitoring well 54MW12 and only in the twenty-sixth quarter. The explosive 2,4,6-TNT was detected above the RG at monitoring well 54MW12 during all four quarters (twenty-fifth through twenty-eighth), at monitoring well 54MW10 during one sampling quarter (twenty-eighth), and at monitoring well 54MW13 during one sampling quarter (twenty-eighth). RDX was detected above the RG during one quarter (twenty-sixth) at monitoring well 54MW12.

During the Year Eight sampling round (twenty-ninth through thirty-second quarters), the number of detected analytes decreased to four compounds: 2,4,6-TNT, 2ADNT, 4ADNT, and RDX. The LOD and LOQ for 2,4,6-TNT, 2ADNT, 4ADNT, and RDX during the twenty-ninth through thirty-second quarters were 0.1 µg/L and 0.2 µg/L, respectively. The LOD and LOQ were 0.2 and 0.1 µg/L, respectively, in the twenty-ninth quarter. The explosive 2,4,6-TNT was detected at concentrations above the RG at monitoring wells 54MW10 in the thirtieth and thirty-first quarters, whereas 2,4,6-TNT was detected at concentrations above the RG at 54MW12 and 54MW13 during the twenty-ninth through thirty-first quarters. RDX and perchlorate were not detected at concentrations above the RG during any quarter.

During the Year Nine sampling round (thirty-third through thirty-sixth quarters), the number of detected analytes increased to six compounds: 2,4,6-TNT, 2ADNT, 4ADNT, 2-nitrotoluene (2-NT), RDX, and TNX. The LOD and LOQ for 2,4,6-TNT, 2ADNT, 4ADNT, and RDX during the thirty-third through thirty-sixth quarters were 0.1 µg/L and 0.2 µg/L, respectively. The explosive 2,4,6-TNT was detected at concentrations above the RG at monitoring wells 54MW10 and 54MW13 in all four quarters (thirty-third through thirty-sixth), whereas 2,4,6-TNT was detected at concentrations above the RG at 54MW12 during the thirty-fourth through thirty-sixth quarters. RDX and perchlorate were not detected above the RG during any quarter.

During the Year Ten sampling round (thirty-seventh and thirty-eighth semiannual events), the number of detected analytes decreased to four compounds as compared to Year Nine: 2,4,6-TNT, 2ADNT, 4ADNT, and RDX. The LOD and LOQ for 2,4,6-TNT, 2ADNT, 4ADNT, and RDX during the thirty-seventh and thirty-eighth events were 0.1 µg/L and 0.2 µg/L, respectively. The explosive 2,4,6-TNT was detected at concentrations above the RG at monitoring wells

54MW12 and 54MW13 in the thirty-seventh event. RDX and perchlorate were not detected above the RG during either semiannual event in Year Ten.

Explosives had gone undetected at monitoring well 54MW1 in 35 of the previous 36 quarters, but 2-NT and RDX were detected in this well in the thirty-sixth quarter (**Figure 5-2**); however, explosives were noted detected in Year Ten at 54MW1. The explosive 2,4,6-TNT was detected at monitoring well 54MW10 above the RG during the tenth, eleventh, twelfth, sixteenth, twenty-first, twenty-eighth, twenty-ninth, thirtieth, and thirty-third through thirty-sixth quarterly monitoring events (**Figure 5-3**); however, it was not detected above its RG in the two Year Ten events (thirty-seventh and thirty-eight events). Monitoring well 54MW12 has had detectable concentrations of 2,4,6-TNT above the RG during all sampling events, with the exception of the sixth, seventh, sixteenth, and thirty-second quarters. The twenty-sixth quarter recorded the highest concentrations of 2,4,6-TNT at 164 µg/L (**Figure 5-4**). The explosive 2,4,6-TNT "spikes" at monitoring well 54MW12 appear fairly regularly to be not occurring in any particular season (**Figure 5-4**). Concentrations of 2,4,6-TNT at 54MW13 had historically been below the RG; however, beginning in the twentieth quarterly event, concentrations have been above the RG for most quarterly events since then, including the twenty-first, twenty-fourth, twenty-eighth, twenty-ninth, thirty-second through thirty-sixth quarterly, and thirty-seventh monitoring events of sampling where it exceeded the RG. The detected concentration in the thirty-fifth quarter was the highest value recorded to date at monitoring well 54MW13 at 19.2 µg/L, which was detected in the duplicate sample (**Figure 5-5**).

Concentrations of RDX exceeded the RG in monitoring well 54MW10 during the fifth, tenth, twelfth, and sixteenth quarters (**Figure 5-3**). Monitoring well 54MW12 had detectable concentrations of RDX above the RG during 7 of the first 12 quarters of sampling, and only one detection above the RG during Year Four (fourteenth quarter) and Year Five (nineteenth quarter) of sampling. During Year Six, however, there were two detections above the RG, once during the twenty-first quarter and once during the twenty-fourth quarter. During Year Seven, there was one RDX detection above the RG (54MW12) in the twenty-sixth quarter. It appears that elevated concentrations of RDX at 54MW12 are cyclic with periods of lower concentrations in between (**Figure 5-4**). These elevated RDX concentrations are closely aligned with those of 2,4,6-TNT with no particular seasonal pattern being apparent. Historically, monitoring well 54MW13 has not

had a detection of RDX above the RG through the first 16 quarters of sampling. This trend continued during the Year Five through Year Six monitoring events. Further, when compared to historical concentrations, the Year Nine and Ten RDX concentrations are increasing, but remain under the RG (**Figure 5-5**).

The only detections of DNX at 54MW12 occurred during the tenth and twelfth quarters, when the breakdown by-product was also detected at monitoring wells 54MW10 and 54MW13. The concentrations of these compounds were low (less than 1 µg/L), but generally mirrored the RDX concentrations in the wells. Detection of the RDX daughter products in these wells with elevated RDX concentrations suggests degradation and natural attenuation of RDX is a viable, ongoing remedial process at the site. During the Year Five through Year Seven monitoring events, DNX was not detected during any of the sampling quarters. DNX was not detected during the Year Nine or Year Ten monitoring events. TNX was detected in monitoring wells 54MW10 and 54MW13 during the thirty-third quarter but was not detected in the thirty-fourth through thirty-sixth quarters during Year Nine or during the thirty-seventh and thirty-eighth events of Year Ten.

Many of the intermediate and end-products of RDX degradation are relatively short-lived in the environment, and accumulation of these would not be expected. Studies on the fate and transport of explosives in the environment state that the nitroso intermediates of RDX (DNX, MNX, and TNX) have rarely been observed in the field at the few sites where analyses have been conducted for them (Brannon and Pennington, 2002). Many of these intermediates are observed only transiently due to their susceptibility to rapid mineralization, typically persisting only on the scale of several hours to several days. Significant observations of the final end-products are also not expected. Hydrazines, dimethylhydrazines, and methanol are not likely to accumulate in the environment, particularly at the low levels of concentration at which they would be produced as end-products, because these compounds biodegrade very rapidly. Therefore, the observation of intermediate and end-products of RDX biodegradation (DNX, MNX, and TNX), even at low concentrations, would be considered strong presumptive evidence of active and ongoing degradation processes.

The 2,4,6-TNT degradation intermediaries 2ADNT and 4ADNT have been detected with regularity at monitoring wells 54MW10, 54MW12, and 54MW13, the exceptions being:

the fourteenth quarter when 4ADNT went undetected in monitoring wells 54MW12 and 54MW13; the twentieth quarter when 4ADNT went undetected in monitoring well 54MW10; the twenty-first quarter when 2ADNT went undetected in monitoring well 54MW12; the twenty-second quarter when both 2ADNT and 4ADNT went undetected in monitoring well 54MW10; the twenty-third quarter when 2ADNT went undetected in monitoring well 54MW13 and 4ADNT went undetected in monitoring well 54MW12; and the twenty-fourth quarter when 4ADNT went undetected in monitoring wells 54MW10 and 54MW12. Additionally, 4ADNT went undetected in 54MW13 during the twenty-fifth quarter. The explosive 4ADNT was detected in monitoring wells 54MW10, 54MW12, and 54MW13 during the thirty-seventh and thirty-eighth events of Year Ten.

The explosive 2,6-DNT was detected twice during the Year Seven monitoring event (twenty-sixth quarter). Monitoring well 54MW12 had a concentration of 3.6 µg/L and monitoring well 54MW13 had an estimated concentration of 0.91 µg/L. DNT mixture results are obtained by adding together the results of 2,4-DNT and 2,6-DNT. The RG of 0.932 µg/L for the DNT mixture was exceeded at monitoring well 54MW12. The explosive 2,6-DNT was not detected during the Year Nine monitoring event but was detected in all four wells during the thirty-seventh event of Year Ten and the two analyzed wells during the thirty-eighth event of Year Ten.

Analysis of the historical and recent data for monitoring wells 54MW10, 54MW12, and 54MW13 shows a correlation in 2,4,6-TNT concentration spikes with increasing concentrations of both 2ADNT and 4ADNT, indicating a limited transformation process from 2,4,6-TNT (**Figures 5-6** through **5-9**, respectively). Degradation of 2,4,6-TNT leading to amino-DNTs is likely occurring at localized zones within the soil matrix where the conditions are more favorable.

5.4.1.2 Perchlorate

Site-wide perchlorate concentrations have typically been steady and below the RG with the exception of the concentrations detected at 54MW12 during the fourth and eighth quarters. These spikes were reported as correlating with peaks in 2,4,6-TNT concentration. During Year Four and Year Five of monitoring, monitoring well 54MW12 continued to exhibit the highest concentrations, with the exception of the sixteenth quarter when the greatest values were detected at monitoring well 54MW10 (**Figures 5-2** through **5-5**). A summary of these results is provided in Section 6.

5.5 LABORATORY ANALYSIS, DATA VALIDATION, AND REPORTING

The Year Ten sampling effort was collected semiannually in October 2021 and April 2022. Groundwater samples were collected in accordance with the Uniform Federal Policy – Quality Assurance Project Plan (UFP-QAPP), revised August 2015. Documentation pertaining to COC and sampling conditions was filed in field and laboratory records. **Table 5-9** summarizes the samples and analyses of the Year Ten sampling effort.

The samples were placed into coolers with ice at the time of collection. The COC forms were completed as the samples were packaged into coolers for transport. Trip blanks, temperature blanks, and ice were added as required. The coolers for the metals, pH, COD, anions, chlorate/chlorite, TIC, and TOC were shipped to CT Laboratories in Baraboo, WI; this laboratory then repacked samples for chlorate/chlorite as necessary and shipped to Eurofins Analytical in South Bend, IN (subcontractor laboratory). The coolers containing explosive and perchlorate samples were shipped to SGS Accutest in Orlando, FL.

The analytical data were reviewed for consistency with the test methods as noted in **Table 5-6** to ensure that the data set met project data quality objectives and were usable for the purposes of the project. Validation was performed following the *National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, 2014a), *National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, 2014b), and professional judgment. Any anomalies with regard to the requirements for precision, accuracy, representativeness, completeness, comparability, and sensitivity are discussed below, and the data were flagged where appropriate. Analytical methods are shown in **Table 5-6**. Data validation reports are included as **Appendix B-2**.

Application of Data Flags

General data quality flagging conventions in **Table 5-7** were used to indicate QC anomalies. Data were flagged, where appropriate, in accordance with the National Functional Guidelines and the UFP-QAPP. A data quality summary is provided below.

Preservation, Temperature, and Hold Time

All sample preservation requirements were met. All sample analyses were within holding time. Refer to **Table 5-8** for holding time exceedances.

5.5.1 Precision

Precision was measured from the relative percent difference (RPD) between the parent sample/field duplicate, laboratory duplicates, laboratory control sample (LCS), MS/MSD pairs, and two columns.

Field Duplicates

Field duplicates were collected at a frequency of 10% of field samples. Except for 1,3,5-TNB for samples 54MW10 and duplicate 54TW10 in October 2021, RPDs were within control limits. **Table 5-9** lists field duplicate exceedances.

Laboratory Duplicates

Laboratory duplicate analysis was performed at a frequency of 10% of laboratory samples, for inorganic analyses. RPDs were within control limits. **Table 5-14** lists laboratory duplicate exceedances.

MS/MSD Duplicate RPD

MS/MSD samples were analyzed at a frequency of 5% per preparatory batch. Most results were within control limits except for a couple of metals for the IDW samples for both events. **Table 5-11** lists MS/MSD RPD exceedances.

RPD Between Two Columns

A few explosives were outside control limits for the October 2021 and April 2022 events. **Table 5-12** lists RPD between two columns exceedances.

5.5.2 Representativeness

The samples were collected from required sampling locations. Representativeness of the data is considered acceptable.

5.5.3 Comparability

Comparability was acceptable. Standard analytical methods were used. Standard preparatory and analytical methods were applied to the samples across sampling events. In all cases, the detection

limits (DLs) and LODs attained were below the specified LOQs. All target compounds detected below the LOQs, flagged (J) by the laboratory, are considered estimated concentrations.

5.5.4 Completeness

Completeness was measured as the number of usable results versus the total number of results. The data set completeness was calculated to be 100%. The information fulfilled the data quality objectives of this investigation.

5.5.5 Accuracy

Accuracy was measured from laboratory QC sample percent recoveries, including LCS, MS, MSD, post-digestion spike (PDS), serial dilutions, and surrogates. Accuracy was also evaluated by determining whether any deviations from method or laboratory requirements for internal standard, initial calibration verification (ICV), and continuing calibration verification (CCV) recoveries were noted in the case narrative(s).

LCS/MS/MSD Recovery

One LCS was analyzed for each batch of 20 samples or fewer.

Most recoveries were within control limits. There were no LCS recovery exceedances.

MS/MSD analysis was performed at a frequency of 5% of field samples.

Most recoveries were within control limits. **Table 5-13** presents MS/MSD recoveries outside control limits. The data for the parent sample were flagged as indicated on the table. If no flag was indicated, the data were not flagged. Data were not flagged in cases where the parent sample concentration was greater than four times the spike concentration.

Only parent samples were qualified.

PDS Recovery Exceedances

Most recoveries were within control limits. There were no PDS recovery exceedances.

Serial Dilution Percent Difference

Most percent differences were within control limits. There were no serial dilution difference exceedances.

Surrogates

All surrogate recoveries were within control limits. There were no surrogates that exceeded acceptance criteria.

Internal Standards

There were no internal standards outside control limits.

Calibration Verification

No calibration results were outside control limits. **Table 5-14** summarizes calibration exceedances.

5.5.6 Sensitivity

Sensitivity was measured by evaluating whether the LOQ was less than the RGs. All LOQs were below the RGs.

Additionally, sensitivity was evaluated by determining whether method blank and trip blanks were less than the LOQ. Some analytes were detected in some blanks, leading to qualification of sample results.

Blanks (Calibration [Instrument], Method, and Trip)

Calibration blanks were analyzed throughout analytical runs.

One method blank was analyzed with every batch of 20 samples or fewer for each matrix.

Table 5-15 presents samples flagged for blank results. Sample results greater than two times the blank concentration were not qualified. Data quality and usability were not affected.

LOQs

LOQs, before adjustments for dilutions, were below the regulatory criteria noted in the UFP-QAPP.

Data Usability Summary

In summary, all data were considered usable with the qualifications discussed above. The completeness goals for the project were met, and all sample data are usable as qualified for making project decisions and assessments. The data were considered of good quality for the project goals.

Low LCS, MS/MSD (**Table 5-13**), and PDS percent recoveries indicate that the associated results may be biased low for the associated samples.

High MS/MSD (**Table 5-13**) percent recoveries indicate that the associated results may be biased high for the associated samples.

The RPDs for field duplicate (**Table 5-9**), laboratory duplicate (**Table 5-10**), MS/MSD (**Table 5-11**), and between two columns (**Table 5-12**) exceedances indicate that the associated results were estimated or non-detect estimated for the associated samples.

The biases do not affect the overall conclusions.

This Data Quality Assessment was prepared by: Amy L. Hogan, Kevin C. Harmon, and Sandra Nacquin of Validata Chemical Services, Inc. (Validata). Validata has provided data validation services since 1990 with completion of over 350 environmental chemistry data validation contracts for all business sectors including 35 USACE and 252 additional U.S. Department of Defense (DoD) contracts. Validata has been audited by the USEPA Quality Assurance Section and the U.S. Navy Environmental Project Management Group, and was approved as a data validation service by both agencies. Data validation reports are presented in **Appendix B-2**.

Table 5-1 SWMU 54 Summary of Thirty-Seventh Event Groundwater Samples

Analyte	Units	RG	# of RG Exceedances	# of Detections	# of Samples[1]	Minimum Concentration	Maximum Concentration	Location of Maximum
Explosives								
1,3-Dinitrobenzene	µg/L	NA	NA	0	5	ND	ND	NA
2,4,6-TNT	µg/L	7.82	2	4	5	ND	11.8	54MW13
DNT Mixture*	µg/L	0.932	0	0	5	ND	ND	NA
2,4-DNT	µg/L	NA	NA	0	5	ND	ND	NA
2,6-DNT	µg/L	NA	NA	0	5	ND	ND	NA
2-Amino-4,6-DNT	µg/L	NA	NA	4	5	ND	3.3	54MW12
2-Nitrotoluene	µg/L	NA	NA	0	5	ND	ND	NA
4-Amino-2,6-DNT	µg/L	NA	NA	4	5	ND	2.0	54MW12
RDX	µg/L	6.1	0	3	5	ND	1.4	54MW10
DNX	µg/L	NA	NA	0	5	ND	ND	NA
MNX	µg/L	NA	NA	0	5	ND	ND	NA
TNX	µg/L	NA	NA	0	5	ND	ND	NA
Miscellaneous								
Perchlorate	µg/L	10.9	0	4	5	ND	0.3	54MW12
Chlorate	µg/L	NA	NA	0	5	ND	ND	NA
Chlorite	µg/L	NA	NA	0	5	ND	ND	NA
Chloride	mg/L	NA	NA	5	5	2.3	7.6	54MW13
Nitrate (as N)	mg/L	NA	NA	4	5	ND	0.66	54MW12
Sulfate	mg/L	NA	NA	5	5	28	120	54MW10
TIC	mg/L	NA	NA	5	5	60	91	54MW13
TOC	mg/L	NA	NA	1	5	ND	1.5	54TW10

Notes:
[1]One sample was a duplicate.
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT.

2,4,6-TNT = 2,4,6-trinitrotoluene
µg/L = micrograms per liter
DNT = dinitrotoluene
DNX = hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine
mg/L = milligrams per liter (parts per million)
MNX = hexahydro-1-nitroso-3,5- dinitro-1,3,5-triazine
NA = not applicable
ND = not detected
RDX = cyclotrimethylenetrinitramine
RG = remedial goal
SWMU = Solid Waste Management Unit
TIC = total inorganic carbon
TNX = hexhydro-1,3,5-trinitroso-1,3,5-triazine
TOC = total organic carbon

Table 5-2 SWMU 54 Detected Analytes in Thirty-Seventh Monitoring Event Groundwater Samples

Sample ID			54MW1					54MW10					54TW10 (duplicate of 54MW10)				
Date Collected			10/27/2021					10/27/2021					10/27/2021				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
Explosives																	
1,3-Dinitrobenzene	µg/L	NA	0.098	U		0.2	0.098	0.098	U		0.2	0.098	0.098	U		0.2	0.098
2,4,6-TNT	µg/L	7.82	0.098	U		0.2	0.098	5.4			0.2	0.098	4			0.2	0.098
DNT Mixture*	µg/L	0.932	0.098	U		0.2	0.098	0.098	U		0.2	0.098	0.098	U		0.2	0.098
2,4-DNT	µg/L	NA	0.098	U		0.2	0.098	0.098	U		0.2	0.098	0.098	U		0.2	0.098
2,6-DNT	µg/L	NA	0.098	U		0.2	0.098	0.098	U		0.2	0.098	0.098	U		0.2	0.098
2-Amino-4,6-DNT	µg/L	NA	0.098	U		0.2	0.098	1.5	J		0.2	0.098	1.5	J		0.2	0.098
2-Nitrotoluene	µg/L	NA	0.098	U		0.2	0.098	0.098	U		0.2	0.098	0.098	U		0.2	0.098
4-Amino-2,6-DNT	µg/L	NA	0.098	U		0.2	0.098	1.6	J		0.2	0.098	1.4	J		0.2	0.098
RDX	µg/L	6.1	0.098	U		0.2	0.098	1.4	J		0.2	0.098	1	J		0.2	0.098
DNX	µg/L	NA	0.098	U		0.2	0.098	0.098	U		0.2	0.098	0.098	U		0.2	0.098
MNX	µg/L	NA	0.098	U		0.2	0.098	0.098	U		0.2	0.098	0.098	U		0.2	0.098
TNX	µg/L	NA	0.098	U		0.2	0.098	0.098	U		0.2	0.098	0.098	U		0.2	0.098
Miscellaneous																	
Perchlorate	µg/L	10.9	0.1	U		0.2	0.1	0.072	J			0.05	0.076	J		0.2	0.1
Chlorate	µg/L	NA	10	U		10	0.1	10	U		10	8.2	10	U		10	0.1
Chlorite	µg/L	NA	10	U		10	0.1	10	U		10	7.7	10	U		10	0.1
Chloride	mg/L	NA	2.3	J		3	0.1	4.7	J		3	1	4.7			3	0.1
Nitrate (as N)	mg/L	NA	0.2	U		0.4	0.1	0.25			0.4	0.12	0.26	J	J	0.4	0.1
Sulfate	mg/L	NA	28			3	0.1	120			15	4	120			3	0.1
TIC	mg/L	NA	60			3	0.1	77			3	0.5	76			3	0.1
TOC	mg/L	NA	1.5	U		3	0.1	1.5	U		3	0.5	1.5	J		3	0.1
MNA																	
Dissolved Fe^{2+}	mg/L	NA	0.03					0.10					NA				
Dissolved Mn	mg/L	NA	0.40					1.1					NA				

Table 5-2 SWMU 54 Detected Analytes in Thirty-Seventh Monitoring Event Groundwater Samples (Continued)

Sample ID			54MW12					54MW13				
Date Collected			10/27/2021					10/27/2021				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
Explosives												
1,3-Dinitrobenzene	µg/L	NA	0.096	U		0.2	0.096	0.098	U		0.2	0.098
2,4,6-TNT	µg/L	7.82	**9.3**			0.2	0.096	**11.8**			0.2	0.098
DNT Mixture*	µg/L	0.932	0.096	U		0.2	0.096	0.098	U		0.2	0.098
2,4-DNT	µg/L	NA	0.096	U		0.2	0.096	0.098	U		0.2	0.098
2,6-DNT	µg/L	NA	0.096	U		0.2	0.096	0.098	U		0.2	0.098
2-Amino-4,6-DNT	µg/L	NA	3.3	J		0.2	0.096	2.3	J		0.2	0.098
2-Nitrotoluene	µg/L	NA	0.096	U		0.2	0.096	0.098	U		0.2	0.098
4-Amino-2,6-DNT	µg/L	NA	1.9	J		0.2	0.096	1.3	J		0.2	0.098
RDX	µg/L	6.1	0.096	U		0.2	0.096	0.58	J		0.2	0.098
DNX	µg/L	NA	0.096	U		0.2	0.096	0.098	U		0.2	0.098
MNX	µg/L	NA	0.096	U		0.2	0.096	0.098	U		0.2	0.098
TNX	µg/L	NA	0.096	U		0.2	0.096	0.098	U		0.2	0.098
Miscellaneous												
Perchlorate	µg/L	10.9	0.3			0.2	0.1	0.14	J		0.2	0.1
Chlorate	µg/L	NA	10	U		10	0.1	10	U		10	0.1
Chlorite	µg/L	NA	10	U		10	0.1	10	U		10	0.1
Chloride	mg/L	NA	6.1		J	3	0.1	7.6			3	0.1
Nitrate (as N)	mg/L	NA	0.66			0.4	0.1	0.49			0.4	0.1
Sulfate	mg/L	NA	28			3	0.1	37			3	0.1
TIC	µg/L	NA	76			0.2	0.1	91			0.2	0.1
TOC	µg/L	NA	1.5	U		10	0.1	1.5	U		10	0.1
MNA												
Dissolved Fe^{2+}	mg/L	NA	0.01					0.07				
Dissolved Mn	mg/L	NA	0.40					0.0				

Table 5-2 SWMU 54 Detected Analytes in Thirty-Seventh Monitoring Event Groundwater Samples (Continued)

Notes:
[1]RGs developed in SWMU 54 RFI/CMS Report, Final Document (URS, 2008).
Exceedances denoted by **bold** font.
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT.
2,4,6-TNT = 2,4,6-trinitrotoluene
µg/L = micrograms per liter (parts per billion)
CMS = Corrective Measures Study
DNT = dinitrotoluene
DNX = hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine
FE^{2+} = dissolved ferrous iron
ID = identifier
Lab Q = Lab Data Qualifiers
LOD = limit of detection
LOQ = limit of quantitation
mg/L = milligrams per liter (parts per million)
Mn =manganese
MNA = monitored natural attenuation
MNX = hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine
NA = not applicable; remedial goal not established for analyte at SWMU 54
RDX = cyclotrimethylenetrinitramine
RFI = RCRA Facility Investigation
RG = Remedial Goal
SWMU = Solid Waste Management Unit
TIC = total inorganic carbon
TNX = hexhydro-1,3,5-trinitroso-1,3,5-triazine
TOC = total organic carbon
URS = URS Corporation
Val Q = Validation Data Qualifier

Data Qualifiers:
J = Estimated value.
U = Analyte concentration was not above the detection level.

Table 5-3 SWMU 54 Summary of Thirty-Eighth Monitoring Event Groundwater Samples

Analyte	RG	# of RG Exceedances	# of Detections	# of Samples[1]	Minimum Concentration	Maximum Concentration	Location of Maximum
Explosives (µg/L)							
1,3-Dinitrobenzene	NA	NA	0	2	ND	ND	NA
2,4,6-TNT	7.82	0	2	2	ND	5.8	54MW10
DNT Mixture*	0.932	0	0	2	ND	ND	NA
2,4-DNT	NA	NA	0	2	ND	ND	NA
2,6-DNT	NA	NA	0	2	ND	ND	NA
2-Amino-4,6-DNT	NA	NA	2	2	ND	1.2	54MW13
2-Nitrotoluene	NA	NA	0	2	ND	ND	NA
4-Amino-2,6-DNT	NA	NA	2	2	ND	0.83	54MW13
RDX	6.1	0	2	2	ND	2.0	54MW13
DNX	NA	NA	0	2	ND	ND	NA
MNX	NA	NA	0	2	ND	ND	NA
TNX	NA	NA	0	2	ND	ND	NA
Miscellaneous (µg/L)							
Perchlorate	10.9	0	2	2	0.27	0.49	54MW12
Chlorate	NA	NA	0	5	ND	ND	NA
Chlorite	NA	NA	0	5	ND	ND	NA
Chloride	NA	NA	5	5	3.1	5.5	54MW12
Nitrate (as N)	NA	NA	4	5	0.13	0.75	54MW12
Sulfate	NA	NA	5	5	27	59	54MW12
TIC	NA	NA	5	5	60	83	54MW12/13
TOC	NA	NA	0	5	ND	ND	NA

Notes:
[1]One sample was a duplicate.
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT.
2,4,6-TNT = 2,4,6-trinitrotoluene
µg/L = micrograms per liter
DNT = dinitrotoluene
DNX = hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine
MNX = hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine
NA = not applicable
ND = not detected
RDX = cyclotrimethylenetrinitramine
RG = remedial goal
SWMU = Solid Waste Management Unit
TIC = total inorganic carbon
TNX = hexhydro-1,3,5-trinitroso-1,3,5-triazine
TOC = total organic carbon

Table 5-4 SWMU 54 Detected Analytes in Thirty-Eighth Monitoring Event Groundwater Samples

Sample ID			54MW1					54MW10					54MW12				
Date Collected			4/25/2022					4/25/2022					4/25/22				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
Explosives																	
1,3-Dinitrobenzene	µg/L	NA	NA					0.1	U		0.2	0.1	NA				
2,4,6-TNT	µg/L	7.82	NA					3.0			0.2	0.1	NA				
DNT Mixture*	µg/L	0.932	NA					0.1	U		0.2	0.1	NA				
2,4-DNT	µg/L	NA	NA					0.1	U		0.2	0.1	NA				
2,6-DNT	µg/L	NA	NA					0.1	U		0.2	0.1	NA				
2-Amino-4,6-DNT	µg/L	NA	NA					1.1			0.2	0.1	NA				
2-Nitrotoluene	µg/L	NA	NA					0.1	U		0.2	0.1	NA				
4-Amino-2,6-DNT	µg/L	NA	NA					0.78			0.2	0.1	NA				
RDX	µg/L	6.1	NA					1.8			0.2	0.1	NA				
DNX	µg/L	NA	NA					0.1	U		0.2	0.1	NA				
MNX	µg/L	NA	NA					0.1	U		0.2	0.1	NA				
TNX	µg/L	NA	NA					0.1	U		0.2	0.1	NA				
Miscellaneous																	
Perchlorate	µg/L	10.9	NA					0.12	J			0.05	NA				
Chlorate	µg/L	NA	10	U		10	0.1	10	U		10	8.2	10	U		10	0.1
Chlorite	µg/L	NA	10	U		10	0.1	10	U		10	7.7	10	U		10	0.1
Chloride	mg/L	NA	3.1			3	0.1	5.1			3	1	7.5			3	0.1
Nitrate (as N)	mg/L	NA	0.13	J		0.4	0.1	0.30			0.4	0.12	0.73			0.4	0.1
Sulfate	mg/L	NA	31			3	0.1	72			15	4	33			3	0.1
TIC	mg/L	NA	60			3	0.1	78			3	0.5	82			3	0.1
TOC	mg/L	NA	1.5	U		3	0.1	1.5	U		3	0.5	1.5	U		3	0.1
MNA																	
Dissolved Fe^{2+}	mg/L	NA	0.93					2.01					0.01				
Dissolved Mn	mg/L	NA	0.50					0.0					2.3				

Table 5-4 SWMU 54 Detected Analytes in Thirty-Eighth Monitoring Event Groundwater Samples (Continued)

Sample ID			54TW12 (duplicate 54MW12)					54MW13				
Date Collected			4/25/2022					4/25/2022				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
Explosives												
1,3-Dinitrobenzene	µg/L	NA	NA					0.10	U		0.2	0.10
2,4,6-TNT	µg/L	7.82	NA					5.8			0.2	0.10
DNT Mixture*	µg/L	0.932	NA					0.10	U		0.2	0.10
2,4-DNT	µg/L	NA	NA					0.10	U		0.2	0.10
2,6-DNT	µg/L	NA	NA					0.10	U		0.2	0.10
2-Amino-4,6-DNT	µg/L	NA	NA					1.2	J		0.2	0.10
2-Nitrotoluene	µg/L	NA	NA					0.10	U		0.2	0.10
4-Amino-2,6-DNT	µg/L	NA	NA					0.83	J		0.2	0.10
RDX	µg/L	6.1	NA					2.0			0.2	0.10
DNX	µg/L	NA	NA					0.10	U		0.2	0.10
MNX	µg/L	NA	NA					0.10	U		0.2	0.10
TNX	µg/L	NA	NA					0.10	U		0.2	0.10
Miscellaneous												
Perchlorate	µg/L	10.9	NA					0.26	J		0.2	0.1
Chlorate	µg/L	NA	10	U		10	0.1	10	U		10	0.1
Chlorite	µg/L	NA	10	U		10	0.1	10	U		10	0.1
Chloride	mg/L	NA	7.3		J	3	0.1	6.5			3	0.1
Nitrate (as N)	mg/L	NA	0.75			0.4	0.1	0.64			0.4	0.1
Sulfate	mg/L	NA	28			3	0.1	33			3	0.1
TIC	µg/L	NA	83			0.2	0.1	83			0.2	0.1
TOC	µg/L	NA	1.5	U		10	0.1	1.5	U		10	0.1
MNA												
Dissolved Fe^{2+}	mg/L	NA	NA					0.50				
Dissolved Mn	mg/L	NA	NA					3.00				

Table 5-4 SWMU 54 Detected Analytes in Thirty-Eighth Monitoring Event Groundwater Samples (Continued)

Notes:
[1]RGs developed in SWMU 54 RFI/CMS Report, Final Document (URS, 2008).
Exceedances denoted by **bold** font.
*DNT mixture is the combined results of 2,4-DNT and 2,6-DNT.
2,4,6-TNT = 2,4,6-trinitrotoluene
µg/L = micrograms per liter (parts per billion)
CMS = Corrective Measures Study
DNT = dinitrotoluene
DNX = hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine
Fe^{2+} = dissolved ferrous iron
ID = identifier
Lab Q = lab data qualifiers
LOD = limit of detection
LOQ = limit of quantitation
mg/L = milligrams per liter (parts per million)
Mn = manganese
MNA = monitored natural attenuation
MNX = hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine
NA = not applicable; remedial goal not established for analyte at SWMU 54
RDX = cyclotrimethylenetrinitramine
RFI = RCRA Facility Investigation
RG = Remedial Goal
SWMU = Solid Waste Management Unit
TIC = total inorganic carbon
TNX = hexhydro-1,3,5-trinitroso-1,3,5-triazine
TOC = total organic carbon
URS = URS Corporation
Val Q = validation data qualifiers

Data Qualifiers:
J = Estimated value.
U = Analyte concentration was not above the detection level.

Table 5-5 Summary of Samples and Analyses

Sampling Event ID	Data Packages	Matrix	Chloride Nitrate Sulfate	Explosives	Metals	TOC TIC	Chlorate Chlorite Perchlorate	COD pH
October 2021	FA90260	GW		X				
	165486	GW	X		X	X	X	X
April 2022	FA95241	GW		X				
	169098	GW	X		X	X	X	X

Notes:
COD = chemical oxygen demand
GW = groundwater
ID = identifier
pH = potential of hydrogen
TIC = total inorganic carbon
TOC = total organic carbon

Table 5-6 Analytical Methods

Analysis	Analytes	Method
Anions	Chloride Nitrate Sulfate	USEPA SW-846 Method 9056A
pH	pH	USEPA SW-846 Method 9040
Explosives	Numerous	USEPA SW-846 Method 8330B
Metals	Numerous	USEPA SW-846 Method 6010C USEPA SW-846 Method 7470A (Mercury)
TOC/TIC	TIC TOC	USEPA SW-846 Method 9060A
COD	COD	USEPA Method 410.4
Chlorate/Chlorite	Chlorate Chlorite	USEPA Method 300.1
Perchlorates	Perchlorates	USEPA SW-846 Method 6850

Notes:
COD = chemical oxygen demand
pH = potential of hydrogen
TIC = total inorganic carbon
TOC = total organic carbon
USEPA = U.S. Environmental Protection Agency

Table 5-7 Data Qualifiers

Qualifier	Description
R	Rejected: The result is rejected due to deficiencies in the analytical system or the inability to meet QC criteria.
M	Matrix effect: The concentration is estimated due to a matrix effect.
J	Estimated: The analyte was positively identified, but the quantitation is an estimate due to discrepancies in meeting certain analyte-specific QC criteria.
J+	Estimated: The analyte was positively identified, but the quantitation is an estimate, possibly biased high, due to discrepancies in meeting certain analyte-specific QC criteria.
J-	Estimated: The analyte was positively identified, but the quantitation is an estimate, possibly biased low, due to discrepancies in meeting certain analyte-specific QC criteria.
B	Blank. The analyte was detected in an associated blank.
U	Undetected: The analyte was analyzed for but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific QC criteria.

Table 5-8 Holding Time Exceedances

Sampling Event	Analysis	Analytes	Result	Samples	Qualifiers
October 2021	No Exceedances				
April 2022	No Exceedances				

Table 5-9 Field Duplicate Precision Exceedances

Sampling Event	Sample ID	Analyte	Flag	RPD
October 2021	54MW10/54TW10	1,3,5-trinitrobenzene	J	≥50
April 2022	No Exceedances			

Notes:
≥ = greater than or equal to
J = Estimated value
RPD = relative percent difference

Table 5-10 Laboratory Duplicate Precision Exceedances

Sampling Event	Analyte	Flag	RPD
October 2021	No Exceedances		
April 2022	No Exceedances		

Notes:
RPD = relative percent difference

Table 5-11 MS/MSD RPD Exceedances

Sampling Event	Sample ID	Analyte	Flag	RPD
October 2020	54-IDW	Lead Manganese	J	≥20
April 2022	54IDW	Mercury	UJ	≥20

Notes:
≥ = greater than or equal to
J = Estimated value
UJ = Not detected estimated
IDW = investigation-derived waste
MS = matrix spike
MSD = matrix spike duplicate
RPD = relative percent difference

Table 5-12 RPD Between Two Columns Exceedances

Sampling Event	Sample ID	Analyte	Flag	RPD
October 2021	54MW10	RDX and 3,5-dinitroanlline	J	≥40
	54MW12	3,5-dinitroaniline	J	≥40
	54MW13	3,5-dinitroanaline	J	≥40
April 2022	54MW10	3,5-dinitroanline and 4A26DNT	J	≥40
	54MW13	3,5-dinitroanline and 4A26DNT	J	≥40

Notes:
≥ = greater than or equal to
J = Estimated value
4A26DNT = 4-amino-2,6-dinitrotoluene
RDX = cyclotrimethylenetrinitramine
RPD = Relative Percent Difference

Table 5-13 MS/MSD Recovery Exceedances

Sampling Event	Sample ID	Analyte	Recovery	Parent Flag
October 2021	54-IDW	Various metals	High/Low	UJ/J
	54MW12/54MW13	Chlorate	Low	UJ
	54MW13	1,3,5-TNT/Perchlorate	High/Low	None
April 2022	54IDW	Mercury	Low	UJ
	54MW13	Tetryl/2,4,6-TNT	Low	None

Notes:
J = Estimated value
UJ = Not detected estimated
1,3,5-TNT = 1,3,5-trinitrotoluene
2,4,6-TNT = 2,4,6-trinitrotoluene
IDW = investigation-derived waste
TNT = trinitrotoluene

Table 5-14 Calibration Exceedances

Sampling Event	Sample ID	Analytes	Result	Samples	Qualifiers
October 2021	No exceedances				
April 2022	No exceedances				

Table 5-15 Blank Flags

Sampling Event	Type of Blank	Parameter Group	Analyte	Samples Qualified	Flag
October 2021	No Flags				
April 2022	No Flags				

Legend

- Well (Current MNA Network)
- Well (Removed from Network After Ninth Quarter)
- Monitoring Well Location (Groundwater Sample Results> RGs)
- Fence
- SWMU 54 Boundary

Aerial Source:
Near Map Imagery, February 2020

N

0 30 60 120 Feet

Prepared By:

Baltimore District

FIGURE 5-1
SWMU 54 OCTOBER 2021
GROUNDWATER SAMPLE
RESULTS EXCEEDING RGS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU54_2021_ Groundwater_Sample_Results_Exce_RGs.mxd, 3/17/2023 3:25:40 PM, schwartj

Figure 5-2 SWMU 54: 54MW1 Explosives Concentrations First Quarter through Thirty-Eighth Event

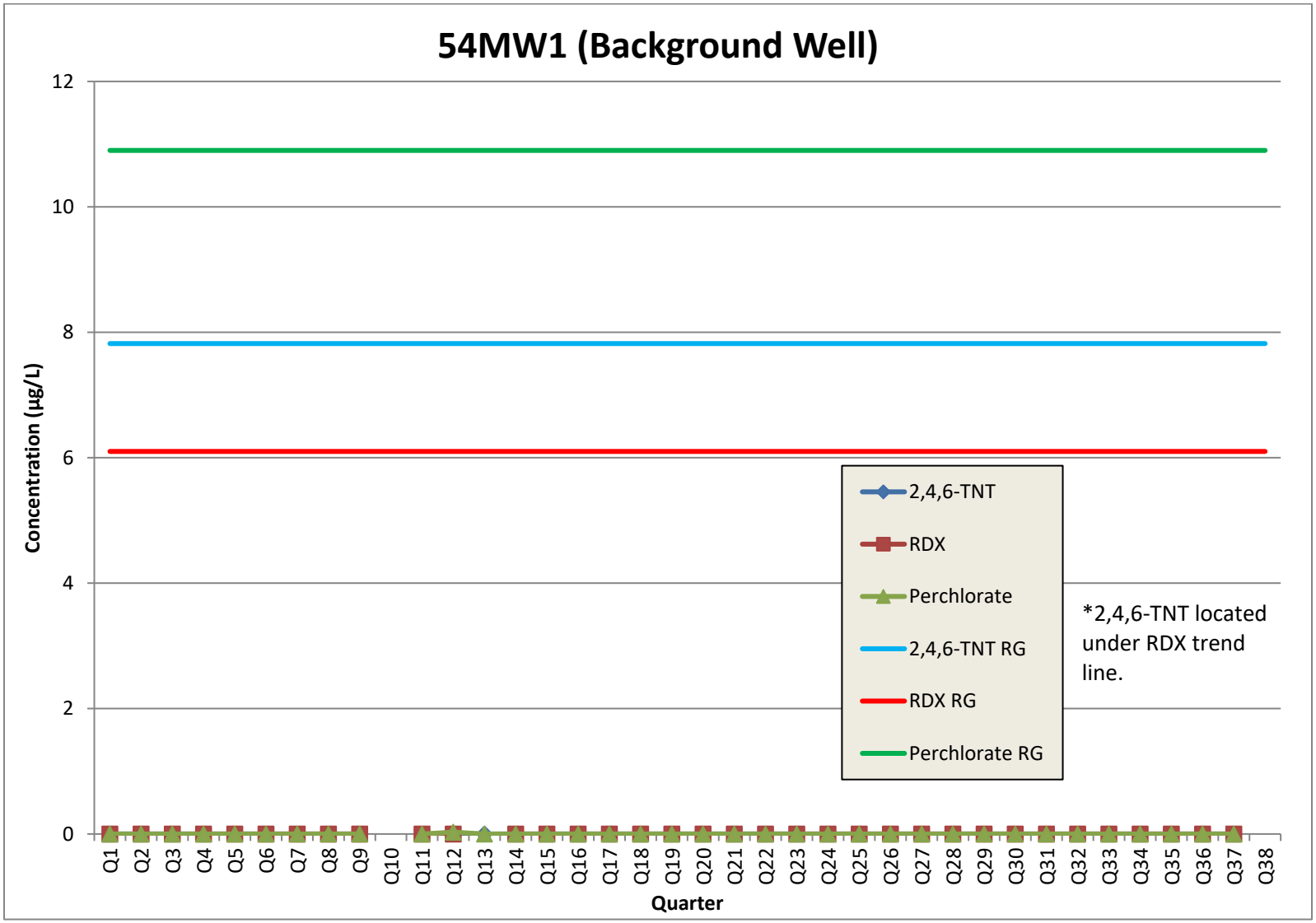


Figure 5-3 SWMU 54: 54MW10 Explosives Concentrations First Quarter through Thirty-Eighth Event

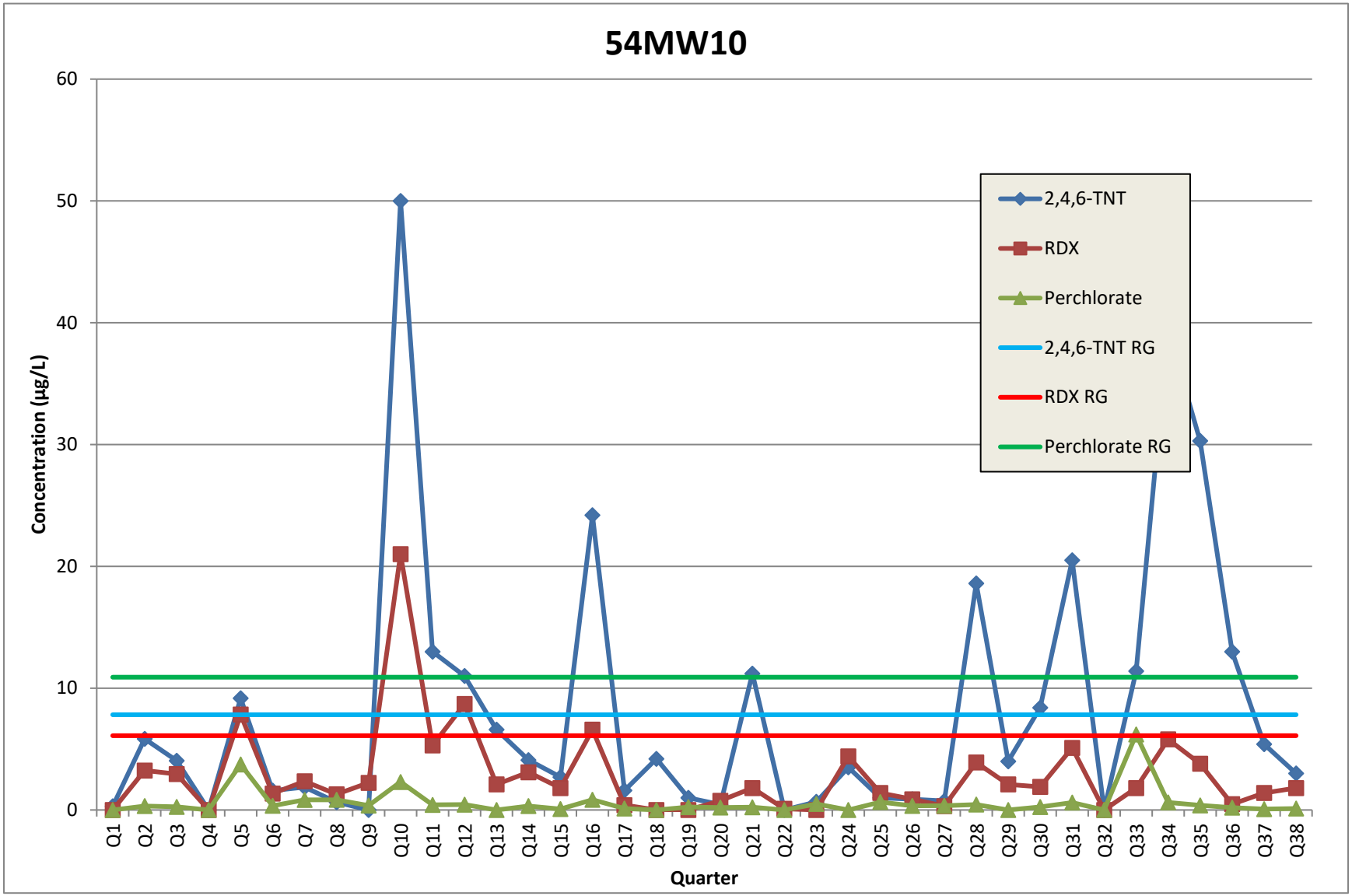


Figure 5-4 SWMU 54: 54MW12 Explosives Concentrations First Quarter through Thirty-Eighth Event

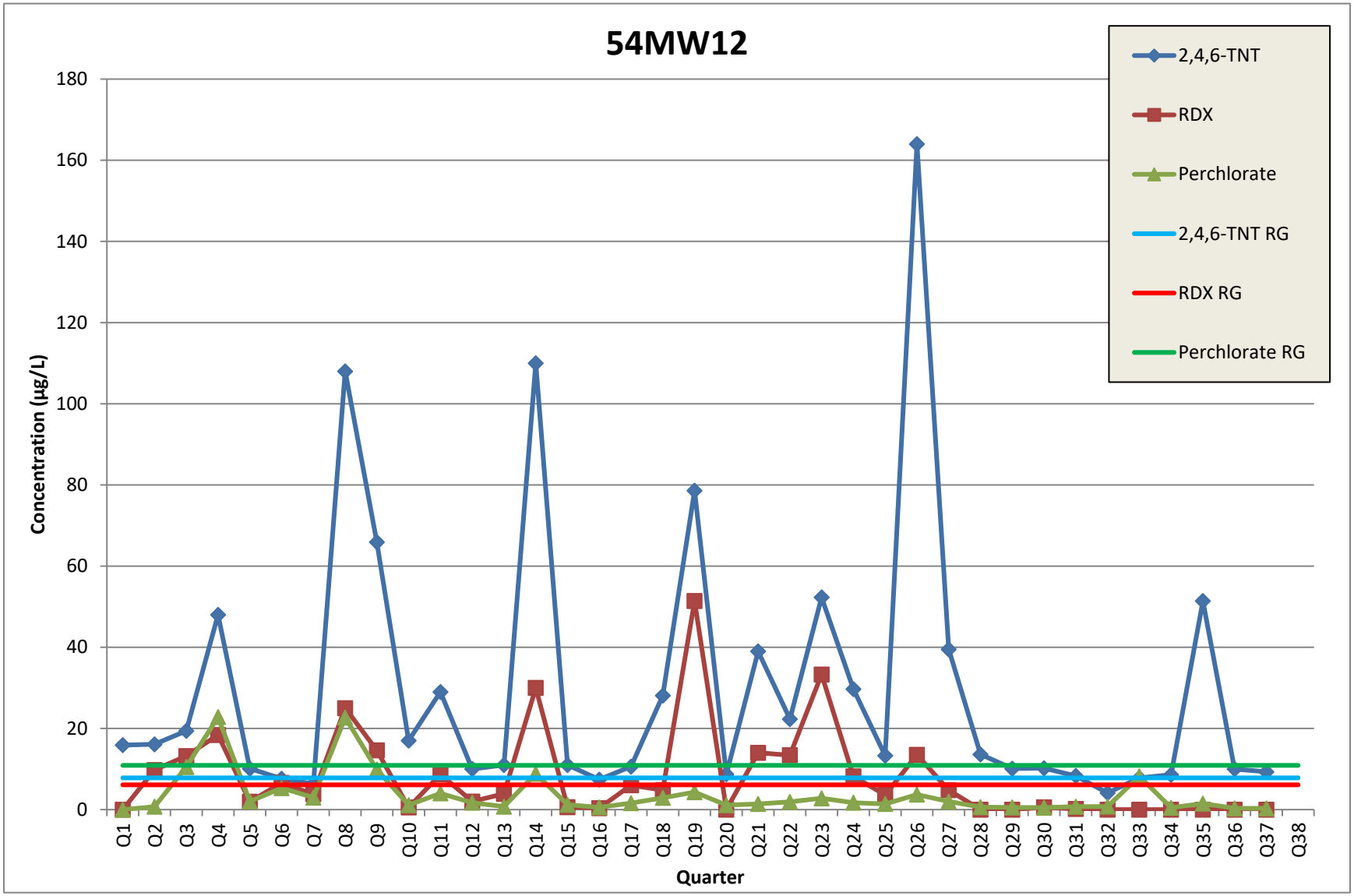


Figure 5-5 SWMU 54: 54MW13 Explosives Concentrations First Quarter through Thirty-Eighth Event

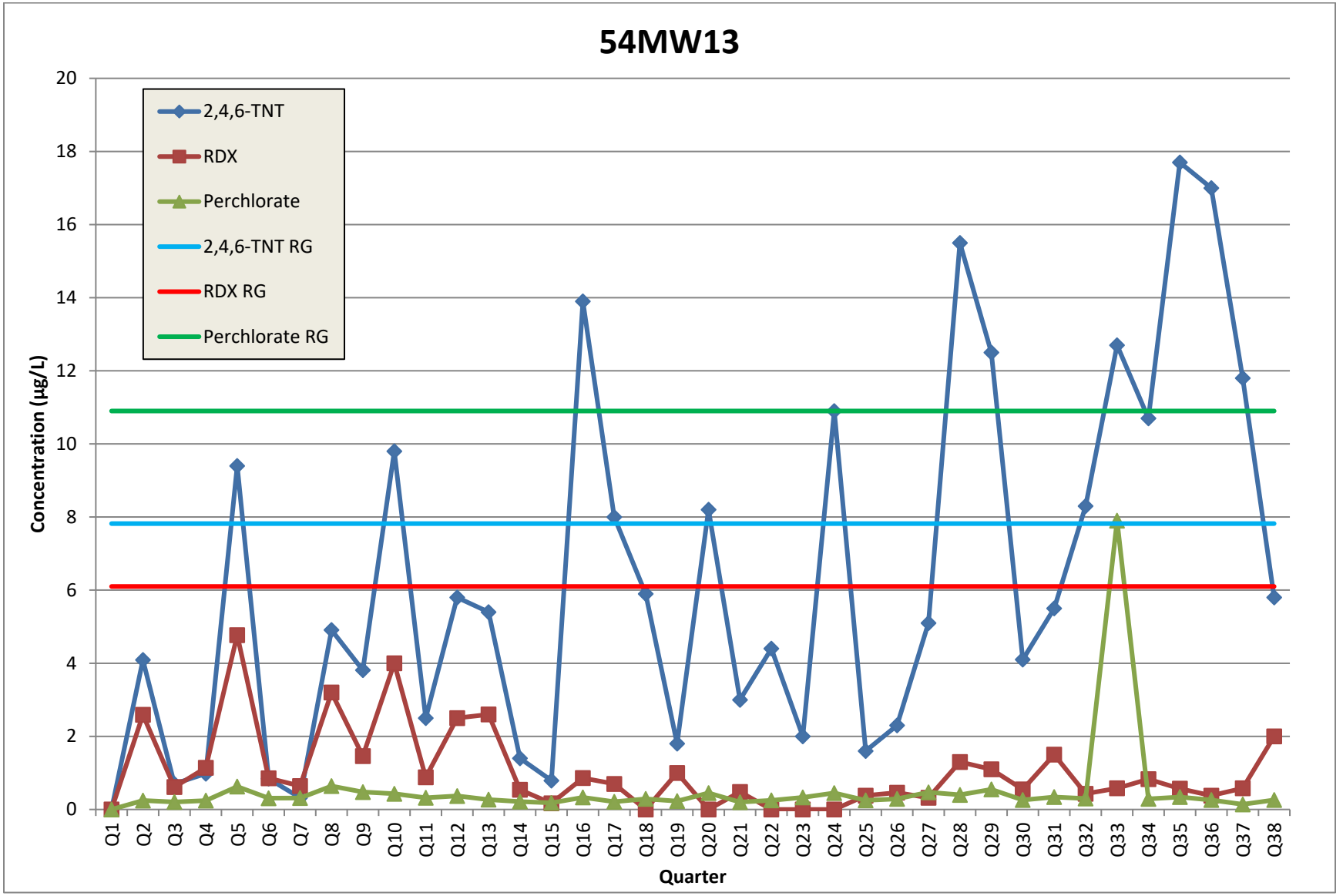


Figure 5-6 SWMU 54: 54MW1 2,4,6-TNT to Amino-DNT Correlation

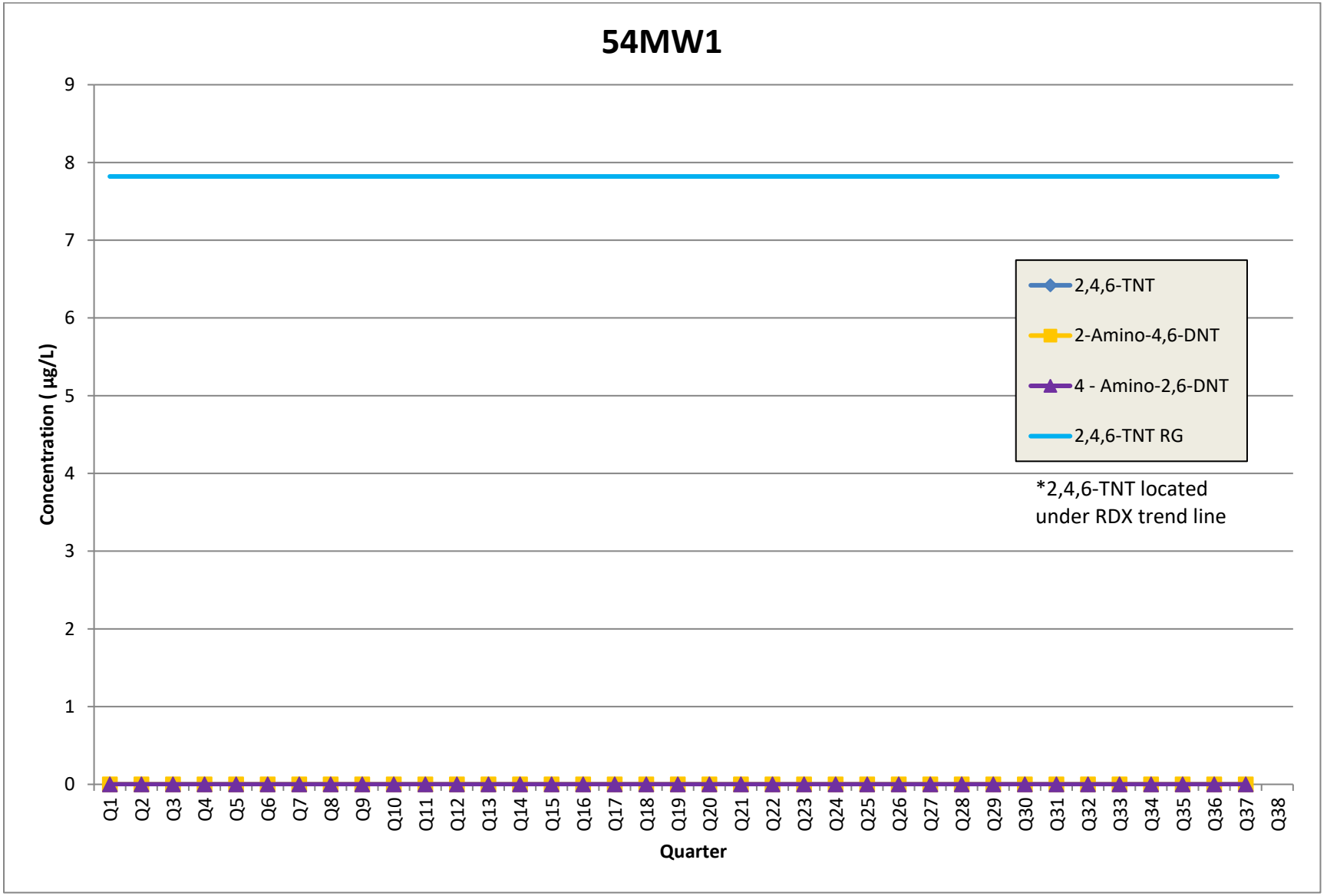


Figure 5-7 SWMU 54: 54MW10 2,4,6-TNT to Amino-DNT Correlation

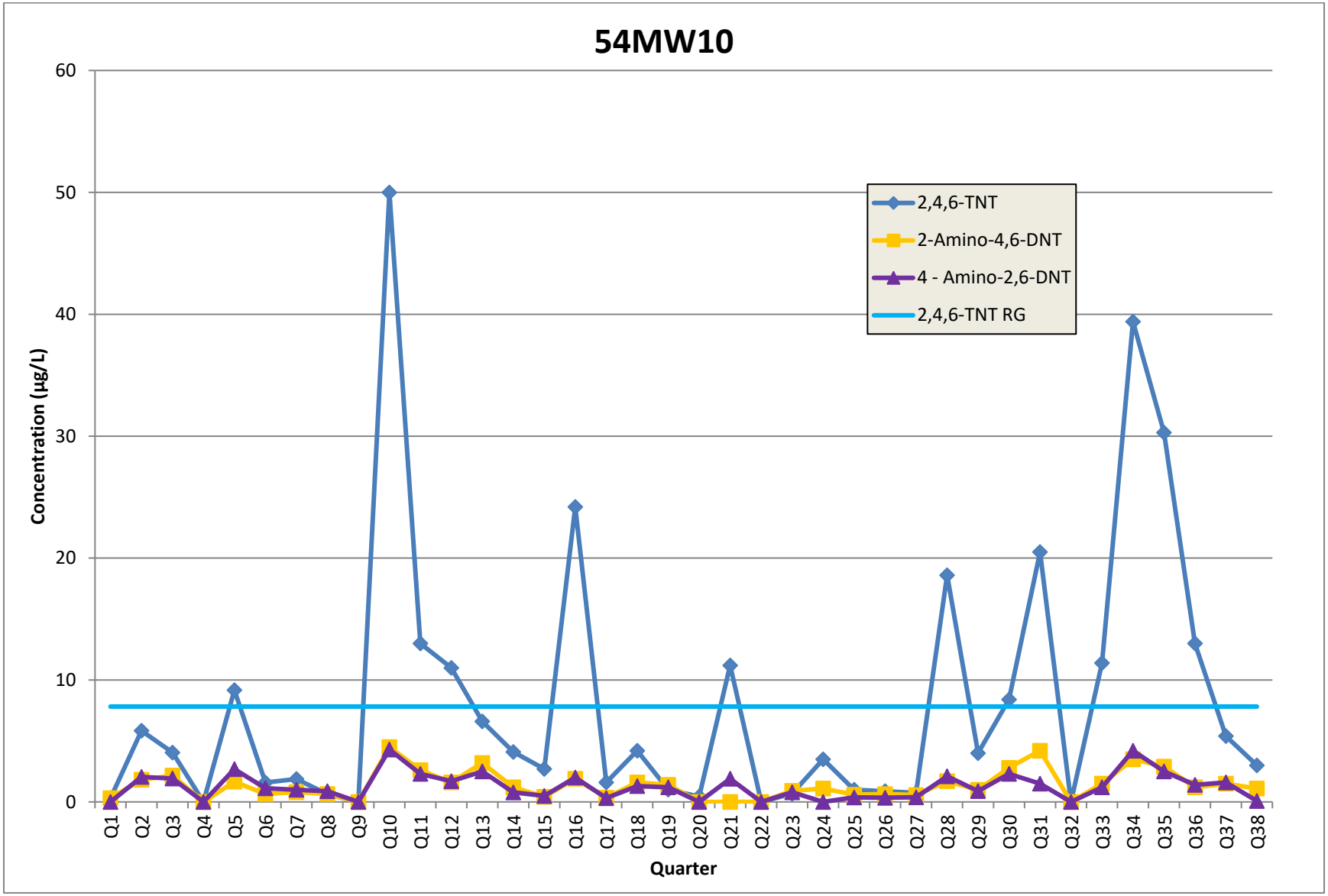


Figure 5-8 SWMU 54: 54MW12 2,4,6-TNT to Amino-DNT Correlation

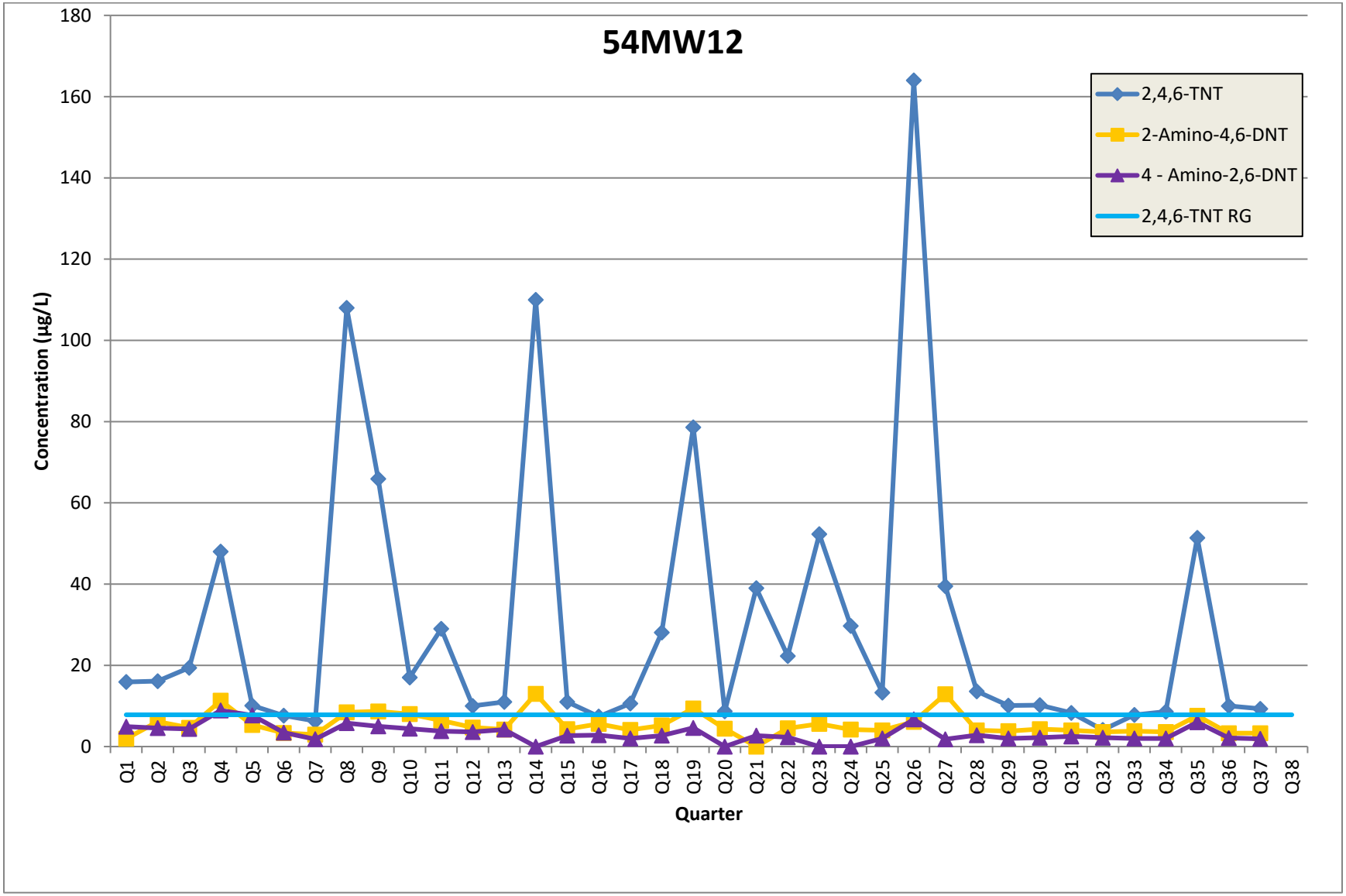
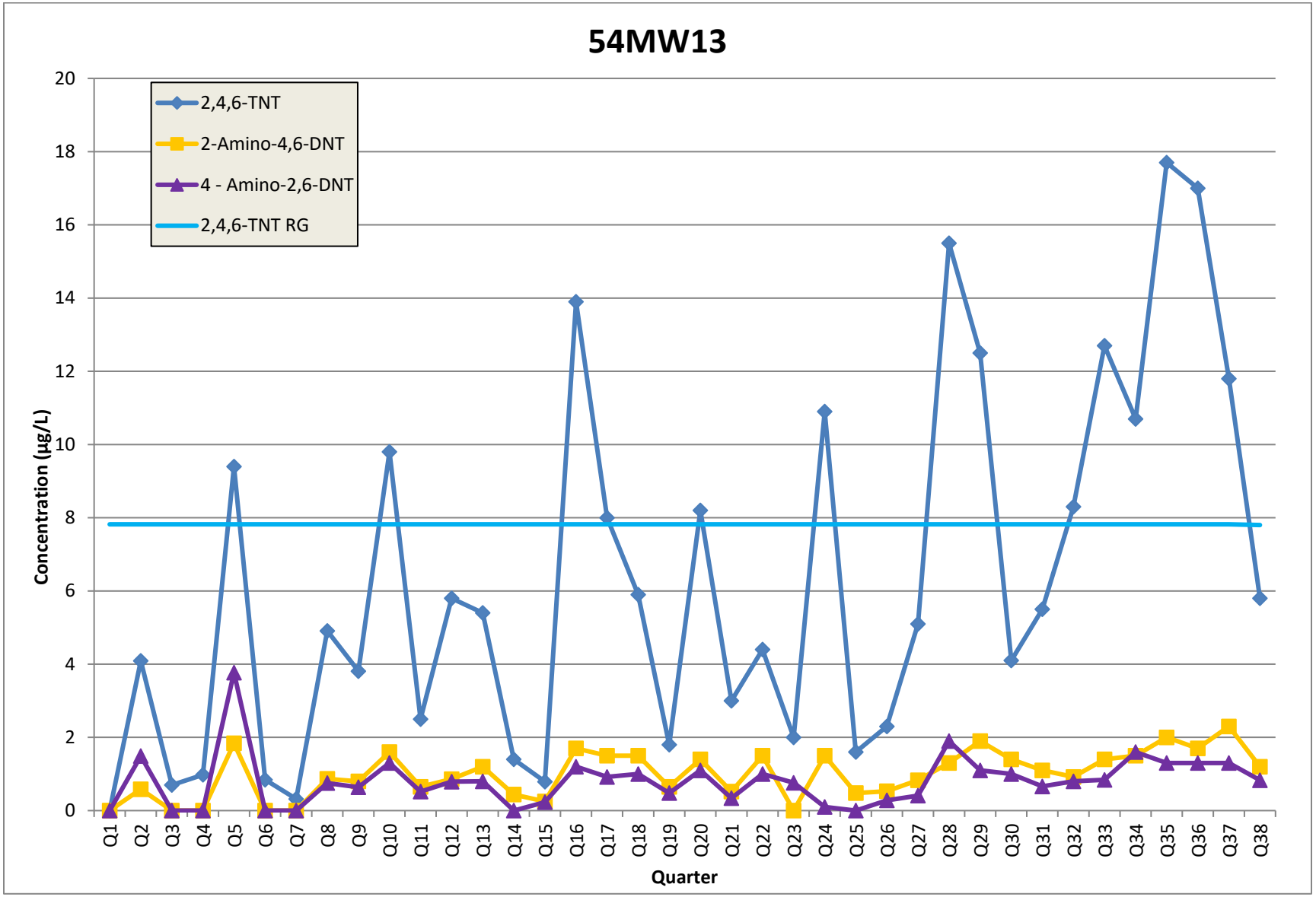


Figure 5-9 SWMU 54: 54MW13 2,4,6-TNT to Amino-DNT Correlation



6. MNA EVALUATION OF SWMU 54

MNA is a remedial approach in which physical, chemical, and biological processes occur under favorable conditions, without human interferences to reduce the mass, toxicity, volume, concentration, and mobility of contaminants in soil and groundwater. The physical, chemical, and biological processes include biodegradation, dispersion, dilution, sorption, volatilization, and chemical or biological stabilization (USEPA, 1998). Analytical results from multiple groundwater sampling events at SWMU 54 were evaluated for qualitative indications of natural attenuation processes that may reduce the concentrations of the contaminants of interest (TNT, RDX, and perchlorate). The following sections present the results as they pertain to the lines of evidence used to demonstrate the potential for MNA.

6.1 FIRST LINE OF EVIDENCE: OCCURRENCE OF CONTAMINANT TRENDS

The first line of evidence consists of evaluating contaminant and daughter product concentrations for a downward trend in monitoring wells over time. SWMU 54 contains 14 wells (54MW1, 54MW2, 54MW3, 54MW4, 54MW5, 54MW6, 54MW7, 54MW8, 54MW9, 54MW10, 54MW11, 54MW12, 54MW13, and 54MW14), which targeted areas of potential nitroaromatic and perchlorate contamination. The target wells were reduced after the ninth and tenth quarters to 54MW1 (background), 54MW10, 54MW12, and 54MW13. Historical trends and the results of quarterly and semiannual groundwater sampling are discussed below, and the data are provided in **Table 6-1**, and in **Figures 6-1** through **6-3. Table 6-1** also includes the sampling month and year for the first through thirty-sixth quarters and the two semiannual events (thirty-seventh and thirty-eighth) in Year Ten.

2,4,6-TNT

The explosive 2,4,6-TNT was detected above the RG of 7.82 µg/L in wells 54MW12 and 54MW13 during the Year Ten monitoring period. TNT exceeded the RG in two wells, including one detection at 54MW12 (thirty-seventh event) and one detection at 54MW13 (thirty-seventh event).

Concentrations of 2,4,6-TNT have fluctuated in monitoring wells 54MW10, 54MW12, and 54MW13 during the 36 quarterly and two semiannual monitoring events. At monitoring well 54MW10, the 2,4,6-TNT concentration went from undetected in the ninth quarter to 50 µg/L in

the tenth quarter, which is the highest concentration recorded in this well during the 7 years of monitoring. The following five quarters of sampling (eleventh through fifteenth quarters) saw concentrations decline dramatically until a spike was observed during the sixteenth quarter. The concentration spike of 24.2 µg/L at 54MW10 exceeded the RG. Concentrations declined dramatically during the seventeenth through twentieth quarters of sampling, until the twenty-first quarter when concentrations spiked to 11.2 µg/L. During the twenty-second through twenty-fourth quarters, levels again receded, reaching a low of 0.67 µg/L during the twenty-third quarter and slightly elevating to 3.5 µg/L during the twenty-fourth quarter. The first three quarters of Year Seven showed levels receding again, reaching a low of 0.74 µg/L during the twenty-seventh quarter and elevating to 18.6 µg/L in the twenty-eighth quarter, with two additional spikes in the thirtieth and thirty-first quarters at 8.4 µg/L and 20.5 µg/L, respectively. Concentrations fluctuated in Year Nine but decreased in Year Ten as no TNT concentrations exceeded its RG in either semiannual event (5.4 µg/L in October 2021 and 3.0 µg/L in April 2022).

Monitoring well 54MW12 experienced the highest detected concentration of 2,4,6-TNT during the Year Seven monitoring period when a concentration of 164 µg/L was detected during the twenty-sixth quarter. The concentrations detected in 54MW12 in the remaining quarters, including the twenty-first through twenty-eighth quarters, were similar to historical concentrations, and a decreasing trend has been noted in the Year Eight twenty-ninth through thirty-second quarters. A spike was observed in the Year Nine thirty-fifth quarter. 2,4,6-TNT was detected at 9.3 µg/L during the thirty-seventh event in October 2021 which is consistent with concentrations noted over the past several years except for the spike noted above in the thirty-fifth event of 51.4 µg/L.

Monitoring well 54MW13 experienced the three high detections of 2,4,6-TNT during the Year Five monitoring period when two detections (8 µg/L and 8.5 µg/L [field duplicate 54TM13]) were observed during the seventeenth quarter, and one detection (8.2 µg/L) was observed during the twentieth quarter. Year Eight detections spiked in the twenty-ninth and thirty-second quarters at 12.5 µg/L and 8.3 µg/L, respectively. During the interim quarters, the levels returned to levels similar to historical concentrations. The highest detection happened during the Year Nine monitoring period when levels spiked to 17.7 µg/L during the thirty-fifth and thirty-sixth quarters. 2,4,6-TNT concentrations in Year Ten at monitoring well 54MW13 were 11.8 µg/L during the

thirty-seventh event and 5.8 µg/L during the thirty-eighth event which are consistent with historical levels except for some of the spiked levels noted above.

DNT Mixture

Previous reports noted that DNT was detected in the fourth, tenth, eleventh, and twelfth quarters of sampling at monitoring wells 54MW10, 54MW12, and 54MW13, yet the combined concentrations of 2,4-DNT and 2,6-DNT did not exceed the RG of 0.932 µg/L. During Year Six, neither 2,4-DNT nor 2,6-DNT were detected in any wells. Therefore, the combined concentrations of 2,4-DNT and 2,6-DNT did not exceed the RG in any of the four wells sampled. However, during Year Seven, 2,6-DNT was detected in 54MW12 (3.6 µg/L) and 54MW13 (0.91 µg/L); therefore, the combined concentrations of 2,4-DNT and 2,6-DNT for these two wells did exceed the RG of 0.932 µg/L in the twenty-sixth quarter. This sole RG exceedance for DNT mixture in the 7 years of monitoring coincides with a spike of 2,4,6-TNT in the well with the highest level of 2,4,6-TNT (54MW12). During Year Eight and Year Nine, levels returned to historical levels and no detections of these compounds were noted in Year Ten.

RDX

RDX concentrations fluctuated in monitoring wells 54MW10 and 54MW12 during the first 16 quarterly sampling events. At monitoring well 54MW10, a sharp increase in RDX concentrations was observed from 2.23 µg/L in the ninth quarter to 21 µg/L in the tenth quarter. The tenth quarter concentration was the highest concentration reported in this well during the 36 quarters of sampling. Concentrations decreased during the next 10 quarters of sampling (eleventh through twentieth quarters) in monitoring well 54MW10; however, during the twelfth and sixteenth quarters, RDX concentrations exceeded the RG. Concentrations again decreased during the next four quarters of sampling (twenty-first through twenty-fourth quarters) in monitoring well 54MW10. Monitoring well 54MW12 had 8 reported concentrations of RDX above the RG of 6.1 µg/L in the first 16 quarters of sampling. During the Year Five monitoring period, concentrations continued to remain below the RG, with the exception of the nineteenth quarter, when concentrations spiked to 51.4 µg/L. This concentration is the highest concentration observed at this well during all 36 quarters of sampling. The concentration then fell below the detection limit of 0.1 µg/L in the twentieth quarter. RDX was detected above the RG of 6.1 µg/L

every quarter of the Year Seven monitoring period in one monitoring well (54MW12). During the Year Seven monitoring period, the RDX concentration rose above the RG at monitoring well 54MW12 during the twenty-sixth quarter (13.5 µg/L). However, during Year Eight through Year Ten, RDX was detected below the RG of 6.1 µg/L every monitoring event.

No breakdown by-products were detected during the Year Ten monitoring period. Historically, RDX breakdown by-products have been observed in monitoring wells 54MW10, 54MW12, and 54MW13. These detections were observed in the tenth through twelfth quarters. The highest total concentrations were observed in monitoring well 54MW10 during the tenth quarter when a spike in RDX occurred. Thereafter, the RDX by-product concentrations steadily decreased. Similar correlations with RDX concentrations were observed in monitoring wells 54MW12 and 54MW13. The highest concentrations of DNX, MNX, and TNX were identified in monitoring wells 54MW12 and 54MW13 during the eleventh and tenth quarters, respectively, which coincide with the highest RDX concentrations recorded in these wells during that time period. There was no DNX, MNX, or TNX detected in monitoring well 54MW12 during the twenty-sixth quarter, when the spike of RDX was observed. TNX was detected at 0.39 µg/L in one well (54MW10) in the thirty-third quarter, and MNX was detected at 5.3 µg/L in one well (54MW12) in the thirty-sixth quarter.

Amino-DNT

As 2,4,6-TNT is biologically degraded, the two daughter products, 2ADNT and 4ADNT, are formed. During the Year Ten monitoring period, the by-products 2ADNT and 4ADNT were detected in monitoring wells 54MW10, 54MW12, and 54MW13 during both semiannual events (thirty-seventh and thirty-eighth events). There is good correlation of 2ADNT and 4ADNT concentrations with 2,4,6-TNT concentrations; i.e., as 2,4,6-TNT concentrations increase or decrease, a corresponding increase or decrease of 2ADNT and 4ADNT is observed. The increased presence of 2ADNT and 4ADNT, along with the increasing concentrations of 2,4,6-TNT, continues to suggest biological degradation of 2,4,6-TNT is occurring at these locations.

Perchlorate

Perchlorate concentrations at monitoring wells 54MW10, 54MW12, and 54MW13 continued to remain well below the RG of 10.9 µg/L during Year Ten of monitoring and are consistent with

concentrations observed through the first 9 years of monitoring. Historically, monitoring well 54MW12 has had two detected concentrations above the RG, which occurred in the fourth and eight quarters. Concentrations decreased during the Year Four monitoring event; this trend first was observed after the ninth quarterly sample event. However, one exception was observed during the fourteenth quarter when the concentration spiked to 8.85 µg/L. The fifteenth and sixteenth quarters saw a return to lower concentrations and a decreasing trend in perchlorate concentrations. During the Year Five monitoring, concentrations steadily rose from 1.6 µg/L to 4.3 µg/L through the seventeenth to nineteenth quarters, though none of the concentrations were above the RG. The twentieth quarter saw a return to a lower concentration of 1.1 µg/L. During the Year Six monitoring, concentrations fluctuated from 1.4 µg/L (twenty-first quarter) to 2.8 µg/L (twenty-third quarter) and back down to 1.7 µg/L (twenty-fourth quarter). Year Seven monitoring results mimicked those of Year Six; observed concentrations ranged from 1.4 µg/L (twenty-fifth quarter) to 3.7 µg/L (twenty-sixth quarter) and back down once again to 2.0 µg/L (twenty-seventh quarter) and to 0.61 µg/L (twenty-eighth quarter). Monitoring well 54MW12 continued to have the highest observed concentrations of perchlorate at SWMU 54 during Year Seven of monitoring but at concentrations below the RG.

Chloride, chlorate, and chlorite are daughter products of perchlorate degradation. At SWMU 54, chloride is present within the groundwater system, including monitoring well 54MW1 (background). Based on the chloride background concentrations through Year Three of monitoring, a determination could not be established that any measurable change exists due to perchlorate reduction. However, although chloride was detected at monitoring well 54MW1 during all of the Year Four monitoring events, the concentrations detected at wells 54MW10, 54MW12, and 54MW13 during the same period were all slightly higher than the concentrations in 54MW1. During the Year Five monitoring event, chloride was detected at monitoring well 54MW1 during the seventeenth through nineteenth quarters but was not detected during the twentieth quarter. The concentrations detected at monitoring wells 54MW10, 54MW12, and 54MW13 from the seventeenth through nineteenth quarter were all slightly higher than the concentrations in monitoring well 54MW1. During the twentieth quarter of the monitoring event, chloride was not detected in monitoring well 54MW10, but it was detected in monitoring wells 54MW12 and 54MW13 at concentrations similar to previous sampling quarters. During the Year Six monitoring

event, chloride was detected at all wells, including 54MW1 (background). Although chloride was detected at monitoring well 54MW1 during all of the Year Six monitoring events, the concentrations detected at monitoring wells 54MW10, 54MW12, and 54MW13 during the same period were all slightly higher than the concentrations in 54MW1. Chlorate and chlorite were not detected during the Year Six monitoring period with the exception of a detection at monitoring well 54MW10 during the twenty-second quarter (11 µg/L). Chlorate and chlorite went undetected in all of the monitoring wells during the Year Seven through Year Ten monitoring period. Chloride was detected in all monitoring wells for both monitoring events of Year Ten with the lowest concentrations observed in monitoring well 54MW1 (2.3 µg/L to 3.1 µg/L). Concentrations in the remaining three wells ranged from a low of 4.7 µg/L at monitoring well 54MW10 (thirty-seventh event) to a high of 7.6 µg/L at monitoring well 54MW13 (thirty-seventh event). This may suggest that chlorate and chlorite have been exhausted in the system and only residual amounts of chloride are being produced as perchlorate concentrations diminish.

Statistical Trends

The time series plots (**Figures 5-4** through **5-6**) show a large degree of variability in 2,4,6-TNT concentrations in wells 54MW10, 54MW12, and 54MW13; therefore, Mann-Kendall tests were run for these three monitoring wells using the USEPA software package ProUCL (USEPA, 2020). The results indicated a slight decreasing trend in 54MW12, but a slight increase at 54MW10 and a more significant increase at 54MW13 (**Appendix C**).

The contaminant concentrations for 2,4,6-TNT, RDX, and perchlorate for the three impacted wells were plotted together to assess a possible correlation between the spike timing among the three wells (**Figures 6-1** through **6-3**). None was apparent; however, there were correlations in all three wells with regard to 2,4,6-TNT, RDX, and perchlorate spikes (i.e., spikes in a given contaminant generally included spikes in the other two contaminants in each well). The two highest 2,4,6-TNT concentrations were recorded in Year Nine monitoring but presented a decrease for Year Ten.

Contaminant concentrations for 2,4,6-TNT, RDX, and perchlorate were plotted against groundwater elevation to determine whether the large spike seen in monitoring wells 54MW10, 54MW12, and 54MW13 may be related to water level changes. **Figures 6-1** through **6-3** demonstrate the correlation between the contaminant concentrations at all three wells and

groundwater elevation. At monitoring well 54MW10, when groundwater elevation rises, contaminant concentrations appear to decrease. The data suggest a direct relationship between groundwater levels and 2,4,6-TNT, RDX, and perchlorate concentrations, in that elevated concentrations of each are observed with elevated groundwater levels at monitoring well 54MW12. At monitoring well 54MW13, however, contaminant concentrations appear to rise on the backside of a groundwater elevation rise (note fifth, tenth, twelfth, sixteenth, twentieth, twenty-fourth, and twenty-ninth through thirty-second quarters; although, the Year Ten data suggest otherwise [**Figure 6-3**]).

Additionally, Mann-Kendall tests were run for monitoring wells 54MW10, 54MW12, and 54MW13 to track the trend of perchlorate. The results indicated a decreasing trend for 54MW12, with no significant trend indicated in wells 54MW10, and a slightly increasing trend at 54MW13 for perchlorate (**Appendix C**).

First Line of Evidence: Results

Although the 2,4,6-TNT concentrations have shown variability over time, the first line of evidence indicates that the presence of daughter products, 2ADNT and 4ADNT, suggests that natural attenuation through biological degradation of 2,4,6-TNT is occurring at SWMU 54. Overall decreasing trends in RDX suggest natural attenuation of RDX and perchlorate is occurring.

6.2 SECOND LINE OF EVIDENCE: GEOCHEMICAL CONDITIONS

Respiratory substrates are used preferentially during microbial metabolism based on the amount of energy that can be derived from each of them. Respiratory substrates are used in the following order:

$$O_2 > NO_3^- > Fe^{+3} > ClO_4 > SO_4^{-2} > CO_2$$

Geochemical data are available for all 36 quarterly groundwater monitoring events at SWMU 54. Field parameters (DO, ORP, pH, temperature, and specific conductivity) have been collected since 2011 as part of the low-flow sampling procedures. Laboratory analyses for nitrate, sulfate, and TOC were conducted for all 36 quarterly and both semiannual groundwater monitoring events at

SWMU 54. These geochemical data are discussed regarding the potential for biodegradation in the groundwater at SWMU 54.

The microbial degradation of nitroaromatic compounds primarily occurs under nitrate-reducing conditions, whereas perchlorate requires sulfate-reducing groundwater conditions.

DO

The preferred terminal electron acceptor during aerobic microbial respiration is oxygen, and DO is measured to determine whether the groundwater is under aerobic or anaerobic conditions. Average DO values less than 1 mg/L are supportive of anaerobic microbial activities. Further, DO values higher than 8 mg/L are considered biased high given their relative magnitude to oxygen solubility at field temperatures and are not included in this analysis.

During the Year Ten monitoring period, DO values ranged from 0.42 mg/L (54MW1) to 6.84 mg/L (54MW12) for the thirty-seventh event and from 1.81 mg/L (54MW10) to 6.19 mg/L (54MW12) for the thirty-eighth event, which were similar to the Year Eight and Year Nine monitoring results. In wells where biological degradation products were observed (54MW10 and 54MW12), the DO concentrations indicate that aerobic conditions appear to be favored (**Table 6-2**). 2,4,6-TNT has been known to be reduced under a variety of conditions (aerobic and anaerobic); however, further reduction of 2,4,6-TNT breakdown products, including 2ADNT and 4ADNT, and reduction of RDX and perchlorate are more favorable under anaerobic conditions (Spain, 1995).

The increase in concentrations of explosive constituents at monitoring wells 54MW10, 54MW12, and 54MW13 during the Year Nine monitoring event took place under aerobic conditions. Under aerobic conditions, biodegradation is not as effective in the reduction of explosives and perchlorates. As a result of the subsurface biochemistry, the decreased biological activity may have also led to an increase in the explosive and perchlorate concentrations during the Year Nine monitoring period. Explosive constituent concentrations for Year Ten were generally less than Year Nine.

ORP

ORP values indicate the groundwater's reductive potential and are used to confirm the DO measurements in groundwater. ORP values less than +50 mV typically correspond to mildly reducing anaerobic conditions, whereas ORP values less than -200 mV correspond to highly reducing anaerobic conditions. As mentioned previously, TNT reduction can occur in aerobic systems, but the reduction of TNT breakdown products, RDX, and perchlorate are favored under anaerobic conditions (generally observed when ORP values are between -100 mV and 0 mV).

ORP concentrations during the first 12 quarterly sampling events (early 2011 to May 2014) ranged from -33 to 297 mV, indicating both anaerobic and aerobic conditions were present at the site. However, it was reported that aerobic conditions appeared to be more prevalent (**Table 6-2**). Further, the Year Three ORP values and DO readings did not show a clear corresponding trend for samples taken at the same well and same sampling event. At monitoring wells with elevated concentrations of TNT and RDX (54MW10, 54MW12, and 54MW13), it was suggested that ORP readings were in agreement with DO concentrations, indicating aerobic conditions.

The Year Four ORP readings ranged from -10.1 mV to 264 mV, indicating that both anaerobic and aerobic conditions were present at SWMU 54. However, there was only one reading (at 54MW1 in the sixteenth quarter), indicating reducing conditions; as such, it would appear that aerobic conditions are more prevalent at the SWMU. The Year Four ORP trends were generally in agreement with Year Three.

The Year Five ORP readings ranged from 15.5 mV (54MW13) to 138.2 mV (54MW1), indicating aerobic conditions were present at SWMU 54. The data suggest that aerobic conditions are more prevalent at the SWMU. The Year Five ORP trends are generally in agreement with Year Four.

The Year Six ORP readings ranged from -19.9 mV (54MW10) to 204.7 mV (54MW12), indicating both anaerobic and aerobic conditions were present at SWMU 54.

The Year Seven ORP ranged from -34.5 mV (54MW1) to 238.7 mV (54MW12), once again indicating both anaerobic and aerobic conditions were present at SWMU 54. The data suggest that aerobic conditions continue to be more prevalent at the site.

ORP readings from Year Eight ranged from 32.8 mV (54MW10) to 161.5 mV (54MW12), indicating both anaerobic and aerobic conditions at minimum were present at SWMU 54. Year Eight data suggest that aerobic conditions continue to be more prevalent at the site.

ORP readings from Year Nine ranged from 19.8 mV (54MW10) to 195.9 mV (54MW12), indicating both anaerobic and aerobic conditions at minimum were present at SWMU 54. Year Nine data suggest that aerobic conditions continue to be more prevalent at the site.

ORP readings from Year Ten ranged from 52.7 mV (54MW1) to 193.4 mV (54MW12), indicating both anaerobic and aerobic conditions at minimum were present at SWMU 54. Year Ten data suggest that aerobic conditions continue to be more prevalent at the site.

pH

The pH for optimum microbial activity ranges from 6.06 SU to 7.59 SU (USEPA, 1998). Microbial activity may decrease at lower pH values. The first 6 years of pH data are within this optimal pH range (**Table 6-2**) and continued during Year Ten. In general, the pH environment at SWMU 54 is suitable for microbial activity.

Nitrate

Following oxygen, microorganisms preferentially use nitrate as a terminal electron acceptor. Diminished nitrate concentrations may indicate nitrate-reducing conditions, which promote the degradation of nitroaromatics (including 2,4,6-TNT) forming breakdown by-products. It should be noted that elevated nitrate concentrations (greater than 1 mg/L) will inhibit perchlorate reduction, and, additionally, any nitrate would preferentially be reduced to nitrite before TNT and RDX could be reduced (Interstate Technology and Regulatory Council [Perchlorate Team], 2008).

Nitrate concentrations during the first 36 sampling events were generally low (overall less than 1 mg/L) with concentrations ranging from non-detect to 4.8 mg/L, suggesting that perchlorate reduction is not inhibited (**Table 6-2**). Year Ten monitoring nitrate concentrations ranged from non-detect to 0.75 mg/L, which is consistent with previous monitoring events.

Monitoring well 54MW12, where historically the highest and more persistent perchlorate concentrations have been identified, consistently had nitrate concentrations greater than 1 mg/L during the first 16 quarters of monitoring.

During the Year Five monitoring period, however, the nitrate concentrations were only greater than or equal to 1 mg/L during two sampling events (seventeenth and nineteenth quarters).

During the Year Six monitoring period, nitrate concentrations were consistently higher than 1 mg/L for the twenty-second through twenty-fourth quarters. Only during the twenty-first quarter was the concentration below 1 mg/L.

During the Year Seven monitoring period, nitrate concentrations were consistently higher than 1 mg/L for the twenty-fifth through twenty-seventh quarters. Only during the twenty-eighth quarter was the concentration below 1 mg/L. In contrast, the corresponding reduction of 2,4,6-TNT concentrations and accrual of 2ADNT and 4ADNT present suggest the biodegradation of TNT.

During the Year Nine monitoring period, nitrate concentrations were only higher than 1 mg/L during the thirty-fifth quarter.

During the Year Ten monitoring period, nitrate concentrations were less than 1 mg/L for both semiannual monitoring events.

Ferrous Iron

Ferric iron is reduced to soluble ferrous iron in the groundwater where iron-reducing bacteria have been active. An increase in ferrous iron concentrations is indicative of iron-reducing conditions. Biological reduction of TNT is favored in iron-reducing conditions; therefore, elevated concentrations of ferrous iron are an indicator of favorable groundwater conditions for TNT degradation.

Ferrous iron concentrations for all wells during the 5 previous years of monitoring have been less than 0.2 mg/L (non-detect) or equal to 0.2 mg/L, indicating that iron-reducing conditions are not present at this time, or that the iron has been reduced previously.

During the Year Five monitoring events, ferrous iron concentrations for all wells was less than 0.2 mg/L (non-detect) with the exception of monitoring well 54MW10 during the seventeenth quarter, when concentrations increased to 0.52 mg/L and then decreased to 0.04 mg/L during the eighteenth quarter.

During the Year Six monitoring events, ferrous iron concentrations for all wells were less than 0.2 mg/L with the exception of monitoring well 54MW13 during the twenty-second quarter, when concentrations increased to 0.26 mg/L, and then decreased to 0.0 mg/L (non-detect) during the twenty-third quarter.

During the Year Seven monitoring events, ferrous iron concentrations for all wells were less than 0.2 mg/L with the exception of monitoring well 54MW12 during the twenty-seventh quarter, when concentrations increased to 0.21 mg/L, and then decreased to 0.14 mg/L during the twenty-eighth quarter.

During the Year Eight monitoring events, ferrous iron concentrations for all wells were less than 0.20 mg/L, whereas Year Nine indicated ferrous iron concentrations were less than 0.10 mg/L.

For the Year Ten monitoring events, an increase in ferrous iron concentrations was noted with concentrations noted up to 2.01 mg/L. Ferrous iron concentration ranges of 0.01 to 0.10 mg/L were noted for the thirty-seventh monitoring event and 0.01 to 2.01 mg/L noted for the thirty-eighth event.

Sulfate

Biological degradation of TNT breakdown products (2ADNT and 4ADNT), RDX, and perchlorate actively occurs under sulfate-reducing conditions. Sulfate concentrations greater than 20 µg/L may cause competitive exclusion (USEPA, 2008). Sulfate concentrations were measured in the groundwater during each of the first 12 quarterly monitoring events and were found to generally be greater than 20 mg/L (ranging from 15.0 mg/L to 403 mg/L), indicating that biological degradation of 2ADNT and 4ADNT may be inhibited at SWMU 54 (**Table 6-2**).

During Year Four of monitoring, sulfate concentrations were slightly lower (ranging from 19 mg/L to 93 mg/L), but again suggested inhibition of biological degradation of the 2,4,6-TNT by-products 2ADNT and 4ADNT.

During Year Five of monitoring, sulfate concentrations were found to be greater than 20 mg/L (ranging from 28.0 mg/L to 150.0 mg/L), again indicating that biological degradation of 2ADNT and 4ADNT is inhibited at SWMU 54.

During Year Six of monitoring, sulfate concentrations were again greater than 20 mg/L (ranging from 25.0 mg/L to 100.0 mg/L).

During Year Seven of monitoring, sulfate concentrations were again greater than 20 mg/L (ranging from 23 mg/L to 69 mg/L) for all monitoring wells with the exception of 54MW13, where concentrations dropped to 16 mg/L and 15 mg/L (twenty-fifth and twenty-sixth quarters, respectively).

Year Eight sulfate concentrations were generally greater than 20 mg/L (ranging from 17 mg/L to 140 mg/L) for all monitoring wells, where concentrations dropped to 17 mg/L in the thirty-second quarter.

Sulfate concentrations were lower in Year Nine than Year Eight, but similar to Year Seven, with a concentration range of 24 mg/L to 96 mg/L. This indicates that biological degradation of 2ADNT and 4ADNT is inhibited at SWMU 54, but conditions clearly appear to be improving.

Sulfate was detected at a concentration range of 28 mg/L to 120 mg/L in Year Ten which is slightly higher than Year Nine.

TOC

Organic carbon is a required source of reduced carbon and energy needed to sustain microbial degradation of nitroaromatics and perchlorate. TOC concentrations greater than 20 mg/L are considered adequate to support microbial activity. For the majority of the first 3 years of monitoring, TOC concentrations were found to be considerably lower than what is considered adequate to support microbial activity. TOC concentrations during this timeframe ranged from less

than 0.50 mg/L (non-detect) to 7.47 mg/L (**Table 6-2**). However, measured TOC concentrations during the twelfth quarter exceeded 20 mg/L in monitoring wells 54MW1 (51.0 mg/L) and 54MW10 (63.0 mg/L). The Year Four, Year Five, Year Six, and Year Seven TOC results, however, again indicated low concentrations considered inadequate to support microbial activity. The range of TOC during the Year Four, Year Five, Year Six, and Year Seven monitoring periods ranged from 0.3 mg/L to 13 mg/L. This trend continued throughout the Year Eight monitoring events, with concentrations ranging from 0.53 mg/L to 0.99 mg/L, whereas Year Nine indicated TOC concentrations ranging from non-detect to 2.4 mg/L. Year Ten indicated TOC concentrations ranging from non-detect to 1.5 mg/L which is similar to the past two years.

TIC

Inorganic carbon species include carbon dioxide, carbonic acid, and carbonate. The presence of TIC is a useful source of carbon needed to sustain microbial degradation. The oxidation of organic matter should lead to an increase of TIC in groundwater. TIC concentrations during this monitoring period ranged from 60 mg/L to 91 mg/L with only slight variations noted during each semiannual monitoring event (**Table 6-2**). In addition, TIC concentrations have shown little variation over the last five years of monitoring, which is consistent with the general low variability of organic contaminant concentrations in groundwater samples over the same period.

Specific Conductivity

Figure 6-4 provides a time series plot of specific conductivity at all four wells. Specific conductivity is the indirect measure of the presence of dissolved solids, such as chloride, nitrate, sulfate, iron, and all degradation by-products. **Figures 6-5** through **6-7** provide time series plots of MNA indicators sulfate and nitrate alongside water quality parameters iron and manganese at monitoring wells 54MW10, 54MW12, and 54MW13 for all 9 years. Additionally, **Figures 6-8** through **6-10** provide time series plots of MNA indicator TOC alongside water quality parameters DO and ORP at monitoring wells 54MW10, 54MW12, and 54MW13 for all nine years. Biodegradation of 2,4,6-TNT, RDX, perchlorate, and more dissolved inorganic ions (such as chlorides, nitrates, sulfates, and iron) would create the electrical current witnessed in the specific conductivity readings.

Monitoring wells 54MW10, 54MW12, and 54MW13 all appear to have similar specific conductivity activity according to **Figure 6-4**. Additionally, **Figures 6-5** through **6-7** demonstrate that iron and dissolved manganese have been reduced to concentrations at or very near zero at all three wells. Overall, there are sulfate-reducing conditions at all three wells, which is indicative of biodegradation of 2ADNT, 4ADNT, RDX, and perchlorate. Nitrate concentrations at monitoring well 54MW13 have always been at or slightly above zero. Nitrate reducing conditions remain present at monitoring well 54MW12.

Figures 6-8 through **6-10** demonstrate that ORP conditions at monitoring well 54MW10 support mildly anaerobic conditions; at monitoring wells 54MW12 and 54MW13, ORP is declining overall and beginning to support mildly reducing anaerobic conditions, although both of these wells saw increases in ORP in the thirty-first and thirty-second quarters. DO conditions at all three wells are aerobic. TOC conditions at monitoring well 54MW10 fluctuate between inadequate and adequate conditions. Since the seventeenth quarter and continuing through the thirty-eighth event (Year Ten), TOC concentrations have remained below 20 mg/L, which is considered inadequate. Meanwhile, conditions at monitoring wells 54MW12 and 54MW13 have consistently been considered inadequate and have remained so since the first quarter. TOC concentrations at monitoring wells 54MW12 and 54MW13 have ranged between less than 0.5 mg/L and 13 mg/L; these concentrations are considered inadequate for sustaining microbial degradation of nitroaromatics and perchlorate. Overall, the data suggest that MNA conditions are still favorable at all three wells.

Table 6-1 Analytical Results for Groundwater Performance Monitoring at SWMU 54

Parameter	RG	July 2011 (Q1)	Oct 2011 (Q2)	Jan 2012 (Q3)	Apr 2012 (Q4)	Aug 2012 (Q5)	Nov 2012 (Q6)	Feb 2013 (Q7)	May 2013 (Q8)	Aug 2013 (Q9)	Nov 2013 (Q10)	Feb 2014 (Q11)	May 2014 (Q12)	Sept 2015 (Q13)	Jan 2016 (Q14)	Apr 2016 (Q15)	July 2016 (Q16)	Oct 2016 (Q17)	Jan 2017 (Q18)	Apr 2017 (Q19)	July 2017 (Q20)	Oct 2017 (Q21)	Jan 2018 (Q22)	Apr 2018 (Q23)	July 2018 (Q24)	Oct 2018 (Q25)	Jan 2019 (Q26)	Apr 2019 (Q27)	July 2019 (Q28)	Oct 2019 (Q29)	Jan 2020 (Q30)	Apr 2020 (Q31)	July 2020 (Q32)	Oct 2020 (Q33)	Jan 2021 (Q34)	Apr 2021 (Q35)	July 2021 (Q36)	Oct 2021 (E37)	Apr 2022 (E38)
54MW1																																							
2,4,6-TNT	7.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
RDX	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Perchlorate	10.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
54MW2																																						
2,4,6-TNT	7.82	2.1	0.9	2.08	--	--	--	--	0.749	0.974	0.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	0.572	ND	ND	--	--	--	--	ND	ND	0.075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	--	--	--	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	3.07	0.547	1.91	--	--	--	--	1.82	1	0.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
54MW3																																						
2,4,6-TNT	7.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	0.53	0.18	ND	ND	0.405	0.303	0.309	0.59	0.446	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
54MW4																																						
2,4,6-TNT	**7.82**	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	ND	ND	ND	ND	ND	0.141	ND	ND	ND	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
54MW5																																						
2,4,6-TNT	7.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	0.311	0.393	0.313	0.301	0.42	0.28	0.255	0.309	0.389	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
54MW6																																						
2,4,6-TNT	7.82	ND	ND	ND	ND	ND	Dry	ND	ND	Dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	ND	ND	ND	ND	ND	Dry	ND	ND	Dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	Dry	ND	ND	Dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	ND	0.127	0.159	ND	0.175	Dry	0.16	0.171	Dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
54MW7																																						
2,4,6-TNT	7.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	0.321	ND	ND	0.365	ND	0.103	0.162	0.103	0.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
54MW8																																						
2,4,6-TNT	7.82	0.928	0.433	ND	0.301	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	0.761	0.567	0.493	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	ND	0.408	0.355	0.388	0.392	0.286	0.484	0.118	0.334	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
54MW9																																						
2,4,6-TNT	7.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	ND	0.229	0.262	0.217	ND	ND	1.07	0.923	0.327	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
54MW10																																						
2,4,6-TNT	7.82	0.305	5.84	4.05	ND	**9.17**	1.59	1.88	0.637	ND	**50**	**13**	**11**	6.6	4.1	2.7	**24.2**	1.6	4.2	1	0.44	**11.2**	ND	0.67	3.5	1	0.88	0.74	18.6	4	**8.4**	**20.5**	ND	**11.4**	**39.4**	**30.3**	**13**	5.4	3
RDX	6.1	ND	3.24	2.95	ND	**7.84**	1.35	2.36	1.29	2.23	**21**	5.3	**8.7**	2.1	3.1	1.8	**6.6**	0.4	1.1	ND	0.76	1.8	0.1	ND	4.4	1.4	0.88	0.32	3.9	2.1	1.9	5.1	ND	1.8	5.8	3.8	0.48	1.4	1.8
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	0.068	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	10.9	ND	0.325	0.258	ND	3.74	0.344	0.832	0.835	0.365	2.3	0.42	0.44	ND	0.326	0.082	.84	0.12	0.1	0.24	0.2	0.23	ND	0.5	0.22	0.65	0.34	0.35	0.45	ND	0.25	0.61	ND	6.2	0.62	0.38	0.19	0.072	0.12

Table 6-1 Analytical Results for Groundwater Performance Monitoring at SWMU 54 (Continued)

Parameter	RG	July 2011 (Q1)	Oct 2011 (Q2)	Jan 2012 (Q3)	Apr 2012 (Q4)	Aug 2012 (Q5)	Nov 2012 (Q6)	Feb 2013 (Q7)	May 2013 (Q8)	Aug 2013 (Q9)	Nov 2013 (Q10)	Feb 2014 (Q11)	May 2014 (Q12)	Sept 2015 (Q13)	Jan 2016 (Q14)	Apr 2016 (Q15)	July 2016 (Q16)	Oct 2016 (Q17)	Jan 2017 (Q18)	Apr 2017 (Q19)	July 2017 (Q20)	Oct 2017 (Q21)	Jan 2018 (Q22)	Apr 2018 (Q23)	July 2018 (Q24)	Oct 2018 (Q25)	Jan 2019 (Q26)	Apr 2019 (Q27)	July 2019 (Q28)	Oct 2019 (Q29)	Jan 2020 (Q30)	Apr 2020 (Q31)	July 2020 (Q32)	Oct 2020 (Q33)	Jan 2021 (Q34)	Apr 2021 (Q35)	July 2021 (Q36)	Oct 2021 (E37)	Apr 2022 (E38)
54MW11																																						
2,4,6-TNT	7.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	ND	ND	0.239	ND	ND	ND	0.263	0.43	0.132	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
54MW12																																					
2,4,6-TNT	7.82	**15.9**	**16.1**	**19.4**	**48**	**10.1**	7.62	6.29	**108**	**65.9**	**17**	**29**	**10**	**11**	**110**	**11**	7.4	**10.6**	**28.1**	**78.6**	**8.7**	**39**	**22.3**	**52.3**	**29.7**	**13.3**	**164**	**39.5**	**13.6**	**10.1**	**10.2**	**8.3**	4.1	7.8	**8.6**	**51.4**	**10**	**9.3**	**--**
RDX	6.1	ND	**9.77**	**13.2**	**18.4**	1.95	**6.59**	3.79	**25**	**14.6**	0.54	**8.7**	2	3.9	**30**	0.62	.37	6	4.8	**51.4**	ND	**14**	**13.4**	**33.3**	**8.2**	3.6	**13.5**	4.8	ND	ND	0.56	0.17	ND	ND	ND	ND	ND	ND	--
DNT Mixture	0.932	ND	ND	ND	0.381	ND	ND	ND	ND	ND	0.2	0.31	0.93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Perchlorate	10.9	ND	0.726	10.5	**22.8**	2	5.31	2.98	**22.7**	9.88	1.1	4	1.7	0.737	8.85	1.2	.56	1.6	2.9	4.3	1.1	1.4	1.9	2.8	1.7	1.4	3.7	2	0.61	0.53	0.49	0.73	0.75	8.2	0.46	1.5	0.30	0.30	--
54MW13																																					
2,4,6-TNT	7.82	ND	4.09	0.699	0.979	**9.4**	0.843	0.318	4.91	3.81	**9.8**	2.5	5.8	5.4	1.4	0.79	**13.9**	**8**	5.9	1.8	**8.2**	3	4.4	2	**10.9**	1.6	2.3	5.1	**15.5**	**12.5**	4.1	**5.5**	**8.3**	**12.7**	**11.1**	**19.2**	**17.7**	**11.8**	5.8
RDX	6.1	ND	2.59	0.614	1.14	4.77	0.855	0.642	3.2	1.46	4	0.88	2.5	2.6	0.54	0.17	.86	0.7	ND	1	ND	0.48	ND	ND	ND	0.38	0.46	0.32	1.3	ND	0.55	1.5	0.43	0.58	0.83	0.57	0.43	0.58	2
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11	ND	0.099	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.01**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	10.9	ND	0.244	0.206	0.243	0.627	0.308	0.313	0.64	0.477	0.43	0.32	0.37	0.270	0.216	0.18	.33	0.21	0.29	0.23	0.45	0.2	0.25	0.33	0.45	0.25	0.29	0.47	0.4	0.55	0.26	0.34	0.30	7.9	0.29	0.34	0.41	0.14	0.26
54MW14																																					
2,4,6-TNT	7.82	0.928	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	6.1	0.761	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DNT Mixture	0.932	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	10.9	ND	ND	0.215	0.181	0.214	0.24	ND	ND	0.195	0.456	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
All units are µg/L.
'-- = not sampled
Bolded data indicate exceedances of RGs.
2,4,6-TNT = 2,4,6-trinitrotoluene
µg/L = micrograms per liter
DNT = dinitrotoluene
ND = not detected
RDX = cyclotrimethylenetrinitramine
RG = remedial goal
SWMU = Solid Waste Management Unit

Table 6-2 Water Quality Parameters for Groundwater for Performance Monitoring at SWMU 54

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 First Quarter (July 2011) Water Quality Parameters														
pH	7.7	6.36	6.86	7.19	6.36	7.33	6.6	6.98	6.29	7.13	7.14	6.67	6.75	7.23
Specific Conductivity (mS/cm)	0.357	0.526	0.491	0.949	0.371	0.449	0.419	0.544	0.535	1.68	0.651	0.568	0.676	0.582
Turbidity (NTU)	5.6	0	1.5	1.9	3	0.2	0	4.6	6	89.8	62.6	100	94	16.9
DO (mg/L)	4.86	2.35	4.71	0	4.87	0.68	3.91	3.53	1.23	0.51	0	3.52	0.9	1.06
ORP (mV)	130	178	121	-18	178	110	170	134	198	67	96	152	29	73
Temperature (°C)	14.12	17.07	19.82	15.52	19.88	19.32	18.87	17.86	14.3	25.19	14.94	18.38	20.09	23.76
Dissolved Manganese	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	<0.05	0.2	<0.05	0.05	<0.05	0.65	<0.05
Dissolved Ferrous Iron (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrate (mg/L)	25.2	1.09	0.967	0	0.613	0	0.119	0.639	0.233	0	0	2.79	0.439	0.242
Sulfate (mg/L)	27.1	39.8	23.6	329	15.1	27.4	61.5	40	62.2	167	93.6	38.1	38.8	33.6
TOC (mg/L)	3.9	3.51	7.26	2.51	6.14	1.95	3.17	6.05	5.1	1.61	5.97	2.64	2.55	6.73
SWMU 54 Second Quarter (October 2011) Water Quality Parameters														
pH	7.49	7.02	7.05	7.27	6.78	7.49	7.3	7.09	7.2	6.83	7.31	6.7	7.05	7.16
Specific Conductivity (mS/cm)	0.432	0.56	0.674	0.912	0.502	0.305	0.734	0.541	0.562	0.677	0.654	0.523	0.831	0.568
Turbidity (NTU)	164	167	160	81.1	231	107	155	104	79.9	236	685	69	--	157
DO (mg/L)	0	0	0	2.44	2.68	3.8	0.1	0.05	0.06	0	0	1.72	0.37	0
ORP (mV)	102	117	107	-15	143	122	66	151	146	82	-13	144	126	73
Temperature (°C)	18.04	14.77	14.16	14.32	15.48	13.18	18.01	14.94	14.75	14.75	13.73	14.81	14.63	14.93
Dissolved Manganese (mg/L)	<0.05	<0.05	0.1	0.05	0.1	0.05	0.4	0.05	0.2	0.15	0.3	<0.05	0.35	0.05
Dissolved Ferrous Iron (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrate (mg/L)	0	0.394	0.357	0	0.568	0.167	0	0.514	0.184	0.388	0	2	0.21	0.202
Sulfate (mg/L)	27.1	27	44.4	210	17.4	7.06	216	39.9	46.9	96.7	119	31.8	90.2	34.1
TOC (mg/L)	3.9	3.2	3.22	1.38	1.88	2.68	1.31	7.47	6.78	6.98	3.22	4.71	3.31	4.64
SWMU 54 Third Quarter (January 2011) Water Quality Parameters														
pH	7.59	7.48	7.4	7.36	7.15	7.53	7.43	7.08	7.4	7.46	7.59	6.09	7.45	7.48
Specific Conductivity (mS/cm)	0.498	0.662	0.762	1.11	0.628	0.305	0.905	0.492	0.674	0.707	0.763	0.595	0.687	0.651
Turbidity (NTU)	8.9	15.3	19.2	55.6	32.1	72.4	26.8	66.7	36.8	1.1	6.8	---	226	0
DO (mg/L)	0	0	0	0	7.81	12.01	0	16.65	8.48	6.06	5.09	4.02	7.63	1.66
ORP (mV)	100	33	24	5	121	191	3	104	111	118	101	186	25	61
Temperature (°C)	13.2	13.91	13.26	13.04	13.58	11.93	12.73	9.72	9.65	11.16	11.4	12.86	11.53	12.91
Dissolved Manganese (mg/L)	<0.05	<0.05	0.1	0.05	0.1	0.05	0.4	0.05	0.2	0.15	0.3	<0.05	0.35	0.05
Dissolved Ferrous Iron (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrate (mg/L)	0	0.609	0	0	0.578	0.158	0	0.401	0.174	0.572	0.158	1.94	0.237	0.241
Sulfate (mg/L)	26.3	28.2	73.7	480	20.3	4.55	249	41.5	62.5	72.7	93	37.6	53.9	32.2
TOC (mg/L)	2.1	1.8	2.39	1.16	1.42	1.94	2.38	1.66	2.78	1.66	6.71	5.09	6.63	1.68

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Fourth Quarter (April 2012) Water Quality Parameters														
pH	5.42	5.19	5.38	5.33	4.99	5.76	5.57	5.38	5.46	5.48	5.59	5.05	5.32	5.5
Specific Conductivity (mS/cm)	0.958	1.12	1.46	0.001	0.891	0.73	1.58	1.21	1.26	1.73	1.4	1.35	0.981	1.2
Turbidity (NTU)	2.5	4.4	2.4	125	70.1	318	38	3.4	65.3	30.8	94.7	37	312	36
DO (mg/L)	7.36	7.18	2.24	23.45	10.47	6.49	2.01	7.43	11.29	2.83	5.8	9.44	7.1	5.55
ORP (mV)	-30	236	225	180	168	132	162	134	145	61	36	267	116	149
Temperature (°C)	13.37	12.44	12.02	11.56	20.98	19.09	12.57	14.69	14.21	15.5	14.11	12.67	15.52	12.69
Dissolved Manganese (mg/L)	<0.05	<0.05	0.1	0.5	<0.05	0.05	0.4	0.05	0.2	0.1	0.3	<0.05	0.35	<0.05
Dissolved Ferrous Iron (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrate (mg/L)	0	1.33	0	0	0.677	0.129	0.231	0.483	0.139	0	0	2.65	0.294	0.386
Sulfate (mg/L)	34.9	34.9	80	432	14	14.9	69.4	40.1	56	221	104	37.9	35.4	29.3
TOC (mg/L)	1.8	1.57	1.18	1.82	2.33	5.46	0.99	2.36	3.01	2.4	2.68	2.34	3.51	1.09
SWMU 54 Fifth Quarter (August 2012) Water Quality Parameters														
pH	7.08	6.94	6.71	7.05	6.71	7.47	7.03	6.87	6.84	6.71	7.06	6.61	6.97	7.05
Specific Conductivity (mS/cm)	0.395	0.722	0.644	0.968	0.58	0.363	0.817	0.599	0.752	0.693	0.715	0.665	0.697	0.625
Turbidity (NTU)	4.1	43	19	14	23	0	7.4	19	5.2	0.8	10.8	48	95	9.2
DO (mg/L)	5.34	0	0	0.23	3.96	4.84	0	2.78	0.56	0.4	0	0.33	1.75	0
ORP (mV)	212	65	209	-33	200	134	128	125	-10	47	-22	226	135	-13
Temperature (°C)	13.89	13.49	12.93	15.06	13.44	16.52	13.66	13.7	14.09	13.93	13.64	13.71	16.12	14.08
Dissolved Manganese (mg/L)	<0.05	<0.05	0.05	0.05	<0.05	0.05	0.05	0.05	0.2	0.05	0.05	<0.05	0.3	<0.05
Dissolved Ferrous Iron (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrate (mg/L)	0.600	0.190	0.613	3.00	0.728	0.120	3.00	0.581	1.80	0.594	1.80	1.06	0.681	0.214
Sulfate (mg/L)	26.1	95.5	23.8	378	18.0	15.7	186	41.8	87.2	102	97.6	27.0	38.2	31.8
TOC (mg/L)	0.721	2.00	2.00	1.10	2.00	1.00	1.02	2.00	2.00	1.37	2.00	2.00	1.05	2.04
SWMU 54 Sixth Quarter (November 2012) Water Quality Parameters														
pH	7.63	7.21	6.97	7.03	6.99	Dry	7.31	7.23	7.23	7.29	7.28	7.6	5.72	7.3
Specific Conductivity (mS/cm)	0.443	0.62	0.561	1.01	0.612	Dry	0.826	0.628	0.784	0.779	0.698	0.635	0.918	0.6
Turbidity (NTU)	2.9	11.4	0.2	17	5.5	Dry	46	3.9	27.7	4.7	2.5	2.4	35	43
DO (mg/L)	1.44	0.86	4.09	1	1.01	Dry	0.56	2.71	1.14	0.38	1.1	0.26	0.95	0.45
ORP (mV)	148	141	145	72	167	Dry	59	101	-28	43	117	135	209	100
Temperature (°C)	10.03	13.43	12.22	11.27	11.21	Dry	10.83	11.98	11.35	13.61	12.95	13.99	12.26	10.61
Dissolved Manganese (mg/L)	0.05	0.05	0.05	0.05	0.05	Dry	0.05	0.05	0.2	0.05	0.05	0.1	0.3	0.05
Dissolved Ferrous Iron (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	Dry	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrate (mg/L)	0.600	0.327	0.656	3.00	0.944	Dry	1.80	0.403	1.80	0.381	0.600	2.86	0.369	0.600
Sulfate (mg/L)	31.3	35.4	22.9	403	21.5	Dry	179	60.3	199	151	99.1	49.8	76.7	39.0
TOC (mg/L)	1.96	2.68	3.29	2.93	4.31	Dry	3.72	4.90	6.73	5.55	5.88	3.41	2.00	2.12

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Seventh Quarter (February 2013) Water Quality Parameters														
pH	7.85	6.89	6.76	7.52	6.56	7.08	7.4	7.03	7.04	6.69	7.09	6.36	6.96	7.45
Specific Conductivity (mS/cm)	0.465	0.682	0.504	1.01	0.417	0.293	0.474	0.498	0.487	0.542	0.687	0.464	0.37	0.619
Turbidity (NTU)	0	20	9	16	0	44.3	16	9.2	10.9	13.2	2	14.2	6.8	1.2
DO (mg/L)	0.71	1.43	6.97	0.53	9.19	9.28	2.83	5.36	8.28	2.97	0.58	1.27	8.39	0.47
ORP (mV)	-5	156	171	-56	168	72	12	168	194	125	169	168	158	56
Temperature (°C)	12.17	8.28	11.98	12.09	11.18	13.15	11.48	9.89	9.74	11.22	10.14	10.31	7.98	12.26
Dissolved Manganese (mg/L)	0.05	<0.05	0.1	0.05	<0.05	0.05	0.1	0.05	0.2	0.1	0.25	<0.05	0.2	<0.05
Dissolved Ferrous Iron (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrate (mg/L)	0.600	0.315	0.423	3.00	0.636	0.209	0.205	0.336	0.510	0.477	0.346	1.95	0.501	0.600
Sulfate (mg/L)	27.1	36.8	25.3	340	15.5	4.29	34.2	44.6	117	70.1	120	35.8	23.1	41.1
TOC (mg/L)	1.19	0.916	1.07	1.35	1.00	1.50	0.791	1.00	2.09	1.14	1.88	1.21	0.683	1.46
SWMU 54 Eighth Quarter (May 2013) Water Quality Parameters														
pH	7.38	6.52	7.06	7.51	6.83	7.33	7.41	7.47	7.95	6.94	7.59	6.78	6.97	7.31
Specific Conductivity (mS/cm)	0.398	0.315	0.499	1.021	0.4	0.494	0.674	0.596	0.521	0.537	0.592	0.665	0.44	0.608
Turbidity (NTU)	1.2	0.2	1.4	6.2	8.9	7.1	0.5	1.6	5.2	1.4	0.3	3.8	0.2	6.4
DO (mg/L)	4.13	2.74	3.55	1.05	3.28	1.29	3.24	0.4	7.58	2.43	1.17	2.54	1.4	4.13
ORP (mV)	122	254.3	273.6	257.1	283.1	128.4	282.7	255.1	244.2	287.8	255.8	292.4	284	296.5
Temperature (°C)	13.43	12.22	13.31	11.73	12.2	13.48	12.74	13.32	11.12	12.89	12.42	13.28	12.84	13.42
Dissolved Manganese (mg/L)	<0.05	0.05	0.05	0.05	<0.05	<0.05	0.05	0.05	0.1	0.05	0.05	<0.05	0.15	0.05
Dissolved Ferrous Iron (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrate (mg/L)	0.368	0.988	0.911	3.00	1.60	0.600	1.10	0.600	0.637	0.740	0.647	4.03	1.05	0.543
Sulfate (mg/L)	26.1	24.1	29.0	329	15.7	14.0	137	41.1	96.7	48.8	89.4	47.6	29.2	37.0
TOC (mg/L)	0.949	1.68	1.36	0.619	1.06	2.41	0.793	1.00	1.38	1.00	0.635	1.36	0.817	0.583
SWMU 54 Ninth Quarter (August 2013) Water Quality Parameters														
pH	7.82	6.91	6.75	6.96	6.28	Dry	6.71	6.95	7.12	6.48	7.04	6.36	6.57	6.84
Specific Conductivity (mS/cm)	0.452	0.592	0.617	0.937	0.333	Dry	0.478	0.559	0.419	0.496	0.637	0.491	0.351	0.554
Turbidity (NTU)	3	0	0	0	0	Dry	7.2	0	6.1	0	0	7.0	0	0
DO (mg/L)	0.136	0.8	1.69	0.39	6.28	Dry	2.4	0.67	2.36	0.86	4.65	2.85	6.57	0.52
ORP (mV)	223.2	84	96	-18	129	Dry	86	42	-13	35	68	91	146	50
Temperature (°C)	14.51	15.25	15.08	13.22	15.49	Dry	13.05	13.4	13.25	14.51	13.46	15.7	13.89	13.21
Dissolved Manganese (mg/L)	0.05	NM	<0.05	0.05	0.05	Dry	<0.05	<0.05	0.05	<0.05	0.05	0.05	0.15	0.05
Dissolved Ferrous Iron (mg/L)	<0.2	NM	<0.2	<0.2	<0.2	Dry	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrate (mg/L)	<0.600	0.326	0.521	<0.600	0.849	Dry	<0.600	0.273	0.194	0.206	0.12	4.8	0.591	0.29
Sulfate (mg/L)	26.7	30.8	26.1	322	15.0	Dry	27.3	38.0	39.2	44.3	91.8	39.6	23.3	28.2
TOC (mg/L)	3.32	1.5	1.11	2.7	0.91	Dry	0.822	2.30	4.17	4.28	3.11	3.27	2.35	3.64

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Tenth Quarter (November 2013) Water Quality Parameters														
pH	--	7.45	--	--	--	--	--	--	--	6.89	--	NM	7.29	--
Specific Conductivity (mS/cm)	--	0.635	--	--	--	--	--	--	--	0.615	--	0.469	0.643	--
Turbidity (NTU)	--	0	--	--	--	--	--	--	--	0	--	4.6	0.4	--
DO (mg/L)	--	2.7	--	--	--	--	--	--	--	2.45	--	1.17	1.32	--
ORP (mV)	--	51	--	--	--	--	--	--	--	18	--	108	25	--
Temperature (°C)	--	14.09	--	--	--	--	--	--	--	15.25	--	14.96	15.96	--
Dissolved Manganese (mg/L)	--	<0.05	--	--	--	--	--	--	--	<0.05	--	0.05	0.05	--
Dissolved Ferrous Iron (mg/L)	--	<0.2	--	--	--	--	--	--	--	<0.2	--	<0.2	<0.2	--
Nitrate (mg/L)	--	0.25	--	--	--	--	--	--	--	0.670	--	1.1	0.45	--
Sulfate (mg/L)	--	29.0	--	--	--	--	--	--	--	57.0	--	26.0	39.0	--
TOC (mg/L)	--	2.5	--	--	--	--	--	--	--	0.68	--	0.5	<0.50	--
SWMU 54 Eleventh Quarter (February 2014) Water Quality Parameters														
pH	8.1	--	--	--	--	--	--	--	--	6.89	--	7.21	7.21	--
Specific Conductivity (mS/cm)	0.41	--	--	--	--	--	--	--	--	0.587	--	0.643	0.481	--
Turbidity (NTU)	0	--	--	--	--	--	--	--	--	0	--	3.8	14	--
DO (mg/L)	1.32	--	--	--	--	--	--	--	--	1.43	--	0.7	2.09	--
ORP (mV)	127	--	--	--	--	--	--	--	--	153	--	150	142	--
Temperature (°C)	12.34	--	--	--	--	--	--	--	--	13.2	--	14.11	12.04	--
Dissolved Manganese (mg/L)	<0.05	--	--	--	--	--	--	--	--	<0.05	--	<0.05	0.05	--
Dissolved Ferrous Iron (mg/L)	<0.2	--	--	--	--	--	--	--	--	0.2	--	0.2	<0.2	--
Nitrate (mg/L)	<0.025	--	--	--	--	--	--	--	--	0.470	--	3.1	0.44	--
Sulfate (mg/L)	30.00	--	--	--	--	--	--	--	--	89.0	--	36.0	31.0	--
TOC (mg/L)	1.00	--	--	--	--	--	--	--	--	0.53	--	1.00	<0.50	--
SWMU 54 Twelfth Quarter (May 2014) Water Quality Parameters														
pH	7.79	--	--	--	--	--	--	--	--	6.93	--	NM	NM	--
Specific Conductivity (mS/cm)	0.469	--	--	--	--	--	--	--	--	0.582	--	0.453	0.47	--
Turbidity (NTU)	3	--	--	--	--	--	--	--	--	3.8	--	10	9	--
DO (mg/L)	1.65	--	--	--	--	--	--	--	--	1.56	--	2.25	1.14	--
ORP (mV)	222.3	--	--	--	--	--	--	--	--	127.4	--	272.1	71.3	--
Temperature (°C)	16.61	--	--	--	--	--	--	--	--	12.81	--	14.61	16.57	--
Dissolved Manganese (mg/L)	0.05	--	--	--	--	--	--	--	--	0.1	--	0.1	0.05	--
Dissolved Ferrous Iron (mg/L)	0.2	--	--	--	--	--	--	--	--	<0.2	--	0.2	0.2	--
Nitrate (mg/L)	0.031	--	--	--	--	--	--	--	--	0.330	--	1.6	0.41	--
Sulfate (mg/L)	29.0	--	--	--	--	--	--	--	--	58.0	--	31.0	27.0	--
TOC (mg/L)	51.0	--	--	--	--	--	--	--	--	62.0	--	<0.50	<0.50	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Thirteenth Quarter (September 2015) Water Quality Parameters														
pH	6.7	--	--	--	--	--	--	--	--	6.8	--	5.4	6.69	--
Specific Conductivity (mS/cm)	0.471	--	--	--	--	--	--	--	--	329	--	0.557	0.529	--
Turbidity (NTU)	0.65	--	--	--	--	--	--	--	--	30.7	--	2.66	1.00	--
DO (mg/L)	0.75	--	--	--	--	--	--	--	--	8.2	--	6.0	6.53	--
ORP (mV)	180	--	--	--	--	--	--	--	--	71	--	264	198.0	--
Temperature (°C)	14.14	--	--	--	--	--	--	--	--	15.8	--	14.8	14.83	--
Dissolved Manganese (mg/L)	0.087	--	--	--	--	--	--	--	--	0.081	--	0.066	0.081	--
Dissolved Ferrous Iron (mg/L)	0	--	--	--	--	--	--	--	--	0.11	--	0.07	0.11	--
Nitrate (mg/L)	0.14	--	--	--	--	--	--	--	--	0.25	--	0.92	0.5	--
Sulfate (mg/L)	25	--	--	--	--	--	--	--	--	23	--	24	26	--
TOC (mg/L)	4.1	--	--	--	--	--	--	--	--	8.1	--	8.3	13	--
SWMU 54 Fourteenth Quarter (January 2016) Water Quality Parameters														
pH	7.60	--	--	--	--	--	--	--	--	6.16	--	6.79	7.01	--
Specific Conductivity (mS/cm)	2.8	--	--	--	--	--	--	--	--	0.54	--	589.5	324.0	--
Turbidity (NTU)	0.78	--	--	--	--	--	--	--	--	0.88	--	5.8	7.99	--
DO (mg/L)	9.89	--	--	--	--	--	--	--	--	6.70	--	8.6	8.74	--
ORP (mV)	76.2	--	--	--	--	--	--	--	--	89.3	--	92.4	73.2	--
Temperature (°C)	9.6	--	--	--	--	--	--	--	--	12.7	--	12.4	11.6	--
Dissolved Manganese (mg/L)	0.063	--	--	--	--	--	--	--	--	0.054	--	0.030	0.063	--
Dissolved Ferrous Iron (mg/L)	0	--	--	--	--	--	--	--	--	0.0	--	0.10	0.05	--
Nitrate (mg/L)	0.15	--	--	--	--	--	--	--	--	0.45	--	2.5	0.46	--
Sulfate (mg/L)	26	--	--	--	--	--	--	--	--	76	--	45	20	--
TOC (mg/L)	1.5	--	--	--	--	--	--	--	--	0.97	--	1.8	1.8	--
SWMU 54 Fifteenth Quarter (April 2016) Water Quality Parameters														
pH	7.61	--	--	--	--	--	--	--	--	6.71	--	6.44	6.77	--
Specific Conductivity (mS/cm)	440	--	--	--	--	--	--	--	--	602	--	353	229	--
Turbidity (NTU)	0.3	--	--	--	--	--	--	--	--	3.74	--	5.7	1.16	--
DO (mg/L)	4	--	--	--	--	--	--	--	--	0.61	--	5.8	6.86	--
ORP (mV)	51	--	--	--	--	--	--	--	--	73.5	--	93.4	76.8	--
Temperature (°C)	12.01	--	--	--	--	--	--	--	--	13.4	--	14.32	13.52	--
Dissolved Manganese (mg/L)	0.021	--	--	--	--	--	--	--	--	0.057	--	0.020	0.025	--
Dissolved Ferrous Iron (mg/L)	0.02	--	--	--	--	--	--	--	--	0.03	--	0.04	0.02	--
Nitrate (mg/L)	0.14	--	--	--	--	--	--	--	--	0.18	--	1.3	0.43	--
Sulfate (mg/L)	29	--	--	--	--	--	--	--	--	83	--	27	19	--
TOC (mg/L)	4.2	--	--	--	--	--	--	--	--	8.9	--	6.8	0.68	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Sixteenth Quarter (July 2016) Water Quality Parameters														
pH	6.82	--	--	--	--	--	--	--	--	7.39	--	6.32	7.27	--
Specific Conductivity (mS/cm)	619	--	--	--	--	--	--	--	--	775	--	499	473.0	--
Turbidity (NTU)	4.62	--	--	--	--	--	--	--	--	5.36	--	6.50	0.72	--
DO (mg/L)	3.14	--	--	--	--	--	--	--	--	0.37	--	4.60	2.09	--
ORP (mV)	-10.1	--	--	--	--	--	--	--	--	109	--	8.2	12.0	--
Temperature (°C)	16.56	--	--	--	--	--	--	--	--	13.79	--	14.33	15.2	--
Dissolved Manganese (mg/L)	0.062	--	--	--	--	--	--	--	--	0.048	--	0.033	0.031	--
Dissolved Ferrous Iron (mg/L)	0.14	--	--	--	--	--	--	--	--	0.02	--	0.02	0.00	--
Nitrate (mg/L)	0.15	--	--	--	--	--	--	--	--	0.47	--	0.81	0.60	--
Sulfate (mg/L)	29	--	--	--	--	--	--	--	--	93	--	25	36	--
TOC (mg/L)	0.92	--	--	--	--	--	--	--	--	0.58	--	1.2	0.78	--
SWMU 54 Seventeenth Quarter (October 2016) Water Quality Parameters														
pH	7.28	--	--	--	--	--	--	--	--	5.91	--	6.34	6.92	--
Specific Conductivity (mS/cm)	474	--	--	--	--	--	--	--	--	839	--	579	673	--
Turbidity (NTU)	0.14	--	--	--	--	--	--	--	--	3.22	--	3.02	9.98	--
DO (mg/L)	2.60	--	--	--	--	--	--	--	--	0.54	--	5.05	3.40	--
ORP (mV)	138.2	--	--	--	--	--	--	--	--	69.1	--	30.4	44.8	--
Temperature (°C)	14.48	--	--	--	--	--	--	--	--	14.63	--	15.55	13.10	--
Dissolved Manganese (mg/L)	0.049	--	--	--	--	--	--	--	--	0.003	--	0.038	0.061	--
Dissolved Ferrous Iron (mg/L)	0.05	--	--	--	--	--	--	--	--	0.52	--	0.00	0.08	--
Nitrate (mg/L)	0.15	--	--	--	--	--	--	--	--	0.26	--	1.2	0.49	--
Sulfate (mg/L)	30	--	--	--	--	--	--	--	--	150	--	41	38	--
TOC (mg/L)	1.5	--	--	--	--	--	--	--	--	0.55	--	0.99	1.5	--
SWMU 54 Eighteenth Quarter (January 2017) Water Quality Parameters														
pH	7.43	--	--	--	--	--	--	--	--	7.19	--	6.70	7.04	--
Specific Conductivity (mS/cm)	486.2	--	--	--	--	--	--	--	--	854	--	647.5	740	--
Turbidity (NTU)	0.28	--	--	--	--	--	--	--	--	1.39	--	1.04	8.20	--
DO (mg/L)	2.21	--	--	--	--	--	--	--	--	1.40	--	5.40	3.29	--
ORP (mV)	74.8	--	--	--	--	--	--	--	--	49	--	75	71	--
Temperature (°C)	12.8	--	--	--	--	--	--	--	--	12.5	--	11.8	11.7	--
Dissolved Manganese (mg/L)	0.036	--	--	--	--	--	--	--	--	0.069	--	0.040	0.060	--
Dissolved Ferrous Iron (mg/L)	0.00	--	--	--	--	--	--	--	--	0.04	--	0.00	0.03	--
Nitrate (mg/L)	0.15	--	--	--	--	--	--	--	--	0.38	--	0.94	0.48	--
Sulfate (mg/L)	31	--	--	--	--	--	--	--	--	110	--	38	42	--
TOC (mg/L)	0.56	--	--	--	--	--	--	--	--	1.5	--	1.4	1.5	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Nineteenth Quarter (April 2017) Water Quality Parameters														
pH	7.65	--	--	--	--	--	--	--	--	6.88	--	6.70	6.97	--
Specific Conductivity (mS/cm)	0.443	--	--	--	--	--	--	--	--	0.614	--	0.627	0.474	--
Turbidity (NTU)	0.25	--	--	--	--	--	--	--	--	0.71	--	1.92	14.2	--
DO (mg/L)	8.38	--	--	--	--	--	--	--	--	3.2	--	5.39	4.74	--
ORP (mV)	91.0	--	--	--	--	--	--	--	--	57.3	--	93.4	77.5	--
Temperature (°C)	13.1	--	--	--	--	--	--	--	--	13.80	--	13.1	14	--
Dissolved Manganese (mg/L)	0.049	--	--	--	--	--	--	--	--	0.039	--	0.036	0.067	--
Dissolved Ferrous Iron (mg/L)	0.00	--	--	--	--	--	--	--	--	0.04	--	0.02	0.14	--
Nitrate (mg/L)	0.15	--	--	--	--	--	--	--	--	0.3	--	1	0.44	--
Sulfate (mg/L)	33	--	--	--	--	--	--	--	--	65	--	47	30	--
TOC (mg/L)	3.3	--	--	--	--	--	--	--	--	6.9	--	6.7	4.4	--
SWMU 54 Twentieth Quarter (July 2017) Water Quality Parameters														
pH	7.43	--	--	--	--	--	--	--	--	7.00	--	6.63	7.00	--
Specific Conductivity (mS/cm)	468	--	--	--	--	--	--	--	--	740	--	505	600	--
Turbidity (NTU)	0.52	--	--	--	--	--	--	--	--	0.52	--	0.71	1.36	--
DO (mg/L)	0.69	--	--	--	--	--	--	--	--	0.83	--	0.11	0.01	--
ORP (mV)	116.5	--	--	--	--	--	--	--	--	24.1	--	85.5	15.5	--
Temperature (°C)	14.8	--	--	--	--	--	--	--	--	14.9	--	13.7	14.8	--
Dissolved Manganese (mg/L)	0.031	--	--	--	--	--	--	--	--	0.060	--	0.073	0.084	--
Dissolved Ferrous Iron (mg/L)	0.00	--	--	--	--	--	--	--	--	0.05	--	0.07	0.08	--
Nitrate (mg/L)	0.15	--	--	--	--	--	--	--	--	0.10	--	0.75	0.56	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	110	--	32	32	--
TOC (mg/L)	0.71	--	--	--	--	--	--	--	--	2.6	--	1.5	1.9	--
SWMU 54 Twenty-First Quarter (October 2017) Water Quality Parameters														
pH	7.23	--	--	--	--	--	--	--	--	6.71	--	6.49	6.68	--
Specific Conductivity (mS/cm)	468.6	--	--	--	--	--	--	--	--	462.3	--	577.5	537.5	--
Turbidity (NTU)	0.17	--	--	--	--	--	--	--	--	0.8	--	8.75	0.74	--
DO (mg/L)	7.98	--	--	--	--	--	--	--	--	8.60	--	6.43	5.71	--
ORP (mV)	63.6	--	--	--	--	--	--	--	--	45.6	--	97.4	88.3	--
Temperature (°C)	14.2	--	--	--	--	--	--	--	--	14.9	--	12.7	14.6	--
Dissolved Manganese (mg/L)	0.21	--	--	--	--	--	--	--	--	0.044	--	0.051	0.032	--
Dissolved Ferrous Iron (mg/L)	0.00	--	--	--	--	--	--	--	--	0.00	--	0.07	0.00	--
Nitrate (mg/L)	0.15	--	--	--	--	--	--	--	--	0.34	--	0.86	0.45	--
Sulfate (mg/L)	31	--	--	--	--	--	--	--	--	38	--	37	29	--
TOC (mg/L)	2.6	--	--	--	--	--	--	--	--	2.6	--	1.2	2.2	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Twenty-Second Quarter (January 2018) Water Quality Parameters														
pH	7.46	--	--	--	--	--	--	--	--	7.14	--	6.57	7.00	--
Specific Conductivity (mS/cm)	438.4	--	--	--	--	--	--	--	--	734	--	531.7	640.2	--
Turbidity (NTU)	0.32	--	--	--	--	--	--	--	--	0.92	--	2.17	7.34	--
DO (mg/L)	0.53	--	--	--	--	--	--	--	--	0.95	--	8.45	4.51	--
ORP (mV)	69	--	--	--	--	--	--	--	--	45.9	--	83.2	75.3	--
Temperature (°C)	13	--	--	--	--	--	--	--	--	12.5	--	10.4	12	--
Dissolved Manganese (mg/L)	0.038	--	--	--	--	--	--	--	--	0.000	--	0.000	0.064	--
Dissolved Ferrous Iron (mg/L)	0.02	--	--	--	--	--	--	--	--	0.00	--	0.00	0.26	--
Nitrate (mg/L)	0.15	--	--	--	--	--	--	--	--	0.15	--	1.4	0.33	--
Sulfate (mg/L)	25	--	--	--	--	--	--	--	--	98	--	46	34	--
TOC (mg/L)	6.5	--	--	--	--	--	--	--	--	3.7	--	13	10	--
SWMU 54 Twenty-Third Quarter (April 2018) Water Quality Parameters														
pH	7.59	--	--	--	--	--	--	--	--	6.87	--	6.68	6.76	--
Specific Conductivity (mS/cm)	441.6	--	--	--	--	--	--	--	--	553.7	--	584	520	--
Turbidity (NTU)	0.59	--	--	--	--	--	--	--	--	0.78	--	10.4	3.15	--
DO (mg/L)	5.28	--	--	--	--	--	--	--	--	4.37	--	6.5	6.18	--
ORP (mV)	63.8	--	--	--	--	--	--	--	--	50	--	204.7	73.5	--
Temperature (°C)	13.6	--	--	--	--	--	--	--	--	13.1	--	12.4	13.4	--
Dissolved Manganese (mg/L)	0.024	--	--	--	--	--	--	--	--	0.11	--	0.046	0.032	--
Dissolved Ferrous Iron (mg/L)	0.00	--	--	--	--	--	--	--	--	0.00	--	0.06	0.00	--
Nitrate (mg/L)	0.2	--	--	--	--	--	--	--	--	0.68	--	1.2	0.62	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	47	--	41	30	--
TOC (mg/L)	1.5	--	--	--	--	--	--	--	--	1.5	--	0.72	1.5	--
SWMU 54 Twenty-Fourth Quarter (July 2018) Water Quality Parameters														
pH	6.87	--	--	--	--	--	--	--	--	6.56	--	6.06	6.55	--
Specific Conductivity (mS/cm)	390.9	--	--	--	--	--	--	--	--	629	--	375.6	549	--
Turbidity (NTU)	0.3	--	--	--	--	--	--	--	--	0.89	--	39.5	2.03	--
DO (mg/L)	6.96	--	--	--	--	--	--	--	--	0.78	--	9.17	3.42	--
ORP (mV)	0.5	--	--	--	--	--	--	--	--	-19.9	--	2.9	0.7	--
Temperature (°C)	14	--	--	--	--	--	--	--	--	14.7	--	15.6	16	--
Dissolved Manganese (mg/L)	0.041	--	--	--	--	--	--	--	--	0.121	--	0.039	0.143	--
Dissolved Ferrous Iron (mg/L)	0.00	--	--	--	--	--	--	--	--	0.03	--	0.04	0.00	--
Nitrate (mg/L)	0.2	--	--	--	--	--	--	--	--	0.19	--	1.6	0.43	--
Sulfate (mg/L)	26	--	--	--	--	--	--	--	--	100	--	40	32	--
TOC (mg/L)	1.5	--	--	--	--	--	--	--	--	1.5	--	1.5	1.5	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Twenty-Fifth Quarter (October 2018) Water Quality Parameters														
pH	7.39	--	--	--	--	--	--	--	--	6.89	--	6.41	6.63	--
Specific Conductivity (mS/cm)	374.1	--	--	--	--	--	--	--	--	707	--	372.6	220	--
Turbidity (NTU)	0.34	--	--	--	--	--	--	--	--	0.56	--	28.90	10.90	--
DO (mg/L)	8.05	--	--	--	--	--	--	--	--	2.68	--	5.84	5.5	--
ORP (mV)	-34.5	--	--	--	--	--	--	--	--	71.7	--	118.5	110.4	--
Temperature (°C)	13.3	--	--	--	--	--	--	--	--	15.4	--	14.7	14.8	--
Dissolved Manganese (mg/L)	0.22	--	--	--	--	--	--	--	--	0.024	--	0.045	0.024	--
Dissolved Ferrous Iron (mg/L)	0.00	--	--	--	--	--	--	--	--	0.00	--	0.16	0.00	--
Nitrate (mg/L)	0.2	--	--	--	--	--	--	--	--	0.62	--	2	0.41	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	61	--	32	16	--
TOC (mg/L)	1.5	--	--	--	--	--	--	--	--	0.81	--	1	1.5	--
SWMU 54 Twenty-Sixth Quarter (February 2019) Water Quality Parameters														
pH	7.14	--	--	--	--	--	--	--	--	6.57	--	6.46	6.28	--
Specific Conductivity (mS/cm)	471.5	--	--	--	--	--	--	--	--	566.6	--	532.6	267.6	--
Turbidity (NTU)	0.32	--	--	--	--	--	--	--	--	0.26	--	6.2	8.99	--
DO (mg/L)	3.02	--	--	--	--	--	--	--	--	0.11	--	1.39	8.02	--
ORP (mV)	10.3	--	--	--	--	--	--	--	--	45.7	--	102.1	79.3	--
Temperature (°C)	13.7	--	--	--	--	--	--	--	--	13.5	--	13.2	13.1	--
Dissolved Manganese (mg/L)	0.029	--	--	--	--	--	--	--	--	0.04	--	0.046	0.045	--
Dissolved Ferrous Iron (mg/L)	0.02	--	--	--	--	--	--	--	--	0.05	--	0.06	0.14	--
Nitrate (mg/L)	0.2	--	--	--	--	--	--	--	--	1.1	--	2	0.48	--
Sulfate (mg/L)	25	--	--	--	--	--	--	--	--	31	--	43	15	--
TOC (mg/L)	1.5	--	--	--	--	--	--	--	--	0.72	--	2.3	1.5	--
SWMU 54 Twenty-Seventh Quarter (April 2019) Water Quality Parameters														
pH	7.33	--	--	--	--	--	--	--	--	6.52	--	5.8	6.34	--
Specific Conductivity (mS/cm)	372.8	--	--	--	--	--	--	--	--	402.4	--	324.6	270.4	--
Turbidity (NTU)	0.28	--	--	--	--	--	--	--	--	1.19	--	46.7	10.17	--
DO (mg/L)	8.4	--	--	--	--	--	--	--	--	4.32	--	6.77	5.9	--
ORP (mV)	62.1	--	--	--	--	--	--	--	--	89.7	--	118.3	116.6	--
Temperature (°C)	13.2	--	--	--	--	--	--	--	--	12.2	--	14.2	14.3	--
Dissolved Manganese (mg/L)	0.023	--	--	--	--	--	--	--	--	0.00	--	0.085	0.04	--
Dissolved Ferrous Iron (mg/L)	0.00	--	--	--	--	--	--	--	--	0.00	--	0.21	0.02	--
Nitrate (mg/L)	0.2	--	--	--	--	--	--	--	--	2	--	2.5	0.58	--
Sulfate (mg/L)	27	--	--	--	--	--	--	--	--	30	--	56	41	--
TOC (mg/L)	1.4	--	--	--	--	--	--	--	--	1.5	--	0.84	1.5	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Twenty-Eighth Quarter (July 2019) Water Quality Parameters														
pH	7.49	--	--	--	--	--	--	--	--	6.9	--	6.54	7.01	--
Specific Conductivity (mS/cm)	479.5	--	--	--	--	--	--	--	--	570.1	--	470.5	577	--
Turbidity (NTU)	0.21	--	--	--	--	--	--	--	--	1.71	--	2.58	1.82	--
DO (mg/L)	3.54	--	--	--	--	--	--	--	--	5.33	--	4.29	6.24	--
ORP (mV)	212.5	--	--	--	--	--	--	--	--	79	--	238.7	225.1	--
Temperature (°C)	14.7	--	--	--	--	--	--	--	--	15.3	--	15.2	18.1	--
Dissolved Manganese (mg/L)	0.035	--	--	--	--	--	--	--	--	0.026	--	0.04	0.038	--
Dissolved Ferrous Iron (mg/L)	0.07	--	--	--	--	--	--	--	--	1.71	--	2.58	1.82	--
Nitrate (mg/L)	0.2	--	--	--	--	--	--	--	--	0.46	--	0.84	0.5	--
Sulfate (mg/L)	26	--	--	--	--	--	--	--	--	65	--	23	31	--
TOC (mg/L)	1.5	--	--	--	--	--	--	--	--	1.5	--	1.5	1.5	--
SWMU 54 Twenty-Ninth Quarter (October 2019) Water Quality Parameters														
pH	7.33	--	--	--	--	--	--	--	--	6.99	--	7	7.01	--
Specific Conductivity (mS/cm)	431	--	--	--	--	--	--	--	--	728	--	601	519	--
Turbidity (NTU)	0.22	--	--	--	--	--	--	--	--	2.52	--	3.06	1.97	--
DO (mg/L)	14.8	--	--	--	--	--	--	--	--	18.3	--	48.6	77	--
ORP (mV)	41.3	--	--	--	--	--	--	--	--	32	--	80.6	44.3	--
Temperature (°C)	14.97	--	--	--	--	--	--	--	--	15.16	--	14.95	16.38	--
Dissolved Manganese (mg/L)	0.02	--	--	--	--	--	--	--	--	0.014	--	0.042	0.04	--
Dissolved Ferrous Iron (mg/L)	0.24	--	--	--	--	--	--	--	--	0	--	0.12	0.16	--
Nitrate (mg/L)	ND	--	--	--	--	--	--	--	--	0.18	--	0.58	0.52	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	140	--	32	33	--
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	0.62	--	0.69	0.53	--
TIC (mg/L)	61	--	--	--	--	--	--	--	--	85	--	86	97	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Thirtieth Quarter (January 2020) Water Quality Parameters														
pH	7.5	--	--	--	--	--	--	--	--	6.87	--	6.51	6.93	--
Specific Conductivity (mS/cm)	462	--	--	--	--	--	--	--	--	508	--	540	600	--
Turbidity (NTU)	0.34	--	--	--	--	--	--	--	--	0.43	--	1.13	1.86	--
DO (mg/L)	2.4	--	--	--	--	--	--	--	--	0.43	--	7.2	6.54	--
ORP (mV)	95.3	--	--	--	--	--	--	--	--	126.8	--	116.8	108.7	--
Temperature (°C)	13.33	--	--	--	--	--	--	--	--	12.6	--	12.72	12.48	--
Dissolved Manganese (mg/L)	0.01	--	--	--	--	--	--	--	--	0.05	--	0.33	0.1	--
Dissolved Ferrous Iron (mg/L)	0.04	--	--	--	--	--	--	--	--	0.06	--	0.07	0.1	--
Nitrate (mg/L)	ND	--	--	--	--	--	--	--	--	0.58	--	0.76	0.63	--
Sulfate (mg/L)	29	--	--	--	--	--	--	--	--	59	--	29	27	--
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	ND	--	ND	ND	--
TIC (mg/L)	56	--	--	--	--	--	--	--	--	59	--	84	70	--
SWMU 54 Thirty-First Quarter (April 2020) Water Quality Parameters														
pH	7.65	--	--	--	--	--	--	--	--	6.83	--	6.62	6.68	--
Specific Conductivity (mS/cm)	339.6	--	--	--	--	--	--	--	--	364.9	--	357.2	241.6	--
Turbidity (NTU)	1.86	--	--	--	--	--	--	--	--	35.68	--	77.81	50.12	--
DO (mg/L)	4.46	--	--	--	--	--	--	--	--	5.28	--	7.34	8.21	--
ORP (mV)	111	--	--	--	--	--	--	--	--	112.6	--	127.8	96	--
Temperature (°C)	13.4	--	--	--	--	--	--	--	--	11.9	--	13.5	12	--
Dissolved Manganese (mg/L)	0.021	--	--	--	--	--	--	--	--	0.07	--	0.08	0.05	--
Dissolved Ferrous Iron (mg/L)	0	--	--	--	--	--	--	--	--	0.02	--	0.1	0.02	--
Nitrate (mg/L)	ND	--	--	--	--	--	--	--	--	1.1	--	1	5.6	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	52	--	28	0.97	--
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	0.99	--	ND	0.46	--
TIC (mg/L)	56	--	--	--	--	--	--	--	--	63	--	85	21	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Thirty-Second Quarter (July 2020) Water Quality Parameters														
pH	7.5	--	--	--	--	--	--	--	--	6.87	--	6.51	6.93	--
Specific Conductivity (mS/cm)	462	--	--	--	--	--	--	--	--	508	--	540	600	--
Turbidity (NTU)	0.34	--	--	--	--	--	--	--	--	0.43	--	1.13	1.86	--
DO (mg/L)	2.4	--	--	--	--	--	--	--	--	0.43	--	7.2	6.54	--
ORP (mV)	95.3	--	--	--	--	--	--	--	--	126.8	--	116.8	108.7	--
Temperature (°C)	13.33	--	--	--	--	--	--	--	--	12.6	--	12.72	12.48	--
Dissolved Manganese (mg/L)	0.04	--	--	--	--	--	--	--	--	0.31	--	0.1	0.037	--
Dissolved Ferrous Iron (mg/L)	0.09	--	--	--	--	--	--	--	--	0.07	--	0.017	0.07	--
Nitrate (mg/L)	0.12	--	--	--	--	--	--	--	--	ND	--	1	1	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	15	--	22	20	--
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	ND	--	ND	ND	--
TIC (mg/L)	63	--	--	--	--	--	--	--	--	63	--	65	48	--
SWMU 54 Thirty-Third Quarter (October 2020) Water Quality Parameters														
pH	7.5	--	--	--	--	--	--	--	--	7.33	--	6.9	7.08	--
Specific Conductivity (mS/cm)	486	--	--	--	--	--	--	--	--	831	--	516	453	--
Turbidity (NTU)	10.3	--	--	--	--	--	--	--	--	28.3	--	15.9	35.8	--
DO (mg/L)	1.81	--	--	--	--	--	--	--	--	1.37	--	5.27	5.19	--
ORP (mV)	123.9	--	--	--	--	--	--	--	--	19.8	--	153.1	106.1	--
Temperature (°C)	15.46	--	--	--	--	--	--	--	--	14.4	--	14.25	14.19	--
Dissolved Manganese (mg/L)	0.00	--	--	--	--	--	--	--	--	0.00	--	0.0	0.0	--
Dissolved Ferrous Iron (mg/L)	0.03	--	--	--	--	--	--	--	--	0.00	--	0.0	0.0	--
Nitrate (mg/L)	0.17	--	--	--	--	--	--	--	--	0.25	--	0.46	0.48	--
Sulfate (mg/L)	31	--	--	--	--	--	--	--	--	95	--	32	30	--
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	1.2	--	1.5	1.2	--
TIC (mg/L)	55	--	--	--	--	--	--	--	--	66	--	69	58	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Thirty-Fourth Quarter (January 2021) Water Quality Parameters														
pH	7.49	--	--	--	--	--	--	--	--	6.77	--	6.6	6.69	--
Specific Conductivity (mS/cm)	471	--	--	--	--	--	--	--	--	629	--	542	400	--
Turbidity (NTU)	11	--	--	--	--	--	--	--	--	8.72	--	2.23	6.53	--
DO (mg/L)	5.06	--	--	--	--	--	--	--	--	5.37	--	6.92	7.63	--
ORP (mV)	99.9	--	--	--	--	--	--	--	--	93.3	--	123.7	167.7	--
Temperature (°C)	13.5	--	--	--	--	--	--	--	--	12.9	--	12.5	12.7	--
Dissolved Manganese (mg/L)	0.0	--	--	--	--	--	--	--	--	0.0	--	0.02	0.02	--
Dissolved Ferrous Iron (mg/L)	0.02	--	--	--	--	--	--	--	--	0.0	--	0.0	0.0	--
Nitrate (mg/L)	0.2	--	--	--	--	--	--	--	--	0.66	--	0.73	0.8	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	75	--	33	24	--
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	1.3	--	1.2	1.5	--
TIC (mg/L)	56	--	--	--	--	--	--	--	--	67	--	66	49	--
SWMU 54 Thirty-Fifth Quarter (April 2021) Water Quality Parameters														
pH	7.58	--	--	--	--	--	--	--	--	6.72	--	6.48	6.68	--
Specific Conductivity (mS/cm)	424	--	--	--	--	--	--	--	--	520	--	502	459	--
Turbidity (NTU)	29.8	--	--	--	--	--	--	--	--	31.72	--	68.62	13.2	--
DO (mg/L)	4.29	--	--	--	--	--	--	--	--	3.98	--	3.96	4.67	--
ORP (mV)	128	--	--	--	--	--	--	--	--	145.7	--	171.3	158.3	--
Temperature (°C)	13.9	--	--	--	--	--	--	--	--	13.1	--	14.5	12.8	--
Dissolved Manganese (mg/L)	0.0	--	--	--	--	--	--	--	--	0.3	--	0.0	0.0	--
Dissolved Ferrous Iron (mg/L)	0.03	--	--	--	--	--	--	--	--	0.01	--	0.02	0.02	--
Nitrate (mg/L)	0.13	--	--	--	--	--	--	--	--	0.71	--	1.1	0.64	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	58	--	34	34	--
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	ND	--	0.84	2.4	--
TIC (mg/L)	57	--	--	--	--	--	--	--	--	71	--	80	63	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
SWMU 54 Thirty-Sixth Quarter (July 2021) Water Quality Parameters														
pH	7.25	--	--	--	--	--	--	--	--	7.12	--	6.87	7.44	--
Specific Conductivity (mS/cm)	482.9	--	--	--	--	--	--	--	--	661	--	570	614	--
Turbidity (NTU)	1.24	--	--	--	--	--	--	--	--	0.65	--	3.38	0.44	--
DO (mg/L)	5.41	--	--	--	--	--	--	--	--	4.59	--	6.04	6.77	--
ORP (mV)	137.7	--	--	--	--	--	--	--	--	131.7	--	195.9	189.6	--
Temperature (°C)	18.5	--	--	--	--	--	--	--	--	14.6	--	18.2	19.8	--
Dissolved Manganese (mg/L)	0.09	--	--	--	--	--	--	--	--	0.2	--	0.5	0.6	--
Dissolved Ferrous Iron (mg/L)	0.01	--	--	--	--	--	--	--	--	0.1	--	0.06	0.02	--
Nitrate (mg/L)	ND	--	--	--	--	--	--	--	--	0.42	--	0.61	0.54	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	96	--	30	34	--
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	ND	--	0.50	1.8	--
TIC (mg/L)	56	--	--	--	--	--	--	--	--	68	--	73	74	--
SWMU 54 Thirty-Seventh Event (October 2021) Water Quality Parameters														
pH	7.59	--	--	--	--	--	--	--	--	7.28	--	6.82	7.14	--
Specific Conductivity (mS/cm)	420	--	--	--	--	--	--	--	--	705	--	470.4	598	--
Turbidity (NTU)	39.72	--	--	--	--	--	--	--	--	7.3	--	24.22	8.56	--
DO (mg/L)	0.42	--	--	--	--	--	--	--	--	0.46	--	6.84	4.39	--
ORP (mV)	165.8	--	--	--	--	--	--	--	--	123.7	--	193.4	164.8	--
Temperature (°C)	13.9	--	--	--	--	--	--	--	--	13.4	--	13.2	13.3	--
Dissolved Manganese (mg/L)	0.40	--	--	--	--	--	--	--	--	1.1	--	0.40	0	--
Dissolved Ferrous Iron (mg/L)	0.03	--	--	--	--	--	--	--	--	0.10	--	0.01	0.07	--
Nitrate (mg/L)	ND	--	--	--	--	--	--	--	--	0.25	--	0.66	0.49	--
Sulfate (mg/L)	28	--	--	--	--	--	--	--	--	120	--	28	37	--
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	ND	--	ND	ND	--
TIC (mg/L)	60	--	--	--	--	--	--	--	--	77	--	76	91	--
SWMU 54 Thirty-Eighth Event (April 2022) Water Quality Parameters														
pH	7.44	--	--	--	--	--	--	--	--	6.75	--	6.68	6.95	--
Specific Conductivity (mS/cm)	428	--	--	--	--	--	--	--	--	521.7	--	479.9	514.4	--
Turbidity (NTU)	0.74	--	--	--	--	--	--	--	--	0.28	--	0.67	1.25	--
DO (mg/L)	2.04	--	--	--	--	--	--	--	--	1.81	--	6.19	4.58	--
ORP (mV)	52.7	--	--	--	--	--	--	--	--	126.6	--	184.3	154.3	--
Temperature (°C)	13.3	--	--	--	--	--	--	--	--	13.8	--	13.4	14.0	--
Dissolved Manganese (mg/L)	0.50	--	--	--	--	--	--	--	--	0	--	2.3	3.0	--
Dissolved Ferrous Iron (mg/L)	0.93	--	--	--	--	--	--	--	--	2.01	--	0.01	0.50	--
Nitrate (mg/L)	0.13	--	--	--	--	--	--	--	--	0.30	--	0.73	0.64	--
Sulfate (mg/L)	31	--	--	--	--	--	--	--	--	72	--	33	33	--

Table 6-2 Water Quality Parameters for Groundwater Performance Monitoring at SWMU 54 (Continued)

Well ID	54MW1	2	3	4	5	6	7	8	9	10	11	12	13	14
TOC (mg/L)	ND	--	--	--	--	--	--	--	--	ND	--	ND	ND	--
TIC (mg/L)	60	--	--	--	--	--	--	--	--	78	--	82	83	--

Notes:
-- = Wells eliminated from monitoring program
°C = degrees Celsius
< = less than
DO = dissolved oxygen
ID = identifier
mg/L = milligrams per liter
mS/cm = millisiemens per centimeter
mV = millivolt
ND = non detect
NM = not measured
NTU = Nephelometric Turbidity Unit
ORP = oxidation reduction potential
pH = potential of hydrogen
SWMU = Solid Waste Management Unit
TIC = total inorganic carbon
TOC = total organic carbon

Figure 6-1 SWMU 54: 54MW10 Contaminant Concentration to Groundwater Elevation Correlation

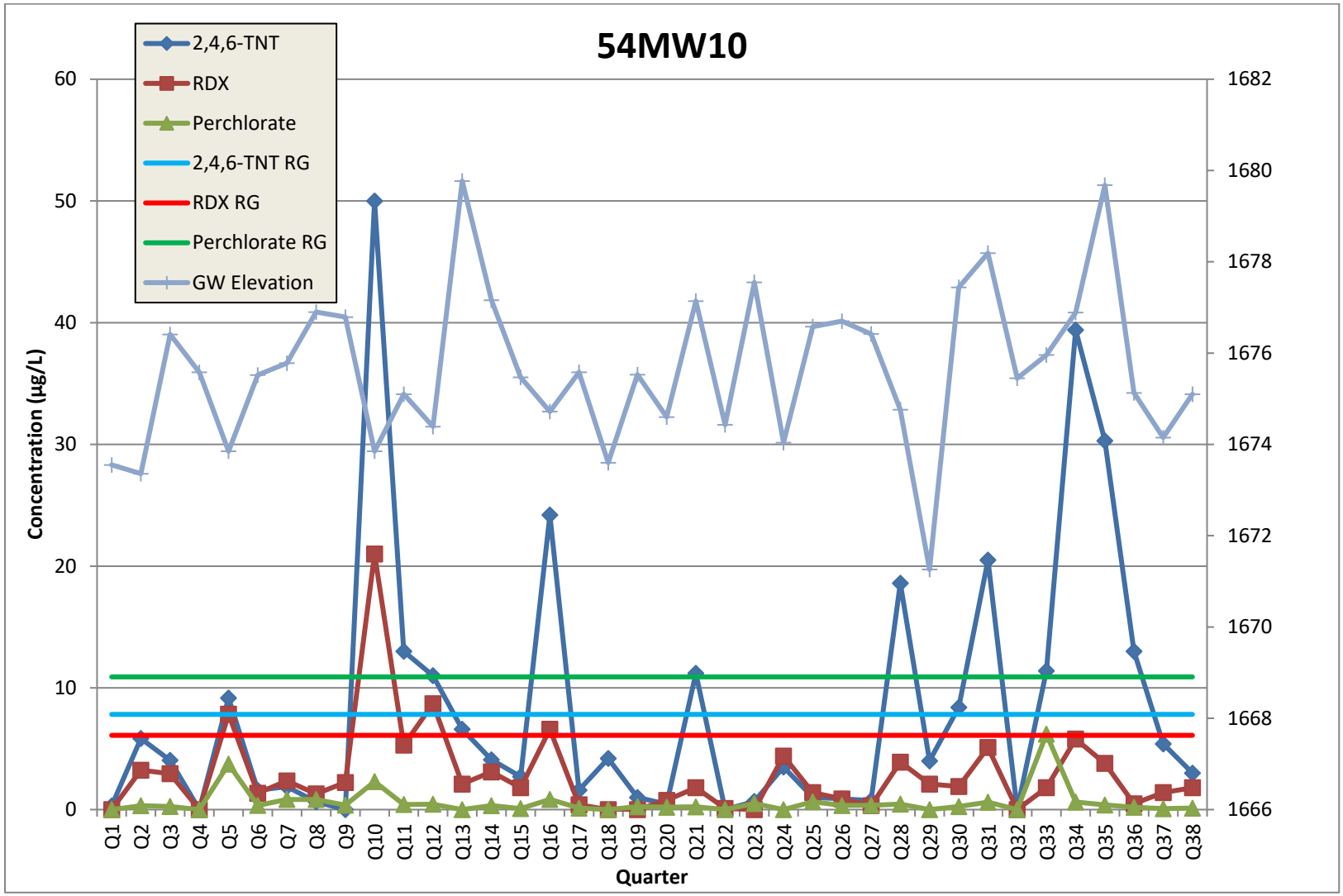


Figure 6-2 SWMU 54: 54MW12 Contaminant Concentration to Groundwater Elevation Correlation

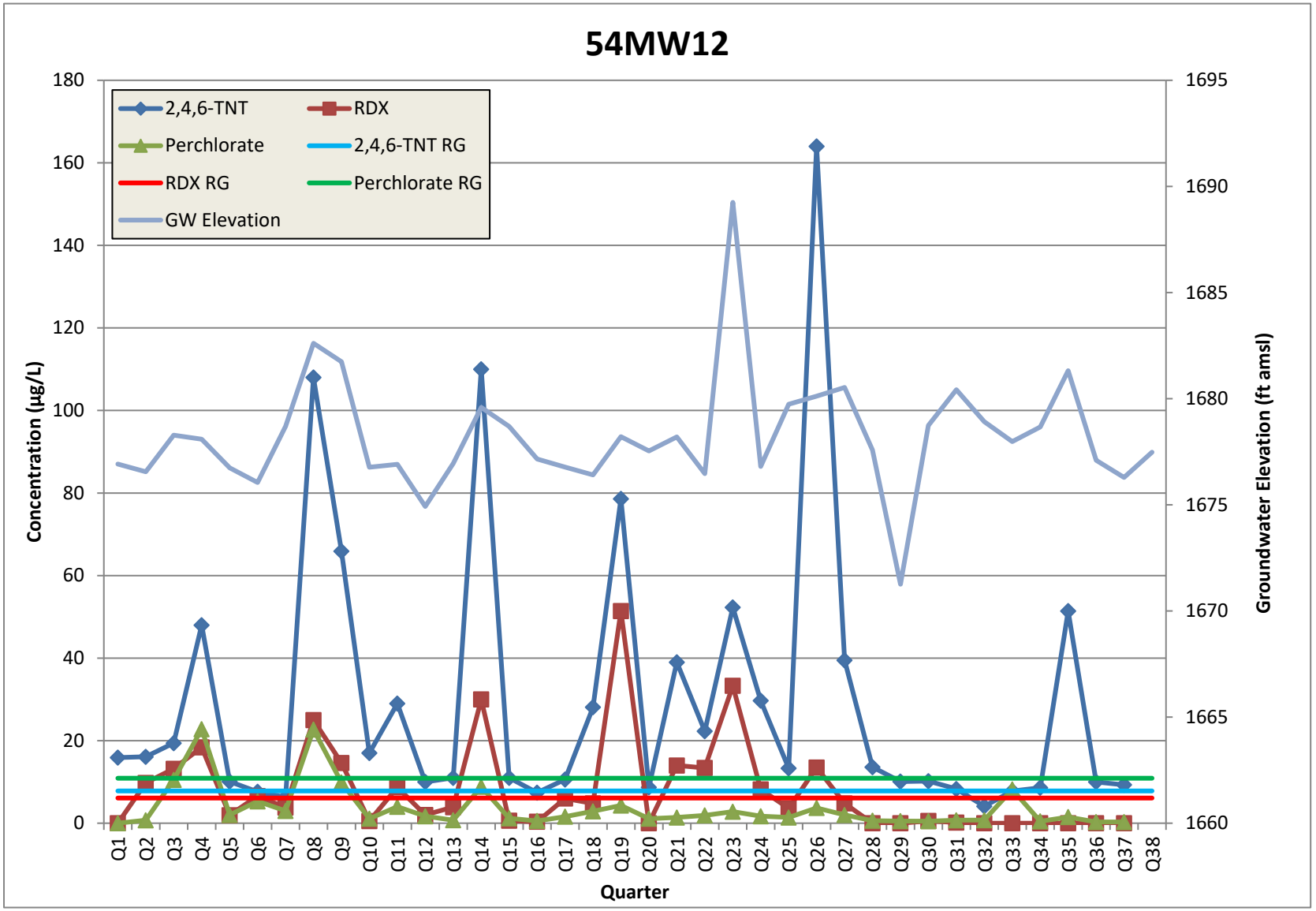


Figure 6-3 SWMU 54: 54MW13 Contaminant Concentration to Groundwater Elevation Correlation

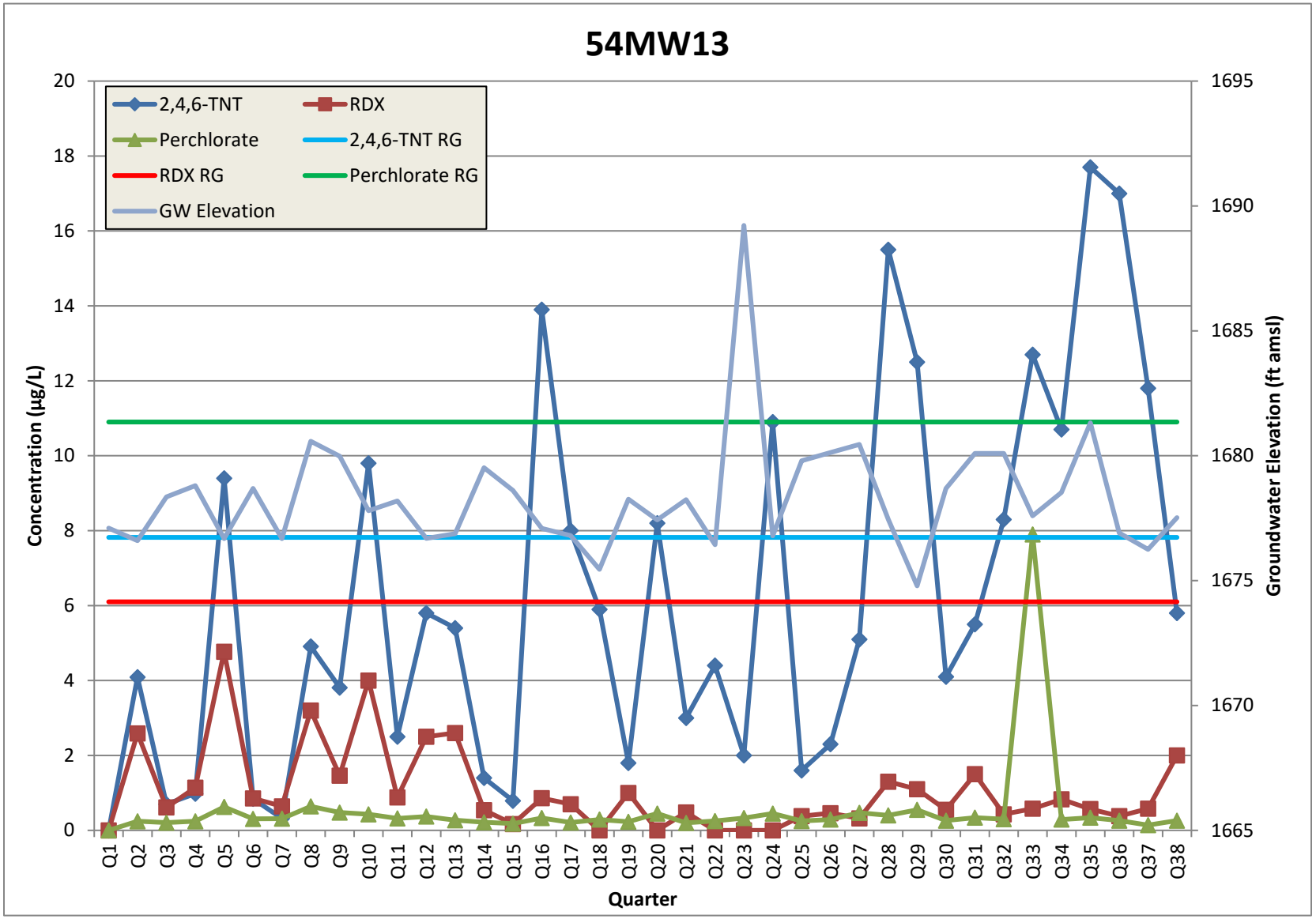
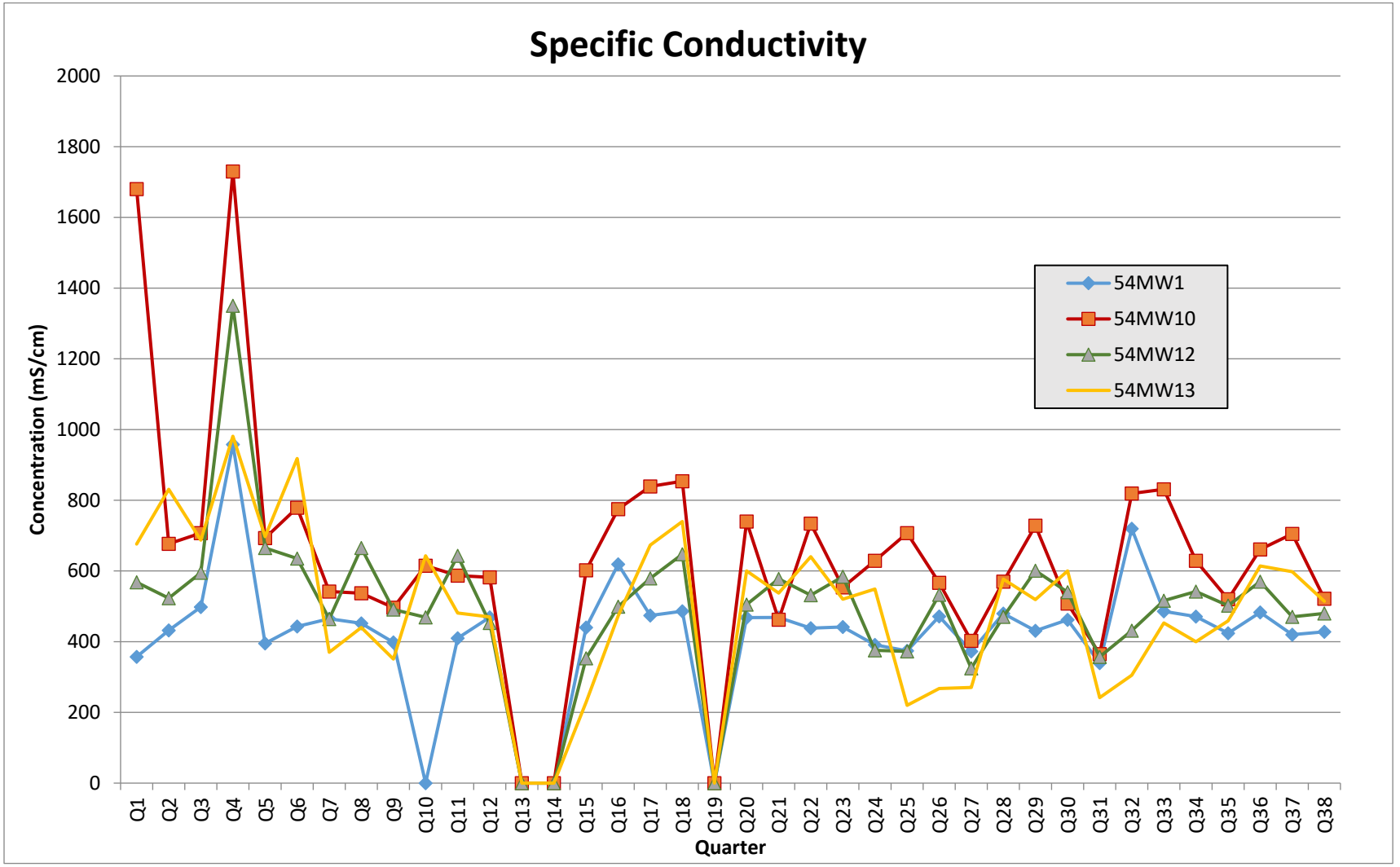


Figure 6-4 SWMU 54: Specific Conductivity



Notes:
1. Specific conductivity was not measured at 54MW1 during the tenth quarter.
2. Specific conductivity readings for the thirteenth, fourteenth, and nineteenth quarters for all four wells were not used due to possible unit entry error.

Figure 6-5 SWMU 54: 54MW10 Ferrous Iron, Dissolved Manganese, Nitrate, and Sulfate Concentrations

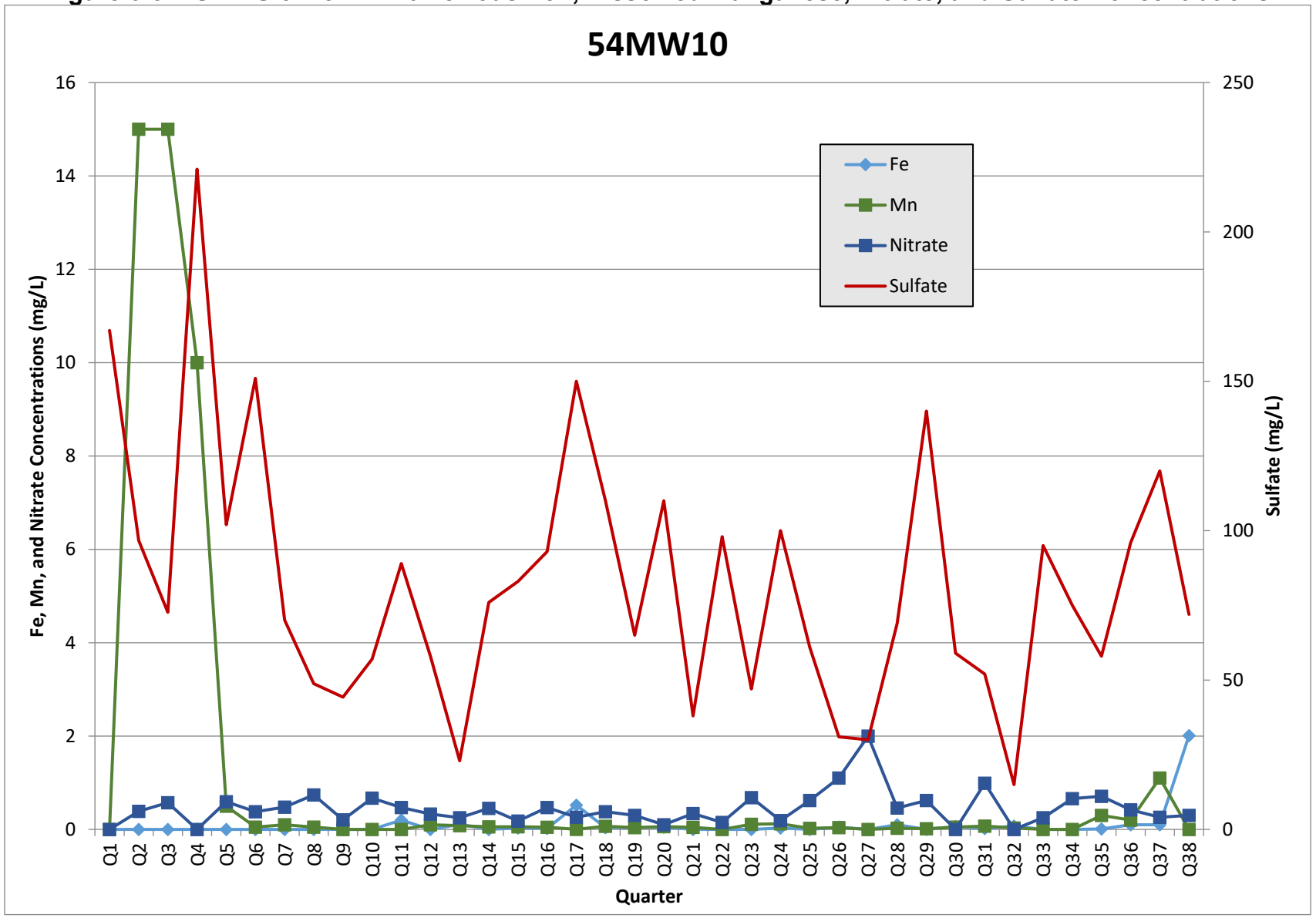


Figure 6-6 SWMU 54: 54MW12 Ferrous Iron, Dissolved Manganese, Nitrate, and Sulfate Concentrations

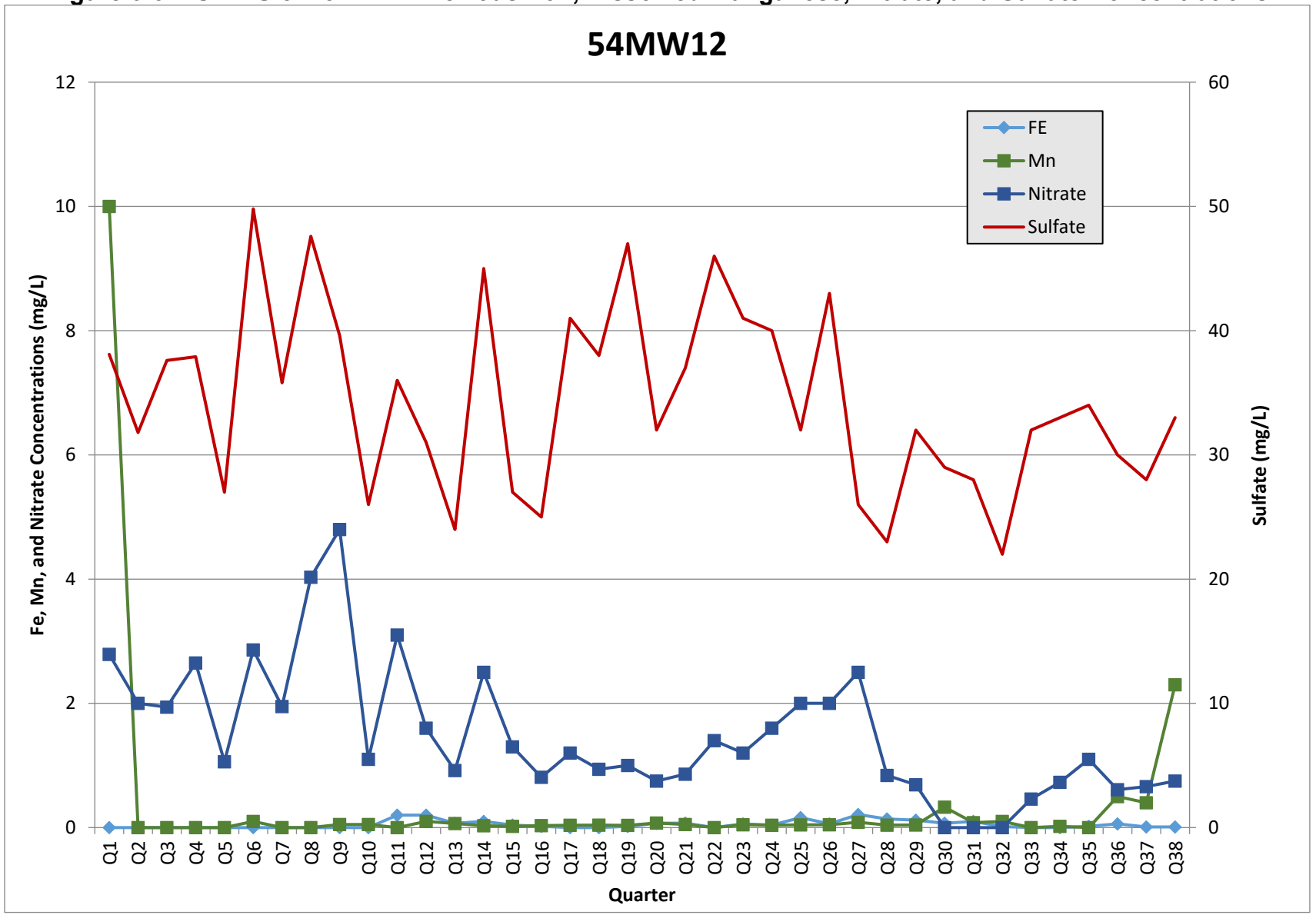


Figure 6-7 SWMU 54: 54MW13 Ferrous Iron, Dissolved Manganese, Nitrate, and Sulfate Concentrations

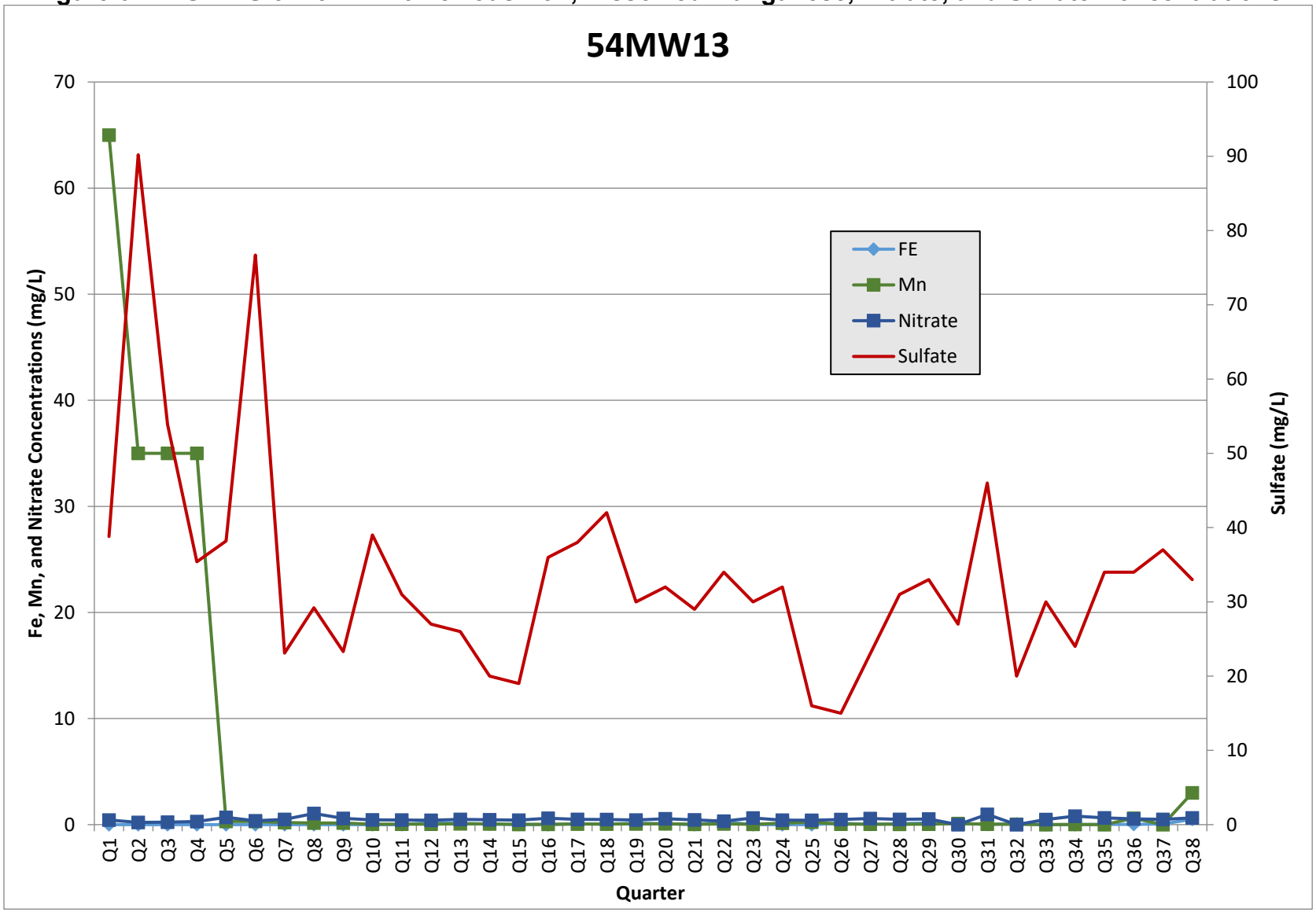


Figure 6-8 SWMU 54: 54MW10 TOC, DO, and ORP Concentrations

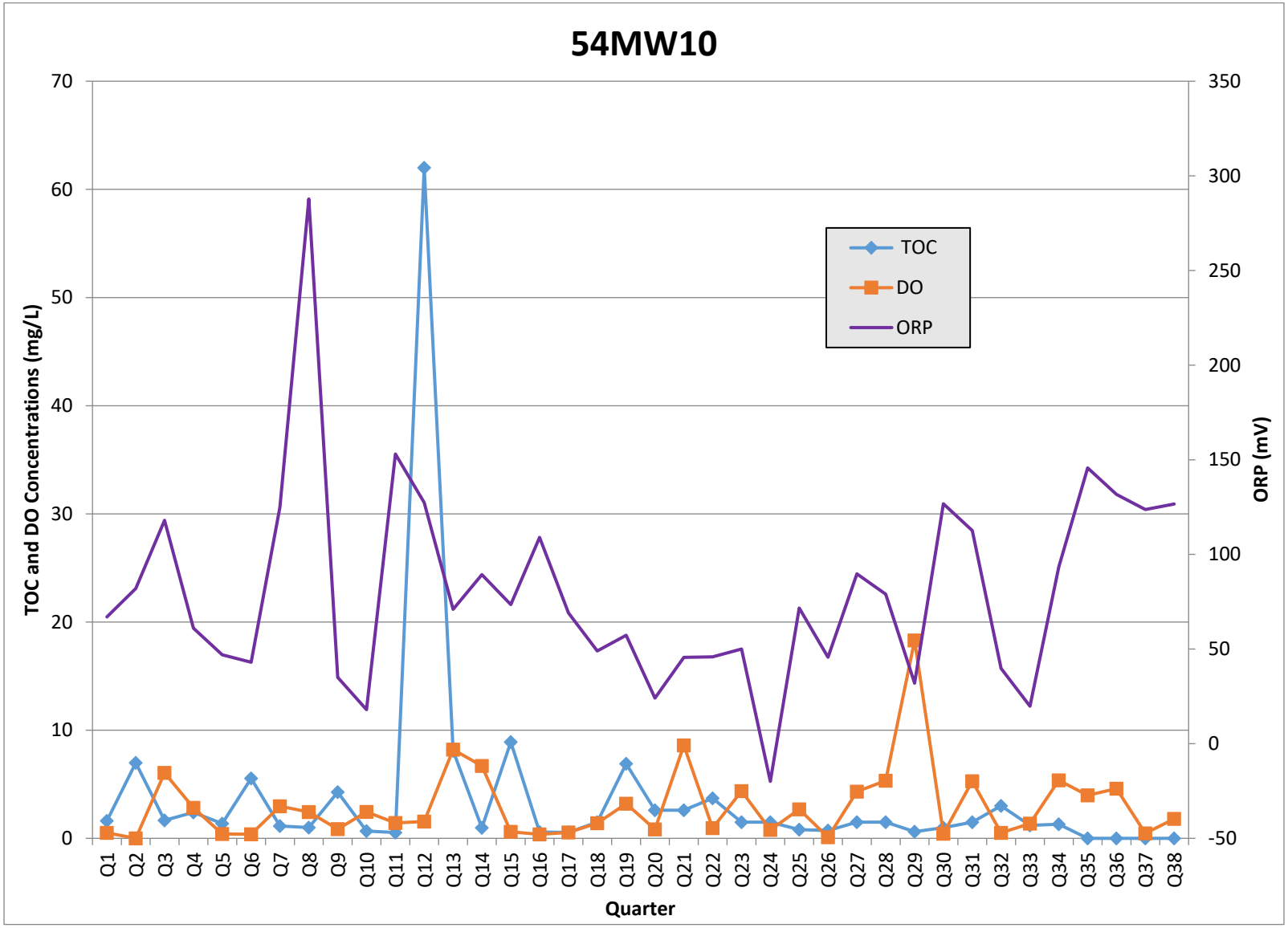


Figure 6-9 SWMU 54: 54MW12 TOC, DO, and ORP Concentrations

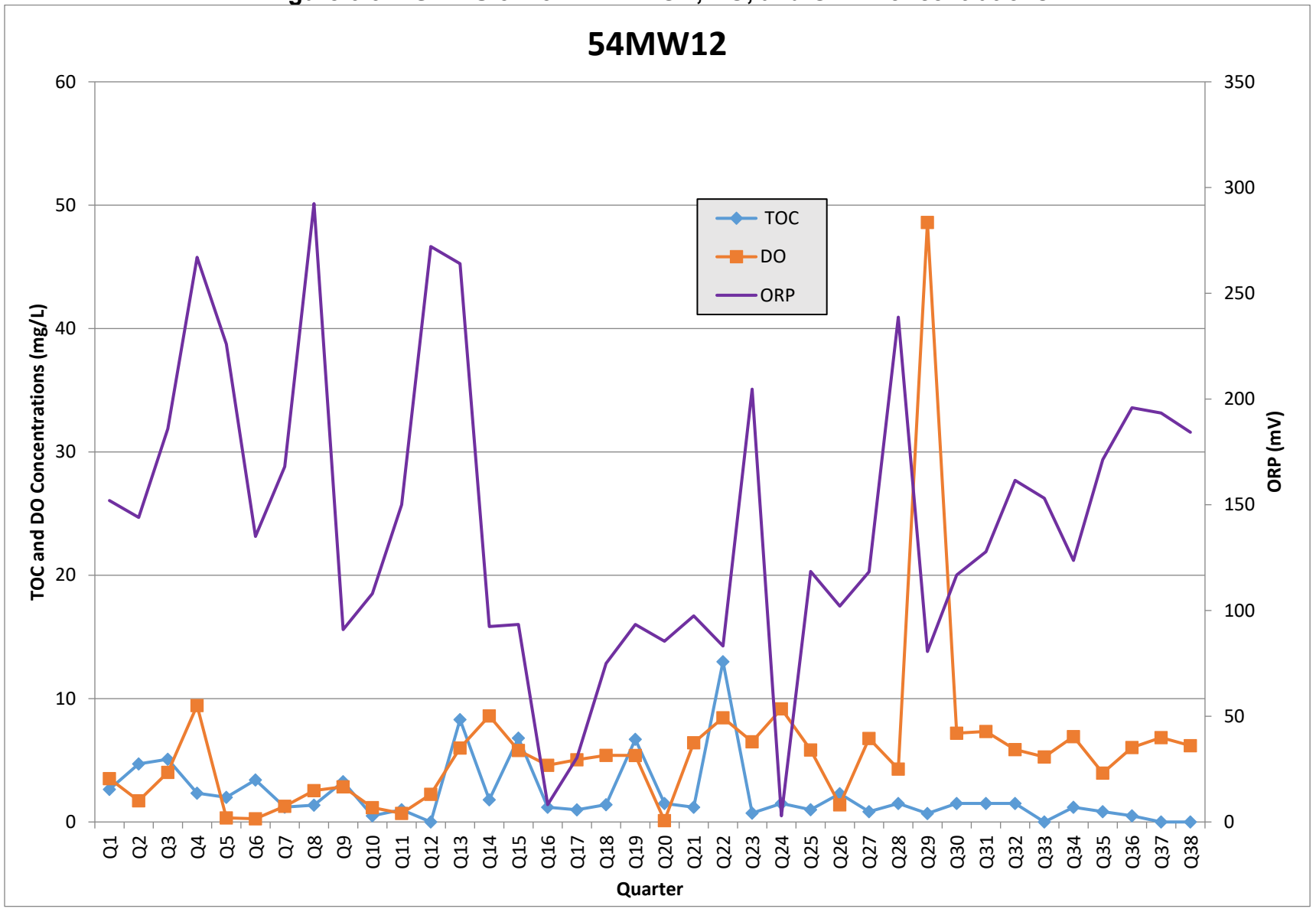
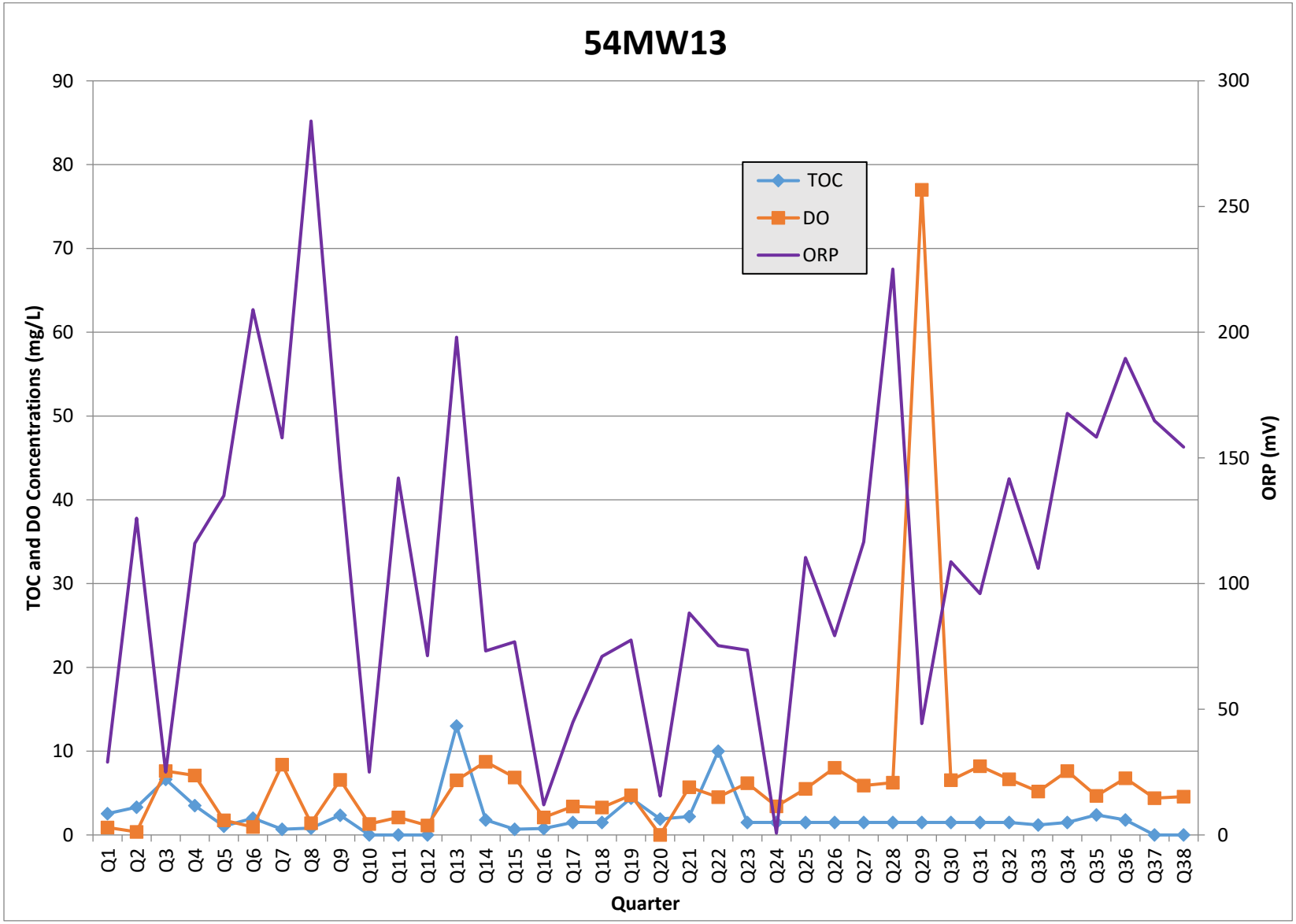


Figure 6-10 SWMU 54: 54MW13 TOC, DO, and ORP Concentrations



7. SUMMARY AND CONCLUSIONS

This report covers the first 10 years (36 quarters and 2 semiannual events) of groundwater monitoring, herein Year Ten's data are discussed in detail. The first 9 years were described in previous annual reports. Fourteen groundwater monitoring wells were sampled on a quarterly basis for over 2 years (nine quarters) at SWMU 54. After the ninth and tenth quarters, the monitoring program was reduced to the three wells (54MW10, 54MW12, and 54MW13), which have had COI concentrations above RGs, and an upgradient well (54MW1). Sampling of the monitoring wells associated with Area B were also discontinued after the tenth quarter because no concentrations were detected above their RGs.

Samples collected during the first 12 quarters were analyzed for explosives, perchlorate, and MNA indicators. During the tenth through thirty-sixth quarters, samples were also analyzed for RDX breakdown by-products. Sample results were compared to RGs and evaluated to determine whether MNA is occurring at the SWMU. This report presents and summarizes the analytical results of the first 10 years (36 quarters and 2 semiannual events) of monitoring.

Based on contaminant concentrations and biological indicator parameters measured in groundwater at SWMU 54 during Year Ten, concentrations of 2,4,6-TNT remain above RGs for Year Ten at 54MW12 and 54MW13. MNA processes have been reducing the concentrations; however, TNT concentrations decreased during the Year Ten results as compared to the Year Nine results at 54MW10.

In summary, the following conclusions and recommendations are made regarding the potential for MNA in contaminated groundwater at SWMU 54:

- Presence of 2,4,6-TNT daughter products 2ADNT and 4ADNT is further evidence that biological degradation has occurred, which may be aiding in removing mass in the groundwater.
- Identification of RDX breakdown by-products DNX, MNX, and TNX indicates active degradation of RDX. Historically, RDX concentrations at monitoring wells 54MW10, 54MW12, and 54MW13 are consistently below the RG of 6.1 µg/L. During the Year Ten monitoring period, no detections were noted above the RG in any of the two semiannual events (thirty-seventh and thirty-eighth events).
- All perchlorate concentrations in Year Three through Year Ten of monitoring are below the RG and showed a steady decline in concentrations during this 7-year period, with the exception of results at monitoring wells 54MW10 and 54MW12 in the thirty-third quarter.

Observed concentrations of DO and ORP during Year Ten indicate both aerobic and anaerobic conditions exist at SWMU 54. However, aerobic conditions were determined to be more prevalent. Although TNT has been known to be degraded under a variety of conditions (aerobic and anaerobic), further degradation of 2ADNT and 4ADNT, and reduction of RDX and perchlorate, are more favorable under anaerobic conditions (Spain, 1995).

The source removal efforts at SWMU 54 appear to have been effective in significantly lowering the site-wide COIs in groundwater. This is evident by the fact that 11 of the 14 monitoring well locations (54MW1 through 54MW9, 54MW11, and 54MW14) observed concentrations below the site-selected RGs for eight consecutive quarters for 2,4,6-TNT, DNT mixture, RDX, and perchlorate. As recommended in the Final SWMU 54 MNA IMWP (Shaw, 2011a), and Year Two MNA Report (CB&I, 2013), these wells were removed from the MNA sampling program after the ninth and tenth quarters.

Explosive concentrations through 36 quarters and 2 semiannual events of groundwater monitoring indicate that limited biodegradation at well locations 54MW10, 54MW12, and 54MW13 (SWMU 54 Area A wells) is occurring. Based on the localized distribution of elevated constituents, the generally declining concentrations site-wide, and the fact that groundwater is bounded within RFAAP by the New River and its use can be controlled by RFAAP, an active groundwater remedy at SWMU 54 does not appear necessary at this time.

The direction and speed of groundwater flow is consistent across all reporting periods and the current network of groundwater monitoring wells is adequate for future groundwater monitoring events.

8. REFERENCES

Brannon, J.M. and J.C. Pennington. 2002. *Environmental Fate and Transport Process Descriptors For Explosives*. Prepared for U.S. Army Corps of Engineers. May.

CB&I (CB&I Environmental and Infrastructure, Inc.). 2013. *SWMU 54 Monitored Natural Attenuation Sampling Year Two Report*. Prepared for U.S. Army Corps of Engineers, Baltimore District. December.

CB&I. 2014. *SWMU 54 Monitored Natural Attenuation Sampling Year Three Report*. Prepared for U.S. Army Corps of Engineers, Baltimore District. October.

Interstate Technology and Regulatory Council (Perchlorate Team). 2008. *Remediation Technologies for Perchlorate Contamination in Water and Soil*. Interstate Technology and Regulatory Council, Washington, DC.

IT (IT Corporation). 2001. *Facility-Wide Background Study*. Radford Army Ammunition Plant, Virginia. Final Report. Delivery Order No. 0008, Contract No. DACA31-94-D-0064.

Parsons (Parsons Engineering Science, Inc.). 1996. *RCRA Facility Investigation for Solid Waste Management Units 17, 31, 48, and 54 at Radford Army Ammunition Plant, Virginia.* Prepared for U.S. Army Environmental Center.

Shaw (Shaw Environmental, Inc.). 2011a. *SWMU 54 Monitored Natural Attenuation Interim Measures Work Plan*. Radford Army Ammunition Plant, Virginia. Final Report.

Shaw. 2011b. *SWMU 54 Interim Measures Completion Report*. Radford Army Ammunition Plant, Radford, Virginia. April.

Spain, J.C. 1995. Biodegradation of Nitroaromatic Compounds*. Annual Review of Microbiology*. 49: 523-555.

URS (URS Corporation). 2003. *Final Master Work Plan, Quality Assurance Plan, Health and Safety Plan*. Radford Army Ammunition Plant, Radford, Virginia. Prepared for the U.S. Army Corps of Engineers, Baltimore District. August.

URS. 2008. *Solid Waste Management Unit 54 RCRA Facility Investigation/Corrective Measures Study Report*. Radford Army Ammunition Plant, Radford, Virginia. September.

USEPA (U.S. Environmental Protection Agency). 1998. *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater,* EPA/600/R-98/128, Wiedemeier, T.H., M.A. Swanson, D.E. Moutoux, E.K. Gordon, J.T. Wilson, B.H. Wilson, D.H. Kampbell, P.E. Haas, R.N. Miller, J.E. Hansen, and F.H. Chapelle. Cincinnati, Ohio.

USEPA. 2000. *Permit for Corrective Action and Waste Minimization*: Pursuant to the Resource Conservation and Recovery Act as Amended by the Hazardous and Solid Waste Amendment of 1984, Radford Army Ammunition Plant, Radford, Virginia. VA1210020730.

USEPA. 2006. EPA Region III BTAG, Freshwater Sediment Screening Benchmarks. https://www.epa.gov/sites/default/files/2015-09/documents/r3_btag_fw_sediment_benchmarks_8-06.pdf. August.

USEPA. 2008. *Site Characterization to Support Use of Monitored Natural Attenuation for Remediation of Inorganic Contaminants in Ground Water.* November.

USEPA. 2014a. *National Functional Guidelines for Inorganic Superfund Data Review*. OSWER 9355.0-131, EPA-540-R-013-001. August.

USEPA. 2014b. *National Functional Guidelines for Superfund Organic Methods Data Review*. OSWER 9355.0-132, EPA-540-R-014-002. August.

USEPA. 2018. *2018 Edition of the Drinking Water Standards and Health Advisories Tables.* March.

USEPA. 2020. ProUCL Software, Version 5.1.00.

USEPA. 2021. *Regional Screening Levels (RSL) – Generic Tables.* May.

WESTON (Weston Solutions, Inc.). 2022. *SWMU 54 Monitored Natural Attenuation Sampling Year Nine Report, Radford Army Ammunition Plant, Radford, Virginia*. Final. October.

APPENDIX A-1
FIELD SAMPLING LOGS

WELL EVACUATION/SAMPLING FORM

GENERAL INFORMATION

Radford Army Ammunition Plant SWMUs 49 & 54	Date: 10/27/2021
Well ID: 54MW1	Weather: Fair 52°F
Sampling Team: M. Ewell / P. Taylor	Sampler's Signature:

WELL INSPECTION

Protective Casing: Intact/Damaged	Well ID Tag Condition: Good
Locked: YES/NO	Measuring Point Marked: YES/NO
Concrete Base: Intact/Damaged	Comments:
Casing Diameter: ½ in., ¾ in., 1 in., 1 ½, 2 in., 3 in., 4 in., 6 in., 8 in.	

WELL EVACUATION INFORMATION

Total Depth (feet Below Top of Casing = ft. BTOC): 67.5	Well Evacuation Method (peristaltic, bladder pump, other):
Depth to Water (ft. BTOC): 20.00	Screen Interval (ft. BGS):
Begin Well Evacuation (Time): 1242	Evacuation Rate (Lpm): 0.2
Stop Evacuation (Time/Reason):	Restart Time:
	Headspace (ppm): 0.0

INDICATOR PARAMETERS

Time: (5 minute intervals)	Volume Purged (L):	Depth to Water (ft. BTOC):	Temperature (°C): (3%)	Specific Conductivity (µS/cm): (3%)	D.O. (mg/L): (10%)	pH: (±0.1)	ORP (mV): (±10 mV)	Turbidity (NTU): (10%)
1247	1	20.91	14.1	420.1	0.79	7.66	171.1	12.44
1252	2	21.41	14.0	420.4	0.52	7.63	169.3	46.64
1257	3	21.86	14.0	419.5	0.48	7.62	167.7	20.40
1302	4	22.18	13.9	420.0	0.42	7.59	165.8	39.72

Red font indicates stabilization criteria to be achieved over three consecutive readings.

Final Depth to Water (ft. BTOC): 23.49	Drawdown Observed (ft): 2.58
Odor: YES/NO	Well Pumped Dry: YES/NO
End Well Evacuation (Time): 1317	Total Volume Purged (L): 7

SAMPLE COLLECTION INFORMATION

Sample ID: 54MW1	PARAMETERS (Circle all applicable):
Sample Date & Time: 10/27/2021 1307	SWMU 49: VOCs, MEE, Chloride/Nitrate/Sulfate, TOC, Ferrous FE, & Mn
Duplicate Sample ID:	SWMU 54: Explosives, Perchlorate, Chlorate/Chlorite, Chloride/Nitrate/Sulfate, TIC, TOC, Ferrous FE, & Mn
Manganese (mg/L): 0.4	Sample Collection Method: Low Flow (LF) Other:
Ferrous Iron (mg/L): 0.03	Sample Collection Depth (ft. BTOC):

COMMENTS

WELL EVACUATION/SAMPLING FORM

GENERAL INFORMATION

Radford Army Ammunition Plant SWMUs 49 & 54	Date: 4/26/2022
Well ID: 54 MW 1	Weather: overcast 65°F
Sampling Team: Paul Taylor, Tyler Vas	Sampler's Signature: Tyler Vas

WELL INSPECTION

Protective Casing: (Intact) Damaged	Well ID Tag Condition: Good
Locked: (YES) NO	Measuring Point Marked: (YES) NO
Concrete Base: (Intact) Damaged	Comments:
Casing Diameter: ½ in., ¾ in., 1 in., 1 ½, 2 in., 3 in., (4 in.), 6 in., 8 in.	

WELL EVACUATION INFORMATION

Total Depth (feet Below Top of Casing = ft. BTOC): 60-2	Well Evacuation Method: (peristaltic) bladder pump, other):
Depth to Water (ft. BTOC): 18.82	Screen Interval (ft. BGS):
Begin Well Evacuation (Time): 1535	Evacuation Rate (Lpm): 0.25
Stop Evacuation (Time/Reason):	Restart Time:
	Headspace (ppm): 0.0

INDICATOR PARAMETERS

Time: (5-minute intervals)	Volume Purged (L):	Depth to Water (ft. BTOC):	Temperature (°C): (3%)	Specific Conductivity (µS/cm): (3%)	D.O. (mg/L): (10%)	pH: (±0.1)	ORP (mV): (±10 mV)	Turbidity (NTU): (10%)
1558	0.75	19.21	13.5	429.4	4.90	7.46	52.5	5.31
1603	2.0	19.59	13.4	428.8	2.80	7.45	26.2	3.97
1608	3.25	19.98	13.4	428.7	2.83	7.43	25.5	4.01
1613	4.5	20.34	13.3	429.0	3.26	7.45	26.9	1.32
1618	5.75	20.72	13.4	428.7	3.03	7.43	33.5	1.06
1623	7.0	21.09	13.4	428.7	2.50	7.42	38.4	0.76
1628	8.25	21.46	13.4	428.5	2.31	7.43	43.0	0.76
1633	9.50	21.71	13.3	429.9	2.11	7.43	48.1	0.68
1638	10.75	22.03	13.3	429.0	2.04	7.44	52.7	0.74

Red font indicates stabilization criteria to be achieved over three consecutive readings.

Final Depth to Water (ft. BTOC): 23.06	Drawdown Observed (ft): 4.24
Odor: YES (NO)	Well Pumped Dry: YES / (NO)
End Well Evacuation (Time): 1659	Total Volume Purged (L): 16.25

SAMPLE COLLECTION INFORMATION

Sample ID: 54 MW1	PARAMETERS (Circle all applicable):
Sample Date & Time: 4/26/2022 1644	SWMU 49: VOCs, MEE, Chloride/Nitrate/Sulfate, TOC, Ferrous Fe, & Mn
Duplicate Sample ID: ———	(SWMU 54) Explosives, Perchlorate, Chlorate/Chlorite, Chloride/Nitrate/Sulfate, TIC, TOC, Ferrous Fe, & Mn
Manganese (mg/L): 0.5	Sample Collection Method: (Low Flow) Other:
Ferrous Iron (mg/L): 0.93	Sample Collection Depth (ft. BTOC): 58

COMMENTS

WELL EVACUATION/SAMPLING FORM

GENERAL INFORMATION

Radford Army Ammunition Plant SWMUs 49 & 54	Date: 10/27/2021
Well ID: 54MW10	Weather: Mostly fair, 45°F
Sampling Team: M. Ewald / P. Taylor	Sampler's Signature:

WELL INSPECTION

Protective Casing: Intact/Damaged	Well ID Tag Condition: None
Locked: YES / NO	Measuring Point Marked: YES / NO
Concrete Base: Intact/Damaged	Comments:
Casing Diameter: ½ in., ¾ in., 1 in., 1 ½, 2 in., 3 in., 4 in., 6 in., 8 in.	

WELL EVACUATION INFORMATION

Total Depth (feet Below Top of Casing = ft. BTOC): 30.1	Well Evacuation Method (peristaltic, bladder pump, other):
Depth to Water (ft. BTOC): 16.95	Screen Interval (ft. BGS):
Begin Well Evacuation (Time): 1008	Evacuation Rate (Lpm): 0.15
Stop Evacuation (Time/Reason):	Restart Time:
	Headspace (ppm): 0.0

INDICATOR PARAMETERS

Time: (5 minute intervals)	Volume Purged (L):	Depth to Water (ft. BTOC):	Temperature (°C): (3%)	Specific Conductivity (µS/cm): (3%)	D.O. (mg/L): (10%)	pH: (±0.1)	ORP (mV): (±10 mV)	Turbidity (NTU): (10%)
1013	0.75	17.05	13.4	723	0.62	7.50	119.4	10.1
1018	1.5	17.08	13.3	720	0.48	7.38	121.5	9.02
1023	2.25	17.08	13.2	715	0.45	7.33	122.4	7.2
1028	3.0	17.08	13.4	705	0.46	7.28	123.7	7.3

Red font indicates stabilization criteria to be achieved over three consecutive readings.

Final Depth to Water (ft. BTOC):	Drawdown Observed (ft): 0.03
Odor: YES / NO Sulfur	Well Pumped Dry: YES / NO
End Well Evacuation (Time):	Total Volume Purged (L): 3.0

SAMPLE COLLECTION INFORMATION

Sample ID: 54MW10	PARAMETERS (Circle all applicable):
Sample Date & Time: 10/27/2021 1040	SWMU 49: VOCs, MEE, Chloride/Nitrate/Sulfate, TOC, Ferrous FE, & Mn
Duplicate Sample ID: 54TW10	SWMU 54: Explosives, Perchlorate, Chlorate/Chlorite, Chloride/Nitrate/Sulfate, TIC, TOC, Ferrous FE, & Mn
Manganese (mg/L): 1.1	Sample Collection Method: Low Flow (LF) Other:
Ferrous Iron (mg/L): 0.1	Sample Collection Depth (ft. BTOC): 28

COMMENTS

WELL EVACUATION/SAMPLING FORM

GENERAL INFORMATION

Radford Army Ammunition Plant SWMUs 49 & 54	Date: 4/25/2022
Well ID: 54 MW10	Weather: Sunny 98°F
Sampling Team: Paul Taylor, Tyler Vas	Sampler's Signature: Tyler Vas

WELL INSPECTION

Protective Casing: (Intact)/Damaged	Well ID Tag Condition: Good
Locked: (YES) / NO	Measuring Point Marked: (YES) / NO
Concrete Base: Intact/Damaged Covered (buried)	Comments: Sediment build up on bottom of well (Soft bottom).
Casing Diameter: ½ in., ¾ in., 1 in., 1 ½, 2 in., 3 in. (4 in.) 6 in., 8 in.	

WELL EVACUATION INFORMATION

Total Depth (feet Below Top of Casing = ft. BTOC): 30.38	Well Evacuation Method: (peristaltic) bladder pump, other):
Depth to Water (ft. BTOC): 16.00	Screen Interval (ft. BGS):
Begin Well Evacuation (Time): 1420	Evacuation Rate (Lpm): 0.3
Stop Evacuation (Time/Reason):	Restart Time:
	Headspace (ppm): 0.0

INDICATOR PARAMETERS

Time: (5-minute intervals)	Volume Purged (L):	Depth to Water (ft. BTOC):	Temperature (°C): (3%)	Specific Conductivity (µS/cm): (3%)	D.O. (mg/L): (10%)	pH: (±0.1)	ORP (mV): (±10 mV)	Turbidity (NTU): (10%)
1425	1.5	16.50	14.0	528.3	1.43	6.75	124.8	1.02
1430	3.0	16.19	13.8	504.4	1.83	6.68	124.6	0.55
1435	4.5	16.20	13.7	503.8	1.67	6.70	124.4	0.59
1440	6.0	16.20	13.8	512.0	1.66	6.76	125.1	0.35
1445	7.5	16.21	13.8	516.8	1.69	6.74	125.7	0.36
1450	9.0	16.21	13.8	521.7	1.81	6.75	126.6	0.28

Red font indicates stabilization criteria to be achieved over three consecutive readings.

Final Depth to Water (ft. BTOC): 16.10	Drawdown Observed (ft): 0.10
Odor: YES (NO)	Well Pumped Dry: YES (NO)
End Well Evacuation (Time):	Total Volume Purged (L): ~~31.5~~ TV 9.0

SAMPLE COLLECTION INFORMATION

Sample ID: 54 MW10	PARAMETERS (Circle all applicable):
Sample Date & Time: 4/25/2022 1455	SWMU 49: VOCs, MEE, Chloride/Nitrate/Sulfate, TOC, Ferrous Fe, & Mn
Duplicate Sample ID: —	(SWMU 54): Explosives, Perchlorate, Chlorate/Chlorite, Chloride/Nitrate/Sulfate, TIC, TOC, Ferrous Fe, & Mn
Manganese (mg/L): 0.0	Sample Collection Method: (Low Flow) Other:
Ferrous Iron (mg/L): 2.01	Sample Collection Depth (ft. BTOC): 28

COMMENTS

WELL EVACUATION/SAMPLING FORM

GENERAL INFORMATION

Radford Army Ammunition Plant SWMUs 49 & 54	Date: 10/27/2021
Well ID: 54MW12	Weather: Mostly fair, 45°F
Sampling Team: M. Ewald / P. Taylor	Sampler's Signature:

WELL INSPECTION

Protective Casing: Intact/Damaged	Well ID Tag Condition: None
Locked: YES/NO	Measuring Point Marked: YES/NO
Concrete Base: Intact/Damaged	Comments:
Casing Diameter: ½ in., ¾ in., 1 in., 1½, 2 in., 3 in., 4 in., 6 in., 8 in.	

WELL EVACUATION INFORMATION

Total Depth (feet Below Top of Casing = ft. BTOC): 33.0	Well Evacuation Method (peristaltic, bladder pump, other):
Depth to Water (ft. BTOC): 26.13	Screen Interval (ft. BGS):
Begin Well Evacuation (Time): 1133	Evacuation Rate (Lpm): 0.2
Stop Evacuation (Time/Reason):	Restart Time:
	Headspace (ppm): 0.0

INDICATOR PARAMETERS

Time: (5 minute intervals)	Volume Purged (L):	Depth to Water (ft. BTOC):	Temperature (°C): (3%)	Specific Conductivity (µS/cm): (3%)	D.O. (mg/L): (10%)	pH: (±0.1)	ORP (mV): (±10 mV)	Turbidity (NTU): (10%)
1138	1	26.10	13.0	582	1.74	7.37	144.0	280
1143	2	26.10	13.0	534	6.23	7.10	157.6	9.34
1148	3	26.10	13.0	484.6	6.82	6.94	174.3	21.62
1153	4	26.10	13.1	471.5	6.96	6.87	184.3	24.80
1158	5	26.10	13.1	477.1	6.70	6.85	189.4	27.70
1203	6	26.10	13.2	470.4	6.84	6.82	193.4	24.22

Red font indicates stabilization criteria to be achieved over three consecutive readings.

Final Depth to Water (ft. BTOC): 26.10	Drawdown Observed (ft): 0.0
Odor: YES/NO Sulfur	Well Pumped Dry: YES/NO
End Well Evacuation (Time):	Total Volume Purged (L): 6

SAMPLE COLLECTION INFORMATION

Sample ID: 54MW12	PARAMETERS (Circle all applicable):
Sample Date & Time: 10/27/2021 1210	SWMU 49: VOCs, MEE, Chloride/Nitrate/Sulfate, TOC, Ferrous FE, & Mn
Duplicate Sample ID:	SWMU 54: Explosives, Perchlorate, Chlorate/Chlorite, Chloride/Nitrate/Sulfate, TIC, TOC, Ferrous FE, & Mn
Manganese (mg/L): 0.4	Sample Collection Method: Low Flow (LF) Other:
Ferrous Iron (mg/L): 0.01	Sample Collection Depth (ft. BTOC): 30

COMMENTS

WELL EVACUATION/SAMPLING FORM

GENERAL INFORMATION

Radford Army Ammunition Plant SWMUs 49 & 54	Date: 4/26/2022
Well ID: 54 MW 12	Weather: Partly Cloudy 65°F
Sampling Team: Paul Taylor, Tyler Vas	Sampler's Signature: Tyler Vas

WELL INSPECTION

Protective Casing: (Intact) Damaged	Well ID Tag Condition: Good
Locked: (YES) NO	Measuring Point Marked: YES / (NO)
Concrete Base: (Intact) Damaged	Comments: not marked in field.
Casing Diameter: ½ in., ¾ in., 1 in., 1 ¼ in., (2 in.), 3 in., 4 in., 6 in., 8 in.	

WELL EVACUATION INFORMATION

Total Depth (feet Below Top of Casing = ft. BTOC): 33.0	Well Evacuation Method: (peristaltic, bladder pump, other):
Depth to Water (ft. BTOC): 24.94	Screen Interval (ft. BGS):
Begin Well Evacuation (Time): 1411	Evacuation Rate (Lpm): 0.20
Stop Evacuation (Time/Reason):	Restart Time:
	Headspace (ppm): 0.0

INDICATOR PARAMETERS

Time: (5-minute intervals)	Volume Purged (L):	Depth to Water (ft. BTOC):	Temperature (°C): (3%)	Specific Conductivity (µS/cm): (3%)	D.O. (mg/L): (10%)	pH: (±0.1)	ORP (mV): (±10 mV)	Turbidity (NTU): (10%)
1413	0.20	24.93	13.4	614.9	3.11	7.06	160.9	30.4
1418	1.0	24.94	13.6	590.8	5.05	6.82	165.9	14.6
1423	2.0	24.94	13.4	548.8	6.00	6.76	171.0	6.95
1428	3.0	24.94	13.1	507.4	6.22	6.72	175.2	3.21
1433	4.0	24.94	13.1	493.4	6.31	6.68	178.7	1.46
1438	5.0	24.94	13.2	487.1	6.29	6.69	180.2	0.96
1443	6.0	24.94	13.1	477.6	6.27	6.68	182.4	0.90
1448	7.0	24.94	13.2	479.9	6.26	6.69	183.0	0.55
1453	8.0	24.94	13.4	479.9	6.19	6.68	184.3	0.67

Red font indicates stabilization criteria to be achieved over three consecutive readings.

Final Depth to Water (ft. BTOC): 24.94	Drawdown Observed (ft): —
Odor: YES (NO)	Well Pumped Dry: YES (NO)
End Well Evacuation (Time): 1535	Total Volume Purged (L): 8.0

SAMPLE COLLECTION INFORMATION

Sample ID: 54 MW 12	PARAMETERS (Circle all applicable):
Sample Date & Time: 4/26/2022 1459	SWMU 49: VOCs, MEE, Chloride/Nitrate/Sulfate, TOC, Ferrous Fe, & Mn
Duplicate Sample ID: 54TW12	(SWMU 54): Explosives, Perchlorate, Chlorate/Chlorite, Chloride/Nitrate/Sulfate, TIC, TOC, Ferrous Fe, & Mn
Manganese (mg/L): 2.3	Sample Collection Method: (Low Flow) Other:
Ferrous Iron (mg/L): 0.01	Sample Collection Depth (ft. BTOC): 32

COMMENTS

WELL EVACUATION/SAMPLING FORM

GENERAL INFORMATION

Radford Army Ammunition Plant SWMUs 49 & 54	Date: 10/27/2021
Well ID: 54MW13	Weather: Fair, 43°F
Sampling Team: P. Taylor / M. Ewald	Sampler's Signature:

WELL INSPECTION

Protective Casing: Intact/Damaged	Well ID Tag Condition: None
Locked: YES / NO	Measuring Point Marked: YES / NO
Concrete Base: Intact/Damaged	Comments:
Casing Diameter: ½ in., ¾ in., 1 in., 1 ¼, 2 in., 3 in., 4 in., 6 in., 8 in.	

WELL EVACUATION INFORMATION

Total Depth (feet Below Top of Casing = ft. BTOC): 25.35	Well Evacuation Method (peristaltic, bladder pump, other):
Depth to Water (ft. BTOC): 22.65	Screen Interval (ft. BGS):
Begin Well Evacuation (Time): 0818	Evacuation Rate (Lpm): 0.2
Stop Evacuation (Time/Reason):	Restart Time:
	Headspace (ppm): 0.1

INDICATOR PARAMETERS

Time: (5 minute intervals)	Volume Purged (L):	Depth to Water (ft. BTOC):	Temperature (°C): (3%)	Specific Conductivity (µS/cm): (3%)	D.O. (mg/L): (10%)	pH: (±0.1)	ORP (mV): (±10 mV)	Turbidity (NTU): (10%)
0823	1	23.05	12.8	617	4.04	7.60	172.0	11.88
0828	2	23.07	13.0	609	4.06	7.42	169.1	6.75
0833	3	23.08	13.2	603	4.29	7.30	169.9	6.05
0838	4	23.08	12.9	599	4.59	7.24	170.2	8.89
0843	5	23.09	13.2	594	4.65	7.14	173.3	5.37
0848	6	23.09	13.3	598	4.39	7.14	164.8	8.56

Red font indicates stabilization criteria to be achieved over three consecutive readings.

Final Depth to Water (ft. BTOC): 23.09	Drawdown Observed (ft): 0.64
Odor: YES / NO 54 Hrs	Well Pumped Dry: YES / NO
End Well Evacuation (Time):	Total Volume Purged (L): 6

SAMPLE COLLECTION INFORMATION

Sample ID: 54MW13	PARAMETERS (Circle all applicable):
Sample Date & Time: 10/27/2021 0900	SWMU 49: VOCs, MEE, Chloride/Nitrate/Sulfate, TOC, Ferrous FE, & Mn
Duplicate Sample ID:	SWMU 54: Explosives, Perchlorate, Chlorate/Chlorite, Chloride/Nitrate/Sulfate, TIC, TOC, Ferrous FE, & Mn
Manganese (mg/L): 0.0	Sample Collection Method: Low Flow (LF) Other:
Ferrous Iron (mg/L): 0.07	Sample Collection Depth (ft. BTOC): 25

COMMENTS

Designated for MS/MSD

WELL EVACUATION/SAMPLING FORM

GENERAL INFORMATION

Radford Army Ammunition Plant SWMUs 49 & 54	Date: 4/25/2022
Well ID: 54MW13	Weather: Sunny 75°F
Sampling Team: Paul Taylor, Tyler Vas	Sampler's Signature: Tyler Vas

WELL INSPECTION

Protective Casing: Intact/Damaged	Well ID Tag Condition: Good
Locked: YES / NO	Measuring Point Marked: YES / NO
Concrete Base: Intact/Damaged	Comments:
Casing Diameter: ½ in., ¾ in., 1 in., 1 ¼, 2 in., 3 in., 4 in., 6 in., 8 in.	

WELL EVACUATION INFORMATION

Total Depth (feet Below Top of Casing = ft. BTOC): 25.35	Well Evacuation Method (peristaltic, bladder pump, other):
Depth to Water (ft. BTOC): 21.38	Screen Interval (ft. BGS):
Begin Well Evacuation (Time): 1124	Evacuation Rate (Lpm): 0.15
Stop Evacuation (Time/Reason):	Restart Time:
	Headspace (ppm): 0.0

INDICATOR PARAMETERS

Time: (5-minute intervals)	Volume Purged (L):	Depth to Water (ft. BTOC):	Temperature (°C): (3%)	Specific Conductivity (µS/cm): (3%)	D.O. (mg/L): (10%)	pH: (±0.1)	ORP (mV): (±10 mV)	Turbidity (NTU): (10%)
1129	0.75	21.60	14.0	472.4	3.82	7.07	96.6	6.50
1136	1.50	21.70	13.9	473.0	8.34	7.00	129.2	5.39
1141	2.25	21.70	13.9	483.4	5.19	6.98	159.6	6.15
1146	3.0	21.70	14.0	497.4	4.93	6.94	156.6	2.36
1151	3.75	21.70	14.0	508.5	4.87	6.96	158.4	1.71
1156	4.50	21.73	13.8	513.5	4.66	6.95	157.5	1.32
1201	5.25	21.73	14.0	514.4	4.58	6.95	154.3	1.25

Red font indicates stabilization criteria to be achieved over three consecutive readings.

Final Depth to Water (ft. BTOC): 21.73	Drawdown Observed (ft): 0.35
Odor: YES / NO	Well Pumped Dry: YES / NO
End Well Evacuation (Time): 1205	Total Volume Purged (L): ~~2~~ TV 5.25

SAMPLE COLLECTION INFORMATION

Sample ID: 54MW13	PARAMETERS (Circle all applicable):
Sample Date & Time: 4/25/2022 1210	SWMU 49: VOCs, MEE, Chloride/Nitrate/Sulfate, TOC, Ferrous Fe, & Mn
Duplicate Sample ID:	SWMU 54: Explosives, Perchlorate, Chlorate/Chlorite, Chloride/Nitrate/Sulfate, TIC, TOC, Ferrous Fe, & Mn
Manganese (mg/L): ~~0.177~~ 3.0	Sample Collection Method: Low Flow Other:
Ferrous Iron (mg/L): ~~0.6~~ 0.5	Sample Collection Depth (ft. BTOC): 24

COMMENTS

MS/MSD

APPENDIX A-2
CALIBRATION FORMS

Equipment Calibration Log

Date/Time	Equipment Description	Equipment ID	Calibration				
			Calibration Standard/Value	Pre-Calibration Readings	Post-Calibration Readings	Performed By	Lot No./Expiration Date/Comments
October 2021 Sampling Event							
10-26-21/11:03	MultiRAE	22414	CO/50 ppm	35 ppm	49 ppm	Paul Taylor	Lot No. 304-401842189-1 Expires: 04/12/2022
			H_2S/10 ppm	12.5 ppm	10.0 ppm	Paul Taylor	
			LEL/50%	48.0%	49%	Paul Taylor	
			O_2/18.0%	18.1%	18.0%	Paul Taylor	
			VOC/100 ppm	91.2 ppm	100.4 ppm	Paul Taylor	Lot No. 304-40180617-1 Expires: 08/12/2023
10-26-2021/11:10	YSI – DSS	22813	Turbidity/123 NTU	143.44 NTU	122.11 NTU	Paul Taylor	
April 2022 Sampling Event							
04-26-21/10:55	MultiRAE	22110	CO/50 ppm	39 ppm	48 ppm	Paul Taylor	Lot No. 304-401842189-1 Expires: 04/12/2022
			H_2S/10 ppm	13.8 ppm	10.2 ppm	Paul Taylor	
			LEL/50%	48.0%	50%	Paul Taylor	
			O_2/18.0%	18.0%	18.1%	Paul Taylor	
			VOC/100 ppm	94.1 ppm	101.0 ppm	Paul Taylor	Lot No. 304-40180617-1 Expires: 08/12/2023
04-26-2021/11:02	YSI – DSS	22549	Turbidity/123 NTU	132.22 NTU	123.71 NTU	Paul Taylor	

Notes:

CO = carbon monoxide
DSS = digital sampling system
H_2S = hydrogen sulfide
ID = identification
LEL = lower explosive limit
No. = number
NTU = nephelometric turbidity unit
O_2 = oxygen
ppm = parts per million
SWMU = Solid Waste Management Unit
VOC = volatile organic compound
YSI = Yellow Springs Instrument

APPENDIX B-1
LABORATORY ANALYTICAL REPORTS

CT LABORATORIES

delivering more than data from your environmental analyses

ANALYTICAL RESULTS FOR:

ANTHONY PACE
WESTON SOLUTIONS, INC.
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

PROJECT SITE:	RFAAP SWMU-54; RADFORD, VA
DOD CONTRACT #:	
PROJECT #:	
SDG:	***165486***
PREPARED:	December 3, 2021
TOTAL # OF PAGES:	629

The data contained in the following report have been reviewed by the appropriate CT Laboratories' LLC staff members. In addition, CT Laboratories LLC certifies that to the best of our knowledge that the analyses reported herein are true, complete and correct within the limits of the methods employed and that they follow the applicable requirements as specified by the project plan, state-specific, NELAC or DOD QSM requirements. The estimated uncertainty of measurement is only available upon request. The reported results relate only to the tested samples. This report shall not be reproduced, except in full, without written approval of CT Laboratories LLC.

APPROVED BY: Brett Szymanski
PROJECT MANAGER

Certifications: IL (NELAP 200073), KS (NELAP E-10368), WI (157066030), DOD ELAP (A2LA 3806.01), VA (NELAP 460203), LA (primary NELAP 115843), ISO17025 (A2LA 3806.01)

CT LABORATORIES

delivering more than data from your environmental analyses

Table of Contents

Section	Page
Cover Page	1
Table of Contents	2
Case Narrative and Summary of Detects (if applicable)	3
Data Qualifier Sheet	6
Sample Delivery Group Summary	8
QC Batch Cross Reference	9
Metals CLP Forms Documents	11
Metals Raw Data Documents	77
Metals Logbook Documents	223
Inorganic CLP Forms Documents	399
Inorganic Raw Data Documents	471
Inorganic Logbook Documents	528
Subcontracted Analysis Documents	556
Chain of Custody, PM Confirmation and Sample Condition Forms	618

CT LABORATORIES

delivering more than data from your environmental analyses

Case Narrative

Client: Weston Solutions
Project: RFAAP SWMU-54, Radford, VA
Sample Receipt Date: 10/28/2021
SDG #: 165486

Six water samples were received for a variety of analytical parameters, including: Metals, pH, COD, Anions, Chlorate/Chlorite, TIC, and TOC. The Chlorate/Chlorite analysis was subcontracted to Eurofins Eaton Analytical in South Bend, IN. The assigned sample ID number, date sampled, and date received are indicated in the attached Project Summary. The samples were received intact and at a temperature within method specified acceptance limits. A breakdown of sample receipt information can be found on the Sample Condition Report located in the last section of the data package and any exceptions are noted below. The analyses were performed following DOD QSM 5.3 requirements.

Manual integrations may have been performed on the data provided with this package. If manual integrations were performed, a Reason #(s) was included on the raw data that corresponds to the "Index Key for Manual Integration Rationale." The raw data includes a "Before" and "After" manual integration illustration. The manual integrations were initialed and dated by the analyst, as well as, by the person reviewing the data.

Sample Analysis and Quality Control

Metals Analysis:

The samples were analyzed using US EPA Methods 6010C (ICP) and 7470A (Hg). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Initial and Continuing Calibration Verification
Blanks Summary
ICP Interference Check Data
Spike Sample Recovery
Duplicates Data
Laboratory Control Sample Data
Analysis Run Log

All analysis results met the method specified quality control criteria with the following exceptions:

ICP Metals (6010C) Water Analysis

Continuing Calibration Verification (CCV) standards were analyzed at two levels (CCV1 & CCV2) with potentially differing wavelengths. Data associated with CCV's were evaluated based on the concentration of the element in the samples and compared to the appropriate CCV level/wavelength.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Analytical Run # 196907

Iron was detected in the Method Blank (MB) greater than the Method Detection Limit (MDL) but less than ½ the Reporting Limit (RL). The sample was reported and not qualified because the MB result was less than 1/10th of the sample result.

The Duplicate (DUP) for sample # 1066849 was not applicable for aluminum, antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, nickel, selenium, silver, thallium, vanadium, and zinc because the parent sample results were less than five times the Limit of Quantitation (LOQ). A Matrix Spike Duplicate (MSD) was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The Matrix Spike (MS) and/or MSD for sample # 1066849 had recoveries outside the specified limits for aluminum, calcium, copper, iron, and silver. A Serial Dilution (L) was analyzed and was not applicable for aluminum, copper, iron, and silver because the parent sample raw results were less than 50 times the LOQ. The L was not acceptable for calcium because the result exceeded the Relative Percent Difference (RPD) limit. A Post Digestion Spike (PDS) was analyzed and was unacceptable for silver. The parent sample was reported and qualified with an "M" flag for the failing element.

ICP Sodium & Potassium (6010C) Water Analysis

Analytical Run # 194020

The DUP for sample # 1030878 was not applicable for potassium because the parent sample result was less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

CVAA Mercury (7470A) Water Analysis

Analytical Run # 194190

The DUP for sample # 1030878 was not applicable for mercury because the parent sample result was less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

Inorganic Analysis:

The samples were analyzed using US EPA Methods 9060A (TIC/TOC), 9040C (pH), 410.4 (COD) and 9056A (Anions). All samples were analyzed within the holding time unless noted below. The following summaries of quality control procedures are included:

Duplicate Analysis Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log

All analysis results met the method specified quality control criteria with the following exceptions:

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Anions (9056A) Water Analysis

Analytical Run # 196892

The MS and the MSD for sample # 1066840 had a low recovery for sulfate. The parent sample result for this analyte was qualified with an “M” flag.

COD (410.4) Water Analysis

Analytical Run # 197021

All analytical results for this run met the method/project specified quality control criteria.

pH (9040C) Water Analysis

Analytical Run # 196890

All analytical results for this run met the method/project specified quality control criteria.

TIC (9060A) Water Analysis

Analytical Run # 197009

All analytical results for this run met the method/project specified quality control criteria.

TOC (9060A) Water Analysis

Analytical Run # 197156

All analytical results for this run met the method/project specified quality control criteria.

CT LABORATORIES

delivering more than data from your environmental analyses

Data Qualifiers

Code	Description
A	Analyte averaged calibration criteria within acceptable limits.
B	Analyte detected in associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was not above the detection level.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Calibration criteria exceeded.

CT LABORATORIES

delivering more than data from your environmental analyses

MANUAL INTEGRATION REASON CODES

CTLaboratories has identified four general cases with valid reasons supporting the use of manual integration techniques. These codes are used on chromatograms in this data package to document the reasons for manual integrations per CTLaboratories' SOP SS-10 current revision.

#1: **Data system failed to select the correct peak or missed the peak entirely.**
In some cases the chromatography system selects and integrates the "wrong peak". In this case the analyst must correct the selection and force the system to integrate the proper peak. In other instances the system may miss the peak completely. In this case the analyst manually integrated the peak

#2: **Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.**
This phenomenon is common at low concentrations where the signal to noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low or high area counts for the target compound.

#3: Improperly Integrated Isomers and/or coeluting compounds.
For when the system fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations may be inaccurate, and they must be corrected by manual integration. Prime examples are compounds that are unresolved and integrated improperly when present at low concentrations in standards or samples.

#4: System Established Incorrect Baseline.
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and may be corrected via manual procedures.

#5: Miscellaneous.
Some situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the group supervisor. If the form of manual integration is not clearly covered by these four cases, then review and approval by the group supervisor or the *QA/QC* Supervisor will be required.

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

Sample Delivery Group

165486

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU 54
Project #:

	CT Sample #	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
1	1066840	165486		54MW13	GROUND WATER	10/27/2021	10/28/2021
2	1066845	165486		54MW10	GROUND WATER	10/27/2021	10/28/2021
3	1066846	165486		54TW10	GROUND WATER	10/27/2021	10/28/2021
4	1066847	165486		54MW12	GROUND WATER	10/27/2021	10/28/2021
5	1066848	165486		54MW1	GROUND WATER	10/27/2021	10/28/2021
6	1066849	165486		54-IDW	GROUND WATER	10/27/2021	10/28/2021

CT LABORATORIES
delivering more than data from your environmental analyses
1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

QC Batch Cross Reference Summary

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU 54
Project #:
Report Date: 12/01/2021
Date Received: 10/28/2021
SDG #: 165486

Inorganic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1066849	pH	EPA 9040C	GROUND WATER		196890

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1066840	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		197009
1066845	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		197009
1066846	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		197009
1066847	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		197009
1066848	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		197009

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1066849	COD QSM	EPA 410.4	GROUND WATER	83211	197021

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1066840	Anions QSM 5.0	EPA 9056A	GROUND WATER		196892
1066845	Anions QSM 5.0	EPA 9056A	GROUND WATER		196892
1066846	Anions QSM 5.0	EPA 9056A	GROUND WATER		196892
1066847	Anions QSM 5.0	EPA 9056A	GROUND WATER		196892
1066848	Anions QSM 5.0	EPA 9056A	GROUND WATER		196892
1066845	Anions QSM 5.0	EPA 9056A	GROUND WATER		196892
1066846	Anions QSM 5.0	EPA 9056A	GROUND WATER		196892

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1066840	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		197156
1066845	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		197156
1066846	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		197156
1066847	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		197156
1066848	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		197156

CT LABORATORIES
delivering more than data from your environmental analyses

Project Name: RADFORD AAP SWMU 54
Project #:
SDG #: 165486

Metal Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1066849	Potassium, Total QSM 5.0	EPA 6010C	GROUND WATER	83161	196908

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1066849	Sodium, Total QSM 5.0	EPA 6010C	GROUND WATER	83161	196908

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1066849	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	83162	196907

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1066849	Mercury, Total QSM	EPA 7470A	GROUND WATER	83168	197150

METALS
CLP FORMS
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066849
Analytical Method:	EPA 7470A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197150	Analysis Date/Time	11/05/2021 11:08
Analytical Prep Batch #:	83168	Prep. Date/Time:	11/03/2021 14:45
ICAL Calibration #:	11052021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	M	0.020	0.080	0.12	0.12

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066849
Analytical Method:	EPA 6010C	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196907	Analysis Date/Time	10/29/2021 15:08
Analytical Prep Batch #:	83162	Prep. Date/Time:	10/28/2021 16:20
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	312		29	60	120	120
7440-36-0	Total Antimony	10	U	4.4	10	20	20
7440-38-2	Total Arsenic	20	U	7.7	20	40	40
7440-39-3	Total Barium	99.9		0.71	2.0	4.0	4.0
7440-41-7	Total Beryllium	3.0	U	0.95	3.0	8.0	8.0
7440-43-9	Total Cadmium	1.0	U	0.41	1.0	2.0	2.0
7440-70-2	Total Calcium	76600		17	50	100	100
7440-47-3	Total Chromium	2.7	J	1.1	2.5	5.0	5.0
7440-48-4	Total Cobalt	2.5	U	0.55	2.5	5.0	5.0
7440-50-8	Total Copper	23.8	J	5.2	20	40	40
7439-89-6	Total Iron	742		11	40	80	80
7439-92-1	Total Lead	8.4		1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	30100		10	25	40	40
7439-96-5	Total Manganese	18.7		1.4	3.0	5.0	5.0
7440-02-0	Total Nickel	3.0	U	1.5	3.0	5.0	5.0
7440-09-7	Total Potassium	1600		120	250	500	500
7782-49-2	Total Selenium	20	U	10	20	40	40
7440-22-4	Total Silver	2.5	U M	1.1	2.5	5.0	5.0
7440-23-5	Total Sodium	27800		200	500	700	700
7440-28-0	Total Thallium	20	U	6.8	20	40	40
7440-62-2	Total Vanadium	3.0	U	1.3	3.0	5.0	5.0
7440-66-6	Total Zinc	11.3	J	4.5	10	20	20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197150

Lab Sample ID: 1071663

ICAL Calibration #: 11052021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/5/21	09:20	3.0	3.08	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907

Lab Sample ID: 1070146

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/21	13:42	12000	11600	97	90	110
Antimony	10/29/21	13:42	500.0	508.0	102	90	110
Arsenic	10/29/21	13:42	2000	1980	99	90	110
Barium	10/29/21	13:42	2000	2050	102	90	110
Beryllium	10/29/21	13:42	50.0	49.10	98	90	110
Cadmium	10/29/21	13:42	50.0	49.20	98	90	110
Calcium	10/29/21	13:42	10000	10200	102	90	110
Chromium	10/29/21	13:42	200.0	201.0	100	90	110
Cobalt	10/29/21	13:42	500.0	511.0	102	90	110
Copper	10/29/21	13:42	250.0	247.0	99	90	110
Iron	10/29/21	13:42	5000	5000	100	90	110
Lead	10/29/21	13:42	500.0	518.0	104	90	110
Magnesium	10/29/21	13:42	10000	9650	96	90	110
Manganese	10/29/21	13:42	500.0	485.0	97	90	110
Nickel	10/29/21	13:42	500.0	507.0	101	90	110
Selenium	10/29/21	13:42	2000	2060	103	90	110
Silver	10/29/21	13:42	50.0	49.50	99	90	110
Thallium	10/29/21	13:42	2000	2090	104	90	110
Vanadium	10/29/21	13:42	500.0	499.0	100	90	110
Zinc	10/29/21	13:42	500.0	530.0	106	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907 Lab Sample ID: 1070147

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/21	13:48	1200	1200	100	80	120
Antimony	10/29/21	13:48	60.0	62.10	104	80	120
Arsenic	10/29/21	13:48	60.0	58.90	98	80	120
Barium	10/29/21	13:48	30.0	30.40	101	80	120
Beryllium	10/29/21	13:48	12.00	12.10	101	80	120
Cadmium	10/29/21	13:48	15.00	15.40	103	80	120
Calcium	10/29/21	13:48	1500	1580	105	80	120
Chromium	10/29/21	13:48	30.0	31.40	105	80	120
Cobalt	10/29/21	13:48	30.0	31.50	105	80	120
Copper	10/29/21	13:48	30.0	33.80	113	80	120
Iron	10/29/21	13:48	900.0	953.0	106	80	120
Lead	10/29/21	13:48	30.0	32.90	110	80	120
Magnesium	10/29/21	13:48	1500	1570	105	80	120
Manganese	10/29/21	13:48	30.0	30.60	102	80	120
Nickel	10/29/21	13:48	30.0	31.40	105	80	120
Selenium	10/29/21	13:48	60.0	64.80	108	80	120
Thallium	10/29/21	13:48	60.0	63.90	106	80	120
Vanadium	10/29/21	13:48	30.0	32.00	107	80	120
Zinc	10/29/21	13:48	30.0	33.80	113	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907

Lab Sample ID: 1070151

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	10/29/21 14:31	10.0	9.84	98	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908

Lab Sample ID: 1070160

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	10/29/21	13:42	5000	5380	108	90	110
Sodium	10/29/21	13:42	5000	5050	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908

Lab Sample ID: 1070161

ICAL Calibration #:

Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	10/29/21	13:48	15000	14800	99	80	120
Sodium	10/29/21	13:48	3000	3080	103	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908 Lab Sample ID: 1070167

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	10/29/21	15:34	100000	97100	97	90	110
Sodium	10/29/21	15:34	100000	103000	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908

Lab Sample ID: 1070168

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	10/29/21	15:40	10000	9910	99	90	110
Sodium	10/29/21	15:40	10000	10100	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908

Lab Sample ID: 1070171

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	10/29/21	16:55	100000	98600	99	90	110
Sodium	10/29/21	16:55	100000	103000	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908

Lab Sample ID: 1070172

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	10/29/21	17:00	10000	10100	101	90	110
Sodium	10/29/21	17:00	10000	10200	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907

Lab Sample ID: 1070153

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/21	15:34	5000	4800	96	90	110
Antimony	10/29/21	15:34	5000	4900	98	90	110
Arsenic	10/29/21	15:34	5000	4880	98	90	110
Barium	10/29/21	15:34	5000	4950	99	90	110
Beryllium	10/29/21	15:34	500.0	497.0	99	90	110
Cadmium	10/29/21	15:34	500.0	482.0	96	90	110
Calcium	10/29/21	15:34	5000	4870	97	90	110
Chromium	10/29/21	15:34	5000	4740	95	90	110
Cobalt	10/29/21	15:34	5000	4720	94	90	110
Copper	10/29/21	15:34	5000	4700	94	90	110
Iron	10/29/21	15:34	5000	4720	94	90	110
Lead	10/29/21	15:34	5000	4810	96	90	110
Magnesium	10/29/21	15:34	5000	4530	91	90	110
Manganese	10/29/21	15:34	5000	4680	94	90	110
Nickel	10/29/21	15:34	5000	4820	96	90	110
Selenium	10/29/21	15:34	5000	4900	98	90	110
Silver	10/29/21	15:34	500.0	478.0	96	90	110
Thallium	10/29/21	15:34	5000	4640	93	90	110
Vanadium	10/29/21	15:34	5000	4870	97	90	110
Zinc	10/29/21	15:34	5000	4950	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907 Lab Sample ID: 1070154

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/21	15:40	500.0	496.0	99	90	110
Antimony	10/29/21	15:40	500.0	505.0	101	90	110
Arsenic	10/29/21	15:40	500.0	497.0	99	90	110
Barium	10/29/21	15:40	500.0	491.0	98	90	110
Beryllium	10/29/21	15:40	50.0	48.20	96	90	110
Cadmium	10/29/21	15:40	50.0	48.30	97	90	110
Calcium	10/29/21	15:40	500.0	508.0	102	90	110
Chromium	10/29/21	15:40	500.0	505.0	101	90	110
Cobalt	10/29/21	15:40	500.0	510.0	102	90	110
Copper	10/29/21	15:40	500.0	513.0	103	90	110
Iron	10/29/21	15:40	500.0	488.0	98	90	110
Lead	10/29/21	15:40	500.0	515.0	103	90	110
Magnesium	10/29/21	15:40	500.0	492.0	98	90	110
Manganese	10/29/21	15:40	500.0	492.0	98	90	110
Nickel	10/29/21	15:40	500.0	505.0	101	90	110
Selenium	10/29/21	15:40	500.0	514.0	103	90	110
Silver	10/29/21	15:40	50.0	48.80	98	90	110
Thallium	10/29/21	15:40	500.0	518.0	104	90	110
Vanadium	10/29/21	15:40	500.0	507.0	101	90	110
Zinc	10/29/21	15:40	500.0	521.0	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907 Lab Sample ID: 1070157

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/21	16:55	5000	4810	96	90	110
Antimony	10/29/21	16:55	5000	4870	97	90	110
Arsenic	10/29/21	16:55	5000	4850	97	90	110
Barium	10/29/21	16:55	5000	4950	99	90	110
Beryllium	10/29/21	16:55	500.0	495.0	99	90	110
Cadmium	10/29/21	16:55	500.0	480.0	96	90	110
Calcium	10/29/21	16:55	5000	4870	97	90	110
Chromium	10/29/21	16:55	5000	4740	95	90	110
Cobalt	10/29/21	16:55	5000	4690	94	90	110
Copper	10/29/21	16:55	5000	4690	94	90	110
Iron	10/29/21	16:55	5000	4740	95	90	110
Lead	10/29/21	16:55	5000	4770	95	90	110
Magnesium	10/29/21	16:55	5000	4480	90	90	110
Manganese	10/29/21	16:55	5000	4690	94	90	110
Nickel	10/29/21	16:55	5000	4810	96	90	110
Selenium	10/29/21	16:55	5000	4900	98	90	110
Silver	10/29/21	16:55	500.0	479.0	96	90	110
Thallium	10/29/21	16:55	5000	4660	93	90	110
Vanadium	10/29/21	16:55	5000	4830	97	90	110
Zinc	10/29/21	16:55	5000	4940	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907

Lab Sample ID: 1070158

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/21	17:00	500.0	497.0	99	90	110
Antimony	10/29/21	17:00	500.0	509.0	102	90	110
Arsenic	10/29/21	17:00	500.0	502.0	100	90	110
Barium	10/29/21	17:00	500.0	492.0	98	90	110
Beryllium	10/29/21	17:00	50.0	48.40	97	90	110
Cadmium	10/29/21	17:00	50.0	48.30	97	90	110
Calcium	10/29/21	17:00	500.0	514.0	103	90	110
Chromium	10/29/21	17:00	500.0	505.0	101	90	110
Cobalt	10/29/21	17:00	500.0	510.0	102	90	110
Copper	10/29/21	17:00	500.0	515.0	103	90	110
Iron	10/29/21	17:00	500.0	493.0	99	90	110
Lead	10/29/21	17:00	500.0	515.0	103	90	110
Magnesium	10/29/21	17:00	500.0	475.0	95	90	110
Manganese	10/29/21	17:00	500.0	493.0	99	90	110
Nickel	10/29/21	17:00	500.0	507.0	101	90	110
Selenium	10/29/21	17:00	500.0	514.0	103	90	110
Silver	10/29/21	17:00	50.0	48.30	97	90	110
Thallium	10/29/21	17:00	500.0	524.0	105	90	110
Vanadium	10/29/21	17:00	500.0	507.0	101	90	110
Zinc	10/29/21	17:00	500.0	520.0	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197150

Lab Sample ID: 1071665

ICAL Calibration #: 11052021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/5/21	10:42	3.0	2.95	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197150

Lab Sample ID: 1071667

ICAL Calibration #: 11052021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/5/21	11:24	3.0	2.95	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197150

Lab Sample ID: 1071669

ICAL Calibration #: 11052021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/5/21	12:05	3.0	3.05	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197150 Lab Sample ID: 1071664

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11052021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/05/2021 09:26	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

3-1

ICB

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907 Lab Sample ID: 1070148

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	10/29/2021 13:54	-0.098	U	29	60
Antimony	10/29/2021 13:54	-2.63	U	4.4	10
Arsenic	10/29/2021 13:54	-0.657	U	7.7	20
Barium	10/29/2021 13:54	-0.377	U	0.71	2.0
Beryllium	10/29/2021 13:54	-0.746	U	0.95	4.0
Cadmium	10/29/2021 13:54	-0.368	U	0.41	1.0
Calcium	10/29/2021 13:54	-1.57	U	17	50
Chromium	10/29/2021 13:54	-0.727	U	1.1	2.5
Cobalt	10/29/2021 13:54	-0.204	U	0.55	2.5
Copper	10/29/2021 13:54	-0.013	U	5.2	20
Iron	10/29/2021 13:54	-12.6	U	11	40
Lead	10/29/2021 13:54	0.203	U	1.4	2.0
Magnesium	10/29/2021 13:54	-0.901	U	10	20
Manganese	10/29/2021 13:54	-0.82	U	1.4	2.5
Nickel	10/29/2021 13:54	-0.272	U	1.5	2.5
Selenium	10/29/2021 13:54	0.598	U	10	20
Silver	10/29/2021 13:54	-0.328	U	1.1	2.5
Thallium	10/29/2021 13:54	0.015	U	6.8	20
Vanadium	10/29/2021 13:54	-0.467	U	1.3	2.5
Zinc	10/29/2021 13:54	-0.236	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908

Lab Sample ID: 1070162

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	10/29/2021 13:54	311.0		120	500
Sodium	10/29/2021 13:54	18.00	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197150 Lab Sample ID: 1071666

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11052021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/05/2021 10:49	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197150

Lab Sample ID: 1071668

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: 11052021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/05/2021 11:30	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197150 Lab Sample ID: 1071670

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11052021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/05/2021 12:11	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907 Lab Sample ID: 1070155

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	10/29/2021 15:45	-0.497	U	29	60
Antimony	10/29/2021 15:45	-0.812	U	4.4	10
Arsenic	10/29/2021 15:45	0	U	7.7	20
Barium	10/29/2021 15:45	-0.309	U	0.71	2.0
Beryllium	10/29/2021 15:45	-0.734	U	0.95	4.0
Cadmium	10/29/2021 15:45	-0.328	U	0.41	1.0
Calcium	10/29/2021 15:45	-1.32	U	17	50
Chromium	10/29/2021 15:45	-0.818	U	1.1	2.5
Cobalt	10/29/2021 15:45	-0.368	U	0.55	2.5
Copper	10/29/2021 15:45	-0.014	U	5.2	20
Iron	10/29/2021 15:45	1.96	U	11	40
Lead	10/29/2021 15:45	-0.862	U	1.4	2.0
Magnesium	10/29/2021 15:45	-0.817	U	10	20
Manganese	10/29/2021 15:45	-0.776	U	1.4	2.5
Nickel	10/29/2021 15:45	-0.353	U	1.5	2.5
Selenium	10/29/2021 15:45	-0.177	U	10	20
Silver	10/29/2021 15:45	-0.307	U	1.1	2.5
Thallium	10/29/2021 15:45	0.219	U	6.8	20
Vanadium	10/29/2021 15:45	-0.078	U	1.3	2.5
Zinc	10/29/2021 15:45	-0.321	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907 Lab Sample ID: 1070159

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	10/29/2021 17:06	-0.279	U	29	60
Antimony	10/29/2021 17:06	-0.84	U	4.4	10
Arsenic	10/29/2021 17:06	-0.616	U	7.7	20
Barium	10/29/2021 17:06	-0.445	U	0.71	2.0
Beryllium	10/29/2021 17:06	-0.761	U	0.95	4.0
Cadmium	10/29/2021 17:06	-0.419	U	0.41	1.0
Calcium	10/29/2021 17:06	-0.916	U	17	50
Chromium	10/29/2021 17:06	-0.974	U	1.1	2.5
Cobalt	10/29/2021 17:06	-0.352	U	0.55	2.5
Copper	10/29/2021 17:06	0.086	U	5.2	20
Iron	10/29/2021 17:06	-20.4	U	11	40
Lead	10/29/2021 17:06	-0.844	U	1.4	2.0
Magnesium	10/29/2021 17:06	-0.722	U	10	20
Manganese	10/29/2021 17:06	-0.789	U	1.4	2.5
Nickel	10/29/2021 17:06	-0.155	U	1.5	2.5
Selenium	10/29/2021 17:06	-1.65	U	10	20
Silver	10/29/2021 17:06	-0.307	U	1.1	2.5
Thallium	10/29/2021 17:06	-2.24	U	6.8	20
Vanadium	10/29/2021 17:06	-0.334	U	1.3	2.5
Zinc	10/29/2021 17:06	-0.368	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908 Lab Sample ID: 1070169

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	10/29/2021 15:45	115.0	U	120	250
Sodium	10/29/2021 15:45	10.00	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908 Lab Sample ID: 1070173

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	10/29/2021 17:06	194.0		120	250
Sodium	10/29/2021 17:06	31.00	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197150 Lab Sample ID: 1067769

Analytical Prep Batch # 83168 Preparation Date/Time: 11/03/2021 14:45

ICAL Calibration #: 11052021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Mercury	11/05/2021 10:58	0.00100	U	0.020	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908 Lab Sample ID: 1067494

Analytical Prep Batch # 83161 Preparation Date/Time: 10/28/2021 16:20

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Potassium	10/29/2021 15:02	-45.0	U	120	250
Total Sodium	10/29/2021 15:02	87.00	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196908 Lab Sample ID: 1067494

Analytical Prep Batch # 83161 Preparation Date/Time: 10/28/2021 16:20

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Potassium	10/29/2021 15:02	-45.0	U	120	250
Total Sodium	10/29/2021 15:02	87.00	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196907 Lab Sample ID: 1067500

Analytical Prep Batch # 83162 Preparation Date/Time: 10/28/2021 16:20

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit	
Total Aluminum	10/29/2021 15:02	1.71	U	29	60	
Total Antimony	10/29/2021 15:02	0.823	U	4.4	10	
Total Arsenic	10/29/2021 15:02	3.99	U	7.7	20	
Total Barium	10/29/2021 15:02	-0.301	U	0.71	2.0	
Total Beryllium	10/29/2021 15:02	-0.743	U	0.95	4.0	
Total Cadmium	10/29/2021 15:02	-0.280	U	0.41	1.0	
Total Calcium	10/29/2021 15:02	6.93	U	19	50	
Total Chromium	10/29/2021 15:02	-0.874	U	1.1	2.5	
Total Cobalt	10/29/2021 15:02	-0.549	U	0.55	2.5	
Total Copper	10/29/2021 15:02	1.98	U	5.2	20	
Total Iron	10/29/2021 15:02	18.90		11	40	FAIL
Total Lead	10/29/2021 15:02	-1.71	U	1.4	2.0	
Total Magnesium	10/29/2021 15:02	1.56	U	10	20	
Total Manganese	10/29/2021 15:02	-0.622	U	1.4	2.5	
Total Nickel	10/29/2021 15:02	-0.581	U	1.5	2.5	
Total Selenium	10/29/2021 15:02	2.90	U	10	20	
Total Silver	10/29/2021 15:02	-0.564	U	1.1	2.5	
Total Thallium	10/29/2021 15:02	-0.758	U	6.8	20	
Total Vanadium	10/29/2021 15:02	-0.599	U	1.3	2.5	
Total Zinc	10/29/2021 15:02	0.418	U	4.5	10	

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
ICP ID Number: TJA 6000
SDG No.: 165486
ICS Source: SPEX

Analytical Run #: 196907
Lab Sample ID: 1070149
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/2021 14:13	500000	529000	106	80	120
Antimony	10/29/2021 14:13	0	0.017	0	-10	10
Arsenic	10/29/2021 14:13	0	0.001	0	-20	20
Barium	10/29/2021 14:13	0	0	0	-1.7	1.7
Beryllium	10/29/2021 14:13	0	-0.249	0	-.7	.7
Cadmium	10/29/2021 14:13	0	-0.002	0	-1.3	1.3
Calcium	10/29/2021 14:13	500000	510000	102	80	120
Chromium	10/29/2021 14:13	0	-3.19	0	-13	13
Cobalt	10/29/2021 14:13	0	0.587	0	-2	2
Copper	10/29/2021 14:13	0	0.003	0	-7	7
Iron	10/29/2021 14:13	500000	483000	97	80	120
Lead	10/29/2021 14:13	0	-0.983	0	-4.7	4.7
Magnesium	10/29/2021 14:13	500000	544000	109	80	120
Manganese	10/29/2021 14:13	0	0.361	0	-7.3	7.3
Nickel	10/29/2021 14:13	0	-1.59	0	-7	7
Selenium	10/29/2021 14:13	0	0.008	0	-13	13
Silver	10/29/2021 14:13	0	-0.314	0	-7.3	7.3
Thallium	10/29/2021 14:13	0	0.105	0	-7.3	7.3
Vanadium	10/29/2021 14:13	10000	10400	0	8000	12000
Zinc	10/29/2021 14:13	0	-0.002	0	-20	20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
ICP ID Number: TJA 6000
SDG No.: 165486
ICS Source: SPEX

Analytical Run #: 196908
Lab Sample ID: 1070163
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/2021 14:13	500000	529000	106	80	120
Calcium	10/29/2021 14:13	500000	510000	102	80	120
Iron	10/29/2021 14:13	500000	483000	97	80	120
Magnesium	10/29/2021 14:13	500000	544000	109	80	120
Potassium	10/29/2021 14:13	0	205.0	0	-500	500
Sodium	10/29/2021 14:13	0	-9.00	0	-140	140

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
ICP ID Number: TJA 6000
SDG No.: 165486
ICS Source: SPEX, Ultra

Analytical Run #: 196907
Lab Sample ID: 1070150
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/2021 14:19	500000	545000	109	80	120
Antimony	10/29/2021 14:19	500.0	533.0	107	80	120
Arsenic	10/29/2021 14:19	500.0	479.0	96	80	120
Barium	10/29/2021 14:19	500.0	501.0	100	80	120
Beryllium	10/29/2021 14:19	500.0	520.0	104	80	120
Cadmium	10/29/2021 14:19	500.0	476.0	95	80	120
Calcium	10/29/2021 14:19	500000	514000	103	80	120
Chromium	10/29/2021 14:19	500.0	511.0	102	80	120
Cobalt	10/29/2021 14:19	500.0	504.0	101	80	120
Copper	10/29/2021 14:19	500.0	510.0	102	80	120
Iron	10/29/2021 14:19	500000	485000	97	80	120
Lead	10/29/2021 14:19	500.0	479.0	96	80	120
Magnesium	10/29/2021 14:19	500000	561000	112	80	120
Manganese	10/29/2021 14:19	500.0	500.0	100	80	120
Nickel	10/29/2021 14:19	500.0	486.0	97	80	120
Selenium	10/29/2021 14:19	500.0	532.0	106	80	120
Silver	10/29/2021 14:19	500.0	492.0	98	80	120
Thallium	10/29/2021 14:19	500.0	454.0	91	80	120
Vanadium	10/29/2021 14:19	500.0	517.0	103	80	120
Zinc	10/29/2021 14:19	500.0	560.0	112	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
ICP ID Number: TJA 6000
SDG No.: 165486
ICS Source: SPEX, Ultra

Analytical Run #: 196908
Lab Sample ID: 1070164
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/2021 14:19	500000	545000	109	80	120
Calcium	10/29/2021 14:19	500000	514000	103	80	120
Iron	10/29/2021 14:19	500000	485000	97	80	120
Magnesium	10/29/2021 14:19	500000	561000	112	80	120
Potassium	10/29/2021 14:19	50000	57000	114	80	120
Sodium	10/29/2021 14:19	50000	59800	120	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
ICP ID Number: TJA 6000
SDG No.: 165486
ICS Source: SPEX, Ultra

Analytical Run #: 196908
Lab Sample ID: 1070164
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	10/29/2021 14:19	500000	545000	109	80	120
Calcium	10/29/2021 14:19	500000	514000	103	80	120
Iron	10/29/2021 14:19	500000	485000	97	80	120
Magnesium	10/29/2021 14:19	500000	561000	112	80	120
Potassium	10/29/2021 14:19	50000	57000	114	80	120
Sodium	10/29/2021 14:19	50000	59800	120	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1067772	Parent Sample No.:	1066849
Analytical Prep Batch #	83168	Analytical Preparation Date/Time:	11/03/2021 14:45
Analytical Run #:	197150	ICAL Calibration #:	11052021

Analysis Type	*Initial Analysis*	Analysis Date: -----	11/05/2021	Analysis Time: --------	11:39

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Mercury	82-119	0.59		BDL	U	2.0	30		CV	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1067497	Parent Sample No.:	1066849
Analytical Prep Batch #	83161	Analytical Preparation Date/Time:	10/28/2021 16:20
Analytical Run #:	196908	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 10/29/2021 Analysis Time: -------- 15:28

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	94700		1600		100000	93		P
Total Sodium	87-115	123000		27800		100000	95		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description: **54-IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix: LIQUID
SDG No.: 165486
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1067502
Parent Sample No.: 1066849
Analytical Prep Batch #: 83162
Analytical Preparation Date/Time: 10/28/2021 16:20
Analytical Run #: 196907
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 10/29/2021 Analysis Time: -------- 15:28

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	1240		312		800	116		P	*FAIL*
Total Antimony	88-113	205		BDL	U	200	102		P	
Total Arsenic	87-113	825		BDL	U	800	103		P	
Total Barium	88-113	856		99.9		800	95		P	
Total Beryllium	89-112	19.8		BDL	U	20.0	99		P	
Total Cadmium	88-113	18.8		BDL	U	20.0	94		P	
Total Calcium	87-113	246000		76600		200000	85		P	*FAIL*
Total Chromium	90-113	83.9		2.7	J	80.0	102		P	
Total Cobalt	89-114	199		BDL	U	200	100		P	
Total Copper	86-114	143		23.8	J	100	119		P	*FAIL*
Total Iron	87-115	1050		742		400	77		P	*FAIL*
Total Lead	86-113	205		8.4		200	98		P	
Total Magnesium	85-113	118000		30100		100000	88		P	
Total Manganese	90-114	212		18.7		200	97		P	
Total Nickel	88-113	193		BDL	U	200	96		P	
Total Selenium	83-114	833		BDL	U	800	104		P	
Total Silver	84-115	14.7		BDL	U	20.0	74		P	*FAIL*
Total Thallium	85-114	766		BDL	U	800	96		P	
Total Vanadium	90-111	205		BDL	U	200	102		P	
Total Zinc	87-115	230		11.3	J	200	109		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **54-IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix: LIQUID
SDG No.: 165486
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1070156
Parent Sample No.: 1066849
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 196907
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 10/29/2021 Analysis Time: -------- 15:58

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Aluminum	80-120	4140		312		4000	96		P	
Antimony	80-120	958		BDL	U	1000	96		P	
Arsenic	80-120	3810		BDL	U	4000	95		P	
Barium	80-120	3980		99.9		4000	97		P	
Beryllium	80-120	92.5		BDL	U	100	92		P	
Cadmium	80-120	87.2		BDL	U	100	87		P	
Calcium	80-120	403000		76600		400000	82		P	
Chromium	80-120	373		2.7	J	400	93		P	
Cobalt	80-120	905		BDL	U	1000	90		P	
Copper	80-120	505		23.8	J	500	96		P	
Iron	80-120	2520		742		2000	89		P	
Lead	80-120	898		8.4		1000	89		P	
Magnesium	80-120	202000		30100		200000	86		P	
Manganese	80-120	900		18.7		1000	88		P	
Nickel	80-120	879		BDL	U	1000	88		P	
Selenium	80-120	3850		BDL	U	4000	96		P	
Silver	80-120	63.9		BDL	U	100	64		P	*FAIL*
Thallium	80-120	3400		BDL	U	4000	85		P	
Vanadium	80-120	943		BDL	U	1000	94		P	
Zinc	80-120	934		11.3	J	1000	92		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1067773	Parent Sample No.:	1067772
Analytical Prep Batch #	83168	Analytical Preparation Date/Time:	11/03/2021 14:45
Analytical Run #:	197150	ICAL Calibration #:	11052021

Analysis Type	*Initial Analysis*	Analysis Date: -----	11/05/2021	Analysis Time: --------	11:43

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Mercury	82-119	0.54		BDL	U	2.0	27		CV	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1067498	Parent Sample No.:	1067497
Analytical Prep Batch #	83161	Analytical Preparation Date/Time:	10/28/2021 16:20
Analytical Run #:	196908	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 10/29/2021 Analysis Time: -------- 15:52

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	99400		1600		100000	98		P
Total Sodium	87-115	129000		27800		100000	101		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **54-IDW**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1067503	Parent Sample No.:	1067502
Analytical Prep Batch #	83162	Analytical Preparation Date/Time:	10/28/2021 16:20
Analytical Run #:	196907	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 10/29/2021 Analysis Time: -------- 15:52

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	1310		312		800	125		P	*FAIL*
Total Antimony	88-113	212		BDL	U	200	106		P	
Total Arsenic	87-113	840		BDL	U	800	105		P	
Total Barium	88-113	880		99.9		800	98		P	
Total Beryllium	89-112	20.3		BDL	U	20.0	102		P	
Total Cadmium	88-113	19.3		BDL	U	20.0	96		P	
Total Calcium	87-113	260000		76600		200000	92		P	
Total Chromium	90-113	85.6		2.7	J	80.0	104		P	
Total Cobalt	89-114	203		BDL	U	200	102		P	
Total Copper	86-114	148		23.8	J	100	124		P	*FAIL*
Total Iron	87-115	1100		742		400	90		P	
Total Lead	86-113	207		8.4		200	99		P	
Total Magnesium	85-113	125000		30100		100000	95		P	
Total Manganese	90-114	219		18.7		200	100		P	
Total Nickel	88-113	197		BDL	U	200	98		P	
Total Selenium	83-114	851		BDL	U	800	106		P	
Total Silver	84-115	14.2		BDL	U	20.0	71		P	*FAIL*
Total Thallium	85-114	774		BDL	U	800	97		P	
Total Vanadium	90-111	210		BDL	U	200	105		P	
Total Zinc	87-115	236		11.3	J	200	112		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54-IDW

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix: LIQUID
SDG No.: 165486
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch # 1
Analytical Preparation Date/Time 83168
Analytical Run #: 197150
ICAL Calibration #: 11052021
Sample #: 1067771
Parent Sample #: 1066849

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Mercury	11/05/2021	11:11	20	0.020	U	0.020	U	0		CV

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54-IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID

SDG No.: 165486

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 83161

Analytical Run #: 196908

ICAL Calibration #:

Sample #: 1067496

Parent Sample #: 1066849

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	10/29/2021	15:22	20	1600		1500		6		P
Total Sodium	10/29/2021	15:22	20	27800		27800		0		P

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54-IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID

SDG No.: 165486

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch #: 1

Analytical Preparation Date/Time: 83162

Analytical Run #: 196907

ICAL Calibration #:

Sample #: 1067499

Parent Sample #: 1066849

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M	
Total Aluminum	10/29/2021	15:22	20	312		363		15		P	
Total Antimony	10/29/2021	15:22	20	4.4	U	4.4	U	0		P	
Total Arsenic	10/29/2021	15:22	20	7.7	U	7.7	U	0		P	
Total Barium	10/29/2021	15:22	20	99.9		102		2		P	
Total Beryllium	10/29/2021	15:22	20	0.95	U	0.95	U	0		P	
Total Cadmium	10/29/2021	15:22	20	0.41	U	0.41	U	0		P	
Total Calcium	10/29/2021	15:22	20	76600		76300		0		P	
Total Chromium	10/29/2021	15:22	20	2.7	J	2.4	J	12		P	
Total Cobalt	10/29/2021	15:22	20	0.55	U	0.55	U	0		P	
Total Copper	10/29/2021	15:22	20	23.8	J	24.5	J	3		P	
Total Iron	10/29/2021	15:22	20	742		780		5		P	
Total Lead	10/29/2021	15:22	20	8.4		10.5		22		P	*FAIL*
Total Magnesium	10/29/2021	15:22	20	30100		29900		1		P	
Total Manganese	10/29/2021	15:22	20	18.7		23.4		22		P	*FAIL*
Total Nickel	10/29/2021	15:22	20	1.5	U	1.5	U	0		P	
Total Selenium	10/29/2021	15:22	20	10	U	10	U	0		P	
Total Silver	10/29/2021	15:22	20	1.1	U	1.1	U	0		P	
Total Thallium	10/29/2021	15:22	20	6.8	U	6.8	U	0		P	
Total Vanadium	10/29/2021	15:22	20	1.3	U	1.3	U	0		P	
Total Zinc	10/29/2021	15:22	20	11.3	J	11.3	J	0		P	

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description

54-IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID

SDG No.: 165486

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch #: 83168

Analytical Preparation Date/Time: 11/03/2021 14:45

Analytical Run #: 197150

ICAL Calibration #: 11052021

Sample #: 1067773

Parent Sample #: 1067772

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Mercury	11/05/2021	11:43	20	0.59		0.54		10		CV

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description

54-IDW

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID
SDG No.: 165486

% Solid for Sample:
Concentration Units: ug/L

Analytical Prep Batch # 83161
Analytical Preparation Date/Time 10/28/2021 16:20

Analytical Run #: 196908
ICAL Calibration #:

Sample #: 1067498
Parent Sample #: 1067497

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	10/29/2021	15:52	20	94700		99400		5		P
Total Sodium	10/29/2021	15:52	20	123000		129000		5		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **54-IDW**

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID | SDG No.: 165486

% Solid for Sample: | Concentration Units: ug/L

Analytical Prep Batch #: 83162 | Analytical Preparation Date/Time: 10/28/2021 16:20

Analytical Run #: 196907 | ICAL Calibration #:

Sample #: 1067503 | Parent Sample #: 1067502

Analysis Type: *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Aluminum	10/29/2021	15:52	20	1240		1310		5		P
Total Antimony	10/29/2021	15:52	20	205		212		3		P
Total Arsenic	10/29/2021	15:52	20	825		840		2		P
Total Barium	10/29/2021	15:52	20	856		880		3		P
Total Beryllium	10/29/2021	15:52	20	19.8		20.3		2		P
Total Cadmium	10/29/2021	15:52	20	18.8		19.3		3		P
Total Calcium	10/29/2021	15:52	20	246000		260000		6		P
Total Chromium	10/29/2021	15:52	20	83.9		85.6		2		P
Total Cobalt	10/29/2021	15:52	20	199		203		2		P
Total Copper	10/29/2021	15:52	20	143		148		3		P
Total Iron	10/29/2021	15:52	20	1050		1100		5		P
Total Lead	10/29/2021	15:52	20	205		207		1		P
Total Magnesium	10/29/2021	15:52	20	118000		125000		6		P
Total Manganese	10/29/2021	15:52	20	212		219		3		P
Total Nickel	10/29/2021	15:52	20	193		197		2		P
Total Selenium	10/29/2021	15:52	20	833		851		2		P
Total Silver	10/29/2021	15:52	20	14.7		14.2		3		P
Total Thallium	10/29/2021	15:52	20	766		774		1		P
Total Vanadium	10/29/2021	15:52	20	205		210		2		P
Total Zinc	10/29/2021	15:52	20	230		236		3		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

LCS Source: SPEX and Ultra SDG No.: 165486

Concentration Units: ug/L

Analytical Run #: 197150 Sample No.:#: 1067770

Analytical Prep Batch #: 83168 Preparation Date/Time: 11/03/2021 14:45

ICAL Calibration #: 11052021

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Mercury	11/05/2021 10:52	82-119	1.94		2.00	97		CV

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

LCS Source: SPEX and Ultra SDG No.: 165486

Concentration Units: ug/L

Analytical Run #: 196908 Sample No.:#: 1067495

Analytical Prep Batch #: 83161 Preparation Date/Time: 10/28/2021 16:20

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Potassium	10/29/2021 14:56	86-114	98500		100000	98		P
Total Sodium	10/29/2021 14:56	87-115	100000		100000	100		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

LCS Source: SPEX and Ultra SDG No.: 165486

Concentration Units: ug/L

Analytical Run #: 196907 Sample No.:#: 1067501

Analytical Prep Batch #: 83162 Preparation Date/Time: 10/28/2021 16:20

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Aluminum	10/29/2021 14:56	86-115	776.0		800.0	97		P
Total Antimony	10/29/2021 14:56	88-113	213.0		200.0	106		P
Total Arsenic	10/29/2021 14:56	87-113	841.0		800.0	105		P
Total Barium	10/29/2021 14:56	88-113	792.0		800.0	99		P
Total Beryllium	10/29/2021 14:56	89-112	20.10		20.0	100		P
Total Cadmium	10/29/2021 14:56	88-113	19.60		20.0	98		P
Total Calcium	10/29/2021 14:56	87-113	184000		200000	92		P
Total Chromium	10/29/2021 14:56	90-113	83.50		80.0	104		P
Total Cobalt	10/29/2021 14:56	89-114	207.0		200.0	104		P
Total Copper	10/29/2021 14:56	86-114	114.0		100.0	114		P
Total Iron	10/29/2021 14:56	87-115	421.0		400.0	105		P
Total Lead	10/29/2021 14:56	86-113	203.0		200.0	102		P
Total Magnesium	10/29/2021 14:56	85-113	93600		100000	94		P
Total Manganese	10/29/2021 14:56	90-114	198.0		200.0	99		P
Total Nickel	10/29/2021 14:56	88-113	200.0		200.0	100		P
Total Selenium	10/29/2021 14:56	83-114	861.0		800.0	108		P
Total Silver	10/29/2021 14:56	84-115	18.90		20.0	94		P
Total Thallium	10/29/2021 14:56	85-114	792.0		800.0	99		P
Total Vanadium	10/29/2021 14:56	90-111	209.0		200.0	104		P
Total Zinc	10/29/2021 14:56	87-115	227.0		200.0	114		P

CT LABORATORIES
delivering more than data from your environmental analyses

9

ICP SERIAL DILUTION

Sample Description

54-IDW

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID SDG No.: 165486

Concentration Units: ug/L

Sample No.: 1070152 Parent Sample No.: 1066849

LIMS Run #: 196907 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Aluminum	10/29/2021 15:15	312	J	400.5	J	28		P	*INVALID*
Antimony	10/29/2021 15:15	BDL	U	22	U	0		P	*INVALID*
Arsenic	10/29/2021 15:15	BDL	U	38.5	U	0		P	*INVALID*
Barium	10/29/2021 15:15	99.9		133		33		P	*FAIL*
Beryllium	10/29/2021 15:15	BDL	U	4.75	U	0		P	*INVALID*
Cadmium	10/29/2021 15:15	BDL	U	2.05	U	0		P	*INVALID*
Calcium	10/29/2021 15:15	76600		196000		156		P	*FAIL*
Chromium	10/29/2021 15:15	2.67	U	5.5	U	100		P	*INVALID*
Cobalt	10/29/2021 15:15	BDL	U	2.75	U	0		P	*INVALID*
Copper	10/29/2021 15:15	23.8	U	36.75	J	54		P	*INVALID*
Iron	10/29/2021 15:15	742		1825		146		P	*INVALID*
Lead	10/29/2021 15:15	8.35	J	13.3	J	59		P	*INVALID*
Magnesium	10/29/2021 15:15	30100		76500		154		P	*FAIL*
Manganese	10/29/2021 15:15	18.7	J	35.9		92		P	*INVALID*
Nickel	10/29/2021 15:15	BDL	U	7.5	U	0		P	*INVALID*
Selenium	10/29/2021 15:15	BDL	U	50	U	0		P	*INVALID*
Silver	10/29/2021 15:15	BDL	U	5.5	U	0		P	*INVALID*
Thallium	10/29/2021 15:15	BDL	U	34	U	0		P	*INVALID*
Vanadium	10/29/2021 15:15	BDL	U	6.5	U	0		P	*INVALID*
Zinc	10/29/2021 15:15	11.3	U	22.5	U	100		P	*INVALID*

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	Fe	0.000006	0.000000	No
			Ce	0.000000	0.000000	No
Ag 338.289 {100}	☒	1	Fe	0.000906	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001713	0.000000	No
As 197.262 {471}	☒	1	Al	-0.000113	0.000000	No
Ba 233.527 {445}	☒	3	Fe	-0.000038	0.000000	No
			V	0.000180	0.000000	No
			Al	0.000000	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000029	0.000000	No
Be 313.042 {108}	☒	1	Fe	0.000000	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000016	0.000000	No
Ca 315.887 {107}	☒	None				
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	1	Cu	0.000000	0.000000	No
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	2	Fe	0.000090	0.000000	No
			Al	0.000000	0.000000	No
Cd 228.802 {147}	☒	None				
Co 228.616 {447}	☒	5	Fe	0.000009	0.000000	No
			Ti	0.003000	0.000000	No
			Ba	-0.001300	0.000000	No
			Ni	0.000040	0.000000	No
			Al	0.000001	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000188	0.000000	No
Cr 205.560 {464}	☒	1	Fe	-0.000004	0.000000	No
Cr 267.716 {126}	☒	1	Fe	-0.000014	0.000000	No
Cu 224.700 {450}	☒	5	Fe	0.000274	0.000000	No
			Mo	0.001320	0.000000	No
			Ni	-0.006000	0.000000	No
			Pb	0.003030	0.000000	No
			Al	0.000000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000136	0.000000	No
Cu 327.396 {103}	☒	1	Fe	0.000069	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000086	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mn 259.373 {130}	☒	1	Mg	0.001339	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000011	0.000000	No
Mo 203.844 {465}	☒	1	Fe	-0.000020	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000036	0.000000	No
Ni 221.647 {452}	☒	1	Ca	0.000021	0.000000	No
Ni 231.604 {445}	☒	3	Fe	0.000012	0.000000	No
			Co	0.000000	0.000000	No
			Mo	0.000000	0.000000	No
Pb 216.999 {455}	☒	2	Al	0.001241	0.000000	No
			Na	0.000000	0.000000	No
Pb 220.353 {453}	☒	3	Si	0.000000	0.000000	No
			Al	0.000001	0.000000	No
			Fe	0.000018	0.000000	No
Pb 220.353 {153}	☒	1	Al	-0.000040	0.000000	No
Sb 206.833 {463}	☒	1	Fe	0.000009	0.000000	No
Sb 217.581 {455}	☒	3	Fe	-0.000069	0.000000	No
			V	0.002070	0.000000	No
			Pb	-0.001040	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000360	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.001308	0.000000	No
Tl 190.856 {476}	☒	5	Fe	0.000024	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000050	0.000000	No
			Cr	0.000251	0.000000	No
			V	-0.003800	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000048	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000073	0.000000	No
V 292.402 {115}	☒	3	Fe	0.000020	0.000000	No
			Cr	-0.000400	0.000000	No
			Al	0.000000	0.000000	No
Zn 202.548 {466}	☒	1	Fe	-0.000239	0.000000	No
Zn 206.200 {463}	☒	1	Fe	-0.000003	0.000000	No
Zn 213.856 {457}	☒	2	Fe	0.000167	0.000000	No
			Cu	0.007413	0.000000	No
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	0.000106	0.000000	No
Si 251.611 {134}	☒	2	Fe	-0.000105	0.000000	No
			Mo	0.005400	0.000000	No
Ti 323.452 {104}	☒	1	Fe	0.000036	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000052	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000014	0.000000	No
Sr 421.552 { 80}	☒	1	Fe	0.000014	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Sn 189.989 {477}	☒	1	Fe	0.000013	0.000000	No
B 249.678 {135}	☒	2	Fe	0.000001	0.000000	No
			Co	0.003970	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000357	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000216	0.000000	No
P 213.618 {457}	☒	1	Fe	-0.000079	0.000000	No
S 182.034 {485}	☒	1	Mg	0.000100	0.000000	No
Hg 184.950 {482}	☒	1	Fe	0.000001	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

ICP LINEAR RANGES (QUARTERLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

ICP ID Number: TA SDG No.: 165486

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	15.00	1000000	P
Antimony	15.00	10000	P
Arsenic	15.00	10000	P
Barium	15.00	10000	P
Beryllium	15.00	1000	P
Boron	15.00	1000	P
Cadmium	15.00	1000	P
Calcium	15.00	1000000	P
Chromium	15.00	100000	P
Cobalt	15.00	10000	P
Copper	15.00	100000	P
Iron	15.00	1000000	P
Lead	15.00	100000	P
Lithium	15.00	10000	P
Magnesium	15.00	1000000	P
Manganese	15.00	100000	P
Molybdenum	15.00	10000	P
Nickel	15.00	10000	P
Potassium	15.00	200000	P
Selenium	15.00	10000	P
Silicon	15.00	1000	P
Silver	15.00	100	P
Sodium	15.00	200000	P
Strontium	15.00	10000	P
Thallium	15.00	10000	P
Tin	15.00	10000	P
Titanium	15.00	1000	P
Tungsten	15.00	10000	P
Vanadium	15.00	10000	P
Zinc	15.00	100000	P

CT LABORATORIES
delivering more than data from your environmental analyses

13

PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Method: EPA 3010A

SDG No.: 165486

Preparation Batch #: 83161

Preparation Date/Time: 10/28/2021 / 16:20

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1066849	Normal Sample	54-IDW	GROUND WATER	
1067494	Method Blank		LIQUID	
1067495	Lab Control Spike		LIQUID	
1067496	Lab Duplicate	54-IDW	GROUND WATER	
1067497	Matrix Spike	54-IDW	GROUND WATER	
1067498	Matrix Spike Duplicate	54-IDW	GROUND WATER	

CT LABORATORIES
delivering more than data from your environmental analyses

13

PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Method: EPA 3010A

SDG No.: 165486

Preparation Batch #: 83162

Preparation Date/Time: 10/28/2021 / 16:20

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1066849	Normal Sample	54-IDW	GROUND WATER	
1067499	Lab Duplicate	54-IDW	GROUND WATER	
1067500	Method Blank		LIQUID	
1067501	Lab Control Spike		LIQUID	
1067502	Matrix Spike	54-IDW	GROUND WATER	50
1067503	Matrix Spike Duplicate	54-IDW	GROUND WATER	

CT LABORATORIES
delivering more than data from your environmental analyses

13

PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Method: EPA 7470A

SDG No.: 165486

Preparation Batch #: 83168

Preparation Date/Time: 11/03/2021 / 14:45

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1066849	Normal Sample	54-IDW	GROUND WATER	
1067769	Method Blank		LIQUID	
1067770	Lab Control Spike		LIQUID	
1067771	Lab Duplicate	54-IDW	GROUND WATER	
1067772	Matrix Spike	54-IDW	GROUND WATER	
1067773	Matrix Spike Duplicate	54-IDW	GROUND WATER	
1067793	Normal Sample	49-IDW	GROUND WATER	

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Lab Code: CTL

SDG No.: 165486

Instrument ID Number: CETAC

Method Number: CV

Start & End Date: 11/05/2021 to 11/05/2021

Analytical Run #: 197150

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1071663	ICV	1	11/05 09:20																X													
1071664	ICB	1	11/05 09:26																X													
1071665	CCV	1	11/05 10:42																X													
1071666	CCB	1	11/05 10:49																X													
1067770	LCSW	1	11/05 10:52																X													
1067769	MBW	1	11/05 10:58																X													
1066849	Initial	1	11/05 11:08																X													
1067771	DUP	1	11/05 11:11																X													
1067793	Initial	1	11/05 11:14																X													
1071667	CCV	1	11/05 11:24																X													
1071668	CCB	1	11/05 11:30																X													
1067772	MSW	1	11/05 11:39																X													
1067773	MSDW	1	11/05 11:43																X													
1071669	CCV	1	11/05 12:05																X													
1071670	CCB	1	11/05 12:11																X													

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Lab Code: CTL

SDG No.: 165486

Instrument ID Number: TJA

Method Number: P

Start & End Date: 10/29/2021 to 10/29/2021

Analytical Run #: 196907

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1070146	ICV	1	10/29 13:42	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070147	ICVLL	1	10/29 13:48	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
1070148	ICB	1	10/29 13:54	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070149	ICSA	1	10/29 14:13	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070150	ICSAB	1	10/29 14:19	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070151	ICVLL	1	10/29 14:31																							X							
1067501	LCSW	1	10/29 14:56	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1067500	MBW	1	10/29 15:02	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1066849	Initial	1	10/29 15:08	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070152	L	5	10/29 15:15	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1067499	DUP	1	10/29 15:22	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1067502	MSW	1	10/29 15:28	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070153	CCV1	1	10/29 15:34	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070154	CCV2	1	10/29 15:40	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070155	CCB	1	10/29 15:45	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1067503	MSDW	1	10/29 15:52	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070156	PDSW	1	10/29 15:58	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070157	CCV1	1	10/29 16:55	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070158	CCV2	1	10/29 17:00	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1070159	CCB	1	10/29 17:06	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Lab Code: CTL
SDG No.: 165486

Instrument ID Number: TJA
Method Number: P

Start & End Date: 10/29/2021 to 10/29/2021
Analytical Run #: 196908

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1070160	ICV	1	10/29 13:42																				X				X						
1070161	ICVLL	1	10/29 13:48																				X				X						
1070162	ICB	1	10/29 13:54																				X				X						
1070163	ICSA	1	10/29 14:13	X							X				X		X						X				X						
1070164	ICSAB	1	10/29 14:19	X							X				X		X						X				X						
1067495	LCSW	1	10/29 14:56																				X				X						
1067494	MBW	1	10/29 15:02																				X				X						
1066849	Initial	1	10/29 15:08																				X				X						
1072394	L	5	10/29 15:15																								X						
1072395	L	5	10/29 15:15																				X										
1067496	DUP	1	10/29 15:22																				X				X						
1067497	MSW	1	10/29 15:28																				X				X						
1070167	CCV1	1	10/29 15:34																				X				X						
1070168	CCV2	1	10/29 15:40																				X				X						
1070169	CCB	1	10/29 15:45																				X				X						
1067498	MSDW	1	10/29 15:52																				X				X						
1072396	PDSW	1	10/29 15:58																								X						
1072397	PDSW	1	10/29 15:58																				X										
1070171	CCV1	1	10/29 16:55																				X				X						
1070172	CCV2	1	10/29 17:00																				X				X						
1070173	CCB	1	10/29 17:06																				X				X						

METALS
RAW DATA
DOCUMENTS

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Ag 328.068 {103}	11/03/2021 11:35:18	10/29/2021 12:44:18	Linear	1/Conc	-11.154576	8.022314	0.000000	1.000000	0.999941	0.093668	0.560433	1.868110
Ag 338.289 {100}	11/03/2021 11:35:18	10/29/2021 13:29:47	Linear	1/Conc	0.000014	0.000002	0.000000	1.000000	0.993802	0.000001	31.343840	104.47946
Al 167.079 {501}	11/03/2021 11:35:18	10/29/2021 12:49:45	Linear	1/Conc	0.000004	0.000004	0.000000	1.000000	0.999092	0.000001	0.347397	1.157992
Al 308.215 {109}	11/03/2021 11:35:18	10/29/2021 13:09:33	Linear	1/Var	0.000605	0.000001	0.000000	1.000000	0.996791	0.000306	99.936470	333.12156
Al 396.152 { 85}	11/03/2021 11:35:18	10/29/2021 13:23:04	Curvili	1/Var	-0.000289	0.000008	0.000000	1.000000	0.999884	0.000486	20.842212	69.474040
As 193.759 {474}	11/03/2021 11:35:18	10/29/2021 12:49:46	Linear	1/Conc	0.000007	0.000001	0.000000	1.000000	0.999847	0.000000	3.352338	11.174461
As 197.262 {471}	11/03/2021 11:35:18	10/29/2021 12:56:06	Linear	1/Var	-0.000007	0.000001	0.000000	1.000000	0.999949	0.000003	4.856588	16.188628
Ba 233.527 {445}	11/03/2021 11:35:18	10/29/2021 12:49:46	Linear	1/Conc	0.000004	0.000012	0.000000	1.000000	0.999939	0.000000	0.266088	0.886960
Ba 455.403 { 74}	11/03/2021 11:35:18	10/29/2021 12:56:06	Linear	1/Conc	0.003364	0.000174	0.000000	1.000000	0.999949	0.000007	0.823306	2.744355
Ba 493.409 { 68}	11/03/2021 11:35:18	10/29/2021 13:29:47	Linear	1/Var	0.074867	0.000175	0.000000	1.000000	0.999832	0.002719	2.744297	9.147658
Be 313.042 {108}	11/03/2021 11:35:18	10/29/2021 12:49:46	Linear	1/Conc	0.000076	0.000080	0.000000	1.000000	0.999084	0.000003	0.022355	0.074517
Be 313.107 {108}	11/03/2021 11:35:18	10/29/2021 12:49:47	Linear	1/Conc	0.000160	0.000129	0.000000	1.000000	0.998584	0.000006	0.377148	1.257161
Be 234.861 {144}	11/03/2021 11:35:18	10/29/2021 12:49:47	Linear	1/Var	-0.000005	0.000010	0.000000	1.000000	0.999995	0.000015	2.414257	8.047523
Ca 184.006 {483}	11/03/2021 11:35:18	10/29/2021 13:23:04	Curvili	1/Var	-0.000027	0.000003	-0.000000	1.000000	0.999766	0.000032	0.978864	3.262881
Ca 315.887 {107}	11/03/2021 11:35:18	10/29/2021 13:23:04	Linear	1/Var	-0.000012	0.000002	0.000000	1.000000	0.999765	0.000929	20.061665	66.872218
Ca 317.933 {106}	11/03/2021 11:35:18	10/29/2021 13:23:04	Linear	1/Conc	0.000342	0.000001	0.000000	1.000000	0.999502	0.000026	75.525992	251.75330
Ca 393.366 { 86}	11/03/2021 11:35:18	10/29/2021 12:49:47	Linear	None	0.008385	0.000568	0.000000	1.000000	0.999763	0.007232	0.179927	0.599756
Ca 396.847 { 85}	11/03/2021 11:35:18	10/29/2021 12:56:07	Linear	1/Conc	0.000645	0.000262	0.000000	1.000000	0.999881	0.000190	0.362443	1.208142
Cd 226.502 {449}	11/03/2021 11:35:18	10/29/2021 12:49:48	Linear	1/Conc	0.000010	0.000037	0.000000	1.000000	0.999823	0.000001	0.135494	0.451645
Cd 228.802 {447}	11/03/2021 11:35:18	10/29/2021 12:49:48	Linear	1/Conc	0.000033	0.000059	0.000000	1.000000	0.999853	0.000001	0.123045	0.410150
Co 228.616 {447}	11/03/2021 11:35:18	10/29/2021 12:56:07	Linear	1/Conc	0.000009	0.000035	0.000000	1.000000	0.999944	0.000001	0.186402	0.621340
Co 238.892 {141}	11/03/2021 11:35:18	10/29/2021 12:56:07	Linear	1/Var	-0.000000	0.000003	0.000000	1.000000	0.999855	0.000007	0.437493	1.458311
Cr 205.560 {464}	11/03/2021 11:35:18	10/29/2021 13:03:01	Linear	1/Var	0.000014	0.000012	0.000000	1.000000	0.999738	0.000029	0.298396	0.994653
Cr 267.716 {126}	11/03/2021 11:35:18	10/29/2021 12:56:08	Linear	1/Conc	-0.000001	0.000003	0.000000	1.000000	0.999956	0.000000	0.601153	2.003843
Cu 223.008 {451}	11/03/2021 11:35:18	10/29/2021 12:56:08	Linear	1/Conc	0.000005	0.000006	0.000000	1.000000	0.999825	0.000002	0.935543	3.118477
Cu 224.700 {450}	11/03/2021 11:35:18	10/29/2021 13:03:01	Linear	None	-0.001059	0.000011	0.000000	1.000000	0.999990	0.002014	0.334871	1.116236
Cu 324.754 {104}	11/03/2021 11:35:18	10/29/2021 13:03:01	Linear	1/Var	0.000937	0.000005	0.000000	1.000000	0.999781	0.000088	11.583810	38.612701
Cu 327.396 {103}	11/03/2021 11:35:18	10/29/2021 13:03:02	Linear	1/Var	-0.000026	0.000005	0.000000	1.000000	0.999881	0.000086	21.188616	70.628721
Fe 234.349 {144}	11/03/2021 11:35:18	10/29/2021 13:09:33	Curvili	1/Conc	0.000012	0.000000	0.000000	1.000000	0.999995	0.000001	1.246187	4.153956
Fe 239.562 {140}	11/03/2021 11:35:18	10/29/2021 13:23:04	Linear	1/Var	0.000058	0.000001	0.000000	1.000000	0.999860	0.000145	23.731128	79.103761
Fe 259.940 {129}	11/03/2021 11:35:18	10/29/2021 13:23:05	Curvili	1/Conc	0.000008	0.000003	0.000000	1.000000	0.999808	0.000116	10.273759	34.245864
Mg 202.582 {466}	11/03/2021 11:35:18	10/29/2021 13:23:05	Curvili	1/Var	0.000006	0.000000	0.000000	1.000000	0.994215	0.000025	2.370910	7.903032
Mg 279.079 {121}	11/03/2021 11:35:18	10/29/2021 13:23:05	Curvili	1/Conc	0.000015	0.000000	0.000000	1.000000	0.999904	0.000006	92.936000	309.78666
Mg 280.270 {120}	11/03/2021 11:35:18	10/29/2021 12:56:09	Linear	1/Conc	0.000087	0.000025	0.000000	1.000000	0.995706	0.000111	0.034938	0.116461
Mn 257.610 {131}	11/03/2021 11:35:18	10/29/2021 12:56:09	Curvili	1/Conc	0.000009	0.000012	-0.000000	1.000000	0.999993	0.000000	0.074644	0.248813
Mn 259.373 {130}	11/03/2021 11:35:18	10/29/2021 13:03:02	Linear	1/Var	0.000016	0.000013	0.000000	1.000000	0.999982	0.000135	2.449452	8.164841
Mo 202.030 {466}	11/03/2021 11:35:18	10/29/2021 12:56:10	Linear	1/Conc	0.000014	0.000005	0.000000	1.000000	0.999987	0.000000	0.876787	2.922624
Mo 204.598 {464}	11/03/2021 11:35:18	10/29/2021 12:56:10	Linear	1/Var	0.000012	0.000006	0.000000	1.000000	0.999930	0.000020	0.640267	2.134222
Mo 202.030 {467}	11/03/2021 11:35:18	10/29/2021 12:56:10	Linear	1/Conc	0.000031	0.000011	0.000000	1.000000	0.999955	0.000001	0.329726	1.099087
Ni 221.647 {452}	11/03/2021 11:35:18	10/29/2021 12:56:10	Linear	1/Var	0.000036	0.000019	0.000000	1.000000	0.999962	0.000119	0.369051	1.230168
Ni 231.604 {445}	11/03/2021 11:35:18	10/29/2021 12:56:10	Linear	1/Conc	-0.000000	0.000022	0.000000	1.000000	0.999941	0.000001	0.338916	1.129719
Pb 216.999 {455}	11/03/2021 11:35:18	10/29/2021 13:03:02	Curvili	1/Var	0.000007	0.000001	0.000000	1.000000	0.999636	0.000028	4.612684	15.375612
Pb 220.353 {453}	11/03/2021 11:35:18	10/29/2021 12:56:10	Linear	1/Conc	0.000016	0.000003	0.000000	1.000000	0.999832	0.000001	1.943796	6.479319
Pb 216.999 {456}	11/03/2021 11:35:18	10/29/2021 13:03:02	Curvili	1/Var	0.000001	0.000000	0.000000	1.000000	0.999960	0.000007	13.164267	43.880891

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 308.215 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 313.107 {108}	OK.	1.000000	0.000000	1	0
	Be 234.861 {144}	OK.	1.000000	0.000000	1	0
	Ca 184.006 {483}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {447}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Cu 224.700 {450}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {456}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Pb 220.353 {153}	11/03/2021 11:35:18	10/29/2021 13:03:02	Linear	1/Var	0.000016	0.000002	0.000000	1.000000	0.999653	0.000109	4.280201	14.267337
Sb 206.833 {463}	11/03/2021 11:35:18	10/29/2021 12:56:11	Linear	1/Var	0.000003	0.000002	0.000000	1.000000	0.999981	0.000011	1.922867	6.409557
Sb 217.581 {455}	11/03/2021 11:35:18	10/29/2021 12:56:11	Linear	1/Conc	0.000009	0.000002	0.000000	1.000000	0.999962	0.000000	2.460926	8.203085
Se 196.090 {472}	11/03/2021 11:35:18	10/29/2021 12:56:11	Linear	1/Conc	0.000001	0.000001	0.000000	1.000000	0.999917	0.000000	2.838775	9.462583
Se 203.985 {465}	11/03/2021 11:35:18	10/29/2021 12:56:11	Linear	1/Var	0.000017	0.000001	0.000000	1.000000	0.999973	0.000005	8.531951	28.439836
Se 206.279 {463}	11/03/2021 11:35:18	10/29/2021 12:56:12	Linear	1/Conc	0.000003	0.000000	0.000000	1.000000	0.999934	0.000000	15.447071	51.490235
Tl 190.856 {476}	11/03/2021 11:35:18	10/29/2021 12:56:12	Linear	1/Conc	0.000005	0.000002	0.000000	1.000000	0.999813	0.000001	1.934055	6.446850
Tl 190.856 {477}	11/03/2021 11:35:18	10/29/2021 12:56:12	Linear	1/Var	0.000007	0.000001	0.000000	1.000000	0.999801	0.000017	2.370298	7.900994
V 290.882 {116}	11/03/2021 11:35:18	10/29/2021 12:56:12	Linear	1/Var	0.000074	0.000003	0.000000	1.000000	0.999987	0.000034	13.408660	44.695533
V 292.402 {115}	11/03/2021 11:35:18	10/29/2021 12:56:12	Linear	1/Conc	0.000014	0.000008	0.000000	1.000000	0.999973	0.000001	0.432034	1.440112
Zn 206.200 {463}	11/03/2021 11:35:18	10/29/2021 13:03:02	Linear	1/Var	0.000044	0.000029	0.000000	1.000000	0.998886	0.000130	0.157909	0.526362
Zn 213.856 {457}	11/03/2021 11:35:18	10/29/2021 12:56:12	Linear	1/Conc	0.000037	0.000059	0.000000	1.000000	0.999846	0.000014	0.093305	0.311018
Y 224.306 {450}*	11/03/2021 11:35:18	10/29/2021 11:59:46	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Y 324.228 {104}*	11/03/2021 11:35:18	10/29/2021 11:59:46	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Y 360.073 { 94}*	11/03/2021 11:35:18	10/29/2021 11:59:46	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Y 371.030 { 91}	11/03/2021 11:35:18	10/29/2021 11:59:46	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Na 330.237 {102}	11/03/2021 11:35:18	10/29/2021 13:23:05	Linear	1/Conc	0.000064	0.000026	0.000000	1.000000	0.998431	0.000026	2.976937	9.923123
Na 588.995 { 57}	11/03/2021 11:35:18	10/29/2021 13:23:05	Linear	1/Var	0.089975	0.051904	0.000000	1.000000	0.998551	0.011910	0.011693	0.038978
Na 589.592 { 57}	11/03/2021 11:35:18	10/29/2021 13:23:05	Linear	1/Var	-0.000600	0.028108	0.000000	1.000000	0.998733	0.002241	0.012675	0.042249
Si 212.412 {458}	11/03/2021 11:35:18	10/29/2021 13:23:06	Curvili	1/Var	0.000038	0.000005	-0.000000	1.000000	0.999994	0.000038	1.036137	3.453789
Si 251.611 {134}	11/03/2021 11:35:18	10/29/2021 13:23:06	Curvili	1/Conc	-0.000002	0.000000	0.000000	1.000000	0.999997	0.000001	105.34796	351.15988
Ti 323.452 {104}	11/03/2021 11:35:18	10/29/2021 12:56:13	Linear	1/Conc	0.000199	0.000024	0.000000	1.000000	0.999973	0.000002	3.352369	11.174563
Ti 334.941 {101}	11/03/2021 11:35:18	10/29/2021 12:56:13	Linear	1/Conc	-0.000011	0.000007	0.000000	1.000000	0.999851	0.000001	8.000151	26.667170
Sr 407.771 { 83}	11/03/2021 11:35:18	10/29/2021 12:56:14	Linear	1/Conc	0.000780	0.000517	0.000000	1.000000	0.999931	0.000024	0.275216	0.917388
Sr 421.552 { 80}	11/03/2021 11:35:18	10/29/2021 12:56:14	Linear	1/Conc	0.000805	0.000414	0.000000	1.000000	0.999918	0.000021	0.313173	1.043910
Sn 189.989 {477}	11/03/2021 11:35:18	10/29/2021 12:56:14	Linear	1/Var	0.000027	0.000006	0.000000	1.000000	0.999760	0.000089	0.556530	1.855100
B 249.678 {135}	11/03/2021 11:35:18	10/29/2021 12:56:14	Linear	None	0.000008	0.000001	0.000000	1.000000	0.999998	0.000015	1.114637	3.715457
B 249.773 {135}	11/03/2021 11:35:18	10/29/2021 12:56:14	Linear	None	0.000028	0.000004	0.000000	1.000000	0.999997	0.000043	0.457704	1.525679
Li 670.784 { 50}	11/03/2021 11:35:18	10/29/2021 12:56:14	Linear	1/Conc	-0.000496	0.000194	0.000000	1.000000	0.999985	0.000014	1.825517	6.085058
K 766.490 { 44}	11/03/2021 11:35:18	10/29/2021 13:23:06	Linear	1/Var	-0.000893	0.004222	0.000000	1.000000	0.997640	0.002292	0.091846	0.306153
K 769.896 { 44}	11/03/2021 11:35:18	10/29/2021 13:23:06	Linear	1/Var	0.001389	0.002647	0.000000	1.000000	0.997264	0.001991	0.107718	0.359059
P 177.495 {489}	11/03/2021 11:35:18	10/29/2021 13:23:06	Linear	1/Conc	-0.000893	0.000001	0.000000	1.000000	0.957138	0.000248	8.384563	27.948545
P 213.618 {457}	11/03/2021 11:35:18	10/29/2021 13:23:06	Linear	1/Conc	0.000002	0.000002	0.000000	1.000000	0.998783	0.000133	3.114887	10.382956
S 182.034 {485}	11/03/2021 11:35:18	10/29/2021 13:23:07	Linear	1/Var	0.000019	0.000001	0.000000	1.000000	0.999704	0.000021	3.142128	10.473762
Hg 184.950 {482}	11/03/2021 11:35:18	10/29/2021 12:49:56	Linear	1/Conc	0.000001	0.000000	0.000000	1.000000	0.999980	0.000000	0.595161	1.983871
Hg 194.227 {473}	11/03/2021 11:35:18	10/29/2021 12:49:56	Linear	1/Conc	0.000002	0.000005	0.000000	1.000000	0.999997	0.000000	0.610382	2.034607
Ce 404.076 { 83}	11/03/2021 11:35:18	10/29/2021 12:49:56	Linear	1/Conc	0.000054	0.000003	0.000000	1.000000	1.000000	0.000000	47.612118	158.70705

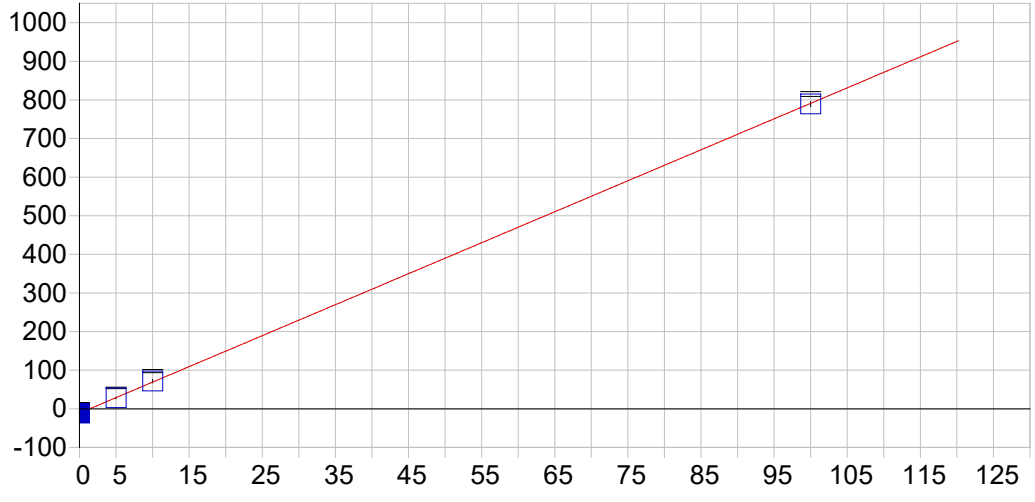
	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 203.985 {465}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 360.073 { 94}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}	Warnin	1.000000	0.000000	1	0
	Na 330.237 {102}	OK.	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 212.412 {458}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 177.495 {489}	OK.	1.000000	0.000000	1	0
	P 213.618 {457}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Hg 194.227 {473}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	1	Ce	-0.002840	0.000000	No
Ag 338.289 {100}	☒	1	Fe	0.000238	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	5	Al	0.001540	0.000000	No
			Mn	-0.000003	0.000000	No
			Ni	-0.000722	0.000000	No
			Cr	0.000734	0.000000	No
			Fe	0.001741	0.000000	No
As 197.262 {471}	☒	1	Al	0.000062	0.000000	No
Ba 233.527 {445}	☒	1	Fe	0.000016	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000009	0.000000	No
Be 313.042 {108}	☒	1	Fe	0.000004	0.000000	No
Be 313.107 {108}	☒	1	Fe	0.000002	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000013	0.000000	No
Ca 184.006 {483}	☒	None				
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	1	Ce	0.001430	0.000000	No
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000122	0.000000	No
Cd 228.802 {447}	☒	1	Fe	-0.000005	0.000000	No
Co 228.616 {447}	☒	4	Fe	0.000002	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.002165	0.000000	No
			Ce	-0.000069	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 223.008 {451}	☒	2	Fe	0.000046	0.000000	No
			Mo	0.004000	0.000000	No
Cu 224.700 {450}	☒	2	Fe	0.003134	0.000000	No
			Ni	-0.007040	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000081	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000009	0.000000	No
			Mo	-0.000319	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	3	Al	-0.000002	0.000000	No
			K	0.000100	0.000000	No
			Ce	-0.000166	0.000000	No
Mn 259.373 {130}	☒	1	Fe	0.000800	0.000000	No
Mo 202.030 {466}	☒	2	Fe	0.000003	0.000000	No
			Ti	0.000527	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000052	0.000000	No
Mo 202.030 {467}	☒	1	Fe	-0.000009	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	6	Fe	0.000019	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Al	0.000003	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.001918	0.000000	No
Pb 216.999 {455}	☒	3	Al	0.001866	0.000000	No
			Na	0.000000	0.000000	No
			Fe	0.002996	0.000000	No
Pb 220.353 {453}	☒	7	Si	0.000000	0.000000	No
			Al	-0.000035	0.000000	No
			Ni	0.000106	0.000000	No
			Mo	-0.001644	0.000000	No
			V	-0.000018	0.000000	No
			Cu	-0.000444	0.000000	No
			Co	0.002100	0.000000	No
Pb 216.999 {456}	☒	1	Al	0.003022	0.000000	No
Pb 220.353 {153}	☒	1	Fe	-0.000011	0.000000	No
Sb 206.833 {463}	☒	3	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
			Ce	0.005500	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000182	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000155	0.000000	No
Se 203.985 {465}	☒	1	Fe	-0.000160	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	8	Fe	-0.000539	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000000	0.000000	No
			Mn	0.000000	0.000000	No
			Ni	0.000000	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Co	0.002495	0.000000	No
			Cr	0.000220	0.000000	No
			Cu	0.001535	0.000000	No
Tl 190.856 {477}	☒	3	Fe	-0.000026	0.000000	No
			Cr	0.000000	0.000000	No
			Ce	0.000980	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	6	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No
			Al	0.000000	0.000000	No
			Ti	0.000420	0.000000	No
			Mo	-0.000481	0.000000	No
			Cu	-0.003767	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	5	Fe	0.000130	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mo	0.000034	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 360.073 { 94}*	☒	None				
Y 371.030 { 91}	☒	None				
Na 330.237 {102}	☒	None				
Na 588.995 { 57}	☒	1	Fe	0.000001	0.000000	No
Na 589.592 { 57}	☒	1	Fe	0.000000	0.000000	No
Si 212.412 {458}	☒	None				
Si 251.611 {134}	☒	1	Fe	-0.000014	0.000000	No
Ti 323.452 {104}	☒	2	Fe	0.000029	0.000000	No
			Ce	0.000123	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000106	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000049	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000017	0.000000	No
B 249.678 {135}	☒	1	Fe	0.000003	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000684	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000016	0.000000	No
K 766.490 { 44}	☒	2	Fe	0.000000	0.000000	No
			Cu	0.000000	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000001	0.000000	No
P 177.495 {489}	☒	None				
P 213.618 {457}	☒	1	Fe	-0.000069	0.000000	No
S 182.034 {485}	☒	2	Mn	0.002145	0.000000	No
			Fe	-0.000035	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
	Hg 184.950 {482}	☒	1	Fe	-0.000000	0.000000	No
	Hg 194.227 {473}	☒	None				
	Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

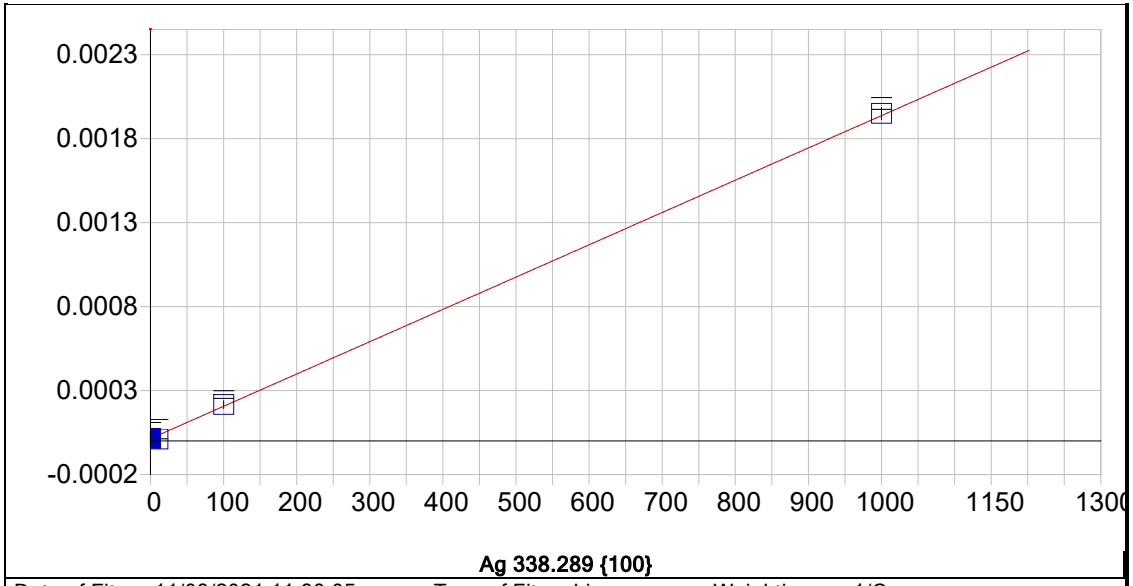


Ag 328.068 {103}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-11.154576	Re-Slope:	1.000000
A1 (Gain):	8.022314	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999941	Status:	OK.
Std Error of Est:	0.093668		
Predicted MDL:	0.560433		
Predicted MQL:	1.868110		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00005	-.000	.000	-11.155	1.42	1
CalStd8=100	100.00	99.769	-.231	-.231	789.23	6.25	1
CalStd4=5	5.0000	4.8982	-.102	-2.04	28.140	2.03	1
CalStd5=10	10.000	10.332	.332	3.32	71.735	4.07	1

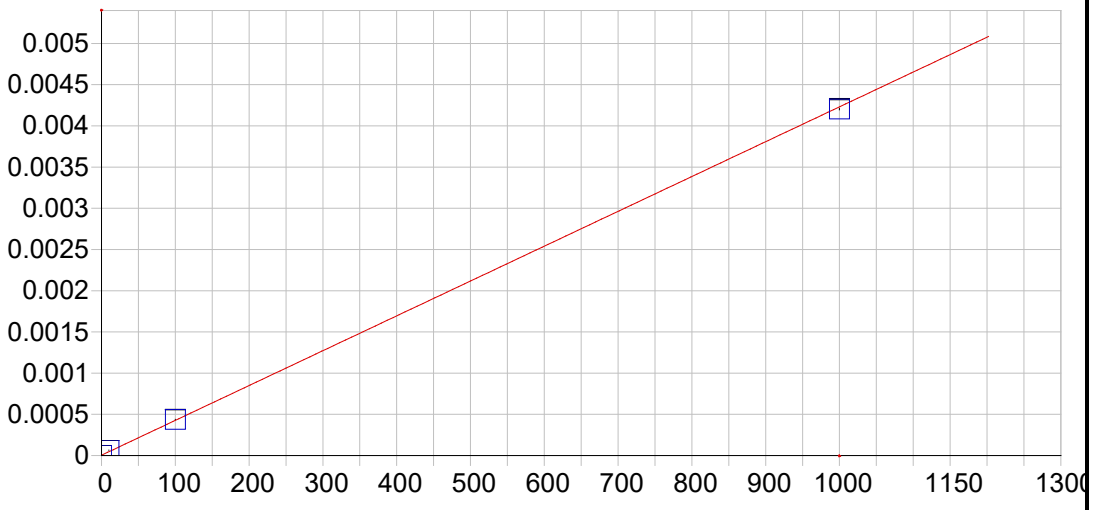


Ag 338.289 {100}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.993802	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	31.343840		
Predicted MQL:	104.479465		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01107	.011	.000	.00001	.000	1
CalStd8=100	100.00	105.16	5.16	5.16	.00022	.000	1
Ag Ba 1000,	1000.0	1006.5	6.49	.649	.00195	.000	1
CalStd5=10	10.000	-1.6480	-11.6	-116.	.00001	.000	1

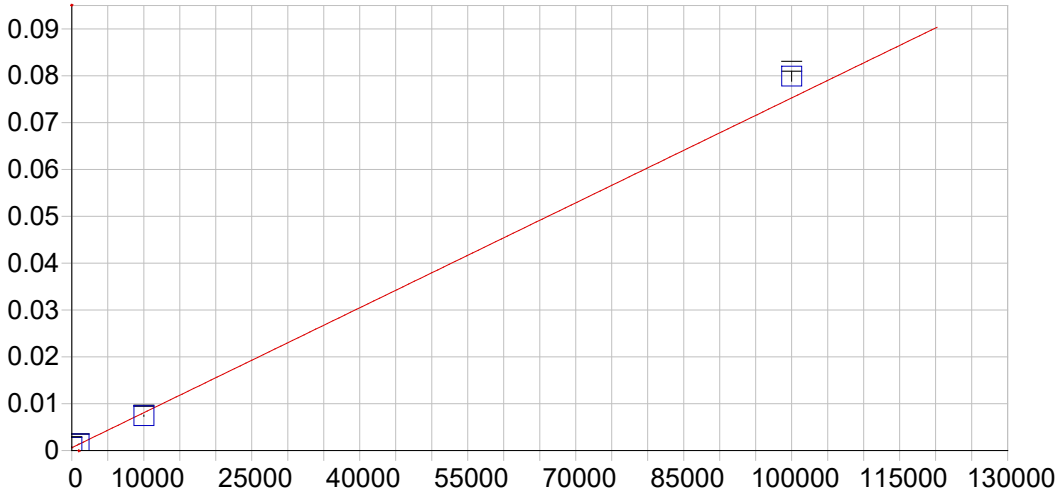


Al 167.079 {501}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999092	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.347397		
Predicted MQL:	1.157992		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00454	-.005	.000	.00000	.000	1
CalStd9=100	1000.0	993.41	-6.59	-.659	.00420	.000	1
CalStd5=10	10.000	14.385	4.39	43.9	.00006	.000	1
CalStd8=100	100.00	102.20	2.20	2.20	.00044	.000	1

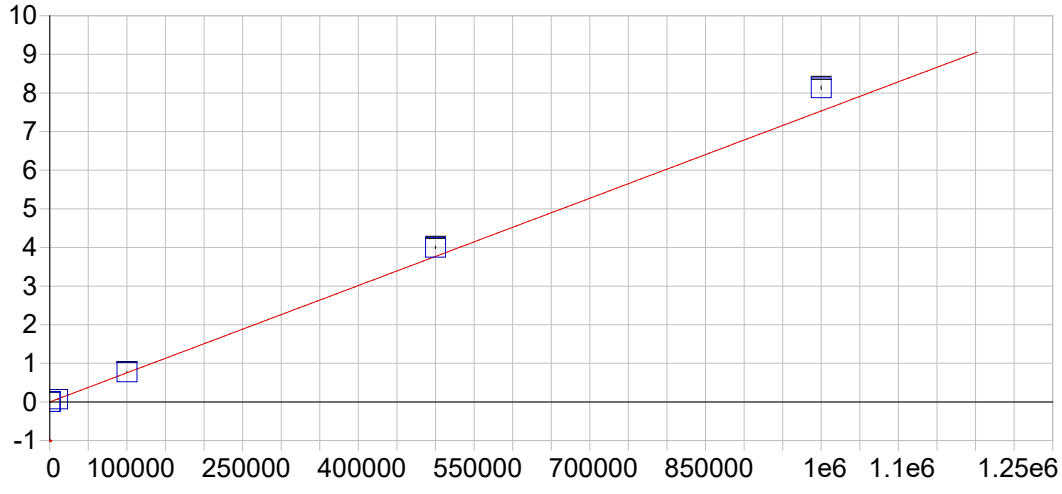


Al 308.215 {109}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000605	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996791	Status:	OK.
Std Error of Est:	0.000306		
Predicted MDL:	99.936470		
Predicted MQL:	333.121565		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	146.85	147.	.000	.00071	.000	1
CalStd10=10	10000.	9125.1	-875.	-8.75	.00742	.000	1
CalStd9=100	1000.0	1046.6	46.6	4.66	.00139	.000	1
CalStd13=10	100000.	106200.	6200.	6.20	.07991	.001	1

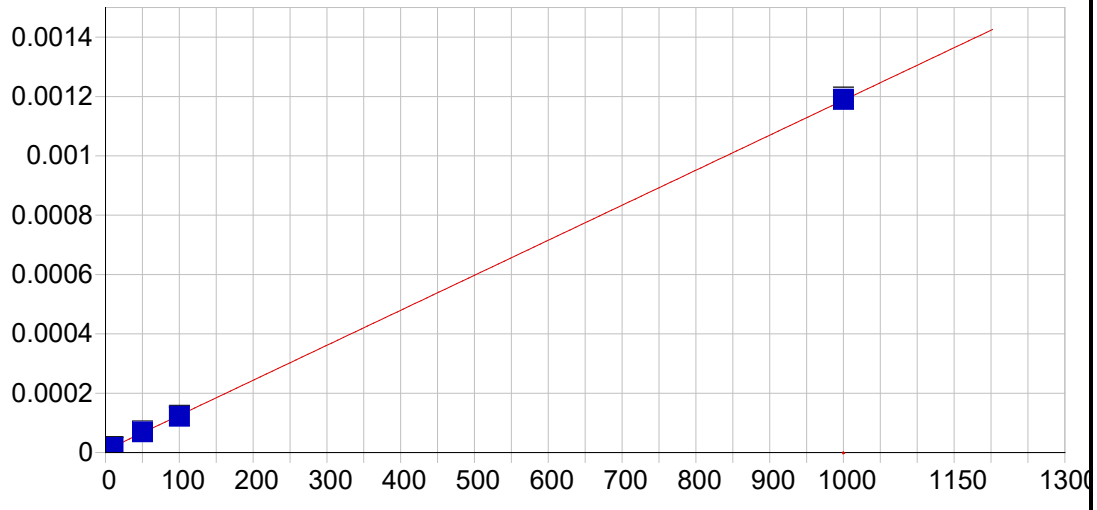


Al 396.152 { 85}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	-0.000289	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999884	Status:	OK.
Std Error of Est:	0.000486		
Predicted MDL:	20.842212		
Predicted MQL:	69.474040		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.6158	-3.62	.000	-.00032	.000	1
CalStd14=50	500000.	531150.	31200.	6.23	4.0020	.026	1
CalStd13=10	100000.	103020.	3020.	3.02	.77599	.011	1
CalStd10=10	10000.	9788.5	-212.	-2.12	.07347	.001	1
CalStd9=100	1000.0	1020.9	20.9	2.09	.00740	.000	1
CalibStd15=	1000000.	1079400.	79400.	7.94	8.1328	.038	1

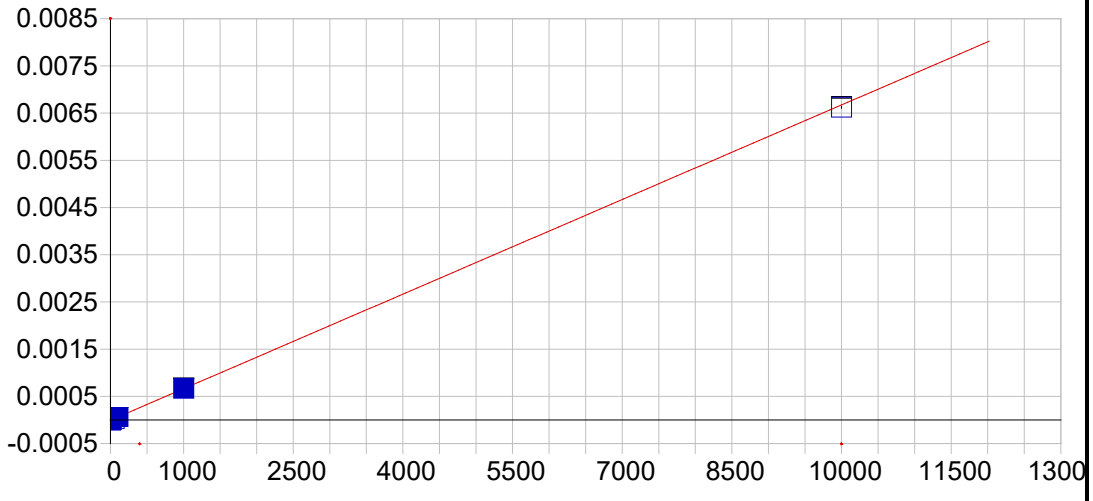


As 193.759 {474}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999847	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.352338		
Predicted MQL:	11.174461		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00089	.001	.000	.00001	.000	1
CalStd9=100	1000.0	1001.7	1.70	.170	.00119	.000	1
CalStd7=50	50.000	52.562	2.56	5.12	.00007	.000	1
CalStd5=10	10.000	8.8952	-1.10	-11.0	.00002	.000	1
CalStd8=100	100.00	96.839	-3.16	-3.16	.00012	.000	1

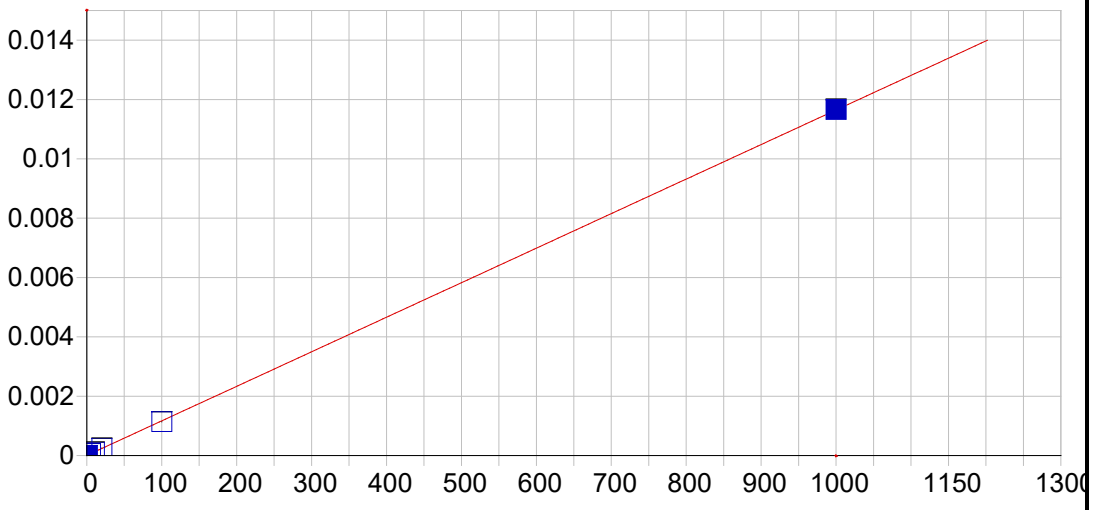


As 197.262 {471}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	4.856588		
Predicted MQL:	16.188628		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.77245	.772	.000	-.00001	.000	1
CalStd9=100	1000.0	1012.1	12.1	1.21	.00067	.000	1
CalStd7=50	50.000	50.282	.282	.564	.00003	.000	1
CalStd5=10	10.000	9.0980	-.902	-9.02	-.00000	.000	1
CalStd8=100	100.00	98.932	-1.07	-1.07	.00006	.000	1
CalStd10=10	10000.	9924.1	-75.9	-.759	.00662	.000	1

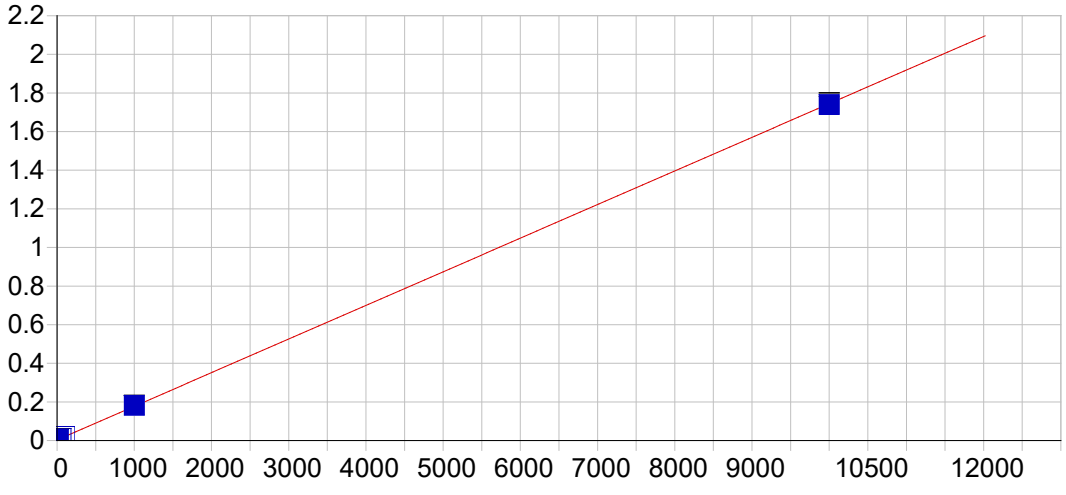


Ba 233.527 {445}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999939	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.266088		
Predicted MQL:	0.886960		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00010	-.000	.000	.00000	.000	1
CalStd5=10	10.000	10.004	.004	.042	.00012	.000	1
CalStd6=20	20.000	21.211	1.21	6.06	.00025	.000	1
CalStd8=100	100.00	97.555	-2.44	-2.44	.00114	.000	1
CalStd4=5	5.0000	4.9836	-.016	-.328	.00006	.000	1
CalStd9=100	1000.0	1001.2	1.18	.118	.01166	.000	1
CalStd3=1	1.0000	1.0621	.062	6.21	.00002	.000	1

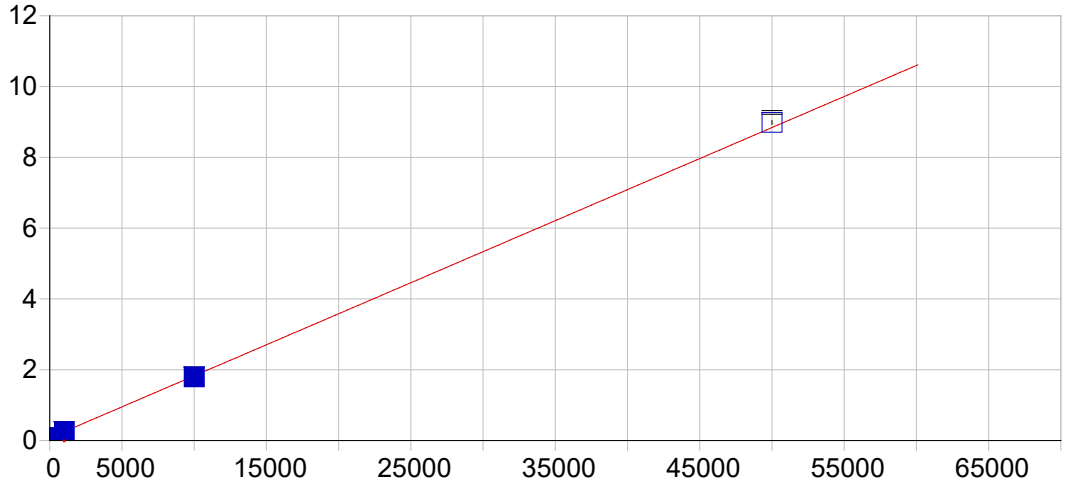


Ba 455.403 { 74}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003364	Re-Slope:	1.000000
A1 (Gain):	0.000174	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.823306		
Predicted MQL:	2.744355		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00037	-.000	.000	.00336	.000	1
CalStd7=50	50.000	52.868	2.87	5.74	.01257	.000	1
CalStd5=10	10.000	10.942	.942	9.42	.00527	.000	1
CalStd6=20	20.000	21.995	2.00	9.98	.00719	.000	1
CalStd8=100	100.00	99.524	-.476	-.476	.02069	.000	1
CalStd4=5	5.0000	4.9143	-.086	-1.71	.00422	.000	1
CalStd9=100	1000.0	1024.2	24.2	2.42	.18170	.001	1
CalStd3=1	1.0000	1.1176	.118	11.8	.00356	.000	1
CalStd10=10	10000.	9970.4	-29.6	-.296	1.7394	.009	1

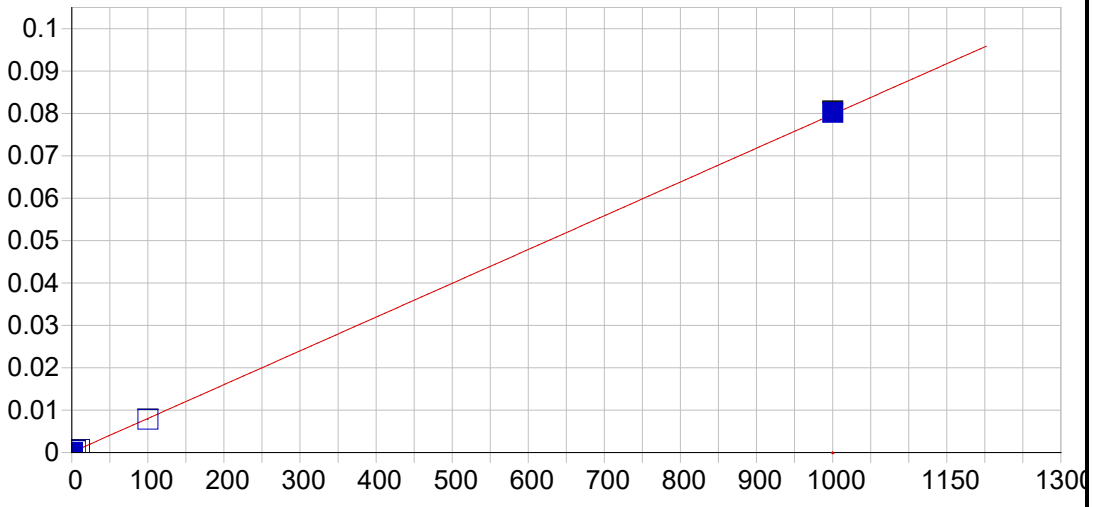


Ba 493.409 { 68}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.074867	Re-Slope:	1.000000
A1 (Gain):	0.000175	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999832	Status:	OK.
Std Error of Est:	0.002719		
Predicted MDL:	2.744297		
Predicted MQL:	9.147658		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.7777	-3.78	.000	.07420	.000	1
CalStd9=100	1000.0	1013.3	13.3	1.33	.25253	.001	1
CalStd8=100	100.00	99.378	-.622	-.622	.09229	.001	1
Ag Ba 1000,	50000.	50824.	824.	1.65	8.9864	.051	1
CalStd10=10	10000.	9805.0	-195.	-1.95	1.7941	.006	1

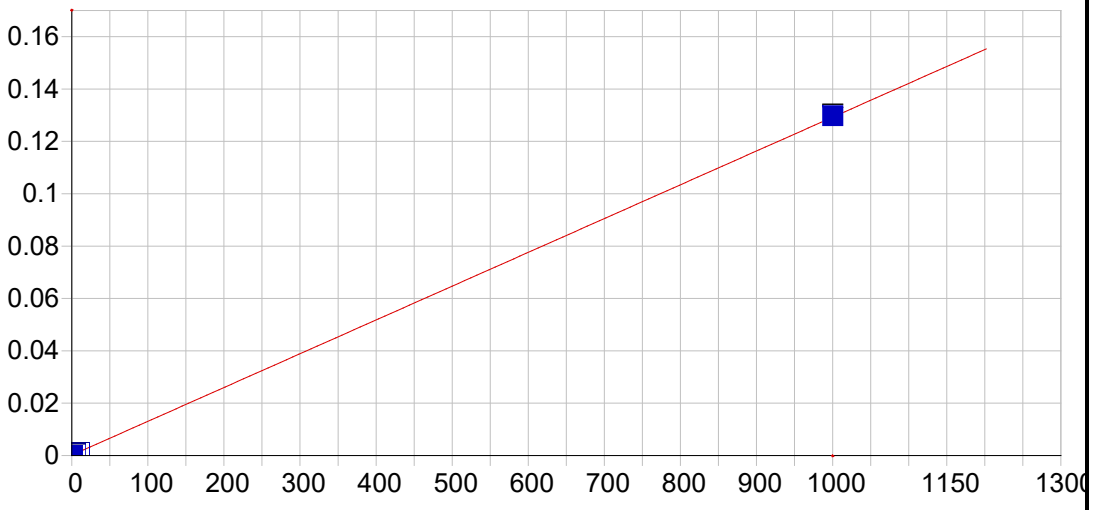


Be 313.042 {108}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000076	Re-Slope:	1.000000
A1 (Gain):	0.000080	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999084	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.022355		
Predicted MQL:	0.074517		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00127	.001	.000	.00008	.000	1
CalStd5=10	10.000	9.3685	-.632	-6.32	.00082	.000	1
CalStd8=100	100.00	97.224	-2.78	-2.78	.00782	.000	1
CalStd2=0.5	.50000	-.30330	-.803	-161.	.00005	.000	1
CalStd4=5	5.0000	4.4177	-.582	-11.6	.00043	.000	1
CalStd9=100	1000.0	1005.5	5.53	.553	.08022	.000	1
CalStd3=1	1.0000	.26629	-.734	-73.4	.00010	.000	1

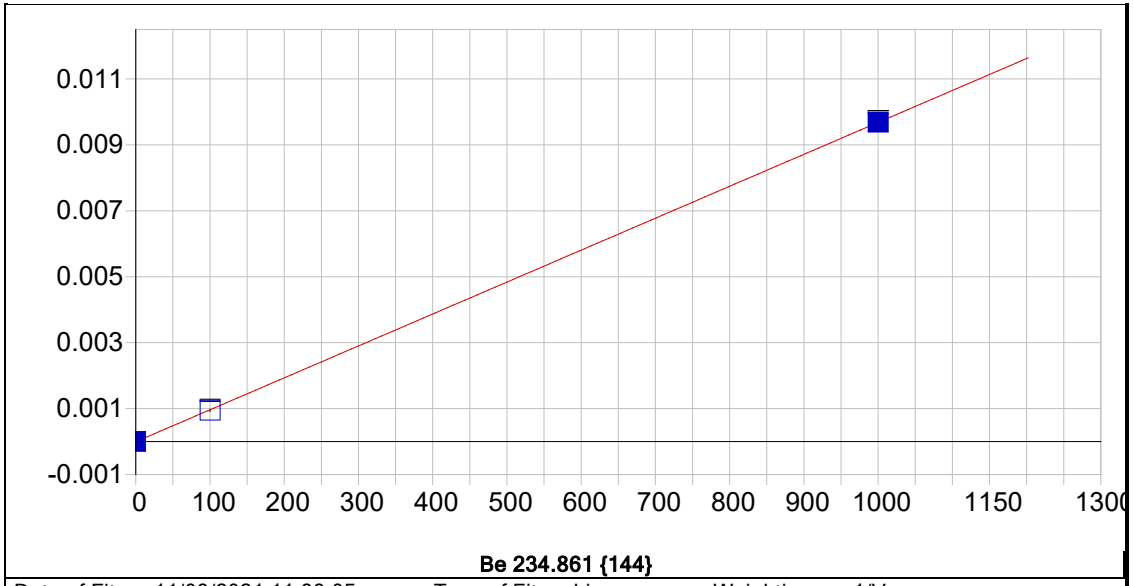


Be 313.107 {108}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000160	Re-Slope:	1.000000
A1 (Gain):	0.000129	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998584	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.377148		
Predicted MQL:	1.257161		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00153	.002	.000	.00016	.000	1
CalStd5=10	10.000	8.7702	-1.23	-12.3	.00129	.000	1
CalStd2=0.5	.50000	-.35158	-.852	-170.	.00011	.000	1
CalStd4=5	5.0000	4.0779	-.922	-18.4	.00069	.000	1
CalStd9=100	1000.0	1004.0	4.05	.405	.12977	.001	1
CalStd3=1	1.0000	-.04471	-1.04	-104.	.00015	.000	1

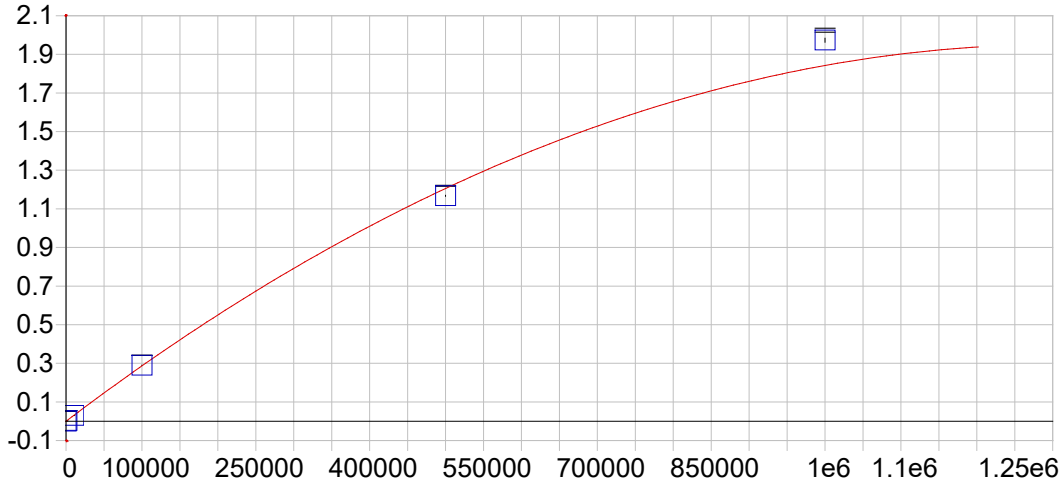


Be 234.861 {144}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	2.414257		
Predicted MQL:	8.047523		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.40368	.404	.000	-.00000	.000	1
CalStd9=100	1000.0	1000.4	.406	.041	.00969	.000	1
CalStd8=100	100.00	98.100	-1.90	-1.90	.00095	.000	1

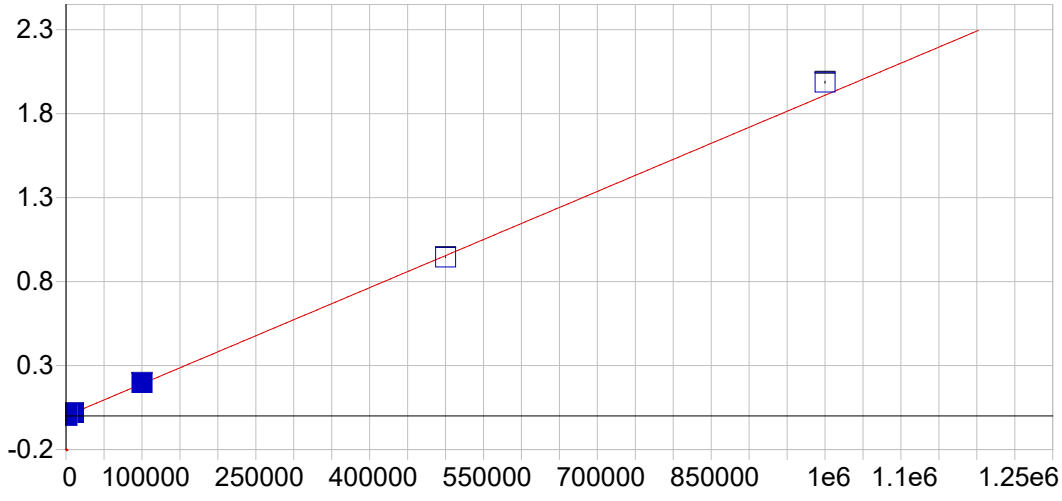


Ca 184.006 {483}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	-0.000027	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999766	Status:	OK.
Std Error of Est:	0.000032		
Predicted MDL:	0.978864		
Predicted MQL:	3.262881		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.73337	-.733	.000	-.00003	.000	1
CalStd10=10	10000.	9935.5	-64.5	-.645	.02946	.000	1
CalStd13=10	100000.	101100.	1100.	1.10	.28955	.001	1
CalStd14=50	500000.	479720.	-20300.	-4.06	1.1675	.003	1
CalStd9=100	1000.0	1033.0	33.0	3.30	.00305	.000	1
CalibStd15=	1000000.	.00000	-1000e3	-100.	1.9735	.010	1

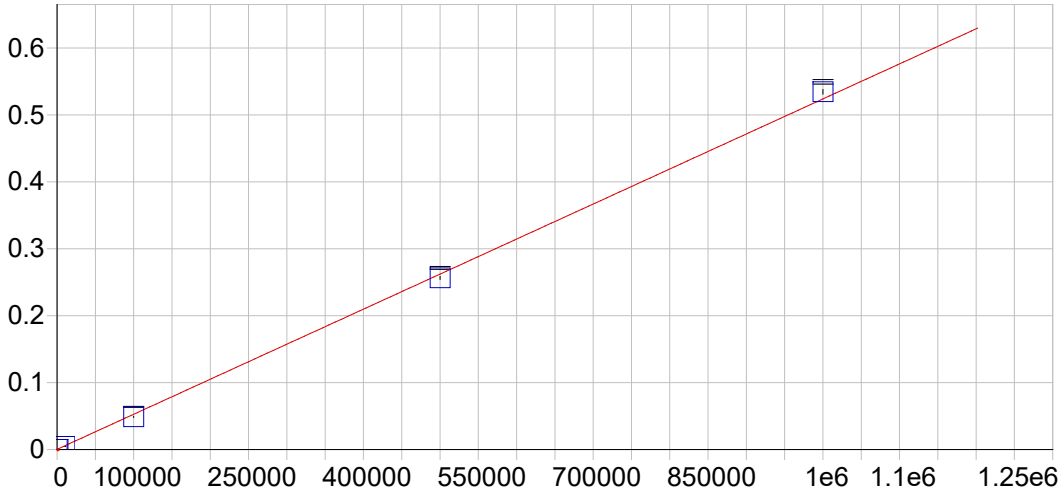


Ca 315.887 {107}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000012	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999765	Status:	OK.
Std Error of Est:	0.000929		
Predicted MDL:	20.061665		
Predicted MQL:	66.872218		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	50.149	50.1	.000	.00008	.000	1
CalStd10=10	10000.	9639.2	-361.	-3.61	.01840	.000	1
CalStd13=10	100000.	103380.	3380.	3.38	.19741	.002	1
CalStd14=50	500000.	494980.	-5020.	-1.00	.94529	.001	1
CalStd9=100	1000.0	1022.7	22.7	2.27	.00194	.000	1
CalibStd15=	1000000.	1040700.	40700.	4.07	1.9874	.005	1

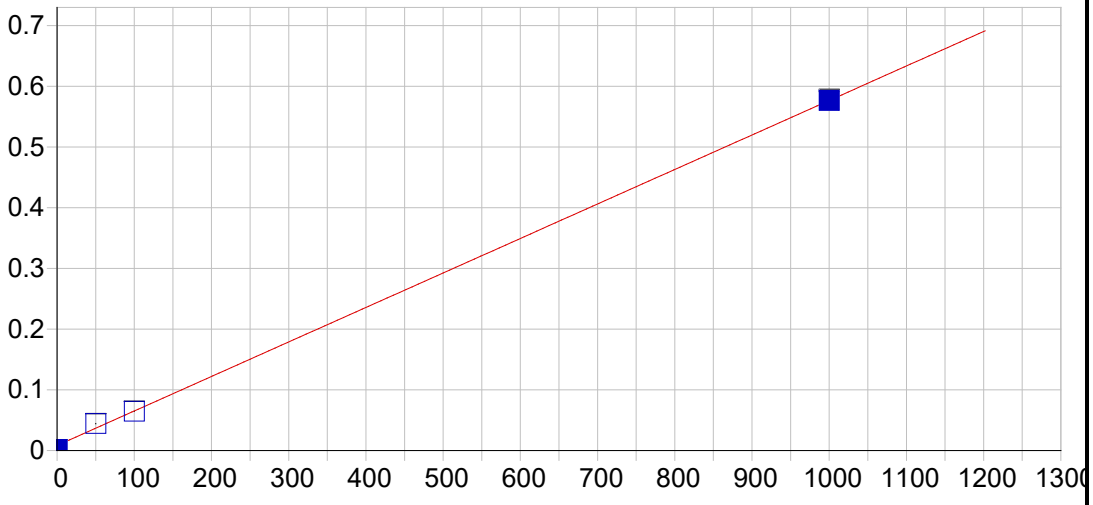


Ca 317.933 {106}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000342	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999502	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	75.525992		
Predicted MQL:	251.753305		

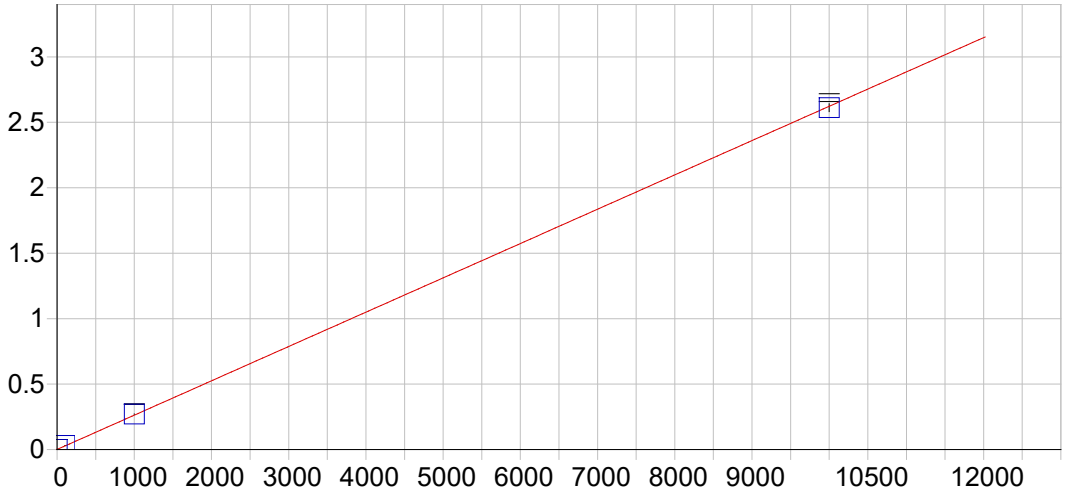
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.45050	.451	.000	.00034	.000	1
CalStd10=10	10000.	8054.1	-1950.	-19.5	.00456	.000	1
CalStd13=10	100000.	92569.	-7430.	-7.43	.04881	.001	1
CalStd14=50	500000.	489260.	-10700.	-2.15	.25651	.002	1
CalStd9=100	1000.0	819.58	-180.	-18.0	.00077	.000	1
CalibStd15=	1000000.	1020300.	20300.	2.03	.53455	.003	1



Ca 393.366 { 86}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	None
A0 (Offset):	0.008385		Re-Slope:	1.000000	
A1 (Gain):	0.000568		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999763		Status:	OK.	
Std Error of Est:	0.007232				
Predicted MDL:	0.179927				
Predicted MQL:	0.599756				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-11.897	-11.9	.000	.00162	.000	1
CalStd9=100	1000.0	999.43	-.574	-.057	.57717	.002	1
CalStd8=100	100.00	99.016	-.984	-.984	.06466	.000	1
CalStd7=50	50.000	63.455	13.5	26.9	.04445	.000	1

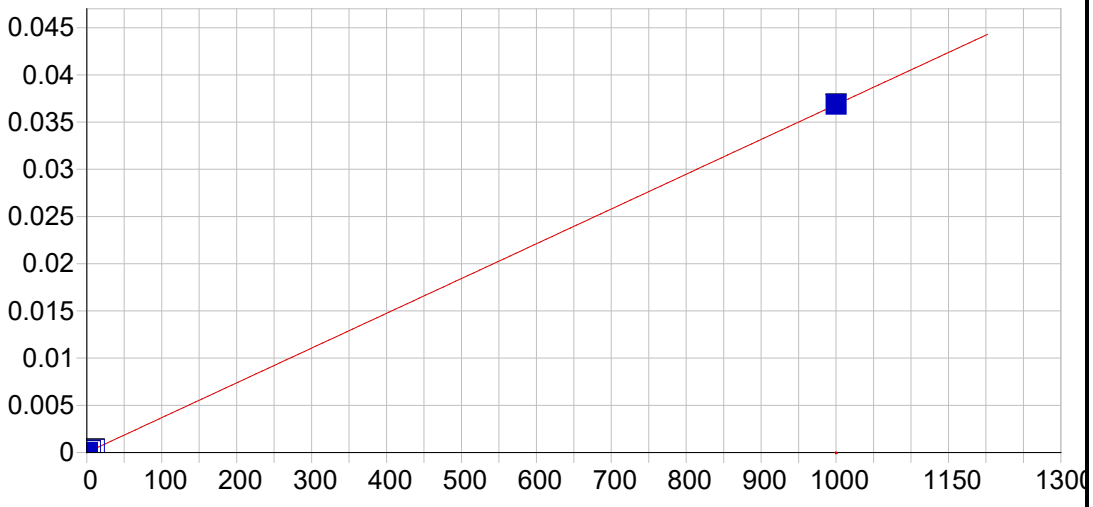


Ca 396.847 { 85}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000645	Re-Slope:	1.000000
A1 (Gain):	0.000262	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999881	Status:	OK.
Std Error of Est:	0.000190		
Predicted MDL:	0.362443		
Predicted MQL:	1.208142		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01519	-.015	.000	.00064	.000	1
CalStd10=10	10000.	9958.2	-41.8	-.418	2.6117	.030	1
CalStd8=100	100.00	112.70	12.7	12.7	.03019	.000	1
CalStd9=100	1000.0	1029.1	29.1	2.91	.27048	.001	1

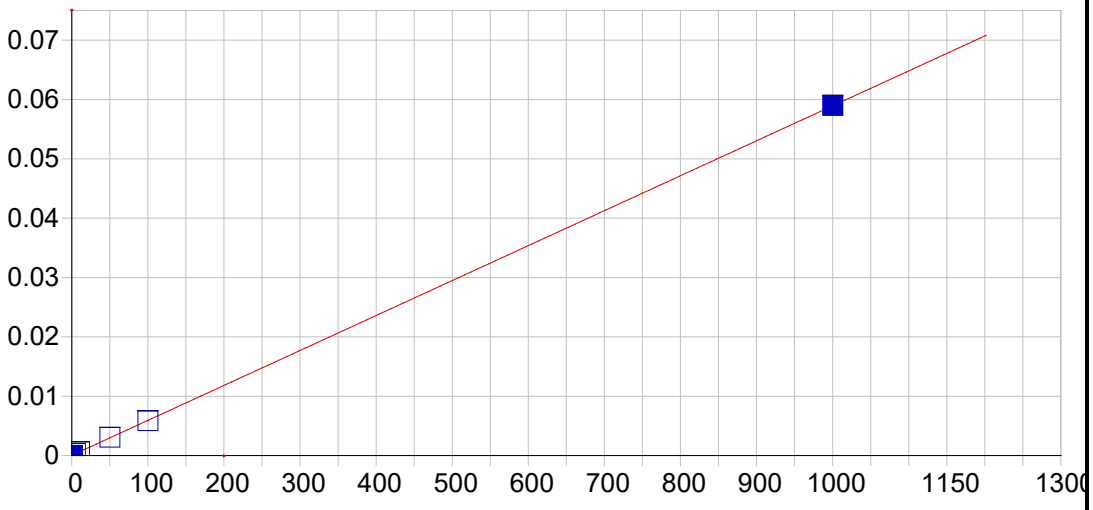


Cd 226.502 {449}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000010	Re-Slope:	1.000000
A1 (Gain):	0.000037	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999823	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.135494		
Predicted MQL:	0.451645		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00051	.001	.000	.00001	.000	1
CalStd3=1	1.0000	.76391	-.236	-23.6	.00004	.000	1
CalStd2=0.5	.50000	.11062	-.389	-77.9	.00001	.000	1
CalStd4=5	5.0000	4.9843	-.016	-.314	.00019	.000	1
CalStd5=10	10.000	9.9511	-.049	-.489	.00038	.000	1
CalStd9=100	1000.0	1000.7	.690	.069	.03688	.000	1

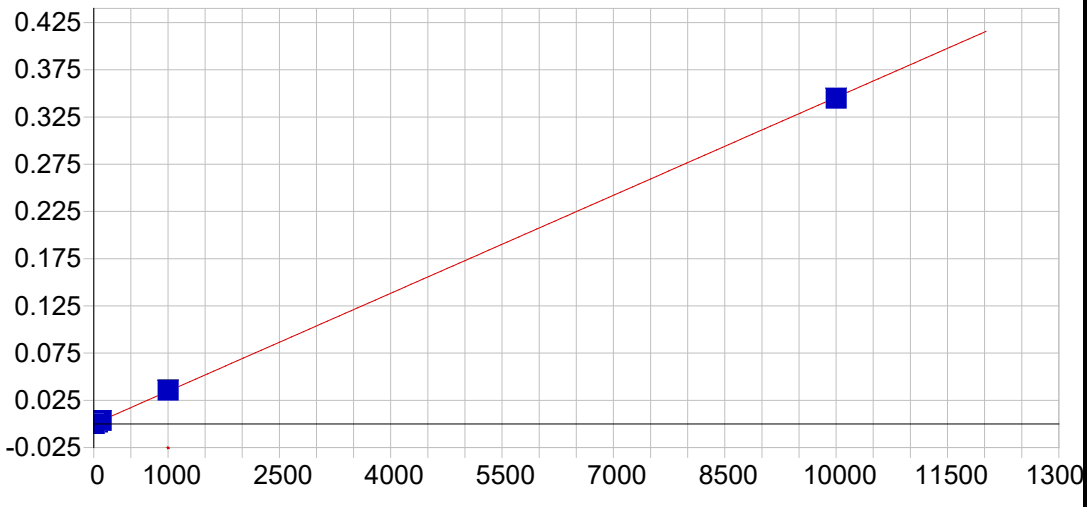


Cd 228.802 {447}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000033	Re-Slope:	1.000000
A1 (Gain):	0.000059	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999853	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.123045		
Predicted MQL:	0.410150		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00047	.000	.000	.00003	.000	1
CalStd7=50	50.000	51.280	1.28	2.56	.00305	.000	1
CalStd3=1	1.0000	.71414	-.286	-28.6	.00008	.000	1
CalStd2=0.5	.50000	.17052	-.329	-65.9	.00004	.000	1
CalStd4=5	5.0000	4.9464	-.054	-1.07	.00032	.000	1
CalStd8=100	100.00	98.942	-1.06	-1.06	.00586	.000	1
CalStd5=10	10.000	9.9919	-.008	-.081	.00062	.000	1
CalStd9=100	1000.0	1000.5	.455	.045	.05896	.000	1

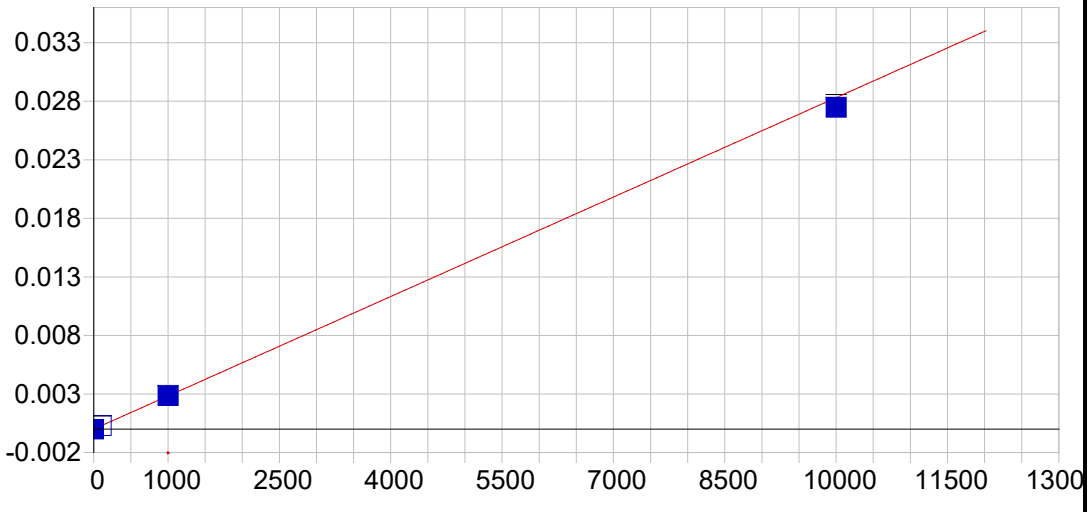


Co 228.616 {447}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000035	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999944	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.186402		
Predicted MQL:	0.621340		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00012	.000	.000	.00001	.000	1
CalStd7=50	50.000	52.943	2.94	5.89	.00184	.000	1
CalStd5=10	10.000	10.137	.137	1.37	.00036	.000	1
CalStd4=5	5.0000	4.9574	-.043	-.852	.00018	.000	1
CalStd8=100	100.00	100.87	.870	.870	.00350	.000	1
CalStd9=100	1000.0	1030.1	30.1	3.01	.03567	.000	1
CalStd3=1	1.0000	.78230	-.218	-21.8	.00004	.000	1
CalStd10=10	10000.	9966.2	-33.8	-.338	.34543	.000	1

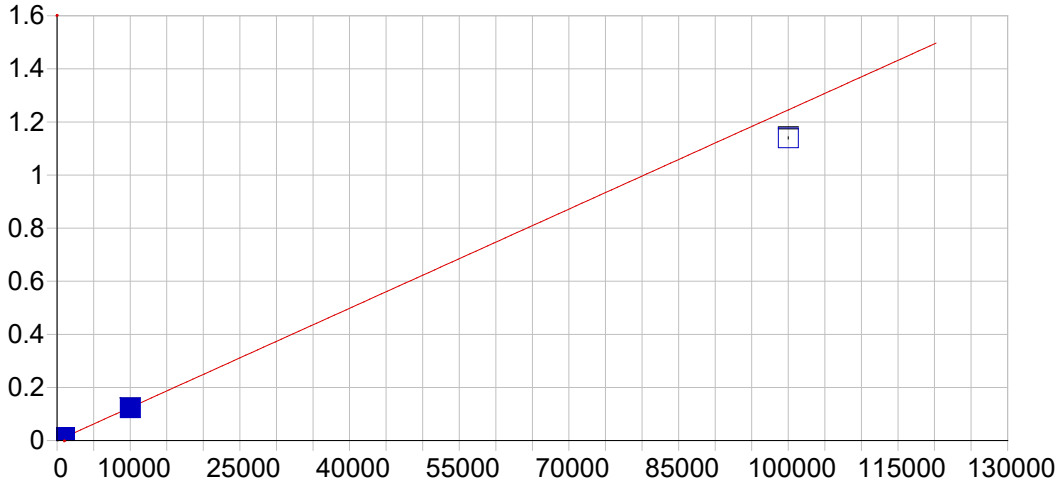


Co 238.892 {141}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999855	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.437493		
Predicted MQL:	1.458311		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.58781	.588	.000	.00000	.000	1
CalStd9=100	1000.0	1011.8	11.8	1.18	.00286	.000	1
CalStd10=10	10000.	9707.1	-293.	-2.93	.02748	.000	1
CalStd8=100	100.00	98.876	-1.12	-1.12	.00028	.000	1

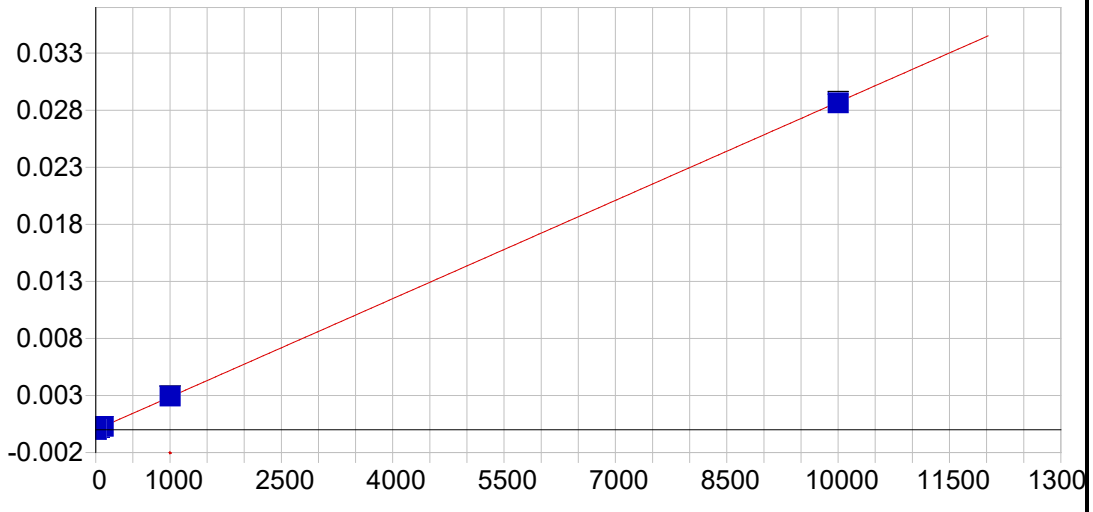


Cr 205.560 {464}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999738	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.298396		
Predicted MQL:	0.994653		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.94415	-.944	.000	.00000	.000	1
CalStd5=10	10.000	8.9718	-1.03	-10.3	.00013	.000	1
CalStd7=50	50.000	50.725	.725	1.45	.00065	.000	1
CalStd9=100	1000.0	1016.7	16.7	1.67	.01267	.000	1
CalStd8=100	100.00	98.233	-1.77	-1.77	.00124	.000	1
CalStd4=5	5.0000	3.8546	-1.15	-22.9	.00006	.000	1
CalStd3=1	1.0000	-.38246	-1.38	-138.	.00001	.000	1
CalStd10=10	10000.	9873.8	-126.	-1.26	.12297	.000	1
CalStd12=10	100000.	91546.	-8450.	-8.45	1.1400	.004	1

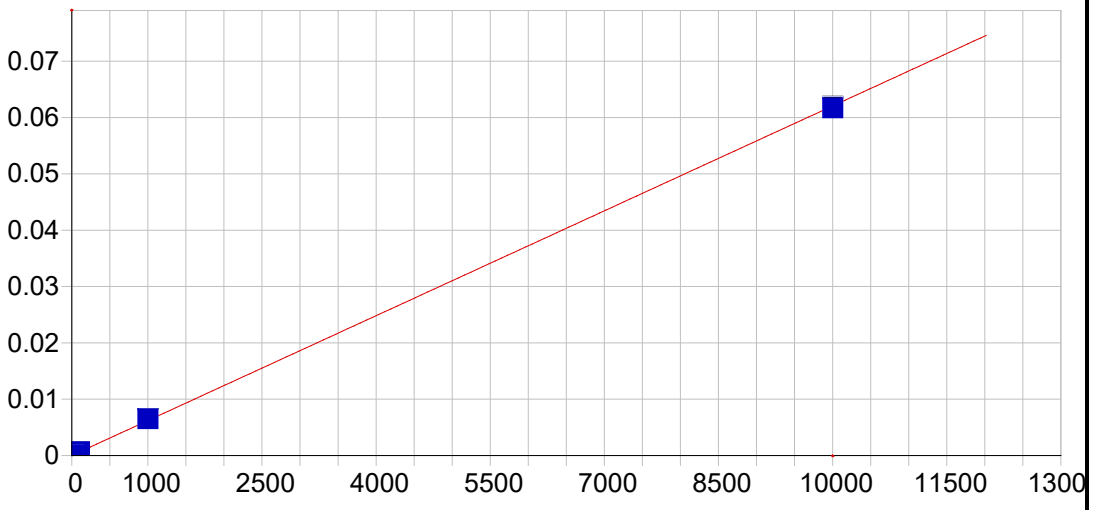


Cr 267.716 {126}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999956	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.601153		
Predicted MQL:	2.003843		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00030	.000	.000	-.00000	.000	1
CalStd5=10	10.000	9.7633	-.237	-2.37	.00003	.000	1
CalStd7=50	50.000	52.499	2.50	5.00	.00015	.000	1
CalStd9=100	1000.0	1026.7	26.7	2.67	.00295	.000	1
CalStd8=100	100.00	99.264	-.736	-.736	.00028	.000	1
CalStd4=5	5.0000	4.4872	-.513	-10.3	.00001	.000	1
CalStd10=10	10000.	9972.3	-27.7	-.277	.02864	.000	1

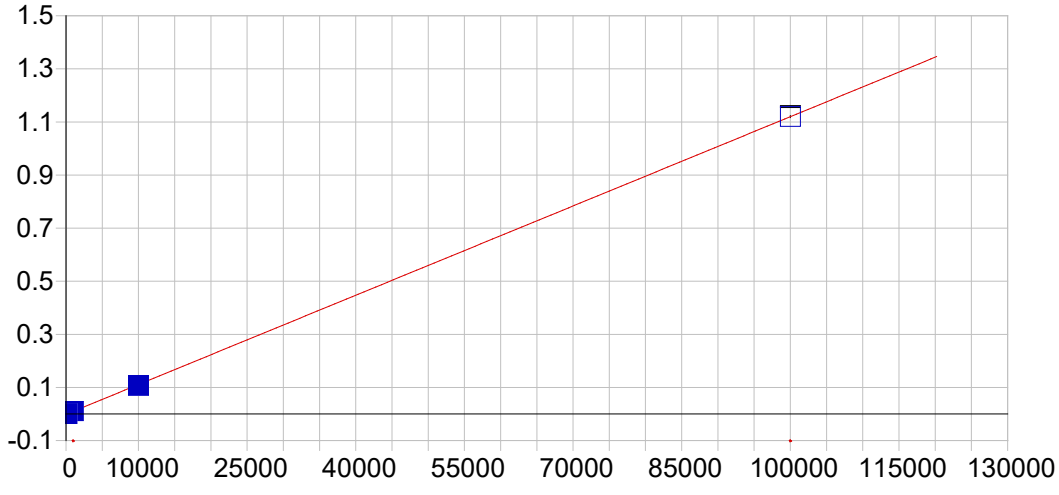


Cu 223.008 {451}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999825	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.935543		
Predicted MQL:	3.118477		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00503	-.005	.000	.00001	.000	1
CalStd9=100	1000.0	1047.2	47.2	4.72	.00653	.000	1
CalStd8=100	100.00	103.95	3.95	3.95	.00065	.000	1
CalStd6=20	20.000	23.465	3.46	17.3	.00015	.000	1
CalStd5=10	10.000	12.484	2.48	24.8	.00008	.000	1
CalStd10=10	10000.	9942.9	-57.1	-.571	.06195	.000	1

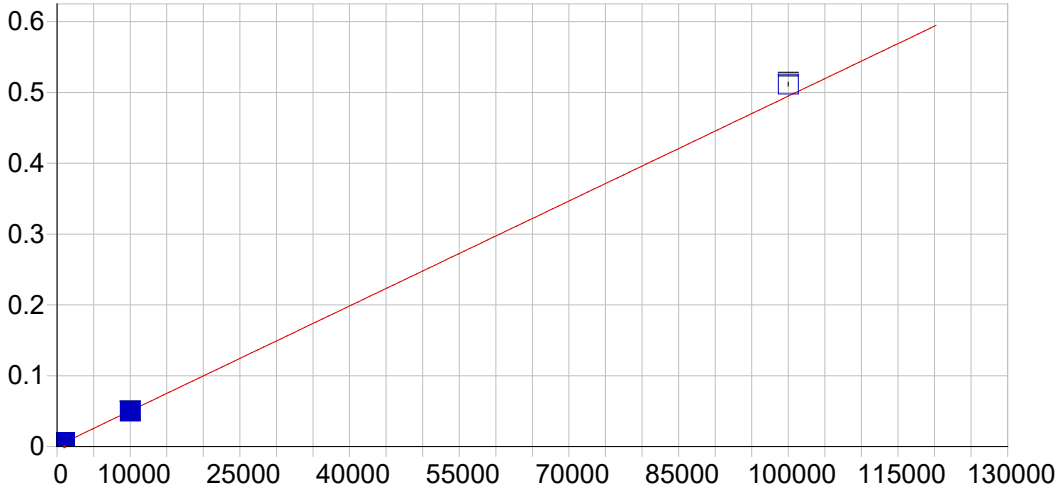


Cu 224.700 {450}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.001059	Re-Slope:	1.000000
A1 (Gain):	0.000011	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999990	Status:	OK.
Std Error of Est:	0.002014		
Predicted MDL:	0.334871		
Predicted MQL:	1.116236		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	95.199	95.2	.000	.00001	.000	1
CalStd9=100	1000.0	1054.8	54.8	5.48	.01072	.000	1
CalStd7=50	50.000	109.08	59.1	118.	.00016	.000	1
CalStd8=100	100.00	143.60	43.6	43.6	.00054	.000	1
CalStd6=20	20.000	100.28	80.3	401.	.00006	.000	1
CalStd12=10	100000.	100040.	36.1	.036	1.1202	.004	1
CalStd10=10	10000.	9630.9	-369.	-3.69	.10645	.000	1

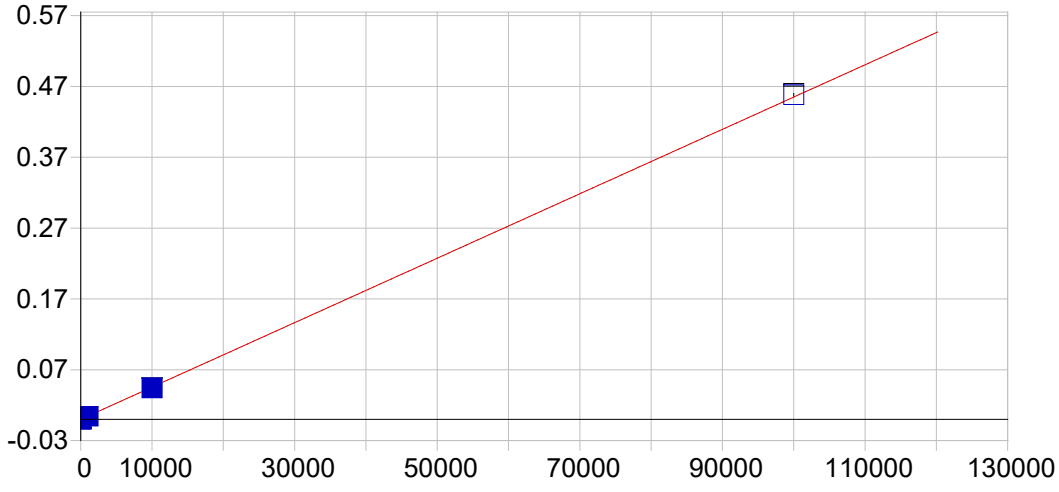


Cu 324.754 {104}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000937	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999781	Status:	OK.
Std Error of Est:	0.000088		
Predicted MDL:	11.583810		
Predicted MQL:	38.612701		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	5.6095	5.61	.000	.00097	.000	1
CalStd9=100	1000.0	1013.2	13.2	1.32	.00594	.000	1
CalStd8=100	100.00	86.539	-13.5	-13.5	.00136	.000	1
CalStd10=10	10000.	9902.7	-97.3	-.973	.04984	.000	1
CalStd12=10	100000.	103420.	3420.	3.42	.51169	.003	1
CalStd5=10	10.000	7.5015	-2.50	-25.0	.00097	.000	1
CalStd6=20	20.000	20.166	.166	.832	.00104	.000	1
CalStd7=50	50.000	52.283	2.28	4.57	.00120	.000	1

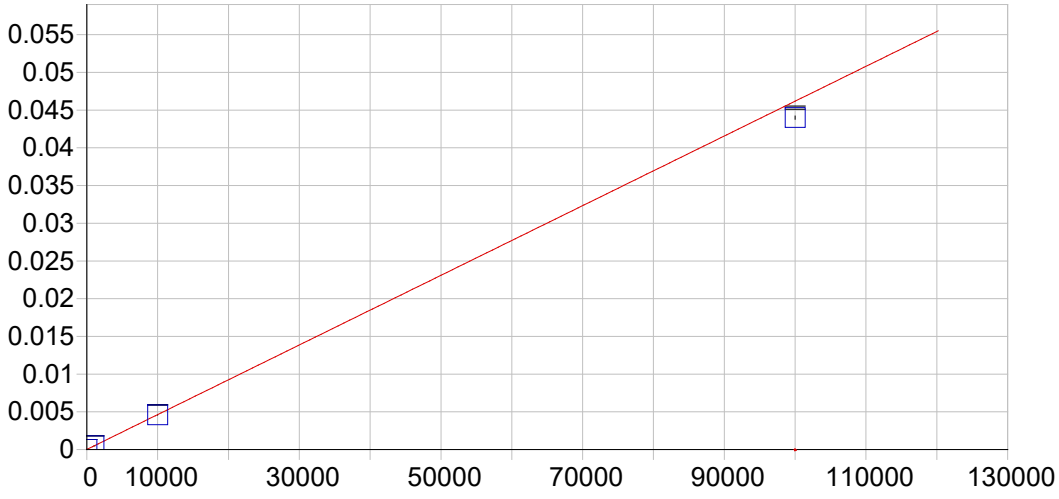


Cu 327.396 {103}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000026	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999881	Status:	OK.
Std Error of Est:	0.000086		
Predicted MDL:	21.188616		
Predicted MQL:	70.628721		

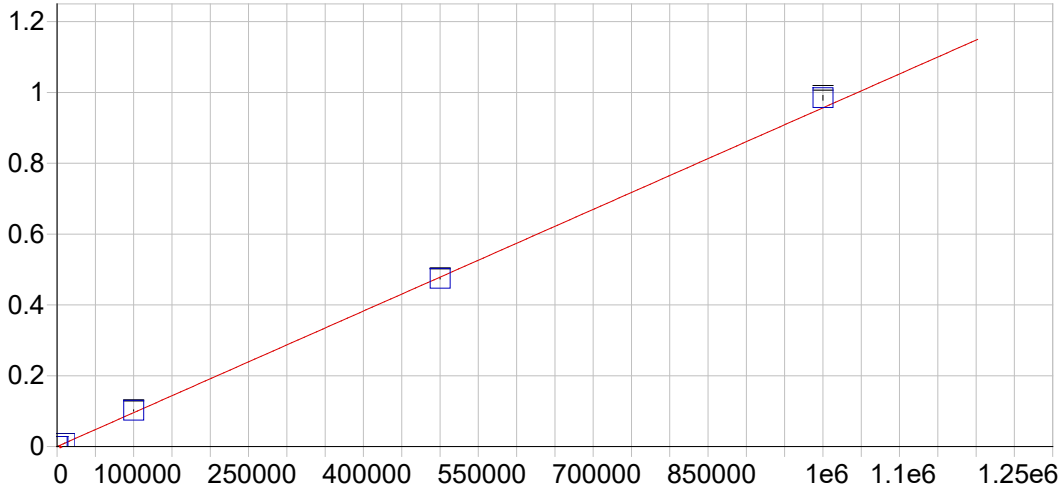
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	21.258	21.3	.000	.00007	.000	1
CalStd6=20	20.000	19.691	-.309	-1.55	.00006	.000	1
CalStd7=50	50.000	47.803	-2.20	-4.39	.00019	.000	1
CalStd8=100	100.00	112.90	12.9	12.9	.00049	.000	1
CalStd9=100	1000.0	985.90	-14.1	-1.41	.00446	.000	1
CalStd10=10	10000.	9706.2	-294.	-2.94	.04413	.000	1
CalStd4=5	5.0000	8.9541	3.95	79.1	.00002	.000	1
CalStd5=10	10.000	2.6853	-7.31	-73.1	-.00001	.000	1
CalStd12=10	100000.	100700.	703.	.703	.45821	.002	1



Fe 234.349 {144}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	0.000012		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999995		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	1.246187				
Predicted MQL:	4.153956				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.02590	-.026	.000	.00001	.000	1
CalStd10=10	10000.	9920.6	-79.4	-.794	.00459	.000	1
CalStd13=10	100000.	95263.	-4740.	-4.74	.04400	.000	1
CalStd9=100	1000.0	1028.6	28.6	2.86	.00049	.000	1

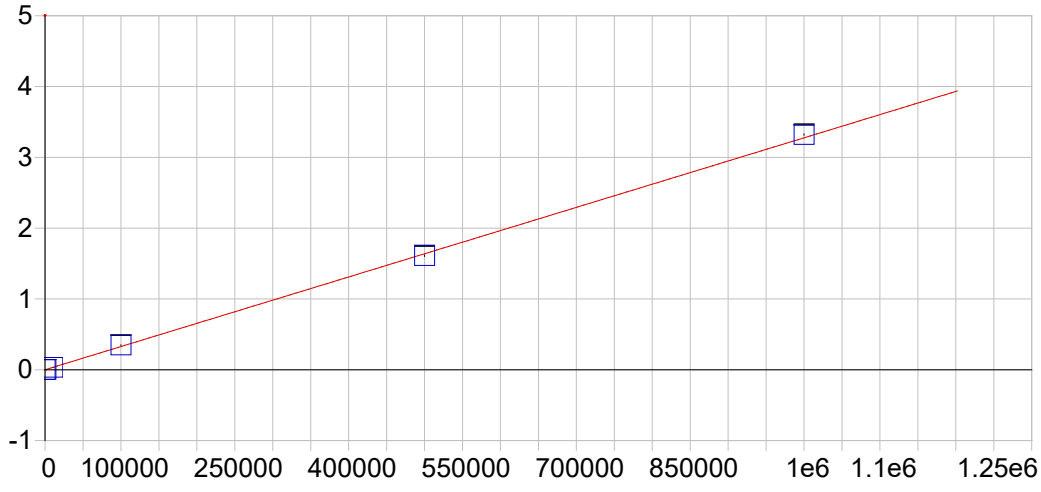


Fe 239.562 {140}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000058	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999860	Status:	OK.
Std Error of Est:	0.000145		
Predicted MDL:	23.731128		
Predicted MQL:	79.103761		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-13.737	-13.7	.000	.00005	.000	1
CalStd10=10	10000.	9993.1	-6.86	-.069	.00962	.000	1
CalStd13=10	100000.	106550.	6550.	6.55	.10198	.001	1
CalStd14=50	500000.	496280.	-3720.	-.744	.47476	.001	1
CalStd9=100	1000.0	1005.5	5.48	.548	.00102	.000	1
CalibStd15=	1000000.	1029600.	29600.	2.96	.98491	.006	1

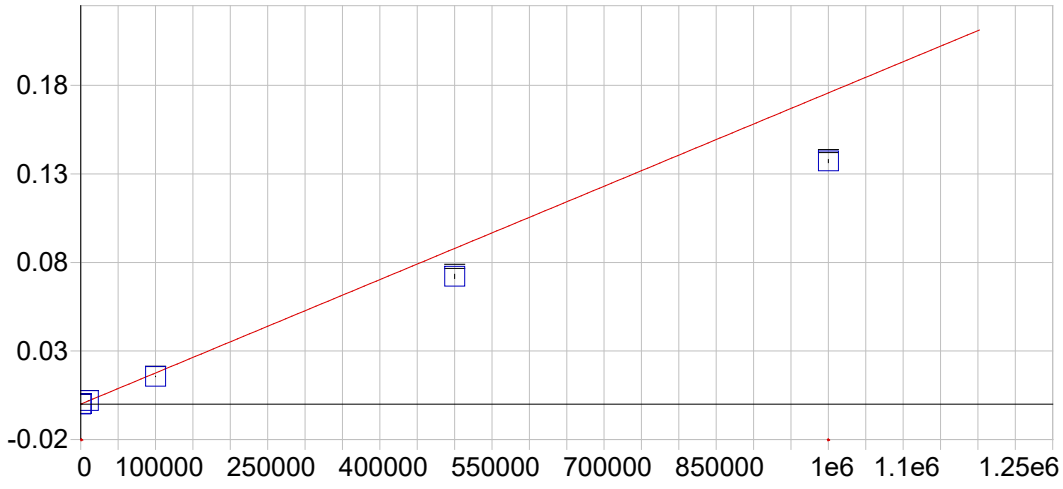


Fe 259.940 {129}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999808	Status:	OK.
Std Error of Est:	0.000116		
Predicted MDL:	10.273759		
Predicted MQL:	34.245864		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.07425	-.074	.000	.00001	.000	1
CalStd10=10	10000.	10035.	34.7	.347	.03288	.000	1
CalStd13=10	100000.	106110.	6110.	6.11	.34760	.004	1
CalStd14=50	500000.	491360.	-8640.	-1.73	1.6096	.008	1
CalStd9=100	1000.0	1027.7	27.7	2.77	.00337	.000	1
CalibStd15=	1000000.	1014100.	14100.	1.41	3.3220	.009	1

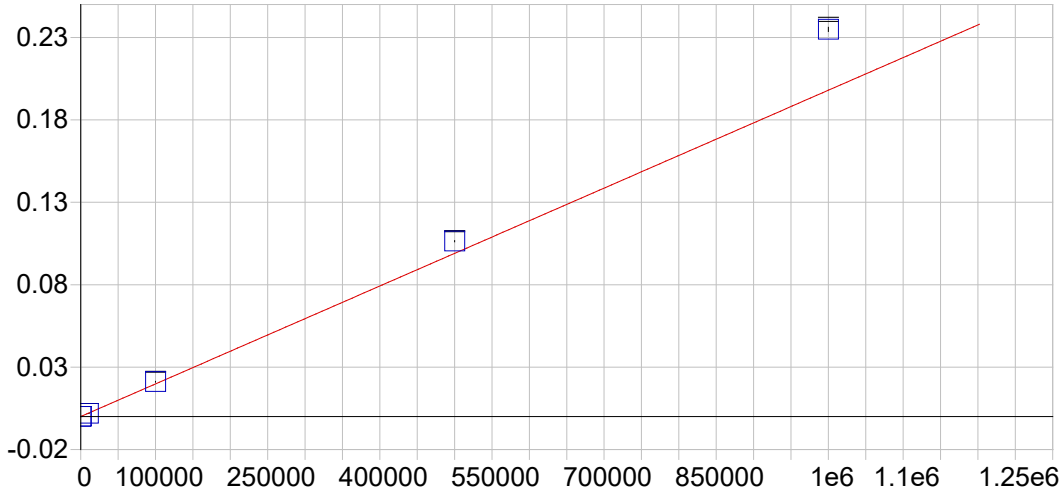


Mg 202.582 {466}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.994215	Status:	OK.
Std Error of Est:	0.000025		
Predicted MDL:	2.370910		
Predicted MQL:	7.903032		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-40.048	-40.0	.000	-.00000	.000	1
CalStd13=10	100000.	88963.	-11000.	-11.0	.01564	.000	1
CalStd10=10	10000.	10921.	921.	9.21	.00193	.000	1
CalStd14=50	500000.	410170.	-89800.	-18.0	.07209	.001	1
CalStd9=100	1000.0	1136.6	137.	13.7	.00021	.000	1
CalibStd15=	1000000.	780980.	-219000.	-21.9	.13726	.001	1

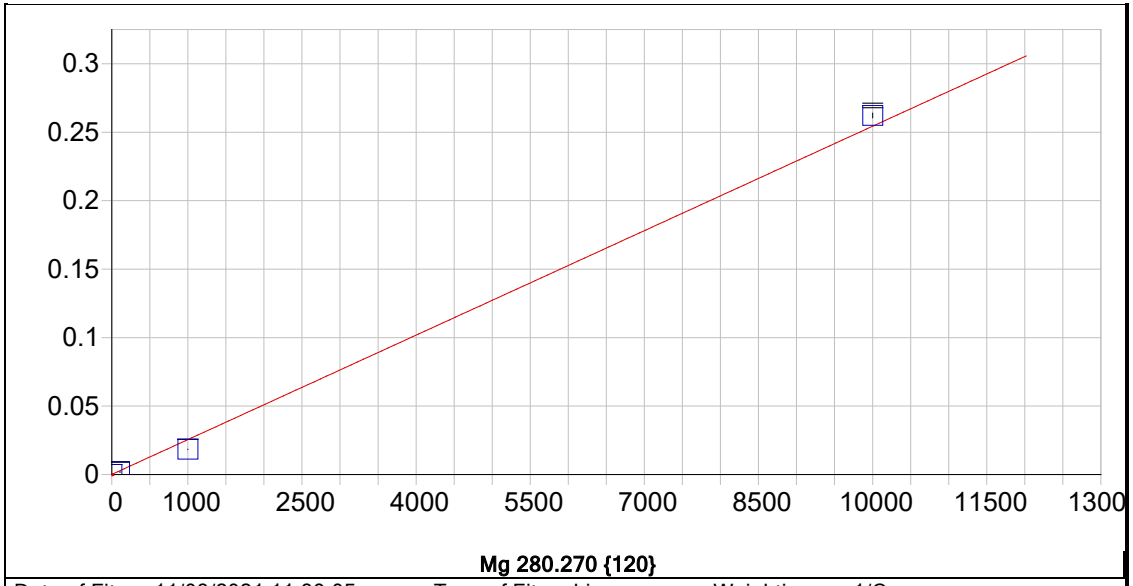


Mg 279.079 {121}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999904	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	92.936000		
Predicted MQL:	309.786666		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.08969	-.090	.000	.00002	.000	1
CalStd13=10	100000.	106680.	6680.	6.68	.02114	.000	1
CalStd10=10	10000.	9667.4	-333.	-3.33	.00193	.000	1
CalStd14=50	500000.	537470.	37500.	7.49	.10643	.000	1
CalStd9=100	1000.0	1089.3	89.3	8.93	.00023	.000	1
CalibStd15=	1000000.	1186400.	186000.	18.6	.23490	.001	1

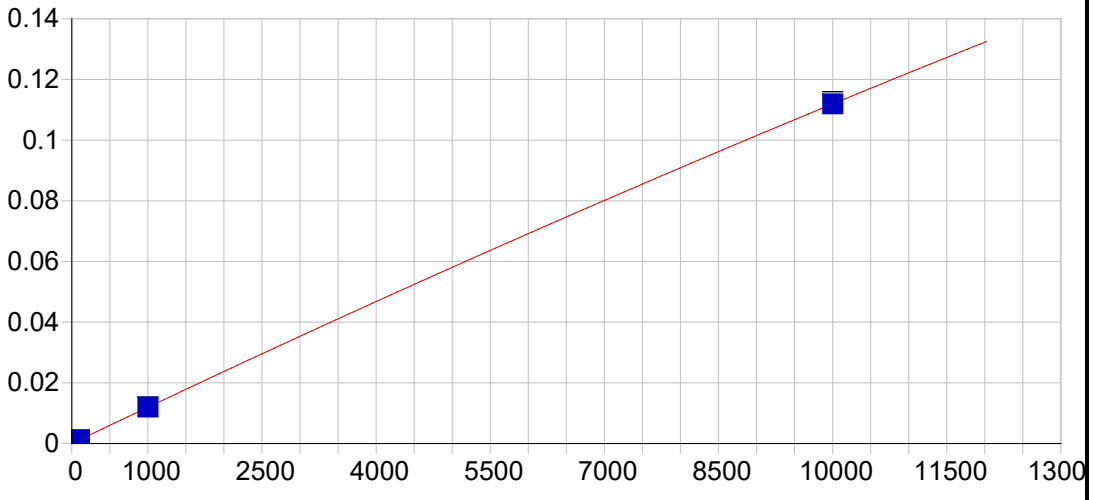


Mg 280.270 {120}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000087	Re-Slope:	1.000000
A1 (Gain):	0.000025	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.995706	Status:	OK.
Std Error of Est:	0.000111		
Predicted MDL:	0.034938		
Predicted MQL:	0.116461		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.05403	.054	.000	.00009	.000	1
CalStd9=100	1000.0	720.95	-279.	-27.9	.01842	.000	1
CalStd10=10	10000.	10308.	308.	3.08	.26222	.002	1
CalStd8=100	100.00	70.790	-29.2	-29.2	.00189	.000	1

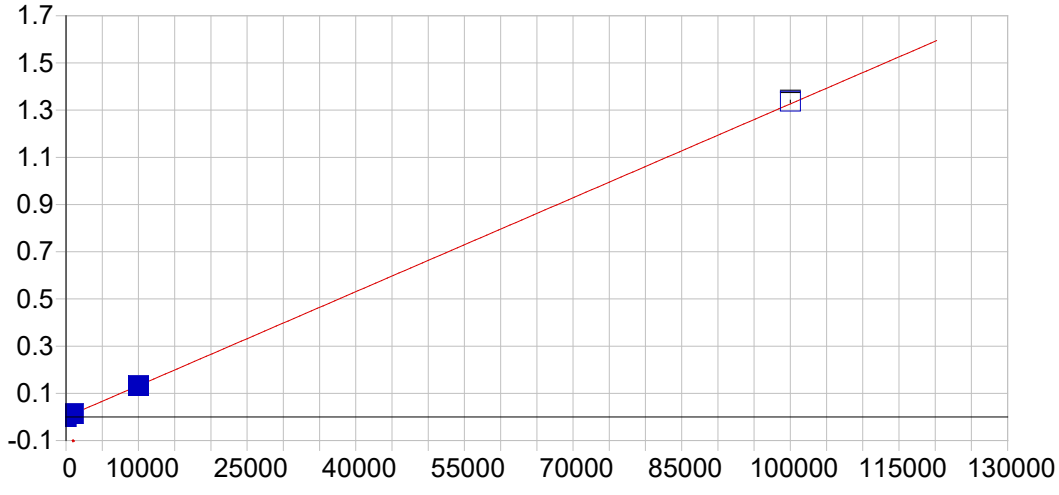


Mn 257.610 {131}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.074644		
Predicted MQL:	0.248813		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00036	.000	.000	.00001	.000	1
CalStd5=10	10.000	9.6940	-.306	-3.06	.00013	.000	1
CalStd7=50	50.000	51.302	1.30	2.60	.00063	.000	1
CalStd6=20	20.000	20.717	.717	3.58	.00026	.000	1
CalStd8=100	100.00	97.931	-2.07	-2.07	.00119	.000	1
CalStd4=5	5.0000	4.5834	-.417	-8.33	.00006	.000	1
CalStd9=100	1000.0	1000.9	.854	.085	.01197	.000	1
CalStd10=10	10000.	9999.9	-.083	-.001	.11192	.001	1

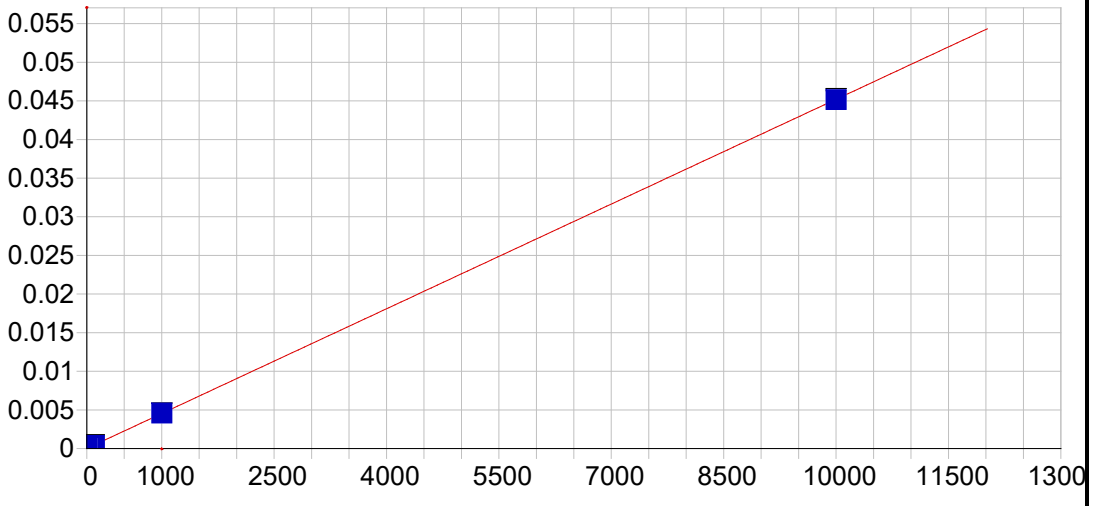


Mn 259.373 {130}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000016	Re-Slope:	1.000000
A1 (Gain):	0.000013	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.000135		
Predicted MDL:	2.449452		
Predicted MQL:	8.164841		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.44457	-.445	.000	.00001	.000	1
CalStd10=10	10000.	9965.9	-34.1	-.341	.13232	.000	1
CalStd9=100	1000.0	1021.0	21.0	2.10	.01357	.000	1
CalStd12=10	100000.	100800.	803.	.803	1.3372	.005	1

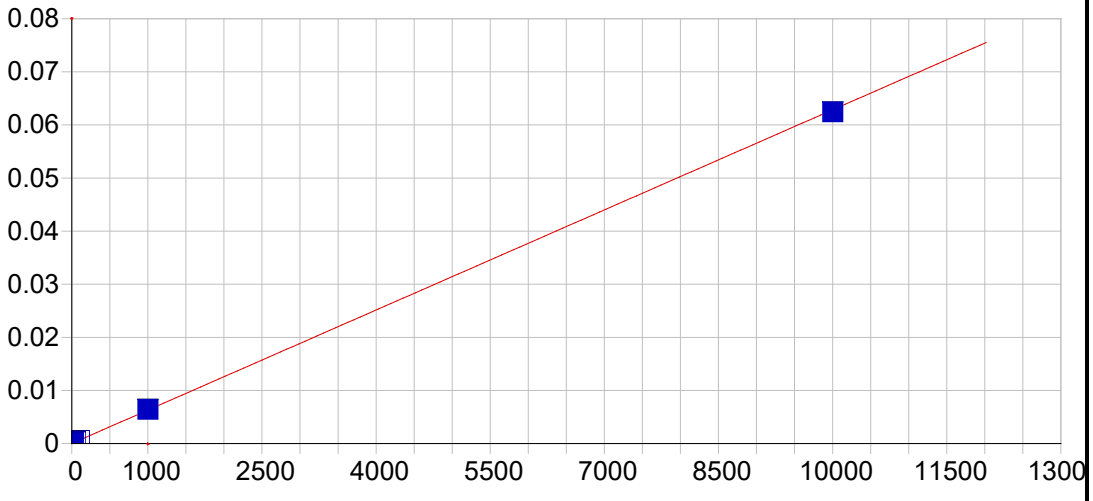


Mo 202.030 {466}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999987	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.876787		
Predicted MQL:	2.922624		

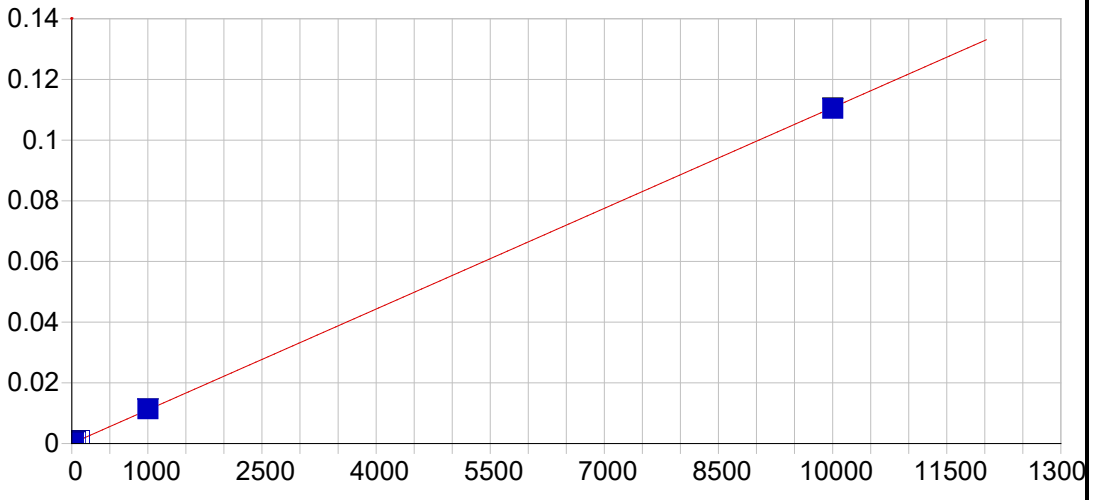
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00012	.000	.000	.00001	.000	1
CalStd7=50	50.000	50.520	.520	1.04	.00024	.000	1
CalStd6=20	20.000	21.330	1.33	6.65	.00011	.000	1
CalStd5=10	10.000	9.8482	-.152	-1.52	.00006	.000	1
CalStd8=100	100.00	99.308	-.692	-.692	.00046	.000	1
CalStd4=5	5.0000	4.5547	-.445	-8.91	.00003	.000	1
CalStd9=100	1000.0	1011.4	11.4	1.14	.00459	.000	1
CalStd10=10	10000.	9988.0	-12.0	-.120	.04518	.000	1



Mo 204.598 {464}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000012		Re-Slope:	1.000000	
A1 (Gain):	0.000006		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999930		Status:	OK.	
Std Error of Est:	0.000020				
Predicted MDL:	0.640267				
Predicted MQL:	2.134222				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.66472	.665	.000	.00002	.000	1
CalStd7=50	50.000	50.844	.844	1.69	.00033	.000	1
CalStd6=20	20.000	20.754	.754	3.77	.00014	.000	1
CalStd5=10	10.000	9.4763	-.524	-5.24	.00007	.000	1
CalStd8=100	100.00	97.796	-2.20	-2.20	.00063	.000	1
CalStd4=5	5.0000	3.9215	-1.08	-21.6	.00004	.000	1
CalStd9=100	1000.0	1019.7	19.7	1.97	.00642	.000	1
CalStd10=10	10000.	9937.6	-62.4	-.624	.06246	.000	1

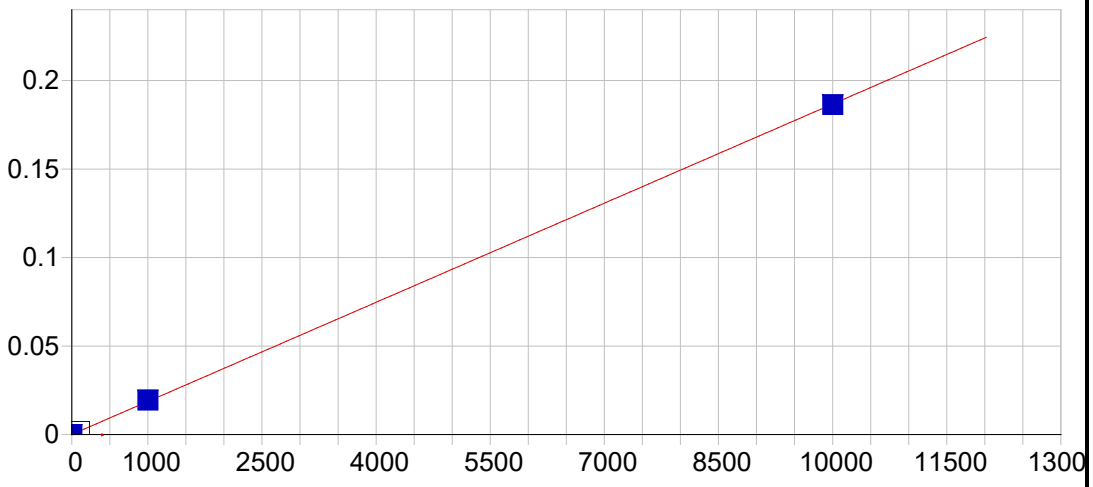


Mo 202.030 {467}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000031	Re-Slope:	1.000000
A1 (Gain):	0.000011	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.329726		
Predicted MQL:	1.099087		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00046	.000	.000	.00003	.000	1
CalStd7=50	50.000	50.867	.867	1.73	.00059	.000	1
CalStd6=20	20.000	21.106	1.11	5.53	.00026	.000	1
CalStd5=10	10.000	9.3925	-.607	-6.07	.00013	.000	1
CalStd8=100	100.00	98.714	-1.29	-1.29	.00112	.000	1
CalStd4=5	5.0000	4.4202	-.580	-11.6	.00008	.000	1
CalStd9=100	1000.0	1027.3	27.3	2.73	.01140	.000	1
CalStd10=10	10000.	9973.2	-26.8	-.268	.11043	.000	1

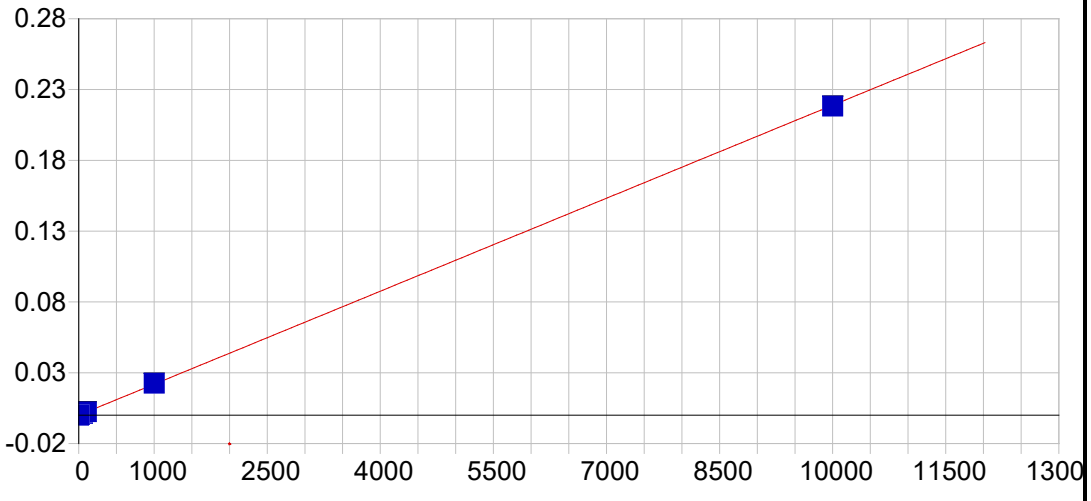


Ni 221.647 {452}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000036	Re-Slope:	1.000000
A1 (Gain):	0.000019	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999962	Status:	OK.
Std Error of Est:	0.000119		
Predicted MDL:	0.369051		
Predicted MQL:	1.230168		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.3091	-1.31	.000	.00001	.000	1
CalStd10=10	10000.	9977.6	-22.4	-.224	.18631	.000	1
CalStd8=100	100.00	100.54	.543	.543	.00191	.000	1
CalStd9=100	1000.0	1032.7	32.7	3.27	.01932	.000	1

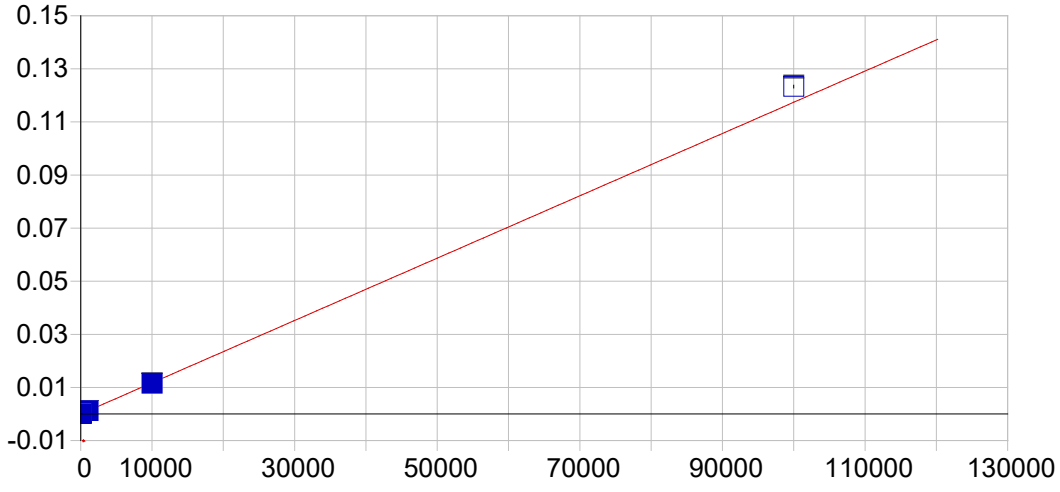


Ni 231.604 {445}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000022	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999941	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.338916		
Predicted MQL:	1.129719		

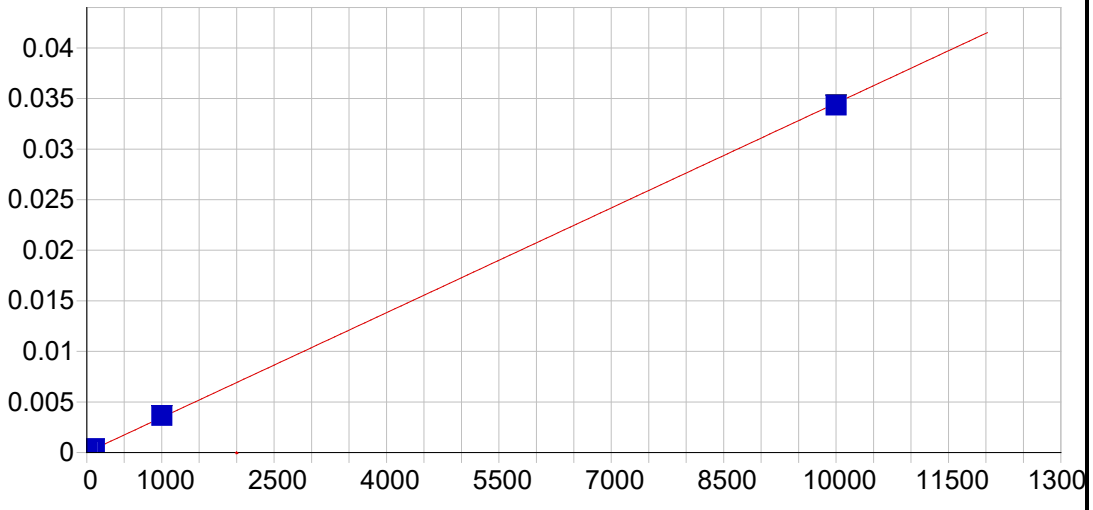
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00039	.000	.000	-.00000	.000	1
CalStd7=50	50.000	53.033	3.03	6.07	.00116	.000	1
CalStd5=10	10.000	9.9017	-.098	-.983	.00022	.000	1
CalStd8=100	100.00	101.65	1.65	1.65	.00222	.000	1
CalStd4=5	5.0000	4.6757	-.324	-6.49	.00010	.000	1
CalStd9=100	1000.0	1028.5	28.5	2.85	.02249	.000	1
CalStd3=1	1.0000	.58049	-.420	-42.0	.00001	.000	1
CalStd10=10	10000.	9967.8	-32.2	-.322	.21838	.000	1



Pb 216.999 {455}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Var
A0 (Offset):	0.000007		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999636		Status:	OK.	
Std Error of Est:	0.000028				
Predicted MDL:	4.612684				
Predicted MQL:	15.375612				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.8157	-5.82	.000	.00000	.000	1
CalStd9=100	1000.0	1035.9	35.9	3.59	.00123	.000	1
CalStd10=10	10000.	9817.3	-183.	-1.83	.01157	.000	1
CalStd8=100	100.00	95.631	-4.37	-4.37	.00012	.000	1
CalStd5=10	10.000	5.1587	-4.84	-48.4	.00001	.000	1
CalStd12=10	100000.	105050.	5050.	5.05	.12334	.001	1

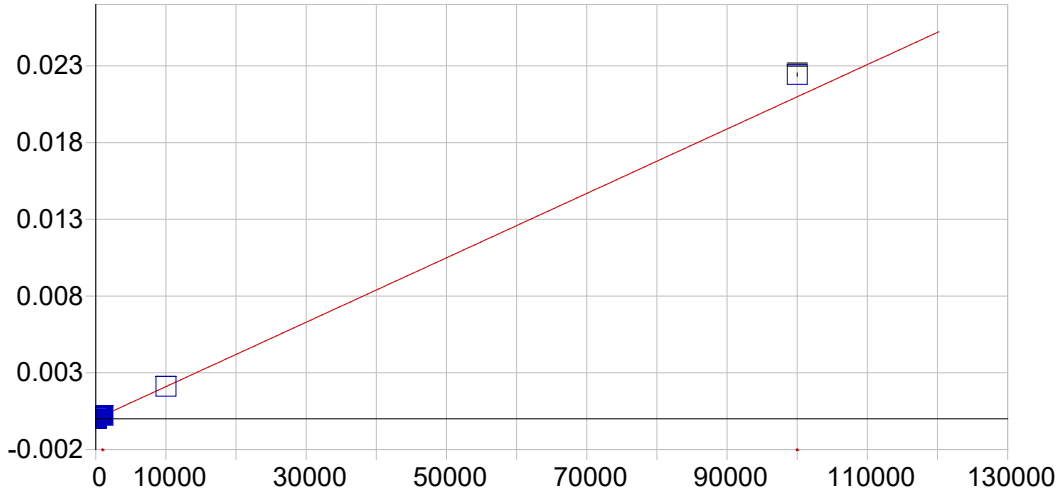


Pb 220.353 {453}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000016	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999832	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.943796		
Predicted MQL:	6.479319		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00205	-.002	.000	.00002	.000	1
CalStd5=10	10.000	10.388	.388	3.88	.00005	.000	1
CalStd8=100	100.00	103.43	3.43	3.43	.00037	.000	1
CalStd4=5	5.0000	6.4486	1.45	29.0	.00004	.000	1
CalStd9=100	1000.0	1053.3	53.3	5.33	.00365	.000	1
CalStd10=10	10000.	9941.4	-58.6	-.586	.03434	.000	1

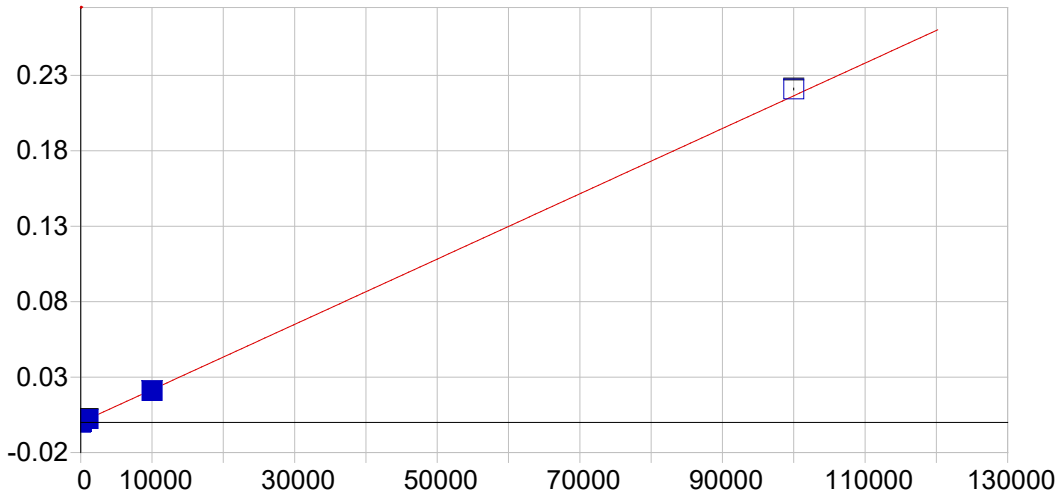


Pb 216.999 {456}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999960	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	13.164267		
Predicted MQL:	43.880891		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-9.1861	-9.19	.000	-.00000	.000	1
CalStd9=100	1000.0	1050.8	50.8	5.08	.00022	.000	1
CalStd10=10	10000.	10052.	52.1	.521	.00211	.000	1
CalStd8=100	100.00	84.743	-15.3	-15.3	.00002	.000	1
CalStd5=10	10.000	-.59299	-10.6	-106.	.00000	.000	1
CalStd12=10	100000.	106880.	6880.	6.88	.02243	.000	1

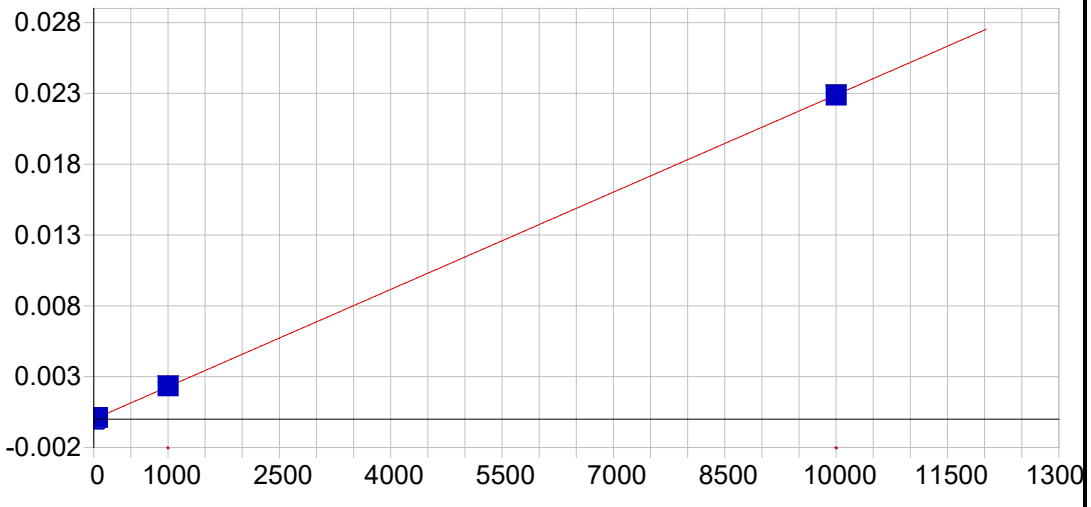


Pb 220.353 {153}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000016	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999653	Status:	OK.
Std Error of Est:	0.000109		
Predicted MDL:	4.280201		
Predicted MQL:	14.267337		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-8.0349	-8.03	.000	-.00000	.000	1
CalStd9=100	1000.0	1022.5	22.5	2.25	.00223	.000	1
CalStd10=10	10000.	9700.2	-300.	-3.00	.02101	.000	1
CalStd8=100	100.00	96.427	-3.57	-3.57	.00022	.000	1
CalStd12=10	100000.	102060.	2060.	2.06	.22093	.001	1

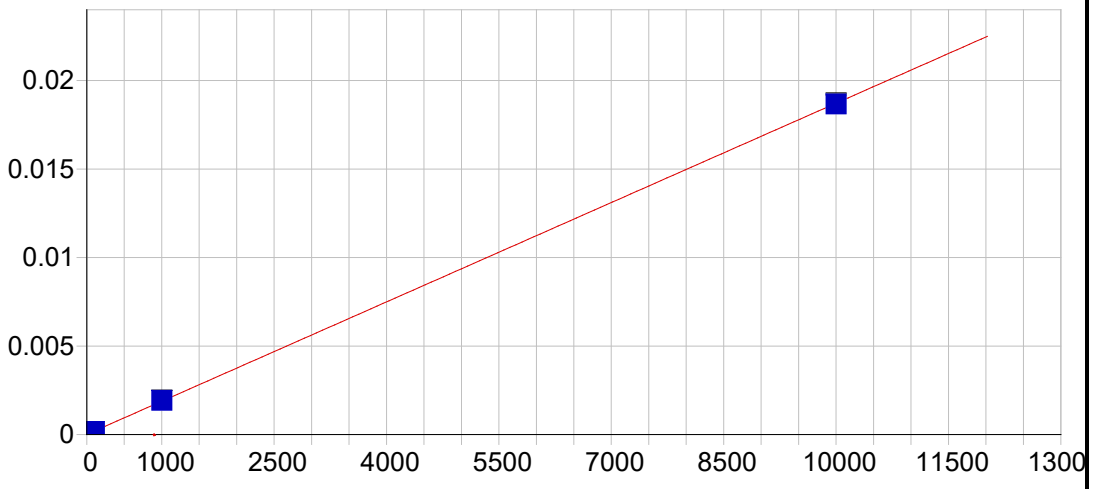


Sb 206.833 {463}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	1.922867		
Predicted MQL:	6.409557		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.5091	-3.51	.000	-.00000	.000	1
CalStd9=100	1000.0	1022.7	22.7	2.27	.00236	.000	1
CalStd5=10	10.000	7.9879	-2.01	-20.1	.00002	.000	1
CalStd7=50	50.000	51.033	1.03	2.07	.00012	.000	1
CalStd10=10	10000.	9987.0	-13.0	-.130	.02287	.000	1

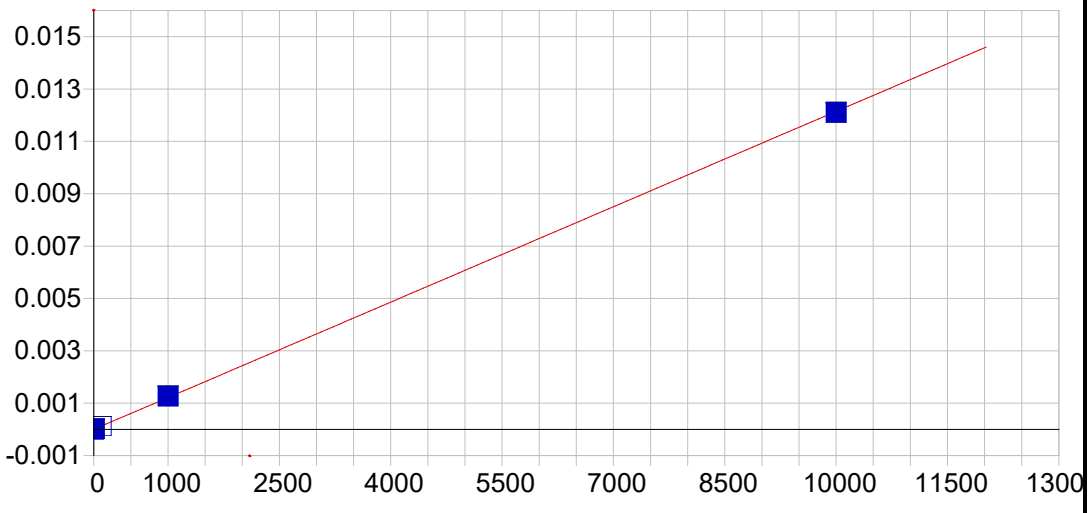


Sb 217.581 {455}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999962	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.460926		
Predicted MQL:	8.203085		

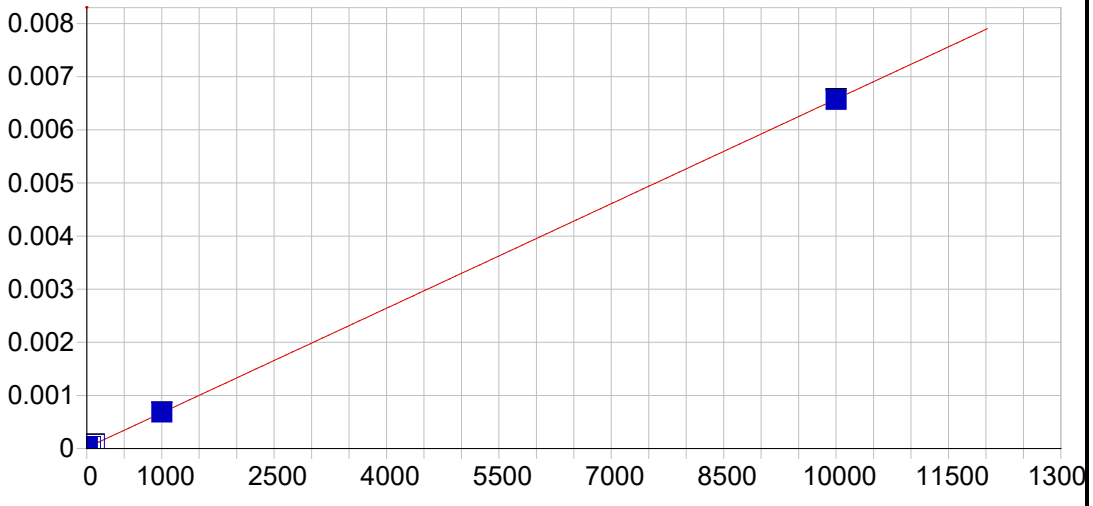
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00039	.000	.000	.00001	.000	1
CalStd9=100	1000.0	1026.1	26.1	2.61	.00193	.000	1
CalStd6=20	20.000	20.361	.361	1.80	.00005	.000	1
CalStd5=10	10.000	10.058	.058	.575	.00003	.000	1
CalStd8=100	100.00	99.913	-.087	-.087	.00020	.000	1
CalStd4=5	5.0000	4.3732	-.627	-12.5	.00002	.000	1
CalStd10=10	10000.	9974.2	-25.8	-.258	.01867	.000	1



Se 196.090 {472}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999917		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	2.838775				
Predicted MQL:	9.462583				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00167	-.002	.000	.00000	.000	1
CalStd9=100	1000.0	1039.0	39.0	3.90	.00126	.000	1
CalStd5=10	10.000	11.187	1.19	11.9	.00001	.000	1
CalStd8=100	100.00	101.38	1.38	1.38	.00012	.000	1
CalStd10=10	10000.	9958.4	-41.6	-.416	.01210	.000	1

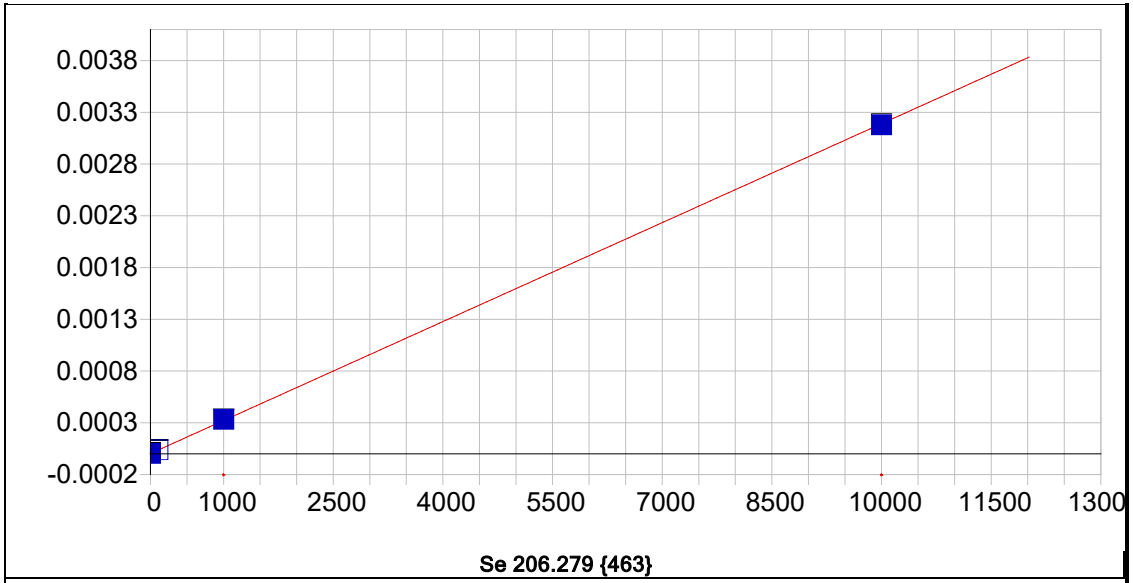


Se 203.985 {465}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000017	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	8.531951		
Predicted MQL:	28.439836		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.05515	.055	.000	.00002	.000	1
CalStd7=50	50.000	35.800	-14.2	-28.4	.00004	.000	1
CalStd9=100	1000.0	1015.0	15.0	1.50	.00068	.000	1
CalStd5=10	10.000	.91471	-9.09	-90.9	.00002	.000	1
CalStd8=100	100.00	102.01	2.01	2.01	.00008	.000	1
CalStd10=10	10000.	9989.1	-10.9	-.109	.00657	.000	1

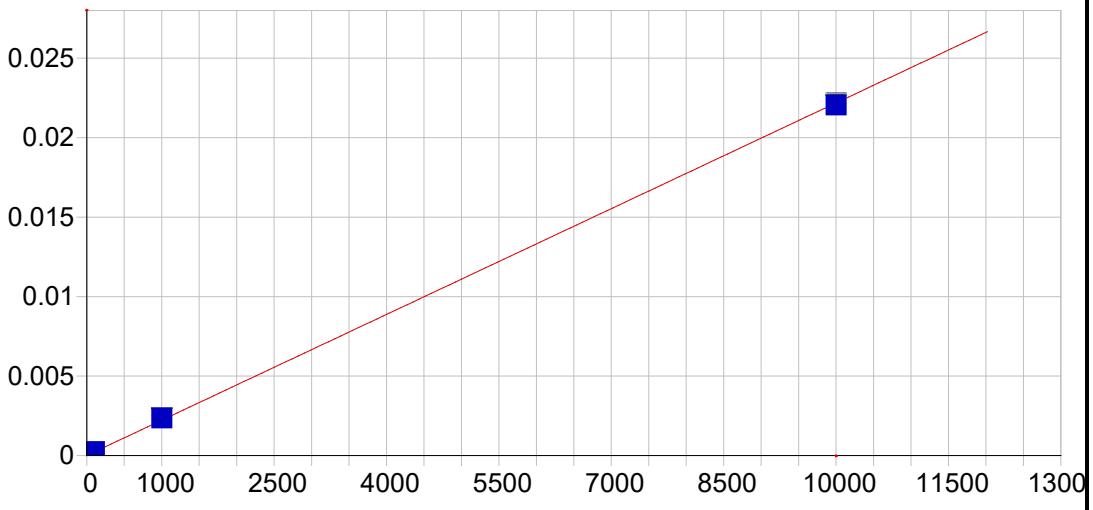


Se 206.279 {463}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999934	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	15.447071		
Predicted MQL:	51.490235		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00776	-.008	.000	.00000	.000	1
CalStd9=100	1000.0	1033.0	33.0	3.30	.00033	.000	1
CalStd10=10	10000.	9962.2	-37.8	-.378	.00318	.000	1
CalStd8=100	100.00	104.84	4.84	4.84	.00004	.000	1

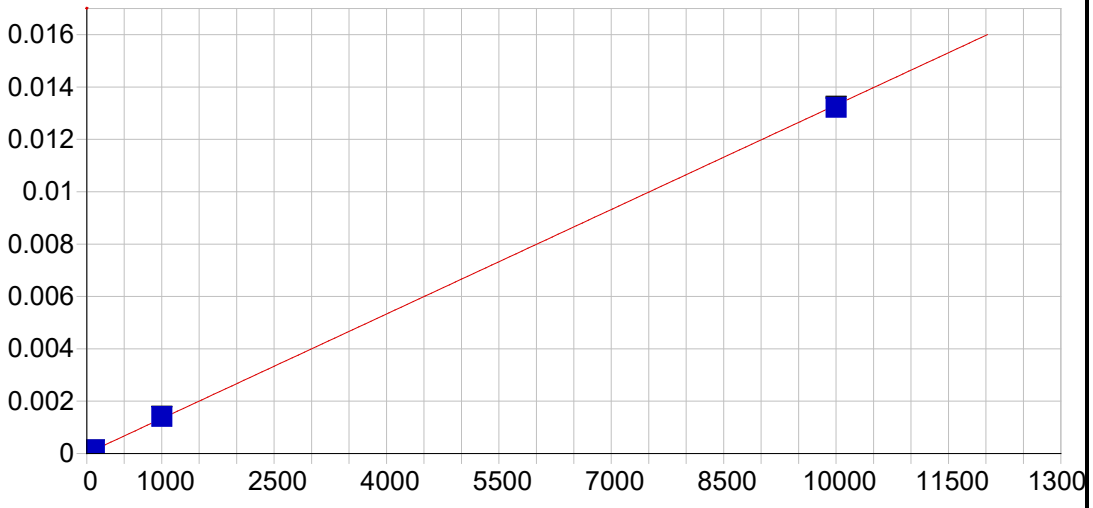


Tl 190.856 {476}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999813	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.934055		
Predicted MQL:	6.446850		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00016	-.000	.000	.00001	.000	1
CalStd9=100	1000.0	1058.9	58.9	5.89	.00236	.000	1
CalStd8=100	100.00	104.93	4.93	4.93	.00024	.000	1
CalStd5=10	10.000	9.1409	-.859	-8.59	.00003	.000	1
CalStd10=10	10000.	9937.0	-63.0	-.630	.02213	.000	1

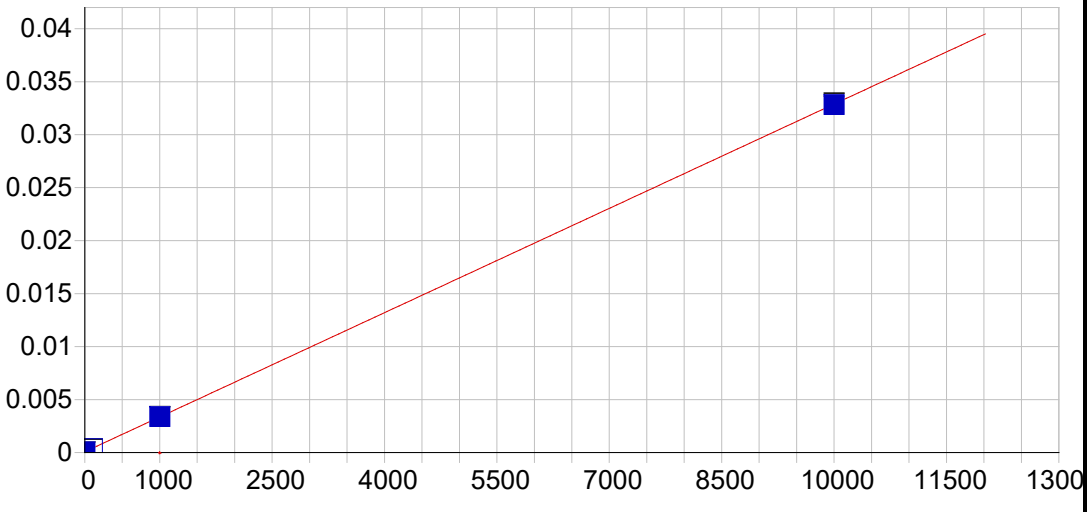


Tl 190.856 {477}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999801	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	2.370298		
Predicted MQL:	7.900994		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.2409	-3.24	.000	.00000	.000	1
CalStd9=100	1000.0	1053.5	53.5	5.35	.00141	.000	1
CalStd8=100	100.00	100.91	.911	.911	.00014	.000	1
CalStd5=10	10.000	7.8946	-2.11	-21.1	.00002	.000	1
CalStd10=10	10000.	9930.0	-70.0	-.700	.01322	.000	1

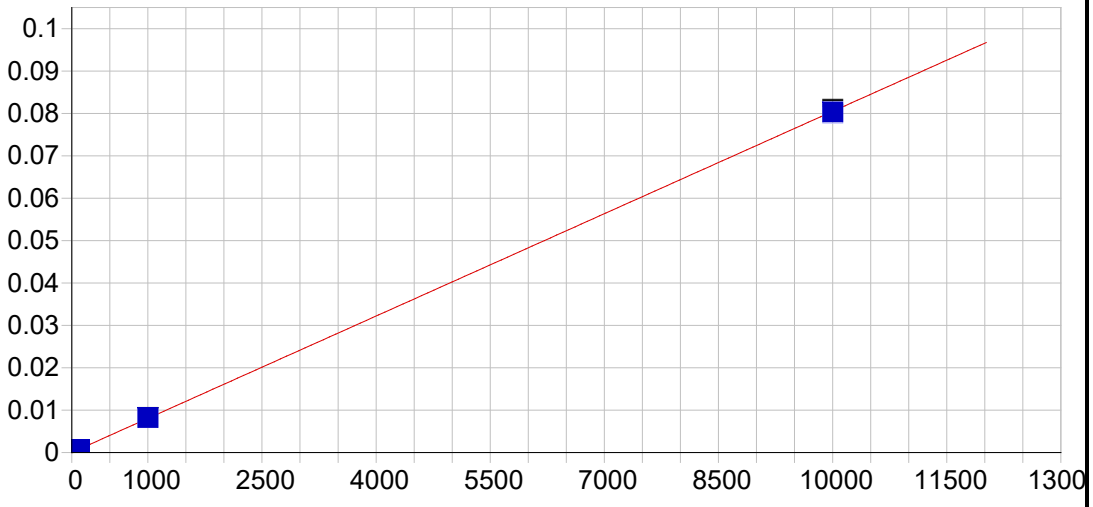


V 290.882 {116}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000074	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999987	Status:	OK.
Std Error of Est:	0.000034		
Predicted MDL:	13.408660		
Predicted MQL:	44.695533		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.7431	-5.74	.000	.00005	.000	1
CalStd9=100	1000.0	1006.9	6.86	.686	.00338	.000	1
CalStd10=10	10000.	9983.1	-16.9	-.169	.03284	.000	1
CalStd8=100	100.00	89.462	-10.5	-10.5	.00037	.000	1

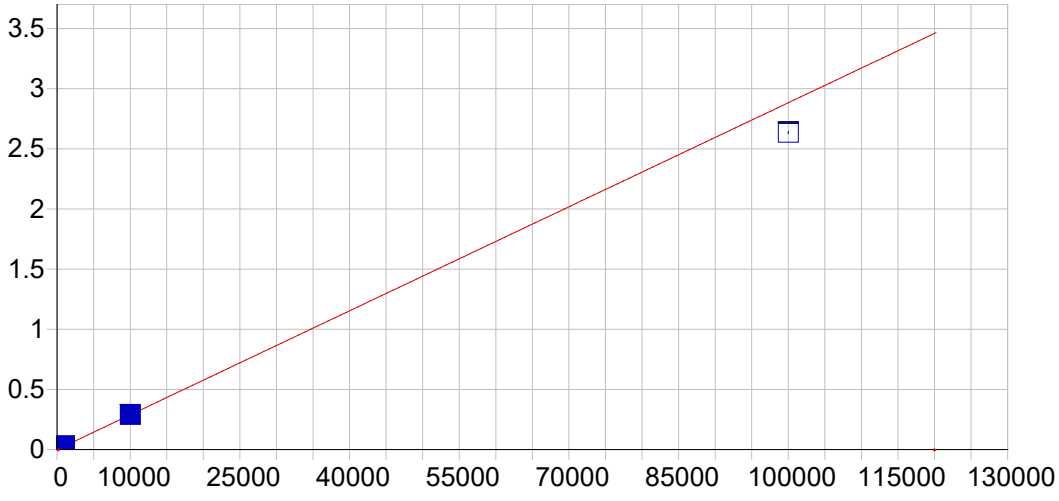


V 292.402 {115}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.432034		
Predicted MQL:	1.440112		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00071	-.001	.000	.00001	.000	1
CalStd7=50	50.000	51.587	1.59	3.17	.00043	.000	1
CalStd9=100	1000.0	1020.4	20.4	2.04	.00819	.000	1
CalStd6=20	20.000	21.086	1.09	5.43	.00018	.000	1
CalStd5=10	10.000	9.8232	-.177	-1.77	.00009	.000	1
CalStd8=100	100.00	98.411	-1.59	-1.59	.00080	.000	1
CalStd10=10	10000.	9978.7	-21.3	-.213	.08001	.001	1

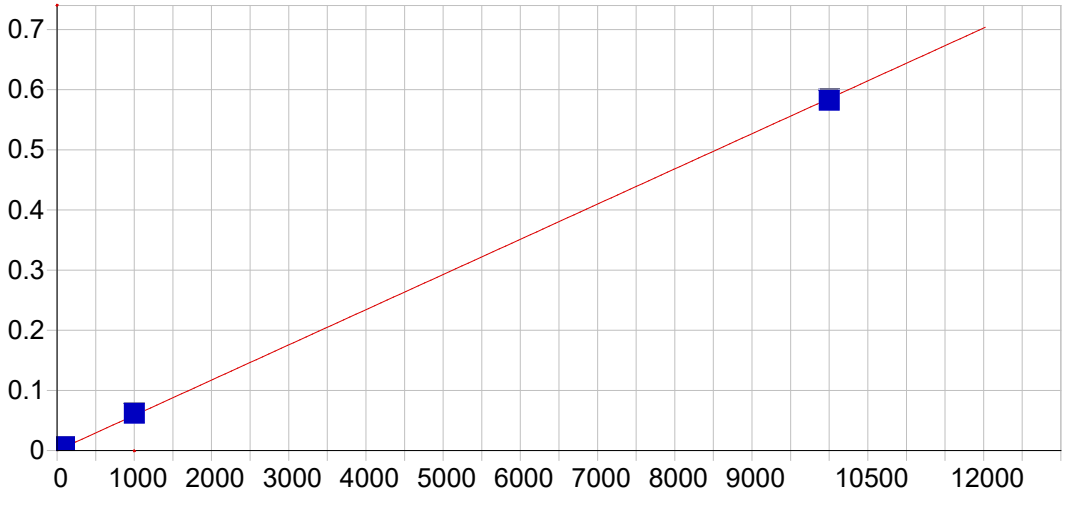


Zn 206.200 {463}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000044	Re-Slope:	1.000000
A1 (Gain):	0.000029	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998886	Status:	OK.
Std Error of Est:	0.000130		
Predicted MDL:	0.157909		
Predicted MQL:	0.526362		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	10077.	77.0	.770	.29059	.001	1
Blank	.00000	-1.0594	-1.06	.000	.00001	.000	1
CalStd9=100	1000.0	1042.6	42.6	4.26	.03010	.000	1
CalStd12=10	100000.	91429.	-8570.	-8.57	2.6361	.007	1
CalStd5=10	10.000	9.7699	-.230	-2.30	.00033	.000	1
CalStd8=100	100.00	102.46	2.46	2.46	.00300	.000	1

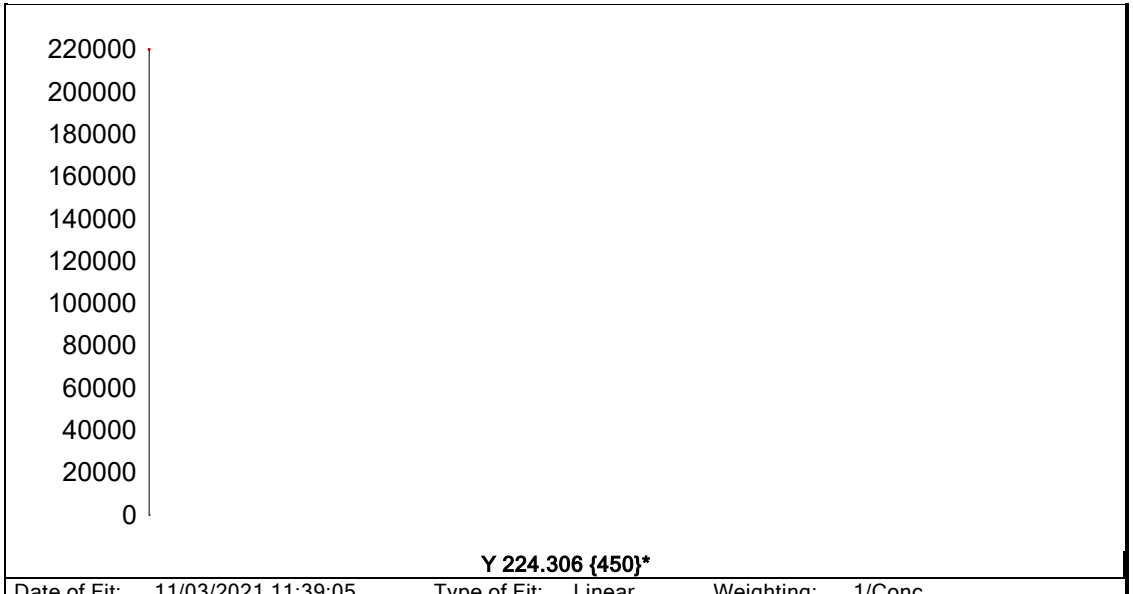


Zn 213.856 {457}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000037	Re-Slope:	1.000000
A1 (Gain):	0.000059	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999846	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.093305		
Predicted MQL:	0.311018		

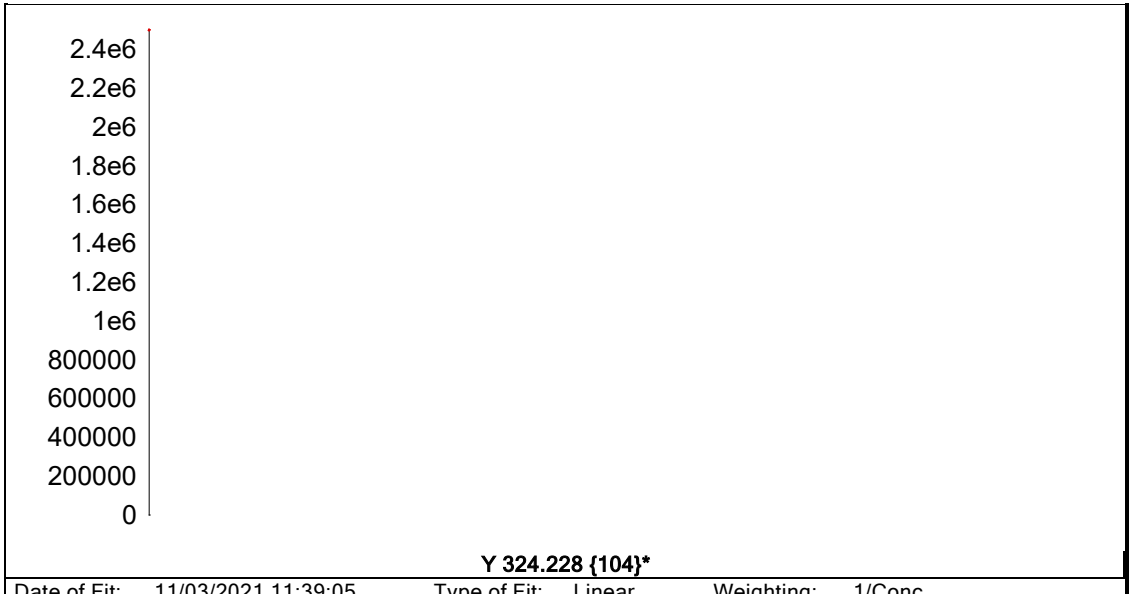
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00202	-.002	.000	.00004	.000	1
CalStd9=100	1000.0	1052.7	52.7	5.27	.06192	.000	1
CalStd5=10	10.000	11.096	1.10	11.0	.00069	.000	1
CalStd8=100	100.00	104.59	4.59	4.59	.00618	.000	1
CalStd10=10	10000.	9941.6	-58.4	-.584	.58460	.000	1



Y 224.306 {450}*

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

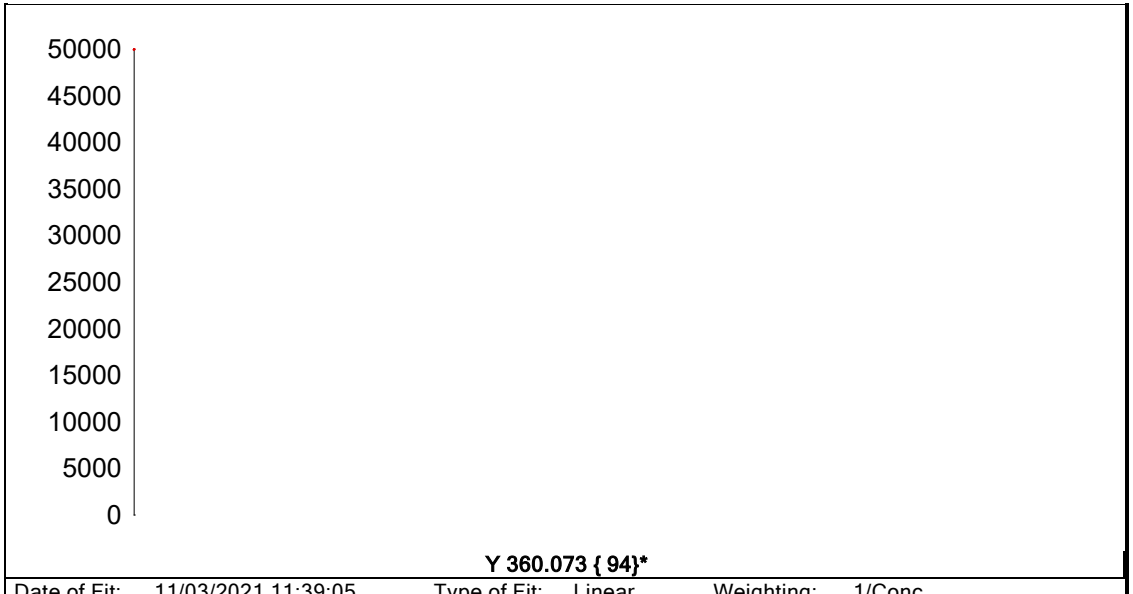
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	209000.	242.	1



Y 324.228 {104}*

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

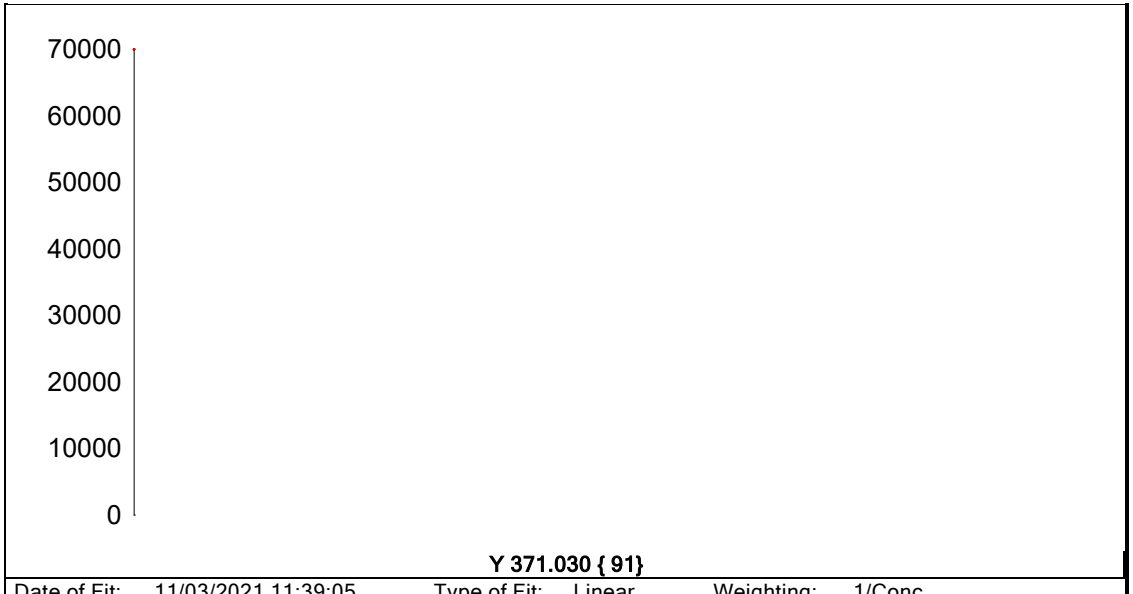
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	2344600.	17900.	1



Y 360.073 { 94}*

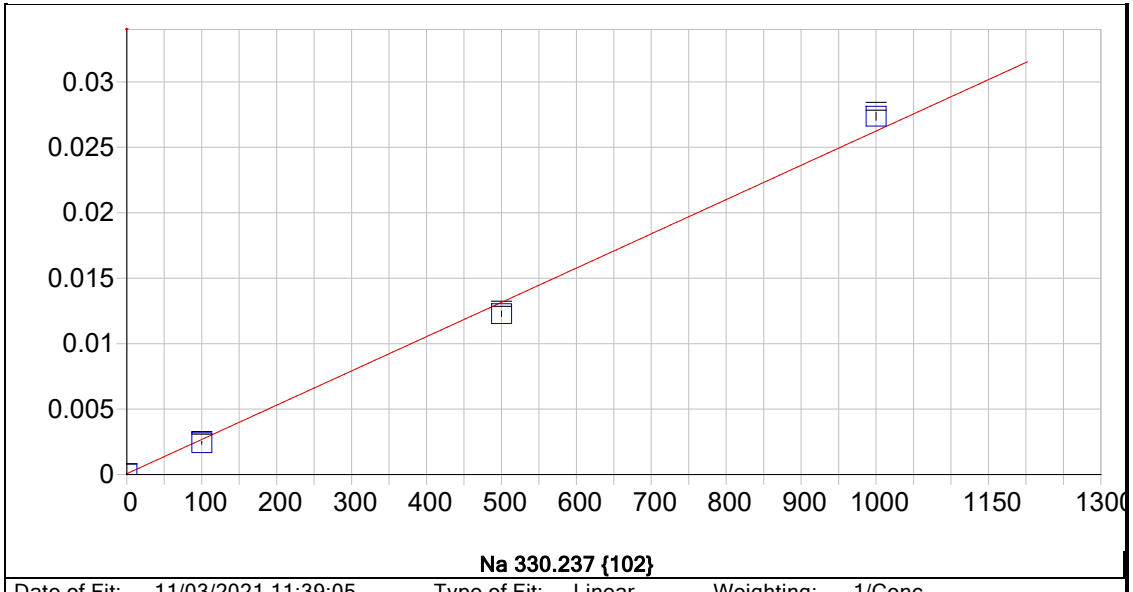
Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	45229.	125.	1



Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	61309.	297.	1

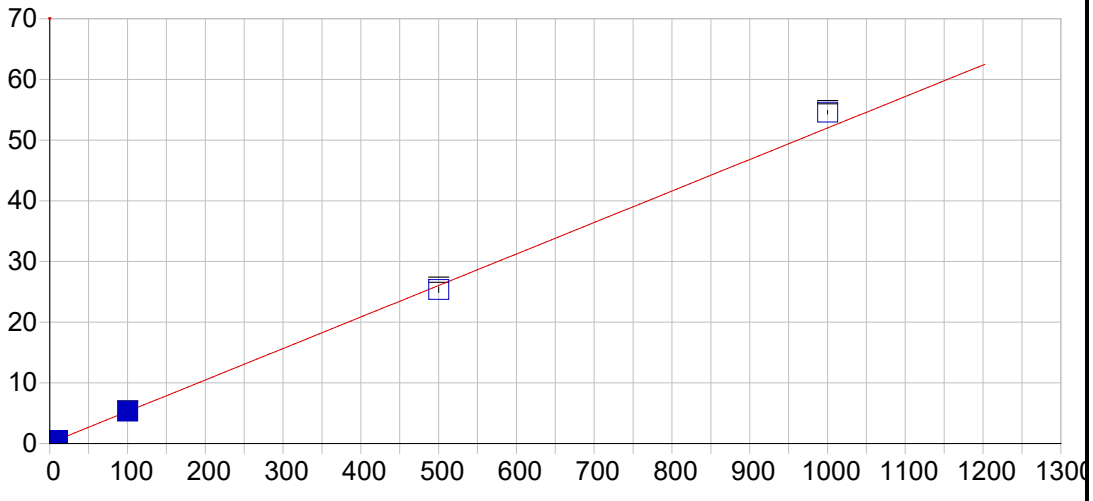


Na 330.237 {102}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000064	Re-Slope:	1.000000
A1 (Gain):	0.000026	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998431	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	2.976937		
Predicted MQL:	9.923123		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01222	.012	.000	.00006	.000	1
CalStd13=10	100.00	90.100	-9.90	-9.90	.00242	.000	1
CalibStd15=	1000.0	1043.0	43.0	4.30	.02737	.000	1
CalStd14=50	500.00	466.86	-33.1	-6.63	.01229	.000	1

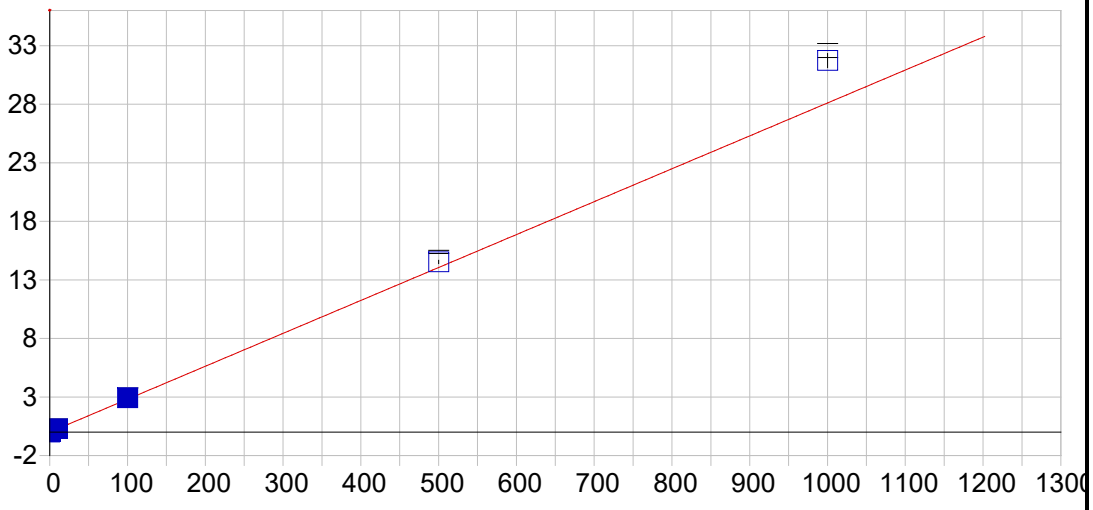


Na 588.995 { 57}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.089975	Re-Slope:	1.000000
A1 (Gain):	0.051904	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998551	Status:	OK.
Std Error of Est:	0.011910		
Predicted MDL:	0.011693		
Predicted MQL:	0.038978		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.03798	.038	.000	.09195	.001	1
CalStd9=100	1.0000	.94136	-.059	-5.86	.13888	.003	1
CalStd10=10	10.000	9.3876	-.612	-6.12	.57767	.003	1
CalStd13=10	100.00	101.05	1.05	1.05	5.3396	.075	1
CalibStd15=	1000.0	1050.2	50.2	5.02	54.598	.285	1
CalStd14=50	500.00	486.71	-13.3	-2.66	25.353	.438	1

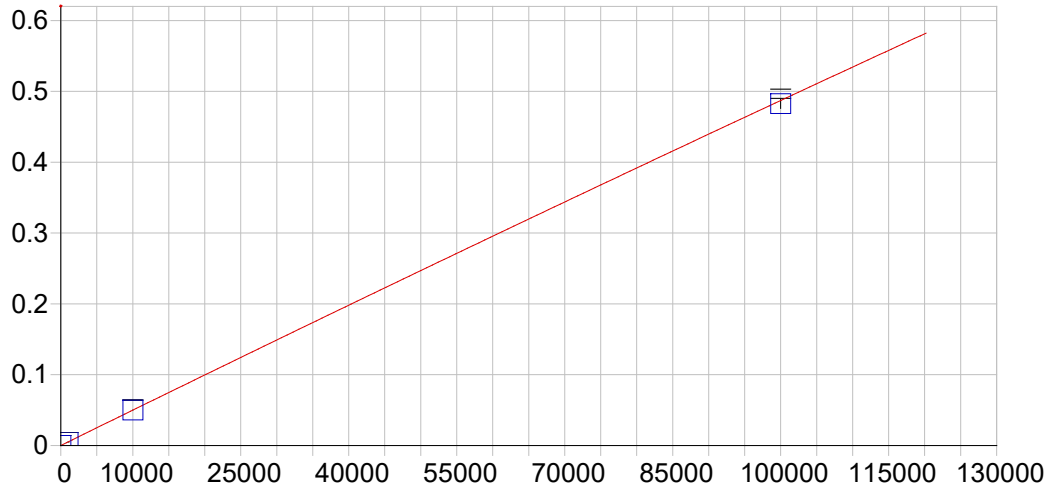


Na 589.592 { 57}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000600	Re-Slope:	1.000000
A1 (Gain):	0.028108	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998733	Status:	OK.
Std Error of Est:	0.002241		
Predicted MDL:	0.012675		
Predicted MQL:	0.042249		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.02617	.026	.000	.00014	.000	1
CalStd9=100	1.0000	.95413	-.046	-4.59	.02623	.000	1
CalStd10=10	10.000	9.6800	-.320	-3.20	.27159	.002	1
CalibStd15=	1000.0	1129.0	129.	12.9	31.733	.600	1
CalStd13=10	100.00	103.91	3.91	3.91	2.9210	.032	1
CalStd14=50	500.00	516.89	16.9	3.38	14.528	.136	1

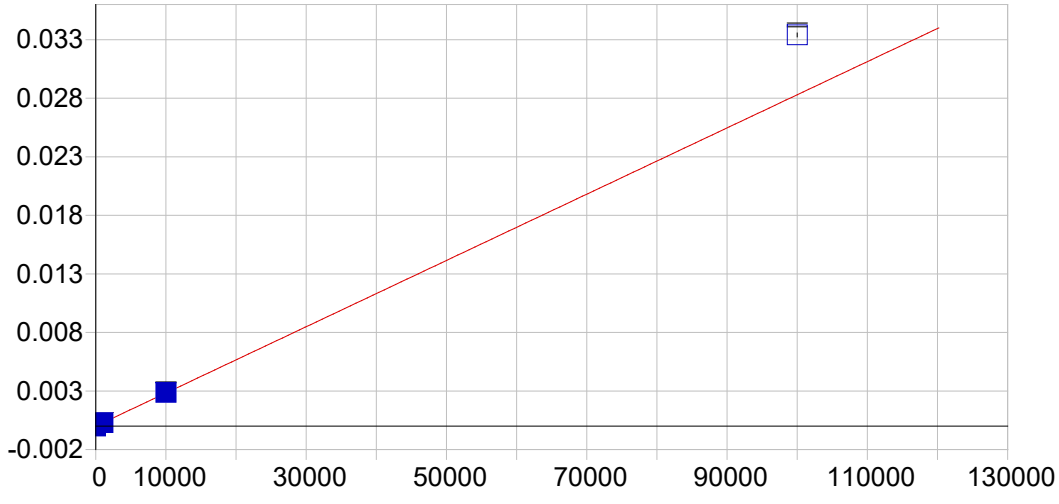


Si 212.412 {458}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000038	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	1.036137		
Predicted MQL:	3.453789		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.8329	1.83	.000	.00005	.000	1
CalStd9=100	1000.0	994.56	-5.44	-.544	.00502	.000	1
CalibStd15=	100000.	99046.	-954.	-.954	.48264	.007	1
CalStd10=10	10000.	10015.	14.6	.146	.05004	.000	1

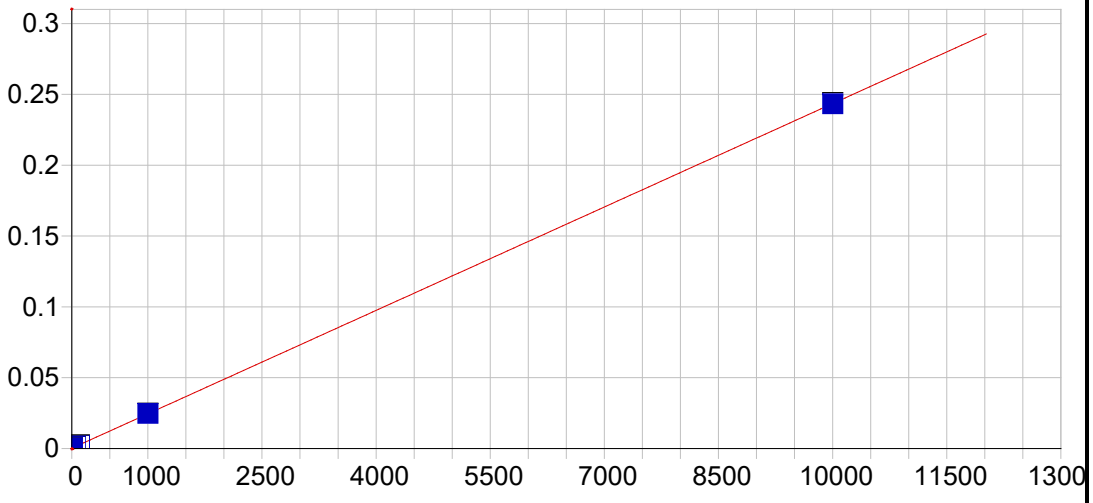


Si 251.611 {134}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	105.347964		
Predicted MQL:	351.159880		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.02588	-.026	.000	-.00000	.000	1
CalStd9=100	1000.0	1030.9	30.9	3.09	.00029	.000	1
CalibStd15=	100000.	118070.	18100.	18.1	.03341	.000	1
CalStd10=10	10000.	10149.	149.	1.49	.00287	.000	1

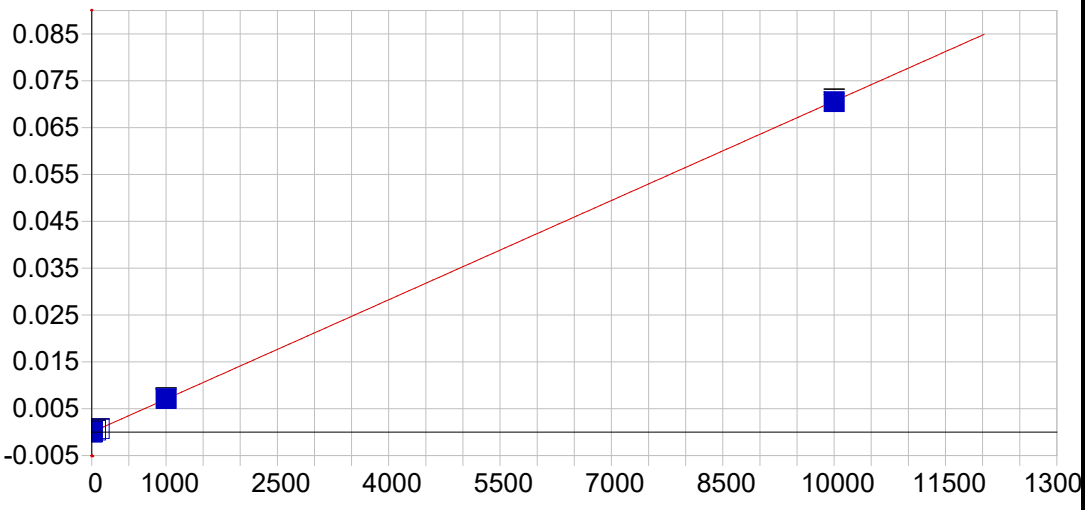


Ti 323.452 {104}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000199	Re-Slope:	1.000000
A1 (Gain):	0.000024	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	3.352369		
Predicted MQL:	11.174563		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00067	-.001	.000	.00020	.000	1
CalStd5=10	10.000	9.8833	-.117	-1.17	.00044	.000	1
CalStd8=100	100.00	95.261	-4.74	-4.74	.00252	.000	1
CalStd9=100	1000.0	1009.7	9.73	.973	.02477	.000	1
CalStd10=10	10000.	9991.3	-8.73	-.087	.24330	.001	1
CalStd7=50	50.000	53.255	3.26	6.51	.00150	.000	1
CalStd4=5	5.0000	5.5990	.599	12.0	.00034	.000	1

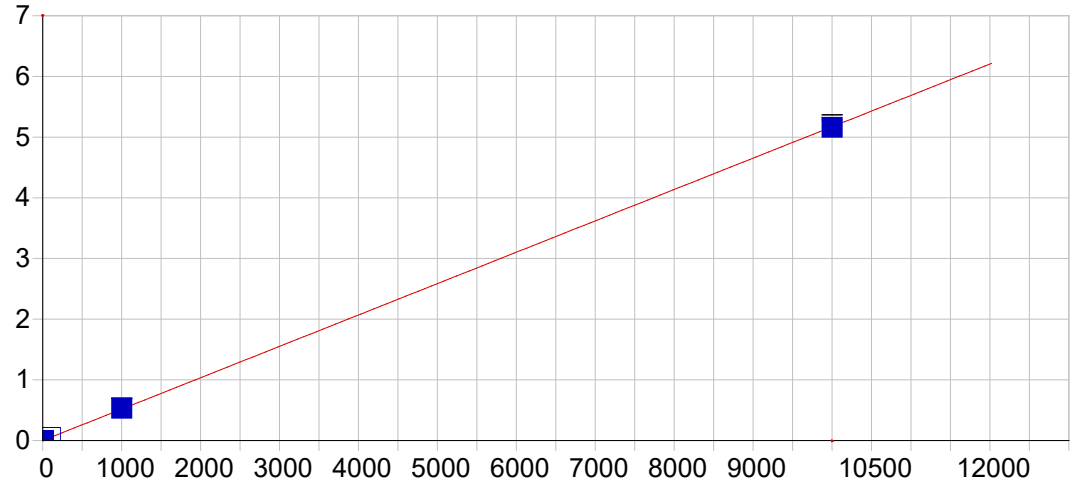


Ti 334.941 {101}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999851	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	8.000151		
Predicted MQL:	26.667170		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00145	.001	.000	-.00001	.000	1
CalStd5=10	10.000	11.589	1.59	15.9	.00007	.000	1
CalStd8=100	100.00	98.324	-1.68	-1.68	.00068	.000	1
CalStd9=100	1000.0	1014.5	14.5	1.45	.00716	.000	1
CalStd10=10	10000.	9981.3	-18.7	-.187	.07051	.001	1
CalStd7=50	50.000	57.258	7.26	14.5	.00039	.000	1
CalStd4=5	5.0000	2.0461	-2.95	-59.1	.00000	.000	1

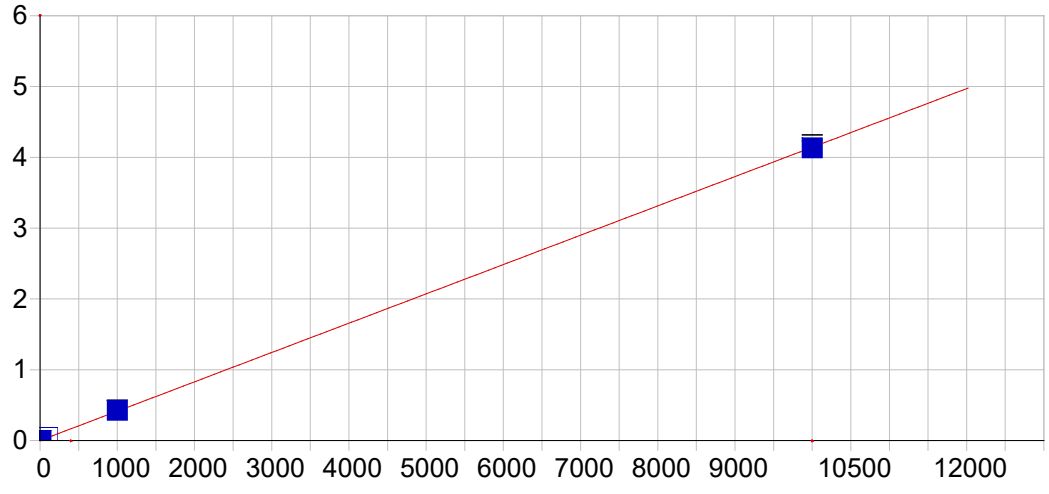


Sr 407.771 { 83}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000780	Re-Slope:	1.000000
A1 (Gain):	0.000517	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999931	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.275216		
Predicted MQL:	0.917388		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00100	.001	.000	.00078	.000	1
CalStd3=1	1.0000	.16537	-.835	-83.5	.00087	.000	1
CalStd4=5	5.0000	4.3770	-.623	-12.5	.00304	.000	1
CalStd5=10	10.000	9.4896	-.510	-5.10	.00569	.000	1
CalStd8=100	100.00	98.843	-1.16	-1.16	.05188	.000	1
CalStd9=100	1000.0	1025.7	25.7	2.57	.53108	.002	1
CalStd10=10	10000.	9977.4	-22.6	-.226	5.1593	.042	1

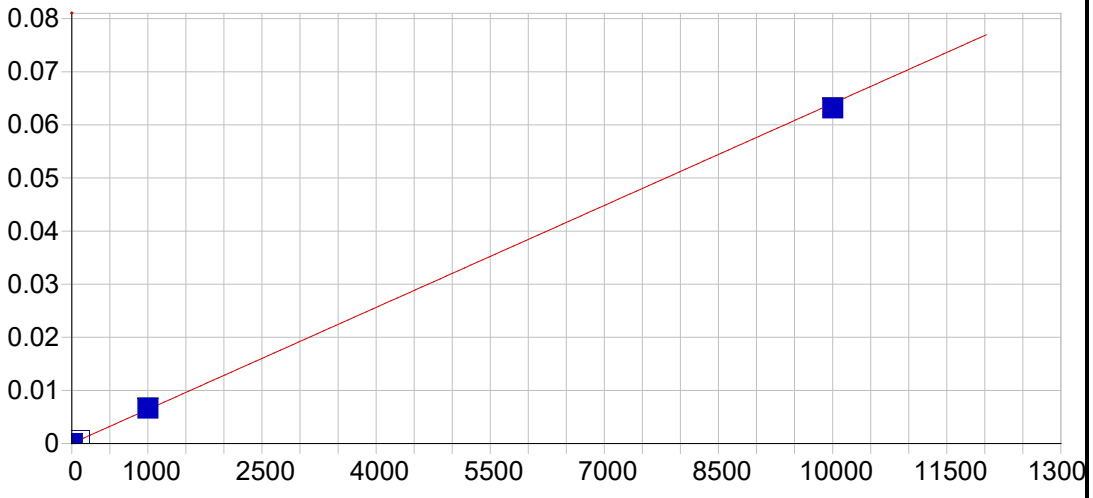


Sr 421.552 { 80}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000805	Re-Slope:	1.000000
A1 (Gain):	0.000414	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999918	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.313173		
Predicted MQL:	1.043910		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00111	.001	.000	.00081	.000	1
CalStd3=1	1.0000	.08795	-.912	-91.2	.00084	.000	1
CalStd4=5	5.0000	4.3099	-.690	-13.8	.00259	.000	1
CalStd5=10	10.000	9.2138	-.786	-7.86	.00462	.000	1
CalStd8=100	100.00	98.980	-1.02	-1.02	.04180	.000	1
CalStd9=100	1000.0	1027.6	27.6	2.76	.42639	.002	1
CalStd10=10	10000.	9975.8	-24.2	-.242	4.1325	.042	1

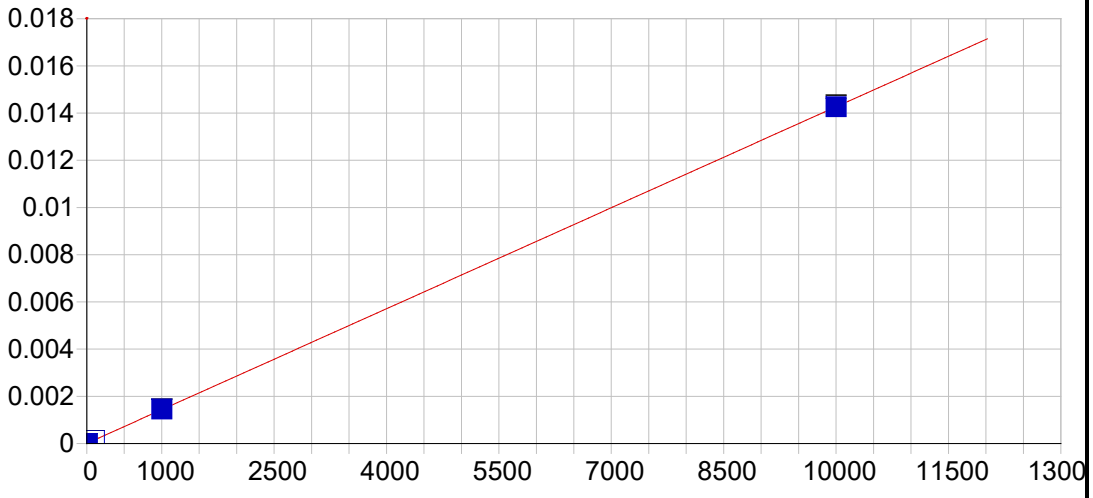


Sn 189.989 {477}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000027	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999760	Status:	OK.
Std Error of Est:	0.000089		
Predicted MDL:	0.556530		
Predicted MQL:	1.855100		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.0816	-3.08	.000	.00001	.000	1
CalStd10=10	10000.	9862.5	-137.	-1.37	.06315	.000	1
CalStd9=100	1000.0	1031.4	31.4	3.14	.00663	.000	1
CalStd8=100	100.00	97.594	-2.41	-2.41	.00065	.000	1
CalStd5=10	10.000	8.3568	-1.64	-16.4	.00008	.000	1

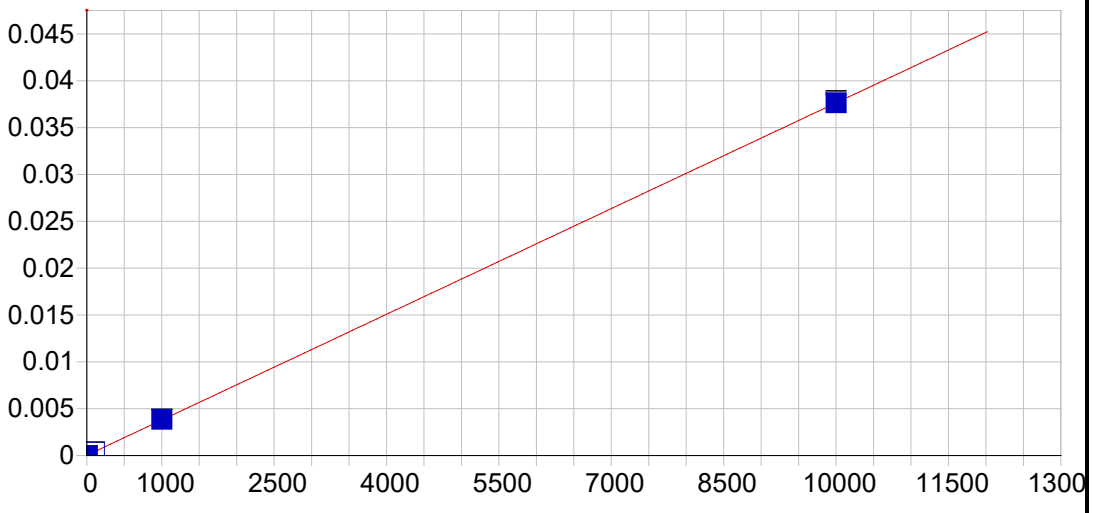


B 249.678 {135}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	1.114637		
Predicted MQL:	3.715457		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.8985	-3.90	.000	.00000	.000	1
CalStd8=100	100.00	94.712	-5.29	-5.29	.00014	.000	1
CalStd5=10	10.000	4.8853	-5.11	-51.1	.00001	.000	1
CalStd9=100	1000.0	1015.8	15.8	1.58	.00146	.000	1
CalStd10=10	10000.	9998.5	-1.52	-.015	.01427	.000	1

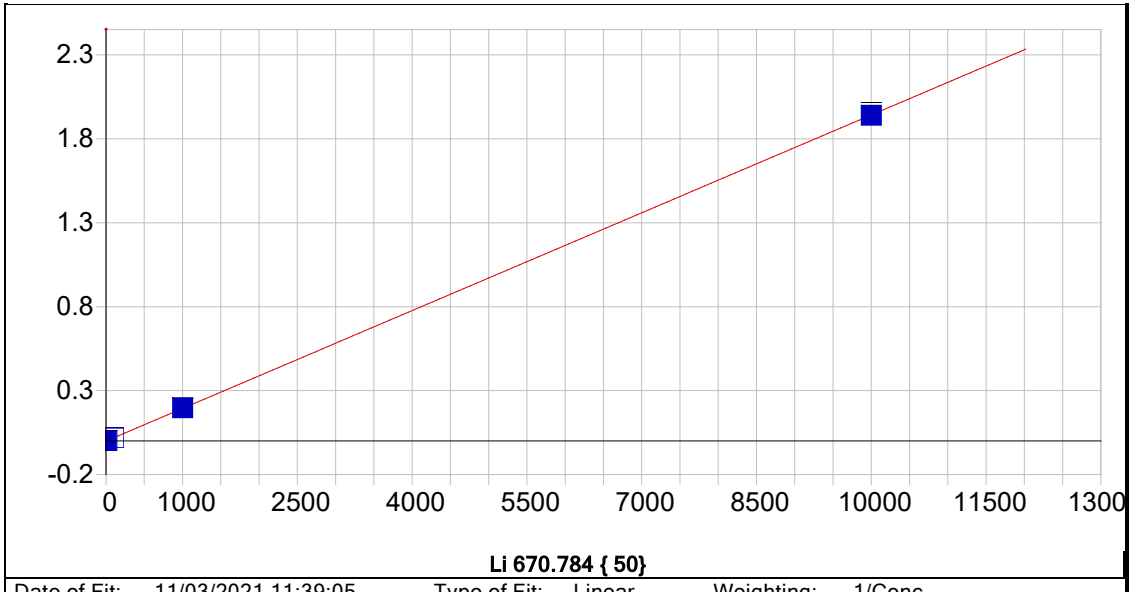


B 249.773 {135}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000028	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.457704		
Predicted MQL:	1.525679		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.9160	-3.92	.000	.00001	.000	1
CalStd8=100	100.00	93.939	-6.06	-6.06	.00038	.000	1
CalStd5=10	10.000	4.3307	-5.67	-56.7	.00004	.000	1
CalStd9=100	1000.0	1017.3	17.3	1.73	.00386	.000	1
CalStd10=10	10000.	9998.3	-1.66	-.017	.03766	.000	1

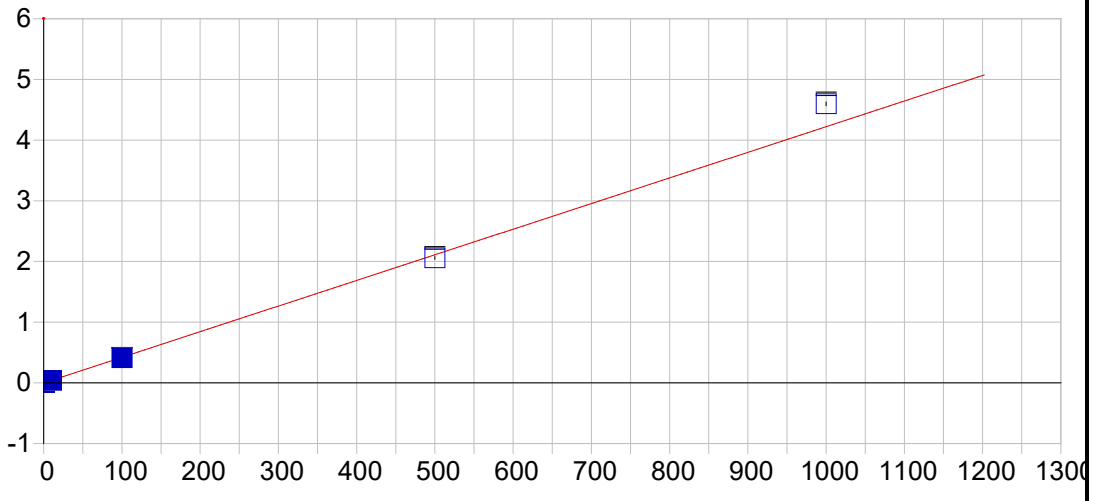


Li 670.784 { 50}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000496	Re-Slope:	1.000000
A1 (Gain):	0.000194	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	1.825517		
Predicted MQL:	6.085058		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00064	.001	.000	-.00050	.000	1
CalStd5=10	10.000	9.3415	-.659	-6.59	.00132	.000	1
CalStd8=100	100.00	98.775	-1.23	-1.23	.01869	.000	1
CalStd9=100	1000.0	1016.0	16.0	1.60	.19688	.002	1
CalStd10=10	10000.	9985.9	-14.1	-.141	1.9396	.017	1

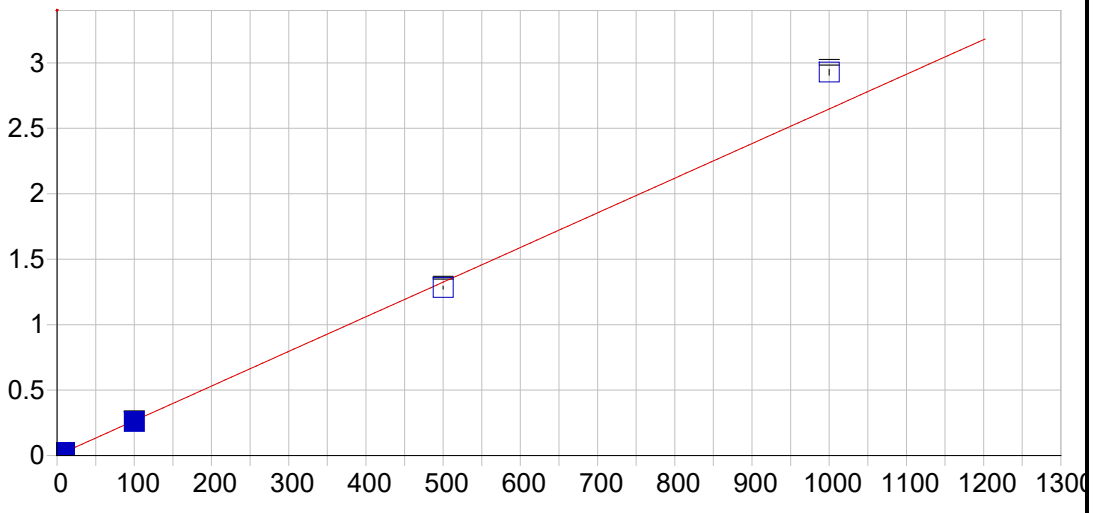


K 766.490 { 44}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000893	Re-Slope:	1.000000
A1 (Gain):	0.004222	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997640	Status:	OK.
Std Error of Est:	0.002292		
Predicted MDL:	0.091846		
Predicted MQL:	0.306153		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.19423	.194	.000	-.00007	.000	1
CalStd9=100	1.0000	1.0794	.079	7.94	.00366	.000	1
CalStd10=10	10.000	9.4785	-.521	-5.21	.03913	.000	1
CalibStd15=	1000.0	1089.4	89.4	8.94	4.5989	.029	1
CalStd13=10	100.00	98.214	-1.79	-1.79	.41380	.005	1
CalStd14=50	500.00	487.83	-12.2	-2.43	2.0589	.021	1

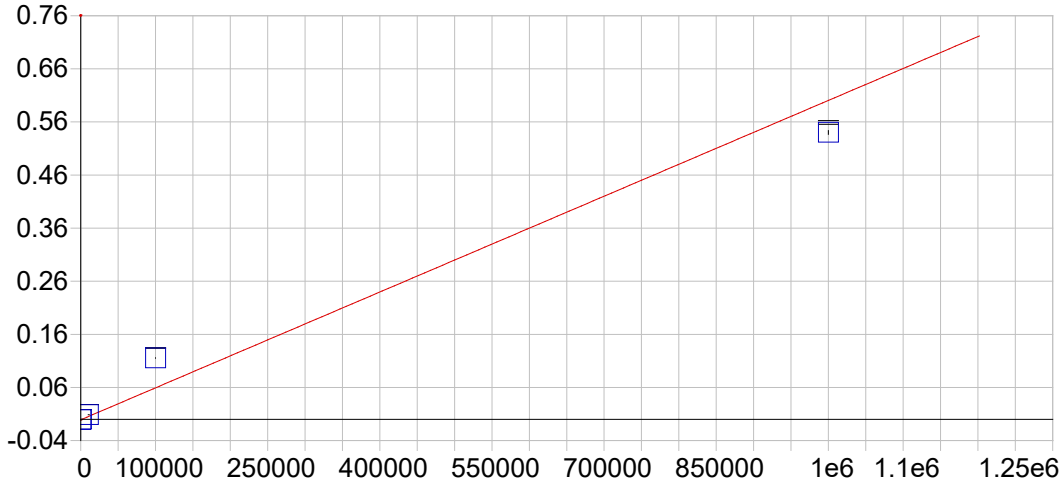


K 769.896 { 44}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.001389	Re-Slope:	1.000000
A1 (Gain):	0.002647	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997264	Status:	OK.
Std Error of Est:	0.001991		
Predicted MDL:	0.107718		
Predicted MQL:	0.359059		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.11363	.114	.000	.00169	.000	1
CalStd9=100	1.0000	1.2390	.239	23.9	.00467	.000	1
CalStd10=10	10.000	9.4504	-.550	-5.50	.02642	.000	1
CalibStd15=	1000.0	1105.9	106.	10.6	2.9285	.021	1
CalStd13=10	100.00	97.510	-2.49	-2.49	.25967	.003	1
CalStd14=50	500.00	484.09	-15.9	-3.18	1.2826	.011	1

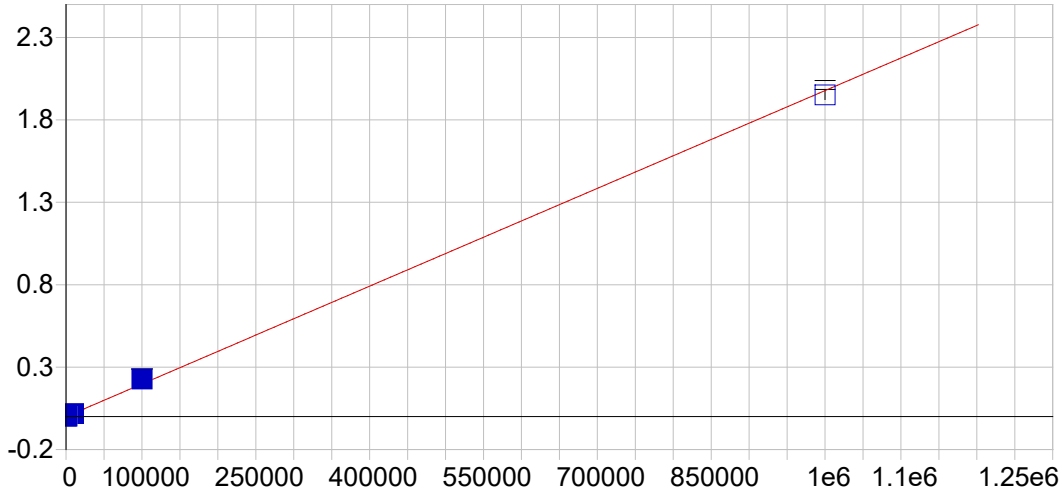


P 177.495 {489}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000893	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.957138	Status:	OK.
Std Error of Est:	0.000248		
Predicted MDL:	8.384563		
Predicted MQL:	27.948545		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.4749	-2.47	.000	-.00089	.000	1
CalStd10=10	10000.	15728.	5730.	57.3	.00857	.000	1
CalStd9=100	1000.0	2068.2	1070.	107.	.00035	.000	1
CalibStd15=	1000000.	899790.	-100000.	-10.0	.54025	.003	1
CalStd13=10	100000.	193410.	93400.	93.4	.11543	.000	1

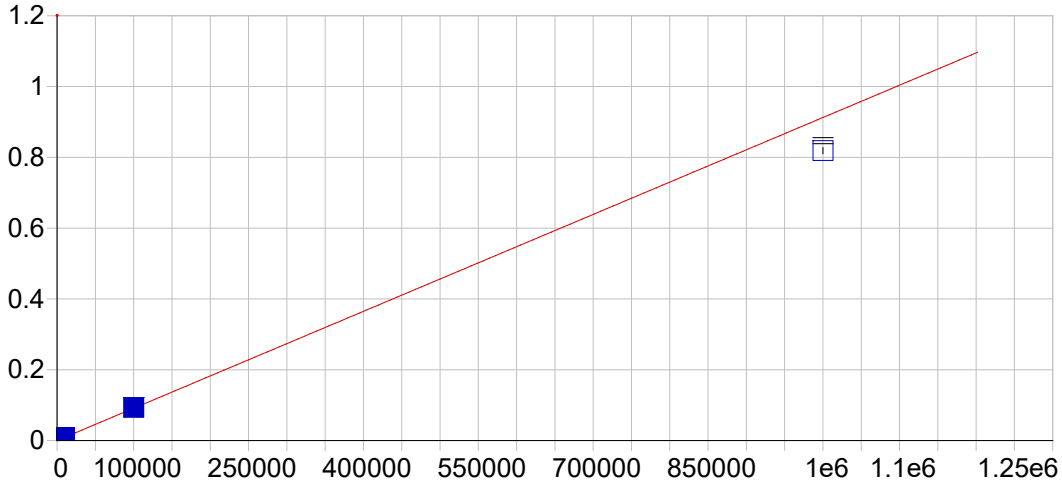


P 213.618 {457}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998783	Status:	OK.
Std Error of Est:	0.000133		
Predicted MDL:	3.114887		
Predicted MQL:	10.382956		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.08921	-.089	.000	.00000	.000	1
CalStd10=10	10000.	8468.5	-1530.	-15.3	.01675	.000	1
CalStd9=100	1000.0	1105.1	105.	10.5	.00219	.000	1
CalibStd15=	1000000.	986340.	-13700.	-1.37	1.9508	.027	1
CalStd13=10	100000.	115090.	15100.	15.1	.22761	.001	1

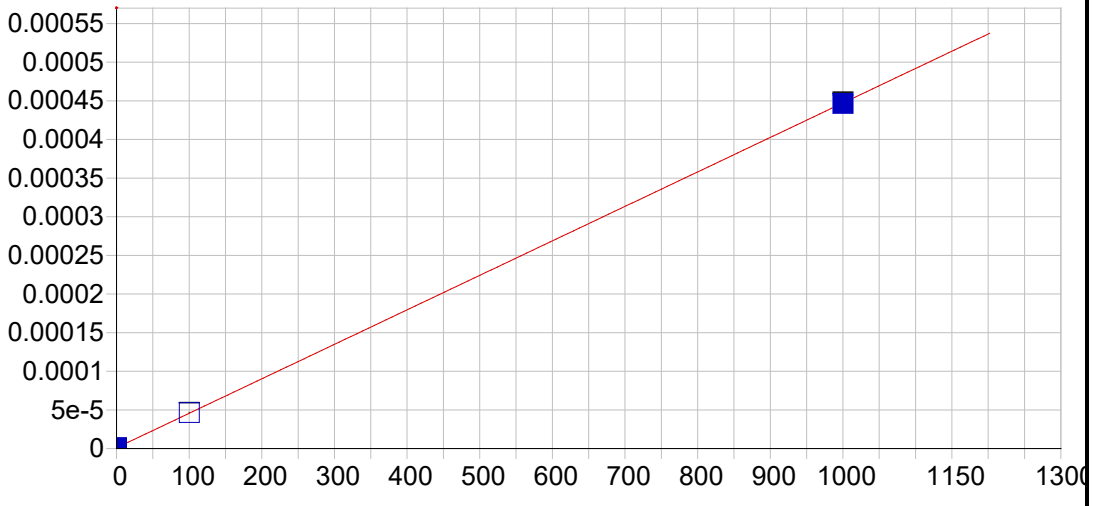


S 182.034 {485}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000019	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999704	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	3.142128		
Predicted MQL:	10.473762		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.9629	-5.96	.000	.00001	.000	1
CalStd9=100	1000.0	1018.5	18.5	1.85	.00095	.000	1
CalStd10=10	10000.	9777.4	-223.	-2.23	.00896	.000	1
CalibStd15=	1000000.	897220.	-103000.	-10.3	.81878	.009	1
CalStd13=10	100000.	101920.	1920.	1.92	.09302	.000	1

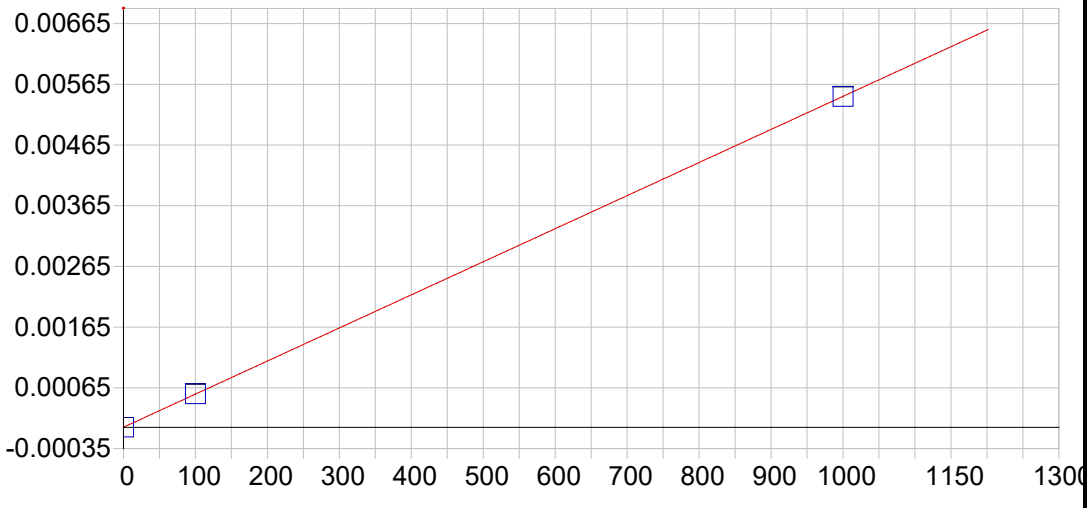


Hg 184.950 {482}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999980	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.595161		
Predicted MQL:	1.983871		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00179	-.002	.000	.00000	.000	1
CalStd8=100	100.00	101.99	1.99	1.99	.00005	.000	1
CalStd9=100	1000.0	998.01	-1.99	-.199	.00045	.000	1

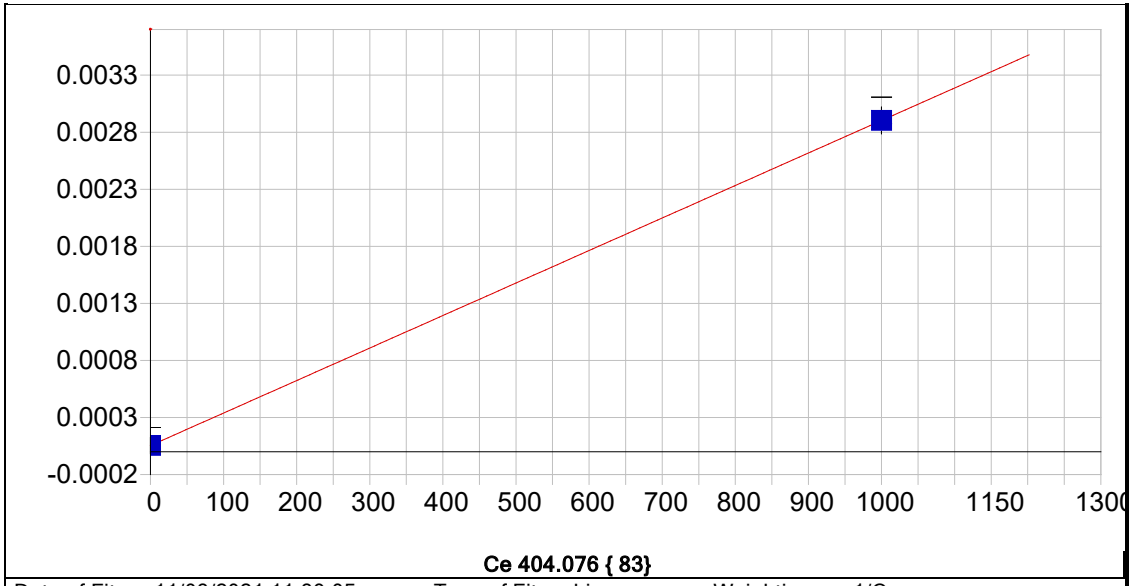


Hg 194.227 {473}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.610382		
Predicted MQL:	2.034607		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00070	-.001	.000	.00000	.000	1
CalStd8=100	100.00	100.78	.780	.780	.00055	.000	1
CalStd9=100	1000.0	999.22	-.780	-.078	.00545	.000	1



Ce 404.076 { 83}

Date of Fit:	11/03/2021 11:39:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000054	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	47.612118		
Predicted MQL:	158.707059		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00005	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00290	.000	1

Sample Name: Blank Acquired: 10/29/2021 11:53:21 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Ca1840	Ca3158	Ca3933	Ca3968
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-11.2**	**.000**	**-.000**	**.000**	**-.000**	**.000**	**.074**	**.000**	**-.000**	**.000**	**.002**	**.001**
Stddev	1.4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	12.8	58.7	28.4	30.8	35.4	45.6	.475	14.1	3.00	67.4	4.10	4.09

Elem	Cd2265	Co2286	Co2388	Cr2677	Cu2230	Cu2247	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	60.2	103.	87.1	221.	35.2	57.8	2.94	72.1	222.	53.0	111.	5.79

Elem	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2203	Pb2169	Sb2068	Sb2175	Se1960	Se2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	16.8	312.	21.4	10.8	41.2	1260.	19.5	418.	68.7	17.2	247.	274.

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.092**	**.000**	**-.000**	**.002**
Stddev	.000	.000	.000	.000	.001	.000	.000	.000
%RSD	42.4	21.6	60.0	17.5	.816	160.	243.	11.9

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**209000.**	**2344600.**	**45229.**
Stddev	242.	17920.	125.
%RSD	.11579	.76432	.27708

Sample Name: CalStd2=0.5 Acquired: 10/29/2021 11:59:51 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Be3130	Cd2265
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	1.26	45.3

Int. Std.	Y_2243	Y_3242
Units	Cts/S	Cts/S
Avg	**207020.**	**2326600.**
Stddev	307.	5428.
%RSD	.14832	.23330

Int. Std.	Y_3600
Units	Cts/S
Avg	**44278.**
Stddev	89.
%RSD	.19995

Sample Name: CalStd3=1 Acquired: 10/29/2021 12:06:19 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Be3130	Cd2265	Co2286	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000
%RSD	13.3	1.08	18.1	8.17	21.8

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**206770.**	**2336700.**	**44552.**
Stddev	315.	10317.	81.
%RSD	.15233	.44152	.18188

Sample Name: CalStd4=5 Acquired: 10/29/2021 12:12:46 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Ba2335	Be3130	Cd2265	Co2286	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316	Pb2203	Sb2175
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**28.1**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	2.0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	7.23	3.56	.813	1.93	2.89	14.3	.859	8.65	4.91	6.46	9.36	15.8

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**206710.**	**2338700.**	**44807.**
Stddev	306.	21002.	132.
%RSD	.14809	.89804	.29520

Sample Name: CalStd5=10 Acquired: 10/29/2021 12:19:14 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	As1972	Ba2335	Be3130	Cd2265	Co2286	Cr2677	Cu2230	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**71.7**	**.000**	**.000**	**-.000**	**.000**	**.001**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	4.1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	5.68	2.62	5.61	94.4	2.14	.545	1.40	.701	4.85	3.20	.727	3.57

Elem	Mo2045	Ni2316	Pb2203	Pb2169	Sb2068	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.48	3.15	11.4	133.	19.9	10.0	18.1	13.2	3.29	.904	1.18

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**206720.**	**2340900.**	**44461.**
Stddev	512.	11120.	162.
%RSD	.24772	.47502	.36324

Sample Name: CalStd6=20 Acquired: 10/29/2021 12:25:44 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Cu2230	Cu2247	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.43	1.54	3.36	.455	.841	3.18	3.86	1.35

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**206970.**	**2345800.**	**44488.**
Stddev	320.	21256.	231.
%RSD	.15472	.90614	.51925

Sample Name: CalStd7=50 Acquired: 10/29/2021 12:32:08 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	As1937	As1972	Ca3933	Co2286	Cr2677	Cu2247	Mn2576	Mo2020	Mo2045	Ni2316	Sb2068	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.044**	**.002**	**.000**	**.000**	**.001**	**.000**	**.000**	**.001**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	3.43	12.3	.534	.414	2.08	1.48	.829	1.74	1.00	.649	1.66	.593

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**207000.**	**2327400.**	**44249.**
Stddev	98.	12110.	173.
%RSD	.04740	.52030	.39160

Sample Name: CalStd8=100 Acquired: 10/29/2021 12:38:20 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	As1972	Ba2335	Ba4934	Be3130	Ca3933	Ca3968	Co2286	Co2388	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**789.**	**.000**	**.000**	**.000**	**.001**	**.092**	**.008**	**.065**	**.030**	**.004**	**.000**	**.000**
Stddev	6.	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000
%RSD	.792	.494	2.65	2.86	.136	.719	.698	.340	.591	.167	.564	.757

Elem	Cu2230	Cu2247	Mg2802	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2203	Pb2169	Sb2175	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.001**	**.001**	*****	**.001**	**.000**	**.001**	**.002**	**.002**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	-----	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.44	4.91	-----	.537	1.44	.650	.295	.352	2.57	18.8	1.56	1.52

Elem	Se2062	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.001**	**.003**	**.006**
Stddev	.000	.000	.000	.000	.000
%RSD	13.0	1.17	.972	.290	.313

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**207530.**	**2337800.**	**44670.**
Stddev	273.	14148.	172.
%RSD	.13160	.60519	.38466

Sample Name: CalStd9=1000 Acquired: 10/29/2021 12:44:29 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al1670	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Ca1840	Ca3158	Ca3933	Ca3968	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.004**	**.007**	**.001**	**.001**	**.012**	**.253**	**.080**	**.003**	**.002**	**.577**	**.270**	**.037**
Stddev	.000	.000	.000	.000	.000	.001	.000	.000	.000	.002	.001	.000
%RSD	.202	1.89	.407	.328	.118	.238	.403	.185	3.87	.293	.506	.080

Elem	Co2286	Co2388	Cr2677	Cu2230	Cu2247	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.036**	**.003**	**.003**	**.007**	**.011**	**.000**	**.001**	**.003**	**.000**	**.000**	*****	**.012**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	-----	.000
%RSD	.138	.383	.549	.095	.296	.422	2.09	1.57	.411	5.34	-----	.481

Elem	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2203	Pb2169	Sb2068	Sb2175	Se1960	Se2062	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.014**	**.005**	**.006**	**.019**	**.022**	**.004**	**.000**	**.002**	**.002**	**.001**	**.000**	**.002**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.13	.354	.120	.147	.141	.254	1.06	.476	.456	.462	.631	.226

Elem	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.008**	**.030**	**.062**	**.139**	**.026**	**.004**	**.005**
Stddev	.000	.000	.000	.003	.000	.000	.000
%RSD	.426	.212	.122	1.82	1.17	4.76	3.00

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**207390.**	**2341600.**	**44574.**
Stddev	248.	8854.	350.
%RSD	.11934	.37813	.78624

Sample Name: CalStd10=10000 Acquired: 10/29/2021 12:50:00 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	As1972	Ba4934	Ca1840	Ca3158	Ca3968	Co2286	Co2388	Cr2677	Cu2230	Cu2247	Fe2343
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.073**	**.007**	**1.79**	**.029**	**.018**	**2.61**	**.345**	**.027**	**.029**	**.062**	**.106**	**.005**
Stddev	.001	.000	.01	.000	.000	.03	.000	.000	.000	.000	.000	.000
%RSD	.797	.265	.339	.103	.747	1.13	.021	.858	.459	.083	.030	.712

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.010**	**.033**	**.002**	**.002**	**.262**	**.112**	**.132**	**.045**	**.062**	**.186**	**.218**	**.034**
Stddev	.000	.000	.000	.000	.002	.001	.000	.000	.000	.000	.000	.000
%RSD	.895	.838	.772	1.06	.625	.667	.214	.321	.071	.039	.088	.108

Elem	Pb2169	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.002**	**.023**	**.019**	**.012**	**.003**	**.022**	**.080**	**.291**	**.585**	**.578**	**.272**	**.039**
Stddev	.000	.000	.000	.000	.000	.000	.001	.001	.000	.003	.002	.000
%RSD	.190	.113	.291	.118	.193	.196	.830	.184	.037	.558	.782	.622

Elem	K_7698
Units	Cts/S
Avg	**.026**
Stddev	.000
%RSD	.729

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**203100.**	**2292400.**	**44025.**
Stddev	245.	16475.	125.
%RSD	.12063	.71869	.28473

Sample Name: CalStd12=100K Acquired: 10/29/2021 12:56:19 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Cu2247	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.12**	**1.34**	**.022**	**2.64**
Stddev	.00	.01	.000	.01
%RSD	.315	.365	.440	.276

Int. Std.	Y_2243	Y_3600
Units	Cts/S	Cts/S
Avg	**202970.**	**43899.**
Stddev	572.	93.
%RSD	.28180	.21146

Sample Name: CalStd13=100000 Acquired: 10/29/2021 13:03:07 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca1840	Ca3158	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.776**	**.290**	**.197**	**.044**	**.102**	**.348**	**.016**	**.021**	**5.34**	**2.92**	**.414**	**.260**
Stddev	.011	.001	.002	.000	.001	.004	.000	.000	.07	.03	.005	.003
%RSD	1.40	.372	1.11	.493	1.39	1.07	.373	1.19	1.40	1.09	1.18	1.19

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**199420.**	**2241400.**	**41583.**
Stddev	234.	6936.	289.
%RSD	.11753	.30944	.69402

Sample Name: CalStd14=500000 Acquired: 10/29/2021 13:09:40 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca1840	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.00**	**1.17**	**.945**	**.475**	**1.61**	**.072**	**.106**	**25.4**	**14.5**	**2.06**	**1.28**
Stddev	.03	.00	.001	.001	.01	.001	.000	.4	.1	.02	.01
%RSD	.653	.235	.142	.282	.496	1.62	.302	1.73	.935	1.01	.834

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**181060.**	**2025100.**	**38995.**
Stddev	303.	34335.	189.
%RSD	.16718	1.6955	.48397

Sample Name: CalibStd15=1000k Acquired: 10/29/2021 13:16:20 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca1840	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8.13**	**1.97**	**1.99**	**.985**	**3.32**	**.137**	**.235**	**54.6**	**31.7**	**4.60**	**2.93**
Stddev	.04	.01	.01	.006	.01	.001	.001	.3	.6	.03	.02
%RSD	.471	.519	.261	.657	.259	.619	.525	.523	1.89	.629	.730

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**164250.**	**1855800.**	**31817.**
Stddev	1124.	7063.	180.
%RSD	.68451	.38062	.56479

Sample Name: Ag Ba 1000, 50000 Acquired: 10/29/2021 13:23:10 Type: Cal
Method: DOD Calibration Updated 060614(v4598) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba4934
Units	Cts/S
Avg	**8.99**
Stddev	.05
%RSD	.564

Int. Std.	Y_3600
Units	Cts/S
Avg	**41765.**
Stddev	143.
%RSD	.34283

Sample Name: icv Acquired: 10/29/2021 13:42:16 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca1840	Ca3158	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**49.5**	**11600.**	**1980.**	**2050.**	**49.1**	**10200.**	**9790.**	**10200.**	**49.2**	**511.**	**201.**	**247.**
Stddev	.7	67.	5.	12.	.2	11.	64.	65.	.1	1.	1.	1.
%RSD	1.47	.580	.265	.573	.324	.104	.655	.640	.164	.150	.374	.237
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2216	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5010.**	**4990.**	**5000.**	**9380.**	**9650.**	**485.**	**498.**	**510.**	**507.**	**518.**	**508.**	**2030.**
Stddev	20.	79.	22.	34.	117.	1.	1.	2.	1.	2.	3.	7.
%RSD	.393	1.58	.437	.360	1.21	.290	.270	.351	.190	.442	.585	.355
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Se2062	Tl1908	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**2060.**	**2090.**	**499.**	**524.**	**530.**	**5.01**	**5.05**	**5.27**	**5.38**
Stddev	17.	5.	1.	1.	1.	.06	.02	.13	.17
%RSD	.820	.236	.221	.251	.204	1.20	.382	2.40	3.08
Check ?	None	None	None	None	None	None	None	None	None
Value									
Range									

Sample Name: icv Acquired: 10/29/2021 13:42:16 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**207470.**	**2348400.**	**41257.**
Stddev	272.	4316.	210.
%RSD	.13106	.18378	.50900

Sample Name: ICVLL Acquired: 10/29/2021 13:48:16 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca1840	Ca3158	Ca3933	Ca3968	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**47.8**	**1200.**	**58.9**	**30.4**	**12.1**	**1600.**	**1560.**	**1540.**	**1580.**	**15.4**	**31.5**	**31.4**
Stddev	.7	9.	1.5	.3	.0	3.	18.	6.	10.	.1	.2	.5
%RSD	1.48	.768	2.59	.952	.345	.183	1.17	.383	.634	.579	.511	1.46
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Cu2230	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**33.8**	**958.**	**953.**	**1420.**	**1570.**	**30.6**	**34.0**	**31.4**	**32.9**	**62.1**	**64.8**	**63.9**
Stddev	.4	4.	16.	11.	32.	.2	.4	.2	1.4	.9	3.1	1.5
%RSD	1.24	.410	1.70	.761	2.02	.785	1.05	.769	4.22	1.39	4.79	2.26
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**32.0**	**33.8**	**3.15**	**3.08**	**14.7**	**14.8**
Stddev	.3	.2	.03	.04	.2	.2
%RSD	1.06	.537	1.08	1.21	1.41	1.17
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: ICVLL Acquired: 10/29/2021 13:48:16 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**206010.**	**2323500.**	**40982.**
Stddev	189.	6448.	280.
%RSD	.09192	.27749	.68208

Sample Name: icb Acquired: 10/29/2021 13:54:20 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.328**	**-.098**	**-.657**	**-.377**	**-.746**	**-13.4**	**-1.57**	**-.368**	**-.204**	**-.727**	**-.013**	**-.242**
Stddev	.200	.402	1.01	.123	.013	.2	.26	.113	.179	.343	.995	.691
%RSD	61.0	409.	154.	32.6	1.72	1.13	16.6	30.9	87.9	47.2	7490.	285.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Fe2599	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-12.6**	**23.4**	**-.901**	**-.820**	**-1.25**	**-.272**	**.203**	**-2.63**	**.598**	**.015**	**-.467**	**-.236**
Stddev	11.8	34.8	.019	.021	.59	.338	1.44	1.40	3.13	1.67	.246	.080
%RSD	93.1	148.	2.08	2.56	47.1	124.	709.	53.3	524.	10900.	52.7	33.8
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Na5889	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.123**	**.018**	**.408**	**.311**
Stddev	.010	.014	.078	.100
%RSD	8.29	77.1	19.0	32.1
Check ?	None	None	None	None
Value				
Range				

Sample Name: icb Acquired: 10/29/2021 13:54:20 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**211000.**	**2363900.**	**41960.**
Stddev	165.	13900.	76.
%RSD	.07810	.58802	.18040

Sample Name: MRL/LLOQ Acquired: 10/29/2021 14:07:07 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	F **13.8**	**412.**	**20.0**	**9.92**	**3.50**	**505.**	**525.**	**4.96**	**10.1**	**9.96**	**12.3**	**319.**
Stddev	.2	1.	1.6	.17	.02	1.	1.	.11	.1	.37	.5	1.
%RSD	1.73	.155	7.81	1.68	.551	.217	.267	2.14	1.14	3.74	4.14	.229
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	20.0											
Range	-30.0%											

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**315.**	**549.**	**9.72**	**10.7**	**10.0**	**10.5**	**20.2**	**20.2**	**18.5**	**10.5**	**11.8**	**1.14**
Stddev	10.	54.	.10	.3	.4	1.1	2.4	1.7	.4	.0	.1	.02
%RSD	3.31	9.79	1.02	2.65	3.85	10.3	12.0	8.38	2.22	.461	1.27	1.67
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L
Avg	**1.05**	**5.12**	**5.29**
Stddev	.00	.08	.08
%RSD	.338	1.57	1.52
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: MRL/LLOQ Acquired: 10/29/2021 14:07:07 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**206790.**	**2334200.**	**41059.**
Stddev	326.	2180.	161.
%RSD	.15750	.09340	.39165

Sample Name: ICSA Acquired: 10/29/2021 14:13:26 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba2335	Be3130	Ca1840	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.314**	**529000.**	**.001**	**-.000**	**-.249**	**503000.**	**510000.**	**-.002**	**.587**	**-3.19**	**.003**
Stddev	.478	3870.	14.2	.631	.015	2130.	2870.	.342	.275	.78	1.49
%RSD	152.	.731	1040000.	1320000.	6.04	.425	.562	14600.	46.8	24.5	55900.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**488000.**	**483000.**	**417000.**	**544000.**	**.361**	**-1.86**	**-1.59**	**-.983**	**.017**	**.008**	**.105**
Stddev	3540.	2760.	1340.	3420.	.066	1.00	.87	4.16	2.06	7.39	4.77
%RSD	.725	.571	.322	.628	18.3	53.8	54.9	423.	12000.	95000.	4540.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**10400.**	**-.002**	**.000**	**-.009**	**.416**	**.205**
Stddev	60.	.394	.027	.012	.077	.128
%RSD	.576	19900.	21200.	125.	18.6	62.6
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA Acquired: 10/29/2021 14:13:26 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**185180.**	**2119300.**	**37283.**
Stddev	218.	10870.	197.
%RSD	.11793	.51289	.52723

Sample Name: ICSAB Acquired: 10/29/2021 14:19:47 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba2335	Be3130	Ca1840	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**492.**	**545000.**	**479.**	**501.**	**520.**	**499000.**	**514000.**	**476.**	**504.**	**511.**	**510.**
Stddev	1.	3550.	2.	1.	1.	915.	2210.	1.	1.	2.	2.
%RSD	.254	.651	.452	.224	.179	.183	.431	.131	.139	.367	.355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2216	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**492000.**	**485000.**	**423000.**	**561000.**	**500.**	**515.**	**504.**	**486.**	**479.**	**533.**	**532.**
Stddev	2760.	2940.	836.	2460.	1.	1.	1.	.	6.	2.	2.
%RSD	.561	.606	.198	.439	.168	.263	.185	.097	1.30	.361	.427
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**454.**	**517.**	**491.**	**560.**	**58.8**	**59.8**	**56.7**	**57.0**
Stddev	4.	2.	1.	1.	.4	.4	.5	.3
%RSD	.831	.402	.181	.207	.754	.643	.960	.447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICSAB Acquired: 10/29/2021 14:19:47 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**185390.**	**2109300.**	**35972.**
Stddev	157.	1170.	158.
%RSD	.08464	.05546	.43957

Sample Name: ICVLL ag Acquired: 10/29/2021 14:31:52 Type: Unk
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9.84**	**5.34**	**-.216**	**-.050**	**-.725**	**-8.79**	**3.46**	**-.319**	**-.408**	**-.725**	**.795**	**36.3**
Stddev	.47	1.15	1.56	.097	.018	.13	.14	.210	.141	.436	.640	7.6
%RSD	4.73	21.5	723.	193.	2.50	1.46	3.89	66.0	34.7	60.2	80.5	20.9

Elem	Fe2599	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**90.8**	**96.3**	**1.44**	**-.590**	**-.450**	**-.632**	**.246**	**1.77**	**.187**	**-.897**	**-.345**	**.117**
Stddev	36.7	46.6	.04	.047	.678	.157	1.10	2.28	2.34	1.85	.113	.060
%RSD	40.4	48.4	2.69	7.98	151.	24.8	447.	129.	1250.	206.	32.8	51.2

Elem	Na5889	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.135**	**.033**	**.389**	**.422**
Stddev	.036	.012	.127	.027
%RSD	26.3	37.0	32.8	6.50

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**207410.**	**2341700.**	**40290.**
Stddev	173.	12051.	262.
%RSD	.08356	.51464	.65006

Sample Name: lcsw83162 Acquired: 10/29/2021 14:56:23 Type: Unk
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	As1972	Ba2335	Be3130	Ca1840	Ca3158	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**18.9**	**776.**	**842.**	**841.**	**792.**	**20.1**	**192000.**	**184000.**	**19.6**	**207.**	**83.5**
Stddev	.5	1.	6.	4.	1.	.1	231.	846.	.1	1.	.5
%RSD	2.48	.160	.737	.429	.130	.527	.120	.459	.759	.301	.633

Elem	Cu2230	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**114.**	**410.**	**421.**	**83300.**	**93600.**	**198.**	**2160.**	**200.**	**203.**	**213.**	**861.**
Stddev	1.	2.	16.	140.	422.	1.	2.	1.	1.	2.	5.
%RSD	.919	.559	3.76	.168	.451	.300	.090	.255	.419	.994	.612

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**792.**	**209.**	**214.**	**227.**	**98.0**	**100.**	**98.1**	**98.5**
Stddev	4.	.	1.	1.	.5	1.	.8	.6
%RSD	.519	.232	.281	.226	.549	.540	.771	.577

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**192210.**	**2181900.**	**38248.**
Stddev	28.	3200.	112.
%RSD	.01453	.14667	.29165

Sample Name: mbw83162 Acquired: 10/29/2021 15:02:36 Type: Unk
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.564**	**1.71**	**3.99**	**-.301**	**-.743**	**-5.11**	**6.93**	**-.280**	**-.549**	**-.874**	**1.98**	**14.0**
Stddev	.453	.21	.97	.060	.011	.65	.76	.067	.085	.177	.25	.6
%RSD	80.3	12.3	24.2	19.9	1.52	12.8	10.9	23.9	15.5	20.2	12.7	4.27

Elem	Fe2599	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**18.9**	**131.**	**1.56**	**-.622**	**2.72**	**-.581**	**-1.71**	**.823**	**2.90**	**-.758**	**-.599**	**.418**
Stddev	11.4	120.	.17	.067	.21	.254	.10	1.74	1.59	.830	.330	.108
%RSD	60.2	91.3	11.2	10.9	7.65	43.7	5.71	211.	54.7	110.	55.0	25.7

Elem	Na5889	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.199**	**.087**	**.407**	**-.045**
Stddev	.015	.010	.034	.061
%RSD	7.33	11.4	8.48	137.

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**208240.**	**2345800.**	**39854.**
Stddev	392.	9362.	96.
%RSD	.18801	.39910	.24120

Sample Name: 1066849 Acquired: 10/29/2021 15:08:59 Type: Unk
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca1840	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.306**	**312.**	**.383**	**99.9**	**-.713**	**80000.**	**76600.**	**-.377**	**-.317**	**2.67**	**23.8**	**744.**
Stddev	.478	1.	2.20	.3	.020	132.	534.	.139	.246	.50	.6	4.
%RSD	156.	.237	574.	.258	2.83	.165	.697	36.9	77.6	18.9	2.43	.558

Elem	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**742.**	**28100.**	**30100.**	**18.7**	**5.95**	**-.018**	**8.35**	**.773**	**1.31**	**.561**	**.529**	**11.3**
Stddev	6.	176.	270.	.1	.59	.330	1.46	2.60	.57	.728	.247	.1
%RSD	.760	.625	.898	.744	9.96	1820.	17.5	337.	43.3	130.	46.7	.963

Elem	Na5889	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L	mg/L
Avg	**27.5**	**27.8**	**1.60**	**1.62**
Stddev	.2	.2	.10	.10
%RSD	.587	.829	6.41	5.91

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**202430.**	**2283700.**	**39095.**
Stddev	192.	11624.	182.
%RSD	.09495	.50902	.46543

Sample Name: I1066849 Acquired: 10/29/2021 15:15:35 Type: Unk
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca1840	Ca3158	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.372**	**80.1**	**.543**	**26.6**	**-.711**	**21500.**	**39200.**	**39200.**	**-.358**	**-.279**	**.684**	**7.35**
Stddev	.428	14.7	.464	5.0	.027	3910.	2290.	2350.	.016	.126	.540	.84
%RSD	115.	18.3	85.4	18.7	3.77	18.2	5.85	5.99	4.49	45.1	79.0	11.4

Elem	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**300.**	**365.**	**7800.**	**15300.**	**7.18**	**1.04**	**-.309**	**2.66**	**-.011**	**-.477**	**-.314**	**.062**
Stddev	25.	33.	1350.	1010.	.69	.56	.247	1.16	1.56	2.94	.737	.275
%RSD	8.24	9.15	17.3	6.62	9.68	54.3	80.1	43.5	14600.	618.	235.	444.

Elem	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.80**	**13.7**	**14.1**	**.958**	**.949**
Stddev	.58	.9	.9	.064	.075
%RSD	20.6	6.60	6.66	6.63	7.92

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**207230.**	**2334800.**	**39990.**
Stddev	257.	8605.	166.
%RSD	.12413	.36856	.41524

Sample Name: dup1066849 Acquired: 10/29/2021 15:22:15 Type: Unk
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca1840	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.037**	**363.**	**.410**	**102.**	**-.702**	**79900.**	**76300.**	**-.310**	**-.355**	**2.42**	**24.5**	**810.**
Stddev	.585	1.	3.14	.	.016	124.	210.	.017	.032	.41	1.1	3.
%RSD	1580.	.194	764.	.452	2.23	.155	.275	5.64	9.03	16.8	4.37	.366

Elem	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**780.**	**28200.**	**29900.**	**23.4**	**5.33**	**-.144**	**10.5**	**-.017**	**1.70**	**.310**	**.442**	**11.3**
Stddev	14.	176.	282.	.1	1.06	.354	1.1	2.90	1.52	1.07	.156	.1
%RSD	1.84	.625	.943	.307	19.9	245.	10.5	16900.	89.1	345.	35.3	1.06

Elem	Na5889	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L	mg/L
Avg	**27.4**	**27.8**	**1.55**	**1.50**
Stddev	.2	.1	.06	.05
%RSD	.572	.392	3.74	3.56

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**201920.**	**2286400.**	**39115.**
Stddev	299.	9819.	34.
%RSD	.14817	.42947	.08718

Sample Name: msw1066849 Acquired: 10/29/2021 15:28:51 Type: Unk
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Be3130	Ca1840	Ca3158	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**14.7**	**1240.**	**821.**	**825.**	**856.**	**19.8**	**257000.**	**246000.**	**18.8**	**199.**	**83.9**
Stddev	.3	29.	2.	5.	1.	.1	633.	1500.	.1	.	.7
%RSD	1.79	2.37	.256	.550	.120	.500	.246	.609	.406	.075	.890

Elem	Cu2230	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**143.**	**1060.**	**1050.**	**106000.**	**118000.**	**212.**	**2110.**	**193.**	**205.**	**205.**	**833.**
Stddev	1.	11.	14.	540.	1110.	1.	1.	.	1.	4.	5.
%RSD	.877	1.03	1.37	.512	.940	.698	.049	.193	.349	1.75	.583

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**766.**	**205.**	**214.**	**230.**	**118.**	**123.**	**94.6**	**94.7**
Stddev	2.	1.	.	.	1.	1.	.9	.5
%RSD	.306	.671	.189	.207	1.05	.586	.916	.549

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**190980.**	**2165900.**	**38229.**
Stddev	393.	11812.	119.
%RSD	.20558	.54540	.31225

Sample Name: ccv1 Acquired: 10/29/2021 15:34:54 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca1840	Ca3158	Ca3968	Cd2265	Co2388	Cr2055	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**478.**	**4800.**	**4880.**	**4950.**	**497.**	**4750.**	**4640.**	**4870.**	**482.**	**4720.**	**4740.**	**4830.**
Stddev	1.	14.	14.	18.	2.	9.	10.	22.	1.	16.	7.	8.
%RSD	.176	.286	.294	.363	.380	.187	.210	.449	.123	.342	.153	.158
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Cu2247	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**4700.**	**4820.**	**4690.**	**4720.**	**5130.**	**4530.**	**4750.**	**4680.**	**4840.**	**4820.**	**4810.**	**4900.**
Stddev	5.	22.	25.	28.	27.	104.	20.	13.	5.	6.	18.	12.
%RSD	.104	.449	.528	.599	.530	2.30	.413	.279	.108	.120	.367	.237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se2062	Tl1908	V_2924	Zn2062	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**4900.**	**4640.**	**4870.**	**4950.**	**99.8**	**103.**	**97.1**	**97.1**
Stddev	29.	14.	20.	8.	.3	.	.5	.3
%RSD	.588	.302	.419	.154	.301	.444	.490	.280
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ccv1 Acquired: 10/29/2021 15:34:54 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**200160.**	**2246500.**	**38780.**
Stddev	221.	11128.	116.
%RSD	.11053	.49532	.29916

Sample Name: ccv2 Acquired: 10/29/2021 15:40:09 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	As1972	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**48.8**	**496.**	**494.**	**497.**	**491.**	**48.2**	**487.**	**508.**	**48.3**	**510.**	**505.**	**513.**
Stddev	.9	1.	4.	1.	1.	.4	2.	3.	.2	.	2.	2.
%RSD	1.81	.280	.754	.144	.204	.808	.362	.654	.444	.089	.478	.479
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2020	Ni2216	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**509.**	**488.**	**492.**	**492.**	**500.**	**508.**	**505.**	**515.**	**505.**	**514.**	**518.**	**507.**
Stddev	4.	13.	27.	3.	3.	1.	1.	1.	1.	4.	3.	4.
%RSD	.863	2.71	5.50	.653	.512	.216	.225	.187	.288	.723	.579	.813
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**516.**	**521.**	**9.90**	**10.1**	**9.70**	**9.91**
Stddev	1.	1.	.07	.1	.14	.07
%RSD	.188	.263	.685	.642	1.44	.658
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: ccv2 Acquired: 10/29/2021 15:40:09 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**207400.**	**2338300.**	**39400.**
Stddev	252.	11757.	262.
%RSD	.12164	.50279	.66497

Sample Name: ccb Acquired: 10/29/2021 15:45:44 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.307**	**-.497**	**.000**	**-.309**	**-.734**	**-13.3**	**-1.32**	**-.328**	**-.368**	**-.818**	**-.014**	**.748**
Stddev	.168	.276	1.06	.277	.017	.2	.22	.145	.269	.384	.854	.875
%RSD	54.5	55.6	327000.	89.7	2.27	1.39	16.8	44.1	73.1	46.9	6070.	117.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Fe2599	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1.96**	**103.**	**-.817**	**-.776**	**-.692**	**-.353**	**-.862**	**-.812**	**-.177**	**.219**	**-.078**	**-.321**
Stddev	8.95	146.	.032	.067	.739	.172	.945	.914	2.02	2.18	.087	.077
%RSD	457.	143.	3.91	8.68	107.	48.6	110.	113.	1140.	999.	112.	24.1
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Na5889	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.142**	**.010**	**.363**	**.115**
Stddev	.005	.009	.075	.054
%RSD	3.53	89.7	20.6	47.2
Check ?	None	None	None	None
Value				
Range				

Sample Name: ccb Acquired: 10/29/2021 15:45:44 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**210960.**	**2375100.**	**40535.**
Stddev	128.	13467.	85.
%RSD	.06064	.56700	.21006

Sample Name: msdw1066849 Acquired: 10/29/2021 15:52:08 Type: Unk
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Be3130	Ca1840	Ca3158	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**14.2**	**1310.**	**839.**	**840.**	**880.**	**20.3**	**273000.**	**260000.**	**19.3**	**203.**	**85.6**
Stddev	.8	11.	4.	2.	1.	.1	82.	340.	.2	.	.7
%RSD	5.38	.870	.531	.289	.138	.584	.030	.130	1.11	.219	.765

Elem	Cu2230	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**148.**	**1090.**	**1100.**	**111000.**	**125000.**	**219.**	**2130.**	**197.**	**207.**	**212.**	**851.**
Stddev	1.	5.	31.	441.	401.	1.	2.	1.	3.	2.	3.
%RSD	.758	.465	2.82	.396	.319	.433	.073	.382	1.30	1.00	.333

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**774.**	**210.**	**220.**	**236.**	**125.**	**129.**	**99.4**	**99.4**
Stddev	3.	1.	.	.	2.	1.	.8	.9
%RSD	.333	.319	.147	.134	1.84	.761	.770	.891

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**190400.**	**2162500.**	**38075.**
Stddev	187.	4344.	61.
%RSD	.09805	.20087	.16145

Sample Name: pdsw1066849 Acquired: 10/29/2021 15:58:13 Type: Unk
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca1840	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**63.9**	**4140.**	**3810.**	**3980.**	**92.5**	**423000.**	**403000.**	**87.2**	**905.**	**373.**	**505.**
Stddev	.8	22.	7.	10.	.3	1110.	1680.	.4	1.	2.	1.
%RSD	1.19	.535	.188	.255	.344	.263	.417	.447	.062	.527	.165

Elem	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2045	Ni2216	Ni2316	Pb2203	Sb2068	Se2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2520.**	**2520.**	**176000.**	**202000.**	**900.**	**2140.**	**899.**	**879.**	**898.**	**958.**	**3850.**
Stddev	8.	26.	631.	871.	3.	4.	2.	2.	1.	4.	9.
%RSD	.330	1.04	.359	.430	.385	.177	.188	.250	.136	.374	.240

Elem	Tl1908	V_2924	Zn2062	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**3400.**	**943.**	**934.**	**206.**	**214.**	**1.77**	**1.71**
Stddev	19.	3.	2.	1.	.	.06	.11
%RSD	.558	.282	.238	.674	.215	3.49	6.20

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**187560.**	**2134700.**	**37412.**
Stddev	248.	5578.	77.
%RSD	.13196	.26131	.20705

Sample Name: ccv1 Acquired: 10/29/2021 16:55:10 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca1840	Ca3158	Ca3968	Cd2265	Co2388	Cr2055	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**479.**	**4810.**	**4850.**	**4950.**	**495.**	**4750.**	**4590.**	**4870.**	**480.**	**4690.**	**4740.**	**4810.**
Stddev	2.	37.	15.	24.	3.	5.	21.	26.	1.	28.	2.	7.
%RSD	.457	.761	.311	.480	.559	.115	.464	.542	.125	.596	.048	.144
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Cu2247	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**4690.**	**4810.**	**4710.**	**4740.**	**5130.**	**4480.**	**4720.**	**4690.**	**4810.**	**4810.**	**4770.**	**4870.**
Stddev	7.	41.	18.	52.	17.	66.	27.	28.	6.	2.	30.	9.
%RSD	.146	.846	.376	1.09	.322	1.48	.567	.604	.122	.052	.619	.184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se2062	Tl1908	V_2924	Zn2062	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**4900.**	**4660.**	**4830.**	**4940.**	**100.**	**103.**	**99.0**	**98.6**
Stddev	19.	14.	23.	6.	1.	1.	1.0	.7
%RSD	.391	.310	.471	.118	.791	.657	1.04	.754
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ccv1 Acquired: 10/29/2021 16:55:10 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**200640.**	**2250600.**	**37808.**
Stddev	385.	8564.	128.
%RSD	.19198	.38053	.33853

Sample Name: ccv2 Acquired: 10/29/2021 17:00:26 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	As1972	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**48.3**	**497.**	**497.**	**502.**	**492.**	**48.4**	**494.**	**514.**	**48.3**	**510.**	**505.**	**515.**
Stddev	.4	2.	3.	4.	.	.5	2.	2.	.2	.	5.	2.
%RSD	.803	.373	.636	.763	.066	1.12	.317	.348	.365	.050	.917	.363
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2020	Ni2216	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**510.**	**493.**	**475.**	**493.**	**505.**	**509.**	**507.**	**515.**	**509.**	**514.**	**524.**	**507.**
Stddev	6.	7.	95.	5.	1.	1.	1.	4.	4.	5.	1.	6.
%RSD	1.08	1.41	20.1	1.02	.291	.106	.213	.791	.723	.932	.128	1.26
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**515.**	**520.**	**10.0**	**10.2**	**10.1**	**10.1**
Stddev	.	1.	.0	.0	.1	.1
%RSD	.036	.144	.171	.394	1.20	.592
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: ccv2 Acquired: 10/29/2021 17:00:26 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**207270.**	**2333700.**	**38744.**
Stddev	173.	20734.	124.
%RSD	.08349	.88846	.31934

Sample Name: ccb Acquired: 10/29/2021 17:06:01 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.307**	**-.279**	**-.616**	**-.445**	**-.761**	**-13.0**	**-.916**	**-.419**	**-.352**	**-.974**	**.086**	**.630**
Stddev	.522	.035	1.32	.069	.003	.1	.252	.010	.212	.703	.551	2.65
%RSD	170.	12.4	215.	15.4	.393	.553	27.5	2.29	60.3	72.2	639.	421.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Fe2599	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-20.4**	**-5.60**	**-.722**	**-.789**	**-1.02**	**-.155**	**-.844**	**-.840**	**-1.65**	**-2.24**	**-.334**	**-.368**
Stddev	20.2	163.	.056	.075	1.55	.063	1.46	1.21	3.14	3.11	.454	.093
%RSD	98.9	2910.	7.78	9.45	152.	40.6	173.	144.	190.	139.	136.	25.2
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

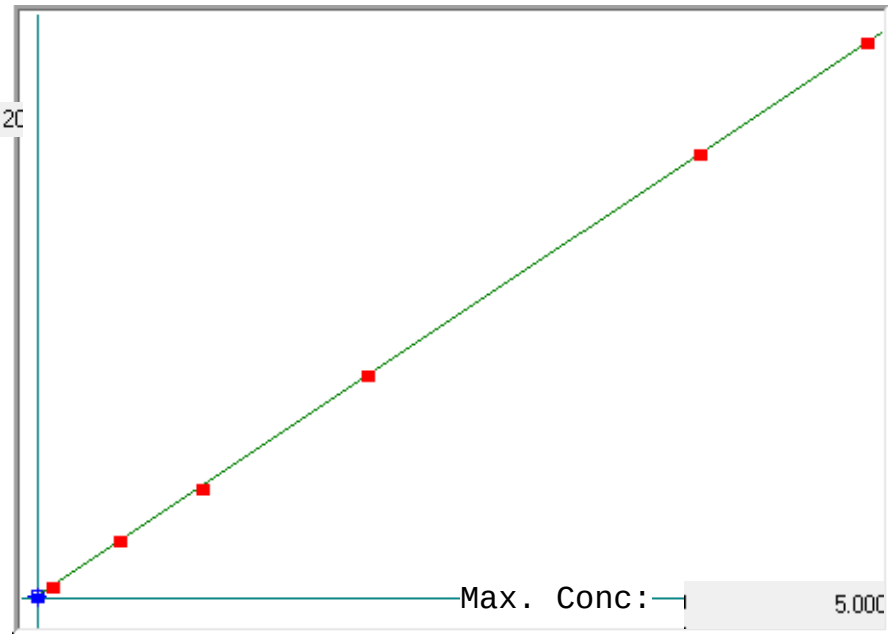
Elem	Na5889	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.176**	**.031**	**.357**	**.194**
Stddev	.062	.015	.058	.106
%RSD	35.5	50.2	16.3	54.3
Check ?	None	None	None	None
Value				
Range				

Sample Name: ccb Acquired: 10/29/2021 17:06:01 Type: QC
Method: DOD Calibration Updated 060614(v4598) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3600
Units	Cts/S	Cts/S	Cts/S
Avg	**211270.**	**2364600.**	**39754.**
Stddev	367.	12019.	223.
%RSD	.17387	.50826	.56083

Hg WATERS

Wt. Linear



A= 0.0000e+000

B= 1.6151e-004

C= -2.3041e-002

Rho= 0.9999409

Accept= Accepted

Accepted Date=

11/05/21 09:20

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
CALIBRATION BLANK	0.000	0.000	0.000	144	7.259	152	138	152	137	
0.1	0.100	0.096	-0.004	738	2.9 %	708	730	761	755	
0.5	0.500	0.506	0.006	3274	1.3 %	3200	3297	3301	3299	
1.0	1.000	0.985	-0.015	6244	1.8 %	6098	6186	6297	6395	
2.0	2.000	1.998	-0.002	12512	1.7 %	12191	12445	12646	12767	
4.0	4.000	4.010	0.010	24969	1.2 %	24543	24888	25140	25308	
5.0	5.000	5.003	0.003	31119	1.6 %	30409	30961	31370	31738	

110521W

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2021 08:32:49

Sample ID	Date	Element	Units	Extended ID	Mean
CALIBRATION BLANK	05 Nov 2021 08:58:03	Hg			145
0.1	05 Nov 2021 09:01:13	Hg			739
0.5	05 Nov 2021 09:04:24	Hg			3274
1.0	05 Nov 2021 09:07:36	Hg			6244
2.0	05 Nov 2021 09:10:48	Hg			12512
4.0	05 Nov 2021 09:13:59	Hg			24970
5.0	05 Nov 2021 09:17:10	Hg			31120
ICV	05 Nov 2021 09:20:20	Hg			102.5% 3.076
ICB	05 Nov 2021 09:26:40	Hg			-0.002
MBW	05 Nov 2021 09:29:50	Hg			0.000
MSDW1063758	05 Nov 2021 09:33:00	Hg			2.157
1063759	05 Nov 2021 09:36:10	Hg			-0.005
1063760	05 Nov 2021 09:39:21	Hg			0.104
1063829	05 Nov 2021 09:42:31	Hg			0.009
1064426	05 Nov 2021 09:45:42	Hg			-0.003
1064437	05 Nov 2021 09:48:53	Hg			0.006
1064438	05 Nov 2021 09:52:05	Hg			0.029
1064439	05 Nov 2021 09:55:15	Hg			-0.001
1064440	05 Nov 2021 09:58:25	Hg			0.006
CCV	05 Nov 2021 10:01:35	Hg			94.7% 2.840
CCB	05 Nov 2021 10:07:54	Hg			-0.004
1064441	05 Nov 2021 10:11:04	Hg			0.259
1064442	05 Nov 2021 10:14:14	Hg			0.003
1065694	05 Nov 2021 10:17:24	Hg			0.001
1065695	05 Nov 2021 10:20:35	Hg			0.012
1065696	05 Nov 2021 10:23:45	Hg			0.008
1065697	05 Nov 2021 10:26:55	Hg			0.195
1065698	05 Nov 2021 10:30:06	Hg			0.008
1065699	05 Nov 2021 10:33:17	Hg			-0.004
1065700	05 Nov 2021 10:36:28	Hg			0.010
1065716	05 Nov 2021 10:39:40	Hg			0.006
CCV	05 Nov 2021 10:42:50	Hg			98.4% 2.951
CCB	05 Nov 2021 10:49:09	Hg			-0.006
LCSW	05 Nov 2021 10:52:19	Hg			1.939
MBW	05 Nov 2021 10:58:39	Hg			0.001
1060821	05 Nov 2021 11:01:49	Hg		5	1.369
1066849	05 Nov 2021 11:08:10	Hg			-0.017
DUP1066849	05 Nov 2021 11:11:20	Hg			-0.017
1067793	05 Nov 2021 11:14:31	Hg			-0.011
1060821	05 Nov 2021 11:17:42	Hg		2	3.428
DUP1060821	05 Nov 2021 11:20:53	Hg		2	3.619
CCV	05 Nov 2021 11:24:04	Hg			98.4% 2.953
CCB	05 Nov 2021 11:30:24	Hg			-0.004
MSW1060821	05 Nov 2021 11:33:34	Hg		2	4.095
MSDW1060821	05 Nov 2021 11:36:46	Hg		2	4.012
MSW1066849	05 Nov 2021 11:39:56	Hg			0.591
MSDW1066849	05 Nov 2021 11:43:07	Hg			0.536
1065160	05 Nov 2021 11:49:29	Hg			-0.004
1067508	05 Nov 2021 11:52:40	Hg			-0.007
1065429	05 Nov 2021 11:55:51	Hg			0.011
1065430	05 Nov 2021 11:59:01	Hg			4.233
1065431	05 Nov 2021 12:02:12	Hg			1.415
CCV	05 Nov 2021 12:05:23	Hg			101.5% 3.046
CCB	05 Nov 2021 12:11:42	Hg			-0.000
1067667	05 Nov 2021 12:14:52	Hg			0.001
1067673	05 Nov 2021 12:18:03	Hg			0.007
1067674	05 Nov 2021 12:21:15	Hg			0.296
DUP1067674	05 Nov 2021 12:24:26	Hg			0.309
1067675	05 Nov 2021 12:27:37	Hg			0.003
1067676	05 Nov 2021 12:30:48	Hg			0.004
1067677	05 Nov 2021 12:33:59	Hg			0.001
DUP1067677	05 Nov 2021 12:37:09	Hg			0.007
1067678	05 Nov 2021 12:40:20	Hg			0.096
1067679	05 Nov 2021 12:43:30	Hg			0.024
CCV	05 Nov 2021 12:46:41	Hg			92.2% 2.767
CCB	05 Nov 2021 12:53:01	Hg			0.000
1067680	05 Nov 2021 12:56:10	Hg			0.015
1067681	05 Nov 2021 12:59:21	Hg			0.024
DUP1067681	05 Nov 2021 13:02:32	Hg			0.027
1067682	05 Nov 2021 13:05:43	Hg			0.445
1067696	05 Nov 2021 13:08:55	Hg			0.005

110521W

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2021 08:32:49

Sample ID	Date	Element	Units	Extended ID	Mean
MSW1067674	05 Nov 2021 13:12:07	Hg			2.114
MSDW1067674	05 Nov 2021 13:15:17	Hg			2.059
MSW1067677	05 Nov 2021 13:18:28	Hg			1.865
MSDW1067677	05 Nov 2021 13:21:39	Hg			1.946
MSW1067681	05 Nov 2021 13:24:50	Hg			1.916
CCV	05 Nov 2021 13:28:01	Hg			96.2% 2.886
CCB	05 Nov 2021 13:34:21	Hg			0.008
MSDW1067681	05 Nov 2021 13:37:30	Hg			1.926
LCSW	05 Nov 2021 13:40:41	Hg			1.865
MBW	05 Nov 2021 13:47:03	Hg			0.001
1065199	05 Nov 2021 13:50:14	Hg			0.012
1065211	05 Nov 2021 13:53:25	Hg			0.017
1065214	05 Nov 2021 13:56:37	Hg			0.056
1065718	05 Nov 2021 13:59:49	Hg			0.019
1065720	05 Nov 2021 14:03:01	Hg			0.031
1065723	05 Nov 2021 14:06:12	Hg			0.030
CCV	05 Nov 2021 14:09:23	Hg			97.6% 2.927
CCB	05 Nov 2021 14:15:43	Hg			-0.001
MSW1065199	05 Nov 2021 14:18:53	Hg			1.684
MSW1065718	05 Nov 2021 14:22:04	Hg			1.716
CCV	05 Nov 2021 14:25:15	Hg			(L)88.7% 2.662
CCV	05 Nov 2021 14:28:25	Hg			92.8% 2.784
CCB	05 Nov 2021 14:34:45	Hg			-0.007

110521W DETAILED

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2021 08:32:49

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CALIBRATION BLANK - 1	05 Nov 2021 08:58:03	Hg			152	-
CALIBRATION BLANK - 2	05 Nov 2021 08:58:03	Hg			138	-
CALIBRATION BLANK - 3	05 Nov 2021 08:58:03	Hg			152	-
CALIBRATION BLANK - 4	05 Nov 2021 08:58:03	Hg			137	-
0.1 - 1	05 Nov 2021 09:01:13	Hg			708	-
0.1 - 2	05 Nov 2021 09:01:13	Hg			730	-
0.1 - 3	05 Nov 2021 09:01:13	Hg			761	-
0.1 - 4	05 Nov 2021 09:01:13	Hg			755	-
0.5 - 1	05 Nov 2021 09:04:24	Hg			3200	-
0.5 - 2	05 Nov 2021 09:04:24	Hg			3297	-
0.5 - 3	05 Nov 2021 09:04:24	Hg			3301	-
0.5 - 4	05 Nov 2021 09:04:24	Hg			3299	-
1.0 - 1	05 Nov 2021 09:07:36	Hg			6098	-
1.0 - 2	05 Nov 2021 09:07:36	Hg			6186	-
1.0 - 3	05 Nov 2021 09:07:36	Hg			6297	-
1.0 - 4	05 Nov 2021 09:07:36	Hg			6395	-
2.0 - 1	05 Nov 2021 09:10:48	Hg			12191	-
2.0 - 2	05 Nov 2021 09:10:48	Hg			12445	-
2.0 - 3	05 Nov 2021 09:10:48	Hg			12646	-
2.0 - 4	05 Nov 2021 09:10:48	Hg			12767	-
4.0 - 1	05 Nov 2021 09:13:59	Hg			24543	-
4.0 - 2	05 Nov 2021 09:13:59	Hg			24888	-
4.0 - 3	05 Nov 2021 09:13:59	Hg			25140	-
4.0 - 4	05 Nov 2021 09:13:59	Hg			25308	-
5.0 - 1	05 Nov 2021 09:17:10	Hg			30409	-
5.0 - 2	05 Nov 2021 09:17:10	Hg			30961	-
5.0 - 3	05 Nov 2021 09:17:10	Hg			31370	-
5.0 - 4	05 Nov 2021 09:17:10	Hg			31738	-
ICV - 1	05 Nov 2021 09:20:20	Hg			18786	100.4% 3.011
ICV - 2	05 Nov 2021 09:20:20	Hg			19093	102.0% 3.061
ICV - 3	05 Nov 2021 09:20:20	Hg			19332	103.3% 3.099
ICV - 4	05 Nov 2021 09:20:20	Hg			19532	104.4% 3.132
ICB - 1	05 Nov 2021 09:26:40	Hg			117	-0.004
ICB - 2	05 Nov 2021 09:26:40	Hg			149	0.001
ICB - 3	05 Nov 2021 09:26:40	Hg			113	-0.005
ICB - 4	05 Nov 2021 09:26:40	Hg			133	-0.002
MBW - 1	05 Nov 2021 09:29:50	Hg			111	-0.005
MBW - 2	05 Nov 2021 09:29:50	Hg			136	-0.001
MBW - 3	05 Nov 2021 09:29:50	Hg			166	0.004
MBW - 4	05 Nov 2021 09:29:50	Hg			168	0.004
MSDW1063758 - 1	05 Nov 2021 09:33:00	Hg			13108	2.094
MSDW1063758 - 2	05 Nov 2021 09:33:00	Hg			13446	2.149
MSDW1063758 - 3	05 Nov 2021 09:33:00	Hg			13668	2.184
MSDW1063758 - 4	05 Nov 2021 09:33:00	Hg			13782	2.203
1063759 - 1	05 Nov 2021 09:36:10	Hg			90	-0.009
1063759 - 2	05 Nov 2021 09:36:10	Hg			111	-0.005
1063759 - 3	05 Nov 2021 09:36:10	Hg			132	-0.002
1063759 - 4	05 Nov 2021 09:36:10	Hg			123	-0.003
1063760 - 1	05 Nov 2021 09:39:21	Hg			773	0.102
1063760 - 2	05 Nov 2021 09:39:21	Hg			790	0.105
1063760 - 3	05 Nov 2021 09:39:21	Hg			770	0.101
1063760 - 4	05 Nov 2021 09:39:21	Hg			810	0.108
1063829 - 1	05 Nov 2021 09:42:31	Hg			187	0.007
1063829 - 2	05 Nov 2021 09:42:31	Hg			192	0.008
1063829 - 3	05 Nov 2021 09:42:31	Hg			207	0.010
1063829 - 4	05 Nov 2021 09:42:31	Hg			211	0.011
1064426 - 1	05 Nov 2021 09:45:42	Hg			79	-0.010
1064426 - 2	05 Nov 2021 09:45:42	Hg			155	0.002
1064426 - 3	05 Nov 2021 09:45:42	Hg			133	-0.002
1064426 - 4	05 Nov 2021 09:45:42	Hg			136	-0.001
1064437 - 1	05 Nov 2021 09:48:53	Hg			196	0.009
1064437 - 2	05 Nov 2021 09:48:53	Hg			185	0.007
1064437 - 3	05 Nov 2021 09:48:53	Hg			173	0.005
1064437 - 4	05 Nov 2021 09:48:53	Hg			153	0.002
1064438 - 1	05 Nov 2021 09:52:05	Hg			311	0.027
1064438 - 2	05 Nov 2021 09:52:05	Hg			317	0.028
1064438 - 3	05 Nov 2021 09:52:05	Hg			331	0.030
1064438 - 4	05 Nov 2021 09:52:05	Hg			330	0.030
1064439 - 1	05 Nov 2021 09:55:15	Hg			149	0.001
1064439 - 2	05 Nov 2021 09:55:15	Hg			114	-0.005
1064439 - 3	05 Nov 2021 09:55:15	Hg			131	-0.002
1064439 - 4	05 Nov 2021 09:55:15	Hg			148	0.001
1064440 - 1	05 Nov 2021 09:58:25	Hg			181	0.006
1064440 - 2	05 Nov 2021 09:58:25	Hg			181	0.006
1064440 - 3	05 Nov 2021 09:58:25	Hg			179	0.006
1064440 - 4	05 Nov 2021 09:58:25	Hg			172	0.005
CCV - 1	05 Nov 2021 10:01:35	Hg			17520	93.6% 2.807
CCV - 2	05 Nov 2021 10:01:35	Hg			17673	94.4% 2.831
CCV - 3	05 Nov 2021 10:01:35	Hg			17782	95.0% 2.849

110521W DETAILED

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2021 08:32:49

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CCV - 4	05 Nov 2021 10:01:35	Hg			17929	95.8% 2.873
CCB - 1	05 Nov 2021 10:07:54	Hg			106	-0.006
CCB - 2	05 Nov 2021 10:07:54	Hg			113	-0.005
CCB - 3	05 Nov 2021 10:07:54	Hg			135	-0.001
CCB - 4	05 Nov 2021 10:07:54	Hg			125	-0.003
1064441 - 1	05 Nov 2021 10:11:04	Hg			1711	0.253
1064441 - 2	05 Nov 2021 10:11:04	Hg			1735	0.257
1064441 - 3	05 Nov 2021 10:11:04	Hg			1770	0.263
1064441 - 4	05 Nov 2021 10:11:04	Hg			1771	0.263
1064442 - 1	05 Nov 2021 10:14:14	Hg			141	-0.000
1064442 - 2	05 Nov 2021 10:14:14	Hg			164	0.003
1064442 - 3	05 Nov 2021 10:14:14	Hg			158	0.002
1064442 - 4	05 Nov 2021 10:14:14	Hg			188	0.007
1065694 - 1	05 Nov 2021 10:17:24	Hg			120	-0.004
1065694 - 2	05 Nov 2021 10:17:24	Hg			159	0.003
1065694 - 3	05 Nov 2021 10:17:24	Hg			156	0.002
1065694 - 4	05 Nov 2021 10:17:24	Hg			168	0.004
1065695 - 1	05 Nov 2021 10:20:35	Hg			212	0.011
1065695 - 2	05 Nov 2021 10:20:35	Hg			236	0.015
1065695 - 3	05 Nov 2021 10:20:35	Hg			191	0.008
1065695 - 4	05 Nov 2021 10:20:35	Hg			230	0.014
1065696 - 1	05 Nov 2021 10:23:45	Hg			179	0.006
1065696 - 2	05 Nov 2021 10:23:45	Hg			211	0.011
1065696 - 3	05 Nov 2021 10:23:45	Hg			194	0.008
1065696 - 4	05 Nov 2021 10:23:45	Hg			192	0.008
1065697 - 1	05 Nov 2021 10:26:55	Hg			1309	0.188
1065697 - 2	05 Nov 2021 10:26:55	Hg			1347	0.195
1065697 - 3	05 Nov 2021 10:26:55	Hg			1362	0.197
1065697 - 4	05 Nov 2021 10:26:55	Hg			1371	0.198
1065698 - 1	05 Nov 2021 10:30:06	Hg			181	0.006
1065698 - 2	05 Nov 2021 10:30:06	Hg			166	0.004
1065698 - 3	05 Nov 2021 10:30:06	Hg			206	0.010
1065698 - 4	05 Nov 2021 10:30:06	Hg			204	0.010
1065699 - 1	05 Nov 2021 10:33:17	Hg			101	-0.007
1065699 - 2	05 Nov 2021 10:33:17	Hg			108	-0.006
1065699 - 3	05 Nov 2021 10:33:17	Hg			150	0.001
1065699 - 4	05 Nov 2021 10:33:17	Hg			113	-0.005
1065700 - 1	05 Nov 2021 10:36:28	Hg			188	0.007
1065700 - 2	05 Nov 2021 10:36:28	Hg			211	0.011
1065700 - 3	05 Nov 2021 10:36:28	Hg			193	0.008
1065700 - 4	05 Nov 2021 10:36:28	Hg			222	0.013
1065716 - 1	05 Nov 2021 10:39:40	Hg			177	0.006
1065716 - 2	05 Nov 2021 10:39:40	Hg			158	0.002
1065716 - 3	05 Nov 2021 10:39:40	Hg			204	0.010
1065716 - 4	05 Nov 2021 10:39:40	Hg			170	0.004
CCV - 1	05 Nov 2021 10:42:50	Hg			17992	96.1% 2.883
CCV - 2	05 Nov 2021 10:42:50	Hg			18236	97.4% 2.922
CCV - 3	05 Nov 2021 10:42:50	Hg			18559	99.1% 2.974
CCV - 4	05 Nov 2021 10:42:50	Hg			18863	100.8% 3.023
CCB - 1	05 Nov 2021 10:49:09	Hg			94	-0.008
CCB - 2	05 Nov 2021 10:49:09	Hg			115	-0.004
CCB - 3	05 Nov 2021 10:49:09	Hg			102	-0.007
CCB - 4	05 Nov 2021 10:49:09	Hg			122	-0.003
LCSW - 1	05 Nov 2021 10:52:19	Hg			11882	1.896
LCSW - 2	05 Nov 2021 10:52:19	Hg			12072	1.927
LCSW - 3	05 Nov 2021 10:52:19	Hg			12220	1.951
LCSW - 4	05 Nov 2021 10:52:19	Hg			12410	1.981
MBW - 1	05 Nov 2021 10:58:39	Hg			156	0.002
MBW - 2	05 Nov 2021 10:58:39	Hg			170	0.004
MBW - 3	05 Nov 2021 10:58:39	Hg			133	-0.002
MBW - 4	05 Nov 2021 10:58:39	Hg			140	-0.000
1060821 - 1	05 Nov 2021 11:01:49	Hg		5	8491	1.348
1060821 - 2	05 Nov 2021 11:01:49	Hg		5	8603	1.366
1060821 - 3	05 Nov 2021 11:01:49	Hg		5	8661	1.376
1060821 - 4	05 Nov 2021 11:01:49	Hg		5	8715	1.384
1066849 - 1	05 Nov 2021 11:08:10	Hg			54	-0.014
1066849 - 2	05 Nov 2021 11:08:10	Hg			26	-0.019
1066849 - 3	05 Nov 2021 11:08:10	Hg			35	-0.017
1066849 - 4	05 Nov 2021 11:08:10	Hg			30	-0.018
DUP1066849 - 1	05 Nov 2021 11:11:20	Hg			56	-0.014
DUP1066849 - 2	05 Nov 2021 11:11:20	Hg			41	-0.016
DUP1066849 - 3	05 Nov 2021 11:11:20	Hg			25	-0.019
DUP1066849 - 4	05 Nov 2021 11:11:20	Hg			37	-0.017
1067793 - 1	05 Nov 2021 11:14:31	Hg			49	-0.015
1067793 - 2	05 Nov 2021 11:14:31	Hg			88	-0.009
1067793 - 3	05 Nov 2021 11:14:31	Hg			88	-0.009
1067793 - 4	05 Nov 2021 11:14:31	Hg			74	-0.011
1060821 - 1	05 Nov 2021 11:17:42	Hg		2	21136	3.391
1060821 - 2	05 Nov 2021 11:17:42	Hg		2	21335	3.423

110521W DETAILED

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2021 08:32:49

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
1060821 - 3	05 Nov 2021 11:17:42	Hg		2	21461	3.443
1060821 - 4	05 Nov 2021 11:17:42	Hg		2	21537	3.455
DUP1060821 - 1	05 Nov 2021 11:20:53	Hg		2	22138	3.552
DUP1060821 - 2	05 Nov 2021 11:20:53	Hg		2	22523	3.615
DUP1060821 - 3	05 Nov 2021 11:20:53	Hg		2	22707	3.644
DUP1060821 - 4	05 Nov 2021 11:20:53	Hg		2	22836	3.665
CCV - 1	05 Nov 2021 11:24:04	Hg			17999	96.1% 2.884
CCV - 2	05 Nov 2021 11:24:04	Hg			18277	97.6% 2.929
CCV - 3	05 Nov 2021 11:24:04	Hg			18560	99.2% 2.975
CCV - 4	05 Nov 2021 11:24:04	Hg			18873	100.8% 3.025
CCB - 1	05 Nov 2021 11:30:24	Hg			118	-0.004
CCB - 2	05 Nov 2021 11:30:24	Hg			148	0.001
CCB - 3	05 Nov 2021 11:30:24	Hg			113	-0.005
CCB - 4	05 Nov 2021 11:30:24	Hg			101	-0.007
MSW1060821 - 1	05 Nov 2021 11:33:34	Hg		2	25025	4.019
MSW1060821 - 2	05 Nov 2021 11:33:34	Hg		2	25330	4.068
MSW1060821 - 3	05 Nov 2021 11:33:34	Hg		2	25618	4.114
MSW1060821 - 4	05 Nov 2021 11:33:34	Hg		2	26026	4.180
MSDW1060821 - 1	05 Nov 2021 11:36:46	Hg		2	24338	3.908
MSDW1060821 - 2	05 Nov 2021 11:36:46	Hg		2	24881	3.995
MSDW1060821 - 3	05 Nov 2021 11:36:46	Hg		2	25217	4.050
MSDW1060821 - 4	05 Nov 2021 11:36:46	Hg		2	25488	4.093
MSW1066849 - 1	05 Nov 2021 11:39:56	Hg			4042	0.630
MSW1066849 - 2	05 Nov 2021 11:39:56	Hg			3855	0.600
MSW1066849 - 3	05 Nov 2021 11:39:56	Hg			3699	0.574
MSW1066849 - 4	05 Nov 2021 11:39:56	Hg			3603	0.559
MSDW1066849 - 1	05 Nov 2021 11:43:07	Hg			3659	0.568
MSDW1066849 - 2	05 Nov 2021 11:43:07	Hg			3504	0.543
MSDW1066849 - 3	05 Nov 2021 11:43:07	Hg			3392	0.525
MSDW1066849 - 4	05 Nov 2021 11:43:07	Hg			3289	0.508
1065160 - 1	05 Nov 2021 11:49:29	Hg			113	-0.005
1065160 - 2	05 Nov 2021 11:49:29	Hg			102	-0.007
1065160 - 3	05 Nov 2021 11:49:29	Hg			131	-0.002
1065160 - 4	05 Nov 2021 11:49:29	Hg			115	-0.004
1067508 - 1	05 Nov 2021 11:52:40	Hg			44	-0.016
1067508 - 2	05 Nov 2021 11:52:40	Hg			74	-0.011
1067508 - 3	05 Nov 2021 11:52:40	Hg			135	-0.001
1067508 - 4	05 Nov 2021 11:52:40	Hg			145	0.000
1065429 - 1	05 Nov 2021 11:55:51	Hg			210	0.011
1065429 - 2	05 Nov 2021 11:55:51	Hg			215	0.012
1065429 - 3	05 Nov 2021 11:55:51	Hg			184	0.007
1065429 - 4	05 Nov 2021 11:55:51	Hg			233	0.015
1065430 - 1	05 Nov 2021 11:59:01	Hg			25692	4.126
1065430 - 2	05 Nov 2021 11:59:01	Hg			26223	4.212
1065430 - 3	05 Nov 2021 11:59:01	Hg			26648	4.281
1065430 - 4	05 Nov 2021 11:59:01	Hg			26852	4.314
1065431 - 1	05 Nov 2021 12:02:12	Hg			8786	1.396
1065431 - 2	05 Nov 2021 12:02:12	Hg			8835	1.404
1065431 - 3	05 Nov 2021 12:02:12	Hg			8920	1.418
1065431 - 4	05 Nov 2021 12:02:12	Hg			9082	1.444
CCV - 1	05 Nov 2021 12:05:23	Hg			18603	99.4% 2.981
CCV - 2	05 Nov 2021 12:05:23	Hg			18928	101.1% 3.034
CCV - 3	05 Nov 2021 12:05:23	Hg			19116	102.1% 3.064
CCV - 4	05 Nov 2021 12:05:23	Hg			19370	103.5% 3.105
CCB - 1	05 Nov 2021 12:11:42	Hg			152	0.002
CCB - 2	05 Nov 2021 12:11:42	Hg			134	-0.001
CCB - 3	05 Nov 2021 12:11:42	Hg			122	-0.003
CCB - 4	05 Nov 2021 12:11:42	Hg			154	0.002
1067667 - 1	05 Nov 2021 12:14:52	Hg			131	-0.002
1067667 - 2	05 Nov 2021 12:14:52	Hg			148	0.001
1067667 - 3	05 Nov 2021 12:14:52	Hg			156	0.002
1067667 - 4	05 Nov 2021 12:14:52	Hg			157	0.002
1067673 - 1	05 Nov 2021 12:18:03	Hg			197	0.009
1067673 - 2	05 Nov 2021 12:18:03	Hg			170	0.004
1067673 - 3	05 Nov 2021 12:18:03	Hg			172	0.005
1067673 - 4	05 Nov 2021 12:18:03	Hg			205	0.010
1067674 - 1	05 Nov 2021 12:21:15	Hg			1916	0.286
1067674 - 2	05 Nov 2021 12:21:15	Hg			1971	0.295
1067674 - 3	05 Nov 2021 12:21:15	Hg			1964	0.294
1067674 - 4	05 Nov 2021 12:21:15	Hg			2054	0.309
DUP1067674 - 1	05 Nov 2021 12:24:26	Hg			2004	0.301
DUP1067674 - 2	05 Nov 2021 12:24:26	Hg			2034	0.305
DUP1067674 - 3	05 Nov 2021 12:24:26	Hg			2061	0.310
DUP1067674 - 4	05 Nov 2021 12:24:26	Hg			2128	0.321
1067675 - 1	05 Nov 2021 12:27:37	Hg			158	0.002
1067675 - 2	05 Nov 2021 12:27:37	Hg			140	-0.000
1067675 - 3	05 Nov 2021 12:27:37	Hg			157	0.002
1067675 - 4	05 Nov 2021 12:27:37	Hg			183	0.007
1067676 - 1	05 Nov 2021 12:30:48	Hg			153	0.002

110521W DETAILED

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2021 08:32:49

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
1067676 - 2	05 Nov 2021 12:30:48	Hg			168	0.004
1067676 - 3	05 Nov 2021 12:30:48	Hg			164	0.003
1067676 - 4	05 Nov 2021 12:30:48	Hg			183	0.007
1067677 - 1	05 Nov 2021 12:33:59	Hg			143	0.000
1067677 - 2	05 Nov 2021 12:33:59	Hg			138	-0.001
1067677 - 3	05 Nov 2021 12:33:59	Hg			172	0.005
1067677 - 4	05 Nov 2021 12:33:59	Hg			136	-0.001
DUP1067677 - 1	05 Nov 2021 12:37:09	Hg			196	0.009
DUP1067677 - 2	05 Nov 2021 12:37:09	Hg			209	0.011
DUP1067677 - 3	05 Nov 2021 12:37:09	Hg			152	0.002
DUP1067677 - 4	05 Nov 2021 12:37:09	Hg			197	0.009
1067678 - 1	05 Nov 2021 12:40:20	Hg			694	0.089
1067678 - 2	05 Nov 2021 12:40:20	Hg			739	0.096
1067678 - 3	05 Nov 2021 12:40:20	Hg			735	0.096
1067678 - 4	05 Nov 2021 12:40:20	Hg			768	0.101
1067679 - 1	05 Nov 2021 12:43:30	Hg			277	0.022
1067679 - 2	05 Nov 2021 12:43:30	Hg			291	0.024
1067679 - 3	05 Nov 2021 12:43:30	Hg			295	0.025
1067679 - 4	05 Nov 2021 12:43:30	Hg			290	0.024
CCV - 1	05 Nov 2021 12:46:41	Hg			16869	90.0% 2.701
CCV - 2	05 Nov 2021 12:46:41	Hg			17115	91.4% 2.741
CCV - 3	05 Nov 2021 12:46:41	Hg			17426	93.0% 2.791
CCV - 4	05 Nov 2021 12:46:41	Hg			17702	94.5% 2.836
CCB - 1	05 Nov 2021 12:53:01	Hg			125	-0.003
CCB - 2	05 Nov 2021 12:53:01	Hg			146	0.001
CCB - 3	05 Nov 2021 12:53:01	Hg			143	0.000
CCB - 4	05 Nov 2021 12:53:01	Hg			160	0.003
1067680 - 1	05 Nov 2021 12:56:10	Hg			239	0.016
1067680 - 2	05 Nov 2021 12:56:10	Hg			223	0.013
1067680 - 3	05 Nov 2021 12:56:10	Hg			230	0.014
1067680 - 4	05 Nov 2021 12:56:10	Hg			246	0.017
1067681 - 1	05 Nov 2021 12:59:21	Hg			273	0.021
1067681 - 2	05 Nov 2021 12:59:21	Hg			281	0.022
1067681 - 3	05 Nov 2021 12:59:21	Hg			300	0.025
1067681 - 4	05 Nov 2021 12:59:21	Hg			322	0.029
DUP1067681 - 1	05 Nov 2021 13:02:32	Hg			311	0.027
DUP1067681 - 2	05 Nov 2021 13:02:32	Hg			312	0.027
DUP1067681 - 3	05 Nov 2021 13:02:32	Hg			304	0.026
DUP1067681 - 4	05 Nov 2021 13:02:32	Hg			324	0.029
1067682 - 1	05 Nov 2021 13:05:43	Hg			2821	0.433
1067682 - 2	05 Nov 2021 13:05:43	Hg			2836	0.435
1067682 - 3	05 Nov 2021 13:05:43	Hg			2919	0.448
1067682 - 4	05 Nov 2021 13:05:43	Hg			3006	0.462
1067696 - 1	05 Nov 2021 13:08:55	Hg			166	0.004
1067696 - 2	05 Nov 2021 13:08:55	Hg			189	0.007
1067696 - 3	05 Nov 2021 13:08:55	Hg			189	0.007
1067696 - 4	05 Nov 2021 13:08:55	Hg			139	-0.001
MSW1067674 - 1	05 Nov 2021 13:12:07	Hg			12759	2.038
MSW1067674 - 2	05 Nov 2021 13:12:07	Hg			13131	2.098
MSW1067674 - 3	05 Nov 2021 13:12:07	Hg			13422	2.145
MSW1067674 - 4	05 Nov 2021 13:12:07	Hg			13626	2.178
MSDW1067674 - 1	05 Nov 2021 13:15:17	Hg			12525	2.000
MSDW1067674 - 2	05 Nov 2021 13:15:17	Hg			12816	2.047
MSDW1067674 - 3	05 Nov 2021 13:15:17	Hg			13051	2.085
MSDW1067674 - 4	05 Nov 2021 13:15:17	Hg			13174	2.105
MSW1067677 - 1	05 Nov 2021 13:18:28	Hg			11349	1.810
MSW1067677 - 2	05 Nov 2021 13:18:28	Hg			11579	1.847
MSW1067677 - 3	05 Nov 2021 13:18:28	Hg			11854	1.891
MSW1067677 - 4	05 Nov 2021 13:18:28	Hg			11982	1.912
MSDW1067677 - 1	05 Nov 2021 13:21:39	Hg			11952	1.907
MSDW1067677 - 2	05 Nov 2021 13:21:39	Hg			12104	1.932
MSDW1067677 - 3	05 Nov 2021 13:21:39	Hg			12220	1.951
MSDW1067677 - 4	05 Nov 2021 13:21:39	Hg			12491	1.994
MSW1067681 - 1	05 Nov 2021 13:24:50	Hg			11790	1.881
MSW1067681 - 2	05 Nov 2021 13:24:50	Hg			11936	1.905
MSW1067681 - 3	05 Nov 2021 13:24:50	Hg			12043	1.922
MSW1067681 - 4	05 Nov 2021 13:24:50	Hg			12246	1.955
CCV - 1	05 Nov 2021 13:28:01	Hg			17640	94.2% 2.826
CCV - 2	05 Nov 2021 13:28:01	Hg			17870	95.4% 2.863
CCV - 3	05 Nov 2021 13:28:01	Hg			18130	96.8% 2.905
CCV - 4	05 Nov 2021 13:28:01	Hg			18401	98.3% 2.949
CCB - 1	05 Nov 2021 13:34:21	Hg			192	0.008
CCB - 2	05 Nov 2021 13:34:21	Hg			190	0.008
CCB - 3	05 Nov 2021 13:34:21	Hg			186	0.007
CCB - 4	05 Nov 2021 13:34:21	Hg			210	0.011
MSDW1067681 - 1	05 Nov 2021 13:37:30	Hg			11831	1.888
MSDW1067681 - 2	05 Nov 2021 13:37:30	Hg			11987	1.913
MSDW1067681 - 3	05 Nov 2021 13:37:30	Hg			12149	1.939
MSDW1067681 - 4	05 Nov 2021 13:37:30	Hg			12299	1.963

110521W DETAILED

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2021 08:32:49

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
LCSW - 1	05 Nov 2021 13:40:41	Hg			11376	1.814
LCSW - 2	05 Nov 2021 13:40:41	Hg			11611	1.852
LCSW - 3	05 Nov 2021 13:40:41	Hg			11815	1.885
LCSW - 4	05 Nov 2021 13:40:41	Hg			11949	1.907
MBW - 1	05 Nov 2021 13:47:03	Hg			152	0.002
MBW - 2	05 Nov 2021 13:47:03	Hg			125	-0.003
MBW - 3	05 Nov 2021 13:47:03	Hg			157	0.002
MBW - 4	05 Nov 2021 13:47:03	Hg			173	0.005
1065199 - 1	05 Nov 2021 13:50:14	Hg			216	0.012
1065199 - 2	05 Nov 2021 13:50:14	Hg			239	0.016
1065199 - 3	05 Nov 2021 13:50:14	Hg			203	0.010
1065199 - 4	05 Nov 2021 13:50:14	Hg			220	0.012
1065211 - 1	05 Nov 2021 13:53:25	Hg			275	0.021
1065211 - 2	05 Nov 2021 13:53:25	Hg			228	0.014
1065211 - 3	05 Nov 2021 13:53:25	Hg			247	0.017
1065211 - 4	05 Nov 2021 13:53:25	Hg			254	0.018
1065214 - 1	05 Nov 2021 13:56:37	Hg			490	0.056
1065214 - 2	05 Nov 2021 13:56:37	Hg			478	0.054
1065214 - 3	05 Nov 2021 13:56:37	Hg			499	0.058
1065214 - 4	05 Nov 2021 13:56:37	Hg			493	0.057
1065718 - 1	05 Nov 2021 13:59:49	Hg			247	0.017
1065718 - 2	05 Nov 2021 13:59:49	Hg			258	0.019
1065718 - 3	05 Nov 2021 13:59:49	Hg			270	0.021
1065718 - 4	05 Nov 2021 13:59:49	Hg			265	0.020
1065720 - 1	05 Nov 2021 14:03:01	Hg			309	0.027
1065720 - 2	05 Nov 2021 14:03:01	Hg			328	0.030
1065720 - 3	05 Nov 2021 14:03:01	Hg			343	0.032
1065720 - 4	05 Nov 2021 14:03:01	Hg			350	0.033
1065723 - 1	05 Nov 2021 14:06:12	Hg			324	0.029
1065723 - 2	05 Nov 2021 14:06:12	Hg			327	0.030
1065723 - 3	05 Nov 2021 14:06:12	Hg			316	0.028
1065723 - 4	05 Nov 2021 14:06:12	Hg			342	0.032
CCV - 1	05 Nov 2021 14:09:23	Hg			17765	94.9% 2.846
CCV - 2	05 Nov 2021 14:09:23	Hg			18221	97.3% 2.920
CCV - 3	05 Nov 2021 14:09:23	Hg			18507	98.9% 2.966
CCV - 4	05 Nov 2021 14:09:23	Hg			18563	99.2% 2.975
CCB - 1	05 Nov 2021 14:15:43	Hg			143	0.000
CCB - 2	05 Nov 2021 14:15:43	Hg			136	-0.001
CCB - 3	05 Nov 2021 14:15:43	Hg			109	-0.005
CCB - 4	05 Nov 2021 14:15:43	Hg			146	0.001
MSW1065199 - 1	05 Nov 2021 14:18:53	Hg			10303	1.641
MSW1065199 - 2	05 Nov 2021 14:18:53	Hg			10519	1.676
MSW1065199 - 3	05 Nov 2021 14:18:53	Hg			10679	1.702
MSW1065199 - 4	05 Nov 2021 14:18:53	Hg			10785	1.719
MSW1065718 - 1	05 Nov 2021 14:22:04	Hg			10533	1.678
MSW1065718 - 2	05 Nov 2021 14:22:04	Hg			10701	1.705
MSW1065718 - 3	05 Nov 2021 14:22:04	Hg			10851	1.729
MSW1065718 - 4	05 Nov 2021 14:22:04	Hg			10996	1.753
CCV - 1	05 Nov 2021 14:25:15	Hg			16159	(L)86.2% 2.587
CCV - 2	05 Nov 2021 14:25:15	Hg			16440	(L)87.7% 2.632
CCV - 3	05 Nov 2021 14:25:15	Hg			16789	(L)89.6% 2.689
CCV - 4	05 Nov 2021 14:25:15	Hg			17104	91.3% 2.739
CCV - 1	05 Nov 2021 14:28:25	Hg			17083	91.2% 2.736
CCV - 2	05 Nov 2021 14:28:25	Hg			17329	92.5% 2.776
CCV - 3	05 Nov 2021 14:28:25	Hg			17502	93.5% 2.804
CCV - 4	05 Nov 2021 14:28:25	Hg			17601	94.0% 2.820
CCB - 1	05 Nov 2021 14:34:45	Hg			141	-0.000
CCB - 2	05 Nov 2021 14:34:45	Hg			105	-0.006
CCB - 3	05 Nov 2021 14:34:45	Hg			95	-0.008
CCB - 4	05 Nov 2021 14:34:45	Hg			63	-0.013

METALS
LOGBOOK
DOCUMENTS

MICP WATER QSM Analytical Run
196907 on 11/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1070146								MICP WATER QSM				
					ICV					0			
	1070147								MICP WATER QSM				
					ICVLL					0			
	1070148								MICP WATER QSM				
					ICB					0			
	1070149								MICP WATER QSM				
					ICSA					0			
	1070150								MICP WATER QSM				
					ICSAB					0			
	1070151								MICP WATER QSM				
					ICVLL					0			
	1067501								ICP TOTAL QSM 5.0				
					LCSW					83162			
	1067500								ICP TOTAL QSM 5.0				
					MBW					83162			
165486	1066849		10/27/2021	13:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ICP TOTAL QSM 5.0		GW	**4**	
		54-IDW								83162			
	1070152								ICP TOTAL QSM 5.0				
					L	1066849				0			
	1067499		10/27/2021	13:45					ICP TOTAL QSM 5.0				
		54-IDW			DUP	1066849				83162			
	1067502		10/27/2021	13:45					ICP TOTAL QSM 5.0				
		54-IDW			MSW	1066849				83162			
	1070153								MICP WATER QSM				
					CCV1					0			
	1070154								MICP WATER QSM				
					CCV2					0			
	1070155								MICP WATER QSM				
					CCB					0			
	1067503		10/27/2021	13:45					ICP TOTAL QSM 5.0				
		54-IDW			MSDW	1067502				83162			
	1070156								ICP TOTAL QSM 5.0				
					PDSW	1066849				0			
	1070157								MICP WATER QSM				
					CCV1					0			
	1070158								MICP WATER QSM				
					CCV2					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp270D.tmp

MICP WATER QSM Analytical Run
196907 on 11/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1070159						MICP WATER QSM				
				CCB				0			

20 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp270D.tmp

MICP WATER QSM K&Na Analytical Run
196908 on 11/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1070160								MICP WATER QSM K&Na				
					ICV					0			
	1070161								MICP WATER QSM K&Na				
					ICVLL					0			
	1070162								MICP WATER QSM K&Na				
					ICB					0			
	1070163								MICP WATER QSM K&Na				
					ICSA					0			
	1070164								MICP WATER QSM K&Na				
					ICSAB					0			
	1067495								ICP K TOTAL QSM 5.0				
					LCSW					83161			
	1067495								ICP NA TOTAL QSM 5.0				
					LCSW					83161			
	1067494								ICP K TOTAL QSM 5.0				
					MBW					83161			
	1067494								ICP NA TOTAL QSM 5.0				
					MBW					83161			
165486	1066849		10/27/2021	13:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ICP K TOTAL QSM 5.0		GW	**4**	
		54-IDW								83161			
165486	1066849		10/27/2021	13:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ICP NA TOTAL QSM 5.0		GW	**4**	
		54-IDW								83161			
	1072394								ICP NA TOTAL QSM 5.0				
					L	1066849							
	1072395								ICP K TOTAL QSM 5.0				
					L	1066849							
	1067496		10/27/2021	13:45					ICP K TOTAL QSM 5.0				
		54-IDW			DUP	1066849				83161			
	1067496		10/27/2021	13:45					ICP NA TOTAL QSM 5.0				
		54-IDW			DUP	1066849				83161			
	1067497		10/27/2021	13:45					ICP K TOTAL QSM 5.0				
		54-IDW			MSW	1066849				83161			
	1067497		10/27/2021	13:45					ICP NA TOTAL QSM 5.0				
		54-IDW			MSW	1066849				83161			
	1070167								MICP WATER QSM K&Na				
					CCV1					0			
	1070168								MICP WATER QSM K&Na				
					CCV2					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpE0AD.tmp

MICP WATER QSM K&Na Analytical Run
196908 on 11/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1070169							MICP WATER QSM K&Na				
				CCB					0			
	1067498		10/27/2021 13:45					ICP K TOTAL QSM 5.0				
		54-IDW		MSDW	1067497				83161			
	1067498		10/27/2021 13:45					ICP NA TOTAL QSM 5.0				
		54-IDW		MSDW	1067497				83161			
	1072396							ICP NA TOTAL QSM 5.0				
				PDSW	1066849							
	1072397							ICP K TOTAL QSM 5.0				
				PDSW	1066849							
	1070171							MICP WATER QSM K&Na				
				CCV1					0			
	1070172							MICP WATER QSM K&Na				
				CCV2					0			
	1070173							MICP WATER QSM K&Na				
				CCB					0			

27 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MERCURY QSM 5.0 Analytical Run
197150 on 11/8/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1071663							MERCURY QSM 5.0				
				ICV					0			
	1071664							MERCURY QSM 5.0				
				ICB					0			
	1071665							MERCURY QSM 5.0				
				CCV					0			
	1071666							MERCURY QSM 5.0				
				CCB					0			
	1067770							MERCURY TOTAL QSM 5.0				
				LCSW					83168			
	1067769							MERCURY TOTAL QSM 5.0				
				MBW					83168			
165486	1066849		10/27/2021 13:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	MERCURY TOTAL QSM 5.0		GW	**4**	
		54-IDW							83168			
	1067771		10/27/2021 13:45					MERCURY TOTAL QSM 5.0				
		54-IDW		DUP	1066849				83168			
165524	1067793		10/28/2021 16:50			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 49	MERCURY TOTAL QSM 5.0		GW	**4**	
		49-IDW							83168			
	1071667							MERCURY QSM 5.0				
				CCV					0			
	1071668							MERCURY QSM 5.0				
				CCB					0			
	1067772		10/27/2021 13:45					MERCURY TOTAL QSM 5.0				
		54-IDW		MSW	1066849				83168			
	1067773		10/27/2021 13:45					MERCURY TOTAL QSM 5.0				
		54-IDW		MSDW	1067772				83168			
	1071669							MERCURY QSM 5.0				
				CCV					0			
	1071670							MERCURY QSM 5.0				
				CCB					0			

15 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp6933.tmp

PrepWrkSht2
on 11/9/2021

Prep Batch: **83162**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	1067500	MBW	0	ICP TOTAL QSM 5.0			LIQUID				
	1067501	LCSW	0	ICP TOTAL QSM 5.0			LIQUID				
165486	1066849			ICP TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	54-IDW	GROUND WATER	10/27/21	13:45	11/9/21	4
	1067499	DUP	1066849	ICP TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		
	1067502	MSW	1066849	ICP TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		
	1067503	MSDW	1067502	ICP TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp1737.tmp

PrepWrkSht2
on 11/9/2021

Prep Batch: **83161**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	1067494	MBW	0	ICP K TOTAL QSM 5.0			LIQUID				
	1067494	MBW	0	ICP NA TOTAL QSM 5.0			LIQUID				
	1067495	LCSW	0	ICP K TOTAL QSM 5.0			LIQUID				
	1067495	LCSW	0	ICP NA TOTAL QSM 5.0			LIQUID				
165486	1066849			ICP NA TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	54-IDW	GROUND WATER	10/27/21	13:45	11/9/21	4
	1066849			ICP K TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	54-IDW	GROUND WATER	10/27/21	13:45	11/9/21	4
	1067496	DUP	1066849	ICP K TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		
	1067496	DUP	1066849	ICP NA TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		
	1067497	MSW	1066849	ICP K TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		
	1067497	MSW	1066849	ICP NA TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		
	1067498	MSDW	1067497	ICP K TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		
	1067498	MSDW	1067497	ICP NA TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpFA28.tmp

PrepWrkSht2
on 11/16/2021

Prep Batch: **83168**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	1067769	MBW		MERCURY TOTAL QSM 5.0			LIQUID				
	1067770	LCSW		MERCURY TOTAL QSM 5.0			LIQUID				
165486	1066849			MERCURY TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	54-IDW	GROUND WATER	10/27/21	13:45	11/9/21	4
165524	1067793			MERCURY TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	49-IDW	GROUND WATER	10/28/21	16:50	11/10/21	4
	1067771	DUP	1066849	MERCURY TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		
	1067772	MSW	1066849	MERCURY TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		
	1067773	MSDW	1067772	MERCURY TOTAL QSM 5.0		54-IDW	GROUND WATER	10/27/21	13:45		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp127.tmp

Metals Digestion Bench Sheet

Program: QSM
*Matrix: liquid

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA, As & Se Liquids

Prep Batch #:	83162
Prep Method:	200.2
Analyst:	NAH
Date:	10/28/2021
Start Time:	16:20

Prep Analyst: MRZ
Balance ID:

End Date: 10/28/2021
End Time: 03:05

Reagent:	Ref. #
Nitric Acid:	AB.705
Hydrochloric Acid:	AB.702
Hydrogen Peroxide:	

Digestion Tube Lot #: 3591
Block Used: D2
Cell Position for Temp. Check: 60
Initial-DigestionTemp (ºC,corrected): 94
Final-Digestion Temp (ºC,corrected): 93

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
1067500	(MB)			50.0	50
1067501	(LCS)			50.0	50
1066849				50.0	50
	Comments:				50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
1067499	(DUP)			50.0	50
1067502	(MS)	Parent Sample		50.0	50
1067503	(MSD)	1066849		50.0	50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
	(DUP) if applicable				50
	(MS)	Parent Sample			50
	(MSD)				50

Leave >> blank if N/A

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.2	M14988
0.5	M14987
0.5	M15046
0.1	M14888

LCS Spike Amount (ml)	Spike Ref. #
0.2	M14988
0.5	M14987
0.5	M15046
0.1	M14888

Reviewed x

11/09/202110:36

Metals Digestion Bench Sheet

Program: QSM
*Matrix: liquid

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA, As & Se Liquids

Prep Batch #:	83161
Prep Method:	200.2
Analyst:	NAH
Date:	10/28/2021
Start Time:	16:20

Prep Analyst: MRZ
Balance ID:

End Date: 10/28/2021
End Time: 03:05

Reagent:	Ref. #
Nitric Acid:	AB.705
Hydrochloric Acid:	AB.702
Hydrogen Peroxide:	

Digestion Tube Lot #: 3591
Block Used: D2
Cell Position for Temp. Check: 60
Initial-DigestionTemp (ºC,corrected): 94
Final-Digestion Temp (ºC,corrected): 93

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
1067494	(MB)			50.0	50
1067495	(LCS)			50.0	50
1066849				50.0	50
	Comments:				50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
1067496	(DUP)			50.0	50
1067497	(MS)	Parent Sample		50.0	50
1067498	(MSD)	1066849		50.0	50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.2	M14988
0.5	M14987
0.5	M15046
0.1	M14888

LCS Spike Amount (ml)	Spike Ref. #
0.2	M14988
0.5	M14987
0.5	M15046
0.1	M14888

Reviewed x

11/09/202110:40

FMT12-03

Mercury Digestion Bench Sheet

(Prep Methods 7470A & 7471A)

CCV ID: M15119
ICV/LCSW ID: M15120

*Matrix: GW
Balance ID:

Prep Batch #:	83168
Prep Method:	7470A
Analyst:	MDS
Date:	11/03/2021
Start Time:	14:45

7470A= Hg Liquids
7471A= Hg Solids

End Date: 11/03/2021
End Time: 16:45

Digestion Tube Lot #: 10521010
Block Used: A
Cell Position for Temp. Check: A-1
Initial-DigestionTemp (ºC,corrected): 92.1
Final-Digestion Temp (ºC,corrected): 92.1
Additional KMnO4 added (ml):
Aqua Regia added (ml)
Calibration Stds: M15118

Reagent:	Ref. #
HNO3:	AB.705
H2SO4:	AB.696
NaCl/Hydrox.SO4:	M15124
KMnO4:	M15121
K2S2O8:	M15122
Aqua-Regia:	

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
1067769	(MB)			25.0	25
1067770	(LCS)			25.0	25
1066849				25.0	25
1067793	**Comments:**			25.0	25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
1067771	(DUP) if applicable			25.0	25
1067772	(MS)	Parent Sample		25.0	25
1067773	(MSD)	1066849		25.0	25
Leave >>	(DUP) if applicable				25
blank	(MS)	Parent Sample			25
	(MSD)				25
	(DUP) if applicable				25
	(MS)	Parent Sample			25
if N/A	(MSD)				25

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

A:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #
0.5	100	M15120

B:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #

Reviewed By/Date: X

iCAP 6000 / 6500 Data Review Checklist	Analysis Date: 10/29/21	Data File: D20 results	Date of review: 11/8/21
Cal Std ID: M15060 LIMS # : 196907 908	Analyst: JH	Reviewer: MDS	Approved? (Yes) No
Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)			
Prep Batch Check ✓			

QC Parameters : 6010 / 200.7 / QSM / Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: r ≥ 0.995 / r > 0.998	✓		✓		
2) ICV: 90-110% / 95-105%	✓		✓		
2) ICVLL: 70-130% / 80-120%	✓		✓		
3) ICB: < 3X IDL / <LOD / <LOQ	✓		✓		
4) ICSA: < ABS LOD	✓		✓		
5) ICSAB: 80-120%	✓		✓		
6) MRL: 70-130% / 80-120%					
7) MDL Check: >LOD					
8) CCV1/CCB1 (CCV: 90-110%)	✓		✓		
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					
Preparation Batch Parameters	**YES**	**NO**	**YES**	**NO**	
Prep Batch ID#: 83162 Dig. Meth. 200.2	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD or ≤ ½ RL	✓	✓	✓	✓	Fe > LOD < ½ RL "B"
Spiked samples in batch:					
a) 10166845 matrix = Cu	✓	✓	✓	✓	MS, MSD - Al, Ca, Cu, Fe, Ag.
b) matrix =					
c) matrix =					Ag "M"
PDS: ±15% / 20% / 25% Sample#:					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					

GFAA / FLAA / CVAA Data Review checklist		Method: 200.9	7000 series AA	245.1 & 245.2	245.7	7470a / 7471a
Instrumentation:	THERMO M SERIES AA		Hydra II Hg ANALYZER			
Analysis Date: 11/5/21	Data File: 110521W	Date Review: 11/8/21	Analyte: Hg			
Cal Std ID: M151B	LIMS # : 197150	Analyst: MDS	Reviewer:	Approved?	Yes	No

Prep Batch Check ✓

Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Calibration Parameters -	YES	NO	YES	NO	Comments:
1) Calibration linearity - r > 0.995	✓		✓		
2) ICV: 90-110% 95-105%	✓		✓		
2) ICVLL: 70-130% 80-120%					
3) ICB: <IDL / <LOD / <LOQ / <½ RL	✓		✓		
6) MRL: 70-130%					
7) CCV1/CCB1- (CCV: 90-110% / 80-120%)	✓		✓		
8) CCV2/CCB2 (CCB: <IDL / <LOD / <LOQ / <½ RL)					
9) CCV3/CCB3					
10) CCV4/CCB4					
11) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	Comments:
Prep Batch ID#: 83168 Dig. Meth. 7470a	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD / <2.2X LOD / ≤ ½RL	✓		✓		
Spiked samples in batch:					
a) 1066849 matrix = GW	✓	✓	✓	✓	Dup invalid MS/MSD Failed "M"
b) matrix =					
c) matrix =					
d) matrix =					
e) matrix =					
PDS: ±15% / 20% / 25% Sample#					
MSA Performed? Yes No					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
d) matrix =					
e) matrix =					
PDS: ±15% / 20% / 25% Sample#					
MSA Performed? Yes No					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
d) matrix =					
e) matrix =					
PDS: ±15% / 20% / 25% Sample#					

CT Laboratories, LLC

ICP-6500 Instrument Run Logbook

Date	Time: Start / End	Analyst	Analytes / Sequence I.D.	Method	LIMS # or Sample Description	Nebulizer Pressure (kpa)	Calib. Std ID	Version	Comments
10/19/21	1000 / 0313	JA	101921	DOD Cal u	196486 196485 196625 196427 196482 196368 196359 196360 196332 196618 196309	270	M15060 M15066 M15063	V4571	M15065 M15061 M15064 M15062
10/20/21	1332 / 1944	JA	102021	DOD Cal u	196485 196486	270	M15060 M15066 M15063	V4583 V4572	M15065 M15061 M15064 M15062
10/21/21	1301 / 0157	JA	102121	DOD Cal u	196569 196612,14 196568 196593 196611	270	M15060 M15066 M15063	V4579 V4574	M15065 M15061 M15064 M15062
10/25/21	1038 / 2030	JA	10/25/21	DOD Cal u	196645,47 196642, 196663 196629, 196391,93, 196685, 72, 73, 75, 77 196650,52,54,56,58,61	320	M15060 M15066 M15063	V4580 V4581 V4582	M15065 M15061 M15064 M15062
10/26/21	1038 / 2030	JA	↓	DOD Cal u	196780 196642 196696 196689,90 197279 196691, 196687,86 196683 196693,94, 196688	320	M15060 M15066 M15063	V4583 V4584 V4585 V4586	M15065 M15061 M15064 M15062
10/27/21	1444 / 1221	JA	10/27/21	DOD Cal u	196703 196778 196782,81 196673,85,93,91,77,76,79,87 196809,10,27 196685 196828,31 196830,30 196805, 196832 196837,832 196834 196683,82 196829	320	M15060 M15066 M15063	V4589	M15065 M15061 M15064 M15062
10/28/21	1406 / 0451	JA	10/28/21	DOD Cal u	196781,82 196863 196696 196692 196868 196840	320	M15060 M15066 M15063	V4588 V4593	M15065 M15061 M15064 M15062
10/29/21	1153 / 2030	JA	102921	DOD Cal u	196905 196906 196908 196870 196927 196917	250	M15060 M15061 M15063	V4598	M15065 M15061 M15064 M15062
11/01/21	0923 / 1838	JA	11/01/21	DOD cal u	196696 196916 196914 196950	250	M15060 M15061 M15063	V4599 V4595	M15065 M15061 M15064 M15062
11/02/21	1252 / 0643	JA	11/02/21	DOD cal u	197005 197000, 197009 197002 197007 197004, 197003	290	M15060 M15061 M15063	V4597	M15065 M15061 M15064 M15062
11/03/21	1505 / 0252	JA	11/03/21	DOD Cal u	196998 197038 197034,33	250	M15060 M15061 M15063	V4602 V4601	M15065 M15061 M15064 M15062
11/4/21	/						M15060 M15061 M15063		M15065 M15061 M15064 M15062

Comments: _____

_____

Checked By / Date: _____

CT Laboratories

Mercury Analyzer Instrument Run Log

Instrument ID: Cetac M-6000A

Analysis Date	Start Time	End Time	Analyst	LIMS Run # (s)	Method File ID #	Cal. Std. ID #	Lamp Current (mA)	Analysis Tube Lot #	Comments
10/14/21	1257	1513	MDS	196292, 196293, 196294, 196295	101421W	M15080	5.935	J500203-4932	$SnCl_2$: M15087
10/20/21	0947	1257	MDS	196535, 196536, 196537 195091, 196531, 196532, 196533, 196534,	102021W	M15100	5.931	J500203-4932	$SnCl_2$: M15107
10/21/21	0851	1042	MDS	196549, 196548, 196547, 196546	102121S	M15100	5.920	J500203-4932	$SnCl_2$: M15107
11/4/21	0923	1150	MDS	197118, 197119, 197117	110421S	M15118	5.917	J500203-4932	$SnCl_2$: M15125
11/4/21	1237	1603	MDS	197141 197144, 197143, 197142, 197138, 197137	110421W	M15118	—	J500203-4932	$SnCl_2$: M15125
11/5/21	0858	1434	MDS	197149, 197147, 197148, 197141, 197139, 197140, 197150, 197145, 197146	110521W	M15118	5.950	J500203-4932	$SnCl_2$: M15125

Reviewed By/Date:_____

Type	Date/Time	Message	User name	Application	Sequence Name
	10/29/2021 03:03:13	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	10/29/2021 03:10:14	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	10/29/2021 03:17:57	Running 1063287 (36)	NAH	Analyst	S_DOD Calibration
	10/29/2021 03:25:49	Running 1063288 (37)	NAH	Analyst	S_DOD Calibration
	10/29/2021 03:34:05	Running lcsw83047 (38)	NAH	Analyst	S_DOD Calibration
	10/29/2021 03:41:53	Running mbw83047 (39)	NAH	Analyst	S_DOD Calibration
	10/29/2021 03:49:32	Running 1063837 (40)	NAH	Analyst	S_DOD Calibration
	10/29/2021 03:57:52	Running 1063839 (41)	NAH	Analyst	S_DOD Calibration
	10/29/2021 04:05:59	Running 1063844 (42)	NAH	Analyst	S_DOD Calibration
	10/29/2021 04:13:47	Running 1063845 (43)	NAH	Analyst	S_DOD Calibration
	10/29/2021 04:21:50	Running 1063846 (44)	NAH	Analyst	S_DOD Calibration
	10/29/2021 04:29:41	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	10/29/2021 04:37:16	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	10/29/2021 04:44:04	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	10/29/2021 04:51:06	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	10/29/2021 04:59:01	Plasma extinguished successfully	NAH	Analyst	
	10/29/2021 04:59:01	Plasma off	NAH	iTEVA Control Center	
	10/29/2021 04:59:03	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	10/29/2021 07:12:00	Plasma On	NAH	iTEVA Control Center	
	10/29/2021 07:12:05	Plasma ignition successful	NAH	Analyst	
	10/29/2021 07:12:52	D33534 - Debug:Wavelength check : x = -0.556, y =-0.337	NAH	Analyst	
	10/29/2021 10:50:58	D33534 - Debug:Wavelength check : x = -0.929, y =-0.515	NAH	Analyst	
	10/29/2021 10:52:17	Auto Peak	NAH	Analyst	
	10/29/2021 10:54:18	Autosampler Run Started	NAH	Analyst	
	10/29/2021 10:54:18	Sequence Started	NAH	Analyst	S_DOD Calibration
	10/29/2021 10:54:40	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:01:07	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:07:34	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:14:01	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:20:29	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:26:56	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:32:48	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:38:58	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:45:03	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:46:22	iTEVA loaded	NAH	iTEVA Control Center	
	10/29/2021 11:46:41	Connected to instrument 20082101	NAH	iTEVA Control Center	
	10/29/2021 11:47:20	Plasma On	NAH	iTEVA Control Center	
	10/29/2021 11:53:00	Autosampler Run Started	NAH	Analyst	
	10/29/2021 11:53:00	Sequence Started	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:53:21	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	10/29/2021 11:59:51	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	10/29/2021 12:06:19	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	10/29/2021 12:12:46	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	10/29/2021 12:19:14	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	10/29/2021 12:25:44	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	10/29/2021 12:32:08	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	10/29/2021 12:33:31	Closing will close the method and all associated samples.	NAH	Analyst	
	10/29/2021 12:38:20	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	10/29/2021 12:44:29	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	10/29/2021 12:50:00	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	10/29/2021 12:56:19	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	10/29/2021 13:03:07	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	10/29/2021 13:09:40	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	10/29/2021 13:16:20	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	10/29/2021 13:19:13	Closing will close the method and all associated samples.	NAH	Analyst	
	10/29/2021 13:23:10	Running Ag Ba 1000, 50000 (15)	NAH	Analyst	S_DOD Calibration
	10/29/2021 13:29:54	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	10/29/2021 13:36:18	Running icv (16)	NAH	Analyst	S_DOD Calibration
	10/29/2021 13:42:16	Running icv (16)	NAH	Analyst	S_DOD Calibration
	10/29/2021 13:48:16	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	10/29/2021 13:52:43	Closing will close the method and all associated samples.	NAH	Analyst	
	10/29/2021 13:54:20	Running icb (17)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:00:43	Running icb (17)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:07:07	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:13:26	Running ICSA (20)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:19:47	Running ICSAB (21)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:25:29	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:31:52	Running ICVLL ag (1)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:34:39	Closing will close the method and all associated samples.	NAH	Analyst	
	10/29/2021 14:38:18	Running 1067306 (2)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:44:57	Running msw1067306 (3)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:50:40	Running msdw1067306 (4)	NAH	Analyst	S_DOD Calibration
	10/29/2021 14:56:23	Running lcsw83162 (5)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:02:36	Running mbw83162 (6)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:08:59	Running 1066849 (7)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:15:35	Running l1066849 (8)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:22:15	Running dup1066849 (9)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:28:51	Running msw1066849 (10)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:34:54	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:40:09	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:45:44	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:52:08	Running msdw1066849 (11)	NAH	Analyst	S_DOD Calibration
	10/29/2021 15:58:13	Running pdsw1066849 (12)	NAH	Analyst	S_DOD Calibration
	10/29/2021 16:03:51	Running lcsw83160 (13)	NAH	Analyst	S_DOD Calibration
	10/29/2021 16:10:06	Running mbw83160 (14)	NAH	Analyst	S_DOD Calibration
	10/29/2021 16:16:31	Running 1066956 (15)	NAH	Analyst	S_DOD Calibration
	10/29/2021 16:23:14	Running msw1066956 (16)	NAH	Analyst	S_DOD Calibration
	10/29/2021 16:29:35	Running msdw1066956 (17)	NAH	Analyst	S_DOD Calibration
	10/29/2021 16:35:56	Running pdsw1066956 (18)	NAH	Analyst	S_DOD Calibration
	10/29/2021 16:41:51	Running 1066957 (19)	NAH	Analyst	S_DOD Calibration
	10/29/2021 16:48:15	Running 1066958 (20)	NAH	Analyst	S_DOD Calibration
	10/29/2021 16:55:10	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:00:26	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:06:01	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:12:26	Running 1066959 (21)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:19:19	Running 1066960 (22)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:26:13	Running 1066961 (23)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:32:39	Running lcss83148 (24)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:38:25	Running mbs83148 (25)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:44:49	Running 1066332 (26)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:51:15	Running mss1066332 (27)	NAH	Analyst	S_DOD Calibration
	10/29/2021 17:57:07	Running msds1066332 (28)	NAH	Analyst	S_DOD Calibration
	10/29/2021 18:02:44	Running pdss1066332 (29)	NAH	Analyst	S_DOD Calibration
	10/29/2021 18:08:39	Running 1066735 (30)	NAH	Analyst	S_DOD Calibration

Standard ID#:	M15134	Vendor:	SpexCertiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/11/2021	Lot #:	1-040EL
Expiration Date (if any):	11/20/2022	Catalog #:	XCTWI-5-500

Standard Log #:	M15129	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/10/2021	Expiration Date:	12/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15130	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/10/2021	Expiration Date:	12/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15131	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/10/2021	Expiration Date:	11/11/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15132	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/11/2021	Expiration Date:	12/11/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15133	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/11/2021	Expiration Date:	12/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15058 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15126	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/10/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15127	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/10/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15128	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/10/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15124	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/04/2021	Expiration Date:	12/04/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15125	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/05/2021	Expiration Date:	12/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

Standard Log #:	M15121	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/03/2021	Expiration Date:	12/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15122	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/03/2021	Expiration Date:	12/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15123	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/03/2021	Expiration Date:	11/04/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard ID#:	M15117	Vendor:	SPEX CertiPrep
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/03/2021	Lot #:	CL12-145HGY
Expiration Date (if any):	10/30/2022	Catalog #:	CLHG4-2Y

		Instrument:	HydraII
Standard Log #:	M15118	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/03/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15119	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/03/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15120	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/03/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15112	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1144484-5
Expiration Date (if any):	04/2023	Catalog #:	4400-10M11

Standard ID#:	M15113	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 mg/L
Date Received:	10/25/2021	Lot #:	KD37797-20
Expiration Date (if any):	04/2023	Catalog #:	4400-10M411-500

Standard ID#:	M15114	Vendor:	CPI
Analyst:	NAH	Chemical:	ZN 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1149838-4
Expiration Date (if any):	04/2023	Catalog #:	S4400-10M681

Standard ID#:	M15115	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1157358-4
Expiration Date (if any):	04/2023	Catalog #:	4400-10M671

Standard ID#:	M15116	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1137797-18
Expiration Date (if any):	04/2023	Catalog #:	4400-10M411

		Instrument:	GFAA
Standard Log #:	M15109	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/25/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15110	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/25/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15111	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/25/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M15108	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	10/21/2021	Lot #:	1084154-49
Expiration Date (if any):	01/22/2023	Catalog #:	S4400-1000331

Standard Log #:	M15103	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/19/2021	Expiration Date:	11/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15104	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/19/2021	Expiration Date:	11/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15105	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/19/2021	Expiration Date:	10/20/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15106	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/20/2021	Expiration Date:	11/20/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15107	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/20/2021	Expiration Date:	11/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15058 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15100	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15101	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15102	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/19/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15099	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	10/15/2021	Expiration Date:	02/2022

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M14623	1000	0.01
As	2	M14621	1000	0.1
Pb	2	M15045	10000	0.01
Sb	2	M14622	1000	0.1
Se	2	M14624	1000	0.1
Tl	2	M14626	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M15094	Vendor:	CPI
Analyst:	NAH	Chemical:	MG 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1075232-5
Expiration Date (if any):	09/2022	Catalog #:	4400-10M311

Standard ID#:	M15095	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	10/14/2021	Lot #:	1049780-73
Expiration Date (if any):	03/2023	Catalog #:	S4400-1000361

Standard ID#:	M15096	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	10/14/2021	Lot #:	1047570-102
Expiration Date (if any):	03/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15097	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1055526-35
Expiration Date (if any):	11/2022	Catalog #:	4400-10M521

Standard ID#:	M15098	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	10/14/2021	Lot #:	1080470-23
Expiration Date (if any):	01/2023	Catalog #:	S4400-100081

Standard ID#:	M15090	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1079898-11
Expiration Date (if any):	01/2023	Catalog #:	S4400-10M391

Standard ID#:	M15091	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	10/14/2021	Lot #:	1072683-57
Expiration Date (if any):	01/2023	Catalog #:	S4400-100051

Standard ID#:	M15092	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1072921-23
Expiration Date (if any):	01/2023	Catalog #:	4400-10M91

Standard ID#:	M15093	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1034257-71
Expiration Date (if any):	03/2023	Catalog #:	4400-10M261

Standard Log #:	M15086	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/13/2021	Expiration Date:	11/13/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15087	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/13/2021	Expiration Date:	11/13/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14949 and brought up to volume.		

Standard ID#:	M15088	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/L
Date Received:	10/13/2021	Lot #:	1047570-102
Expiration Date (if any):	03/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15089	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	10/13/2021	Lot #:	57-130CR
Expiration Date (if any):	10/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M15083	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/12/2021	Expiration Date:	11/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15084	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/12/2021	Expiration Date:	11/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15085	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/12/2021	Expiration Date:	10/13/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

		Instrument:	HydraII
Standard Log #:	M15080	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/12/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15081	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/12/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15082	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/12/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15079	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	8 µg/L As 10 µg/L Pb 8 µg/L Sb 16 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	10/11/2021	Expiration Date:	02/2022

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M14621	10,000
Pb	0.1	10,000	M15045	10,000
Tl	1	1000	M14626	10,000
Se	1	1000	M14624	10,000
Sb	1	1000	M14622	10,000
Ag	0.1	1000	M14623	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	0.8	10,000	8
Pb	1.0	10,000	10
Tl	1.0	10,000	10
Se	1.6	10,000	16
Sb	0.8	10,000	8
Ag	0.6	1000	0.6

Standard Log #:	M15074	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/05/2021	Expiration Date:	11/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15075	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/05/2021	Expiration Date:	11/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15076	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/05/2021	Expiration Date:	10/06/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15077	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/06/2021	Expiration Date:	11/06/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15078	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/06/2021	Expiration Date:	11/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15071	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/05/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15072	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/05/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15073	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/05/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15067	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/04/2021	Expiration Date:	08/20/2022
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M15008 and **10 mL** Mg (10,000 mg/L) M14739 and brought up to volume.		

Standard ID#:	M15068	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Interference A
Date Received:	10/4/2021	Lot #:	18-102WLX
Expiration Date (if any):	09/22	Catalog #:	INT-A1

Standard ID#:	M15069	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	10/04/2021	Lot #:	1-181-PC
Expiration Date (if any):	09/30/2022	Catalog #:	XCTWI-1-500

MRL BASE STD M15066 Analyst NAH

Prep Date 10/04/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	02/22
Al	400	M15098	10000	2	02/23
Ba	10	M14772	1000	0.5	09/22
Be	4	M15203	1000	0.2	09/22
Cd	5	M14201	1000	0.25	09/22
Co	10	M15019	1000	0.5	02/23
Cr	10	M15027	10000	0.05	02/23
Cu	10	M15021	10000	0.05	02/23
Mg	500	M14739	10000	2.5	08/22
Mn	10	M15023	10000	0.05	02/23
Mo	10	M15022	1000	0.5	02/23
Ni	10	M14196	1000	0.5	xx
Pb	10	M15045	10000	0.05	03/23
Sb	20	M14622	1000	1	02/22
V	10	M15020	1000	0.5	02/23
Zn	10	M14197	10000	0.05	xx
K	1000	M14887	10000	5	11/22
Na	1000	M14969	10000	5	01/23
As	20	M14621	1000	1	02/22
Ca	500	M15026	10000	2.5	02/23
Fe	300	M15024	10000	1.5	02/23
Se	20	M14624	1000	1	02/22
Tl	20	M14626	1000	1	02/22
Si	100	M14968	1000	5	01/23
B	20	M14966	1000	1	01/23
Li	20	M14681	1000	1	07/22
W	50	xxxxx	1000	2.5	xxxxx
Ti	10	M14674	1000	0.5	07/22
Sr	10	M14683	1000	0.5	07/22
Sn	50	M14774	1000	2.5	09/22
S	300	M14773	10000	1.5	09/22

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M15064	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **15 mL** Fe (10,000 mg/L) M15204, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15028 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15065	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833 and **15 mL** Fe (10000 mg/L) M15024 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15061	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15028 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15062	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15028 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15063	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14988, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **0.5 mL** Mo (1000 mg/L) M15022, **0.5 mL** B (1000 mg/L) M14966, **0.5 mL** Sr (1000 mg/L) M14683, **0.5 mL** Li (1000 mg/L) M14681, **0.5 mL** Sn (1000 mg/L) M14774 and **0.5 mL** Ti (1000 mg/L) M14674.		

		Instrument:	ICP 6500
Standard Log #:	M15060	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	10/14/2021	Expiration Date:	01/30/2022
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15828, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **1 mL** of Si (1000 mg/L) M14968 and 1 mL M14682 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M15046. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M15021, **10 mL** of Mn (10,000 mg/L) M15023, **10 mL** of Cr (10,000 mg/L) M15027, **10 mL** Pb (10,000 mg/L) M15045, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14969. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14739, **10 mL** of Fe (10,000 mg/L) M15024, **10 mL** of Ca (10,000 mg/L) M14740 and **10 mL** Al (10,000 mg/L) M14737. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

Standard Log #:	M15059	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	09/29/2021	Expiration Date:	10/29/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14946. Dilute to 20 L and mix.		

Standard ID#:	M15057	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	09/23/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M15058	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	09/23/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M15056	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	09/22/2021	Lot #:	A0428169
Expiration Date (if any):		Catalog #:	198531000

Standard Log #:	M15051	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/20/2021	Expiration Date:	10/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15052	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/20/2021	Expiration Date:	10/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15053	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/20/2021	Expiration Date:	09/21/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15054	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/21/2021	Expiration Date:	10/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15055	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/21/2021	Expiration Date:	10/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15048	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15049	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15050	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/20/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15047	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	09/09/2021	Expiration Date:	09/09/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14964. Dilute to 20 L and mix.		

Standard ID#:	M15045	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10,000 mg/L
Date Received:	09/15/2021	Lot #:	1035677-18
Expiration Date (if any):	03/2023	Catalog #:	4400-10M281

Standard ID#:	M15046	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,1000 mg/L
Date Received:	09/15/2021	Lot #:	1137797-13
Expiration Date (if any):	03/2023	Catalog #:	4400-10M411-500

Standard Log #:	M15040	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/14/2021	Expiration Date:	10/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15041	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/14/2021	Expiration Date:	10/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15042	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/14/2021	Expiration Date:	09/15/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15043	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/15/2021	Expiration Date:	10/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15044	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/15/2021	Expiration Date:	10/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15037	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15038	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15039	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/14/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15032	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/01/2021	Expiration Date:	10/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15033	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/01/2021	Expiration Date:	10/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15034	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/01/2021	Expiration Date:	09/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15035	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/02/2021	Expiration Date:	10/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15036	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/02/2021	Expiration Date:	10/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14940 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15029	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/01/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15030	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/01/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15031	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/01/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15023	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10,000 mg/L
Date Received:	08/30/2021	Lot #:	985851-80
Expiration Date (if any):	02/2023	Catalog #:	S4400-10M321

Standard ID#:	M15024	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1034257-71
Expiration Date (if any):	02/2023	Catalog #:	4400-10M261

Standard ID#:	M15025	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1050965-59
Expiration Date (if any):	02/2023	Catalog #:	4400-10M544

Standard ID#:	M15026	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1072921-23
Expiration Date (if any):	02/2023	Catalog #:	4400-10M91

Standard ID#:	M15027	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1076194-26
Expiration Date (if any):	02/2023	Catalog #:	S4400-10M121

Standard ID#:	M15028	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	NAH	Lot #:	17-023AB
Expiration Date (if any):	AUG 30,2022	Catalog #:	XCTWI-5-500

Standard ID#:	M15018	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1077245-48
Expiration Date (if any):	02/2023	Catalog #:	4400-10M11

Standard ID#:	M15019	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	08/30/2021	Lot #:	1107088-1
Expiration Date (if any):	02/2023	Catalog #:	S4400-1000131

Standard ID#:	M15020	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	08/30/2021	Lot #:	1055682-88
Expiration Date (if any):	02/2023	Catalog #:	S4400-1000651

Standard ID#:	M15021	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1063159-57
Expiration Date (if any):	02/2023	Catalog #:	S4400-10M141

Standard ID#:	M15022	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	08/30/2021	Lot #:	1075718-15
Expiration Date (if any):	02/2023	Catalog #:	S4400-1000343

Standard Log #:	M15013	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/24/2021	Expiration Date:	09/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15014	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/24/2021	Expiration Date:	09/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15015	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/24/2021	Expiration Date:	08/25/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15016	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/25/2021	Expiration Date:	09/25/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15017	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/25/2021	Expiration Date:	09/25/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15010	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/24/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15011	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/24/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15012	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/24/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15009	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	08/23/2021	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

Standard ID#:	M15008	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Palladium Matrix Modifier
Date Received:	08/19/2021	Lot #:	2113302-100
Expiration Date (if any):	08/31/2022	Catalog #:	HP1900-100

Standard Log #:	M15003	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15004	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15005	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	08/19/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15006	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15007	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15000	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/18/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15001	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/18/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15002	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/18/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14997	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	08/13/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14998	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	08/13/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14999	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	08/13/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14992	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/10/2021	Expiration Date:	09/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14993	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/10/2021	Expiration Date:	09/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14994	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/10/2021	Expiration Date:	08/11/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14995	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/11/2021	Expiration Date:	09/11/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14996	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/11/2021	Expiration Date:	09/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14989	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/10/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14990	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/10/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14991	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/10/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14987	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/09/2021	Lot #:	5-190MF
Expiration Date (if any):	08/30/2022	Catalog #:	XCTWI-1-500

Standard ID#:	M14988	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/09/2021	Lot #:	5-189MF
Expiration Date (if any):	08/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14982	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	09/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14983	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	09/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14984	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	08/04/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14985	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/04/2021	Expiration Date:	09/04/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14986	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/04/2021	Expiration Date:	09/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14979	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/03/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14980	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/03/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14981	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/03/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14978	Vendor:	Enviromental Express
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	05/20/2021	Lot #:	400175-1116-T
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14973	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	08/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14974	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	08/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14975	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	07/28/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14976	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/29/2021	Expiration Date:	08/29/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14977	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2021	Expiration Date:	08/29/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14970	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/27/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14971	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/27/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14972	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/27/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14966	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 10,000 mg/L
Date Received:	07/27/2021	Lot #:	1101946-16
Expiration Date (if any):	01/2023	Catalog #:	S4400-100074

Standard ID#:	M14967	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 mk/L
Date Received:	07/27/2021	Lot #:	1109477-26
Expiration Date (if any):	01/2023	Catalog #:	4400-10M671

Standard ID#:	M14968	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	07/27/2021	Lot #:	1047570-64
Expiration Date (if any):	01/2023	Catalog #:	S4400-1000504F

Standard ID#:	M14969	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000
Date Received:	07/27/2021	Lot #:	1055526-35
Expiration Date (if any):	01/2023	Catalog #:	4400-10M521

		Instrument:	CETAC
Standard Log #:	M14963	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/21/2021	Expiration Date:	08/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

Standard Log #:	M14964	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/22/2021	Expiration Date:	07/22/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14964. Dilute to 20 L and mix.		

Standard Log #:	M14965	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	07/23/2021	Expiration Date:	07/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.704 and brought up to volume.		

Standard Log #:	M14959	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	08/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14960	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	08/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14961	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	07/21/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14962	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/21/2021	Expiration Date:	08/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14956	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14957	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14958	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/20/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14955	Vendor:	GFS Chemicals
Analyst:	NAH	Chemical:	AMCO Clear 2.0 NTU
Date Received:	07/16/2021	Lot #:	21150075
Expiration Date (if any):	07/22/2022	Catalog #:	8008

Standard Log #:	M14950	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	08/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14951	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	08/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14952	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	07/15/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14953	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/15/2021	Expiration Date:	08/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14954	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/15/2021	Expiration Date:	08/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14947	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14948	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14949	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/14/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14944	Standard:	ICV Std.
Analyst:	nah	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	07/09/2021	Expiration Date:	08/2022
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14874, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **0.5 mL** Mo (1000 mg/L) M14888, **0.5 mL** B (1000 mg/L) M14675, **0.5 mL** Sr (1000 mg/L) M14683, **0.5 mL** Li (1000 mg/L) M14681, **0.5 mL** Sn (1000 mg/L) M14774, **0.5 mL** Ti (1000 mg/L) M14674, **0.5 mL** W (1000 mg/L) XXXXXXX, **0.5 mL** Si (1000 mg/L) M14680, **0.5 mL** S (10000 mg/L) M14570, **0.5 mL** K (10000 mg/L) M14887, and **0.5 mL** Na (10000 mg/L) M14736		

Standard Log #:	M14945	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/12/2021	Expiration Date:	07/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14946	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	07/14/2021	Expiration Date:	12/14/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC272 and brought up to volume.		

Standard ID#:	M14939	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	07/09/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14940	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	07/09/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14941	Vendor:	GFS
Analyst:	NAH	Chemical:	AMCO Clear 0.1 ntu
Date Received:	07/12/2021	Lot #:	Returned to manufacturer
Expiration Date (if any):	not used	Catalog #:	not used

		Instrument:	ICP 6500
Standard Log #:	M14942	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	07/09/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14833 and 15 **mL** 10000 mg/L Fe M14676 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14943	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	07/09/2021	Expiration Date:	12/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **15 mL** Fe (10,000 mg/L) M14676, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14788, **2.5 mLs Na 10,000 ug/mL** M14736 **,2.5 mLs k 10,000 ug/mL** M14370 **2.5 mLs S 10,000 ug/mL** M14677, **0.5 mls Si 1000 ug/mL** M14735 and brought up to volume with milli-Q .		

Standard Log #:	M14938	Reagent:	TCLP EXTRACTION FLUID #2
Analyst:	BMM	pH:	2.88 ± 0.05
Prep Date:	07/08/2021	Expiration Date:	07/08/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703. Dilute to 20 L and mix.		

Standard Log #:	M14933	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	08/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14934	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	08/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14935	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	07/08/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14936	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/08/2021	Expiration Date:	08/08/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14937	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/08/2021	Expiration Date:	08/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14930	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/07/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14931	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/07/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14932	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/07/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14925	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14926	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14927	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	07/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14928	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14929	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14922	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/30/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14923	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/30/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14924	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/30/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14921	Vendor:	LabChem
Analyst:	NAH	Chemical:	Turbidity Standard(Formazin) 4000NT
Date Received:	06/25/2021	Lot #:	L147-07
Expiration Date (if any):	06/08/2022	Catalog #:	LC26290

		Instrument:	ICP 6500
Standard Log #:	M14919	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M14205 0.5 **mL** 10000 mg/L Cu M14199 5.0 **mL** 1000 mg/L Co M14204 5.0 **mL** 1000 mg/L Mo M14888 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14920	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M14196 5.0 **mL** 10000 mg/L Ti M14674 brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M14916	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/23/2021	Expiration Date:	07/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14917	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M14200 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14918	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M14772 5.0 **mL** 10000 mg/L Be M14203 5.0 **mL** 10000 mg/L Sn M14774 brought up to volume with milli-Q H_2O.		

Standard Log #:	M14912	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	07/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14913	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	07/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14914	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	06/23/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14915	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/23/2021	Expiration Date:	07/23/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14909	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/22/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14910	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/22/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14911	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/22/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14904	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	07/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14905	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	07/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14906	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	06/17/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14907	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/17/2021	Expiration Date:	07/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14908	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/17/2021	Expiration Date:	07/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

Standard Log #:	M14903	Instrument:	ICP 6500
Analyst:	NAH	Standard:	Dissolved MDL Verificaion
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	2.7	M14623	1000	0.135
Al	10	M14736	**10000**	.05
As	20	M14621	1000	1
Ba	2	M14772	1000	0.1
Be	1	M14203	1000	0.05
Ca	50	M14740	**10000**	0.25
Cd	0.5	M14201	1000	.025
Co	2.5	M14204	1000	0.125
Cr	5	M14205	**10000**	.025
Cu	10	M14199	**10000**	.05
Fe	40	M14738	**10000**	0.2
Mg	25	M14676	**10000**	0.125
Mn	3	M14200	**10000**	.015
Mo	2.5	M14888	1000	0.125
Ni	3	M14196	1000	0.15
Pb	20	M14202	**10000**	0.1
Sb	10	M14622	1000	0.5
Se	20	M14624	1000	1
Tl	20	M14626	1000	1
V	3	M14198	1000	0.15
Zn	5	M14197	**10000**	0.025
Na	150	M14736	**10000**	0.75
K	150	M14741	**10000**	0.75
B	20	M14675	1000	1
Si	200	M14735	1000	10
Li	10	M14681	1000	0.5
Sr	20	M14775	1000	1
Sn	20	M14774	1000	1
Ti	5	M14674	1000	0.25
S	200	M14773	**10000**	10

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14902	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL spike Soln.
Prep Date:	06/16/2021	Expiration Date:	09//2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M14623	1000	2
Al	800	M14736	**10000**	4
As	40	M14621	1000	2
Ba	20	M14772	1000	1
Be	8	M14203	1000	0.4
Ca	1000	M14740	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14738	**10000**	3
Mg	1000	M14676	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14888	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M14622	1000	2
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14736	**10000**	50
K	10000	M14741	**10000**	50
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14901	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ Solid QSM
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M14623	1000	2
Al	800	M14736	**10000**	4
As	40	M14621	1000	2
Ba	40	M14772	1000	2
Be	8	M14203	1000	0.4
Ca	1000	M14740	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14738	**10000**	3
Mg	1000	M14676	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14888	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M14622	1000	2
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14736	**10000**	50
K	10000	M14741	**10000**	50
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14900	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ water QSM
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M14623	1000	0.25
Al	120	M14737	**10000**	0.6
As	40	M14621	1000	2
Ba	4	M14772	1000	0.2
Be	8	M14203	1000	0.4
Ca	100	M14740	**10000**	0.5
Cd	2	M14201	1000	0.1
Co	5	M14204	1000	0.25
Cr	5	M14205	**10000**	0.025
Cu	40	M14199	**10000**	0.2
Fe	80	M14738	**10000**	0.4
Mg	40	M14676	**10000**	0.2
Mn	5	M14200	**10000**	0.025
Mo	5	M14888	1000	0.25
Ni	5	M14196	1000	0.25
Pb	20	M14202	**10000**	0.1
Sb	20	M14622	1000	1.0
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	5	M14198	1000	0.25
Zn	20	M14197	**10000**	0.1
Na	700	M14736	**10000**	3.5
K	500	M14741	**10000**	2.5
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14897	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14898	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14899	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14892	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	07/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14893	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	07/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14894	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	06/09/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14895	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/09/2021	Expiration Date:	07/09/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14896	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/09/2021	Expiration Date:	07/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14889	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/08/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14890	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/08/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14891	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/08/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14886	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	06/04/2021	Lot #:	Y20F051
Expiration Date (if any):		Catalog #:	88944

Standard ID#:	M14887	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	06/04/2021	Lot #:	1053109-69
Expiration Date (if any):	11/2022	Catalog #:	4400-10M411500

Standard ID#:	M14888	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06/04/2021	Lot #:	1075718-15
Expiration Date (if any):	11/2022	Catalog #:	S4400-1000343

Standard Log #:	M14885	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14883	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14884	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14878	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	07/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14879	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	07/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14880	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	06/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14881	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/02/2021	Expiration Date:	07/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14882	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/02/2021	Expiration Date:	07/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14875	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14876	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14877	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/01/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14874	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/24/2021	Lot #:	16-115AB
Expiration Date (if any):	05/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M14869	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	06/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14870	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	06/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14871	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	05/19/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14872	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/19/2021	Expiration Date:	06/19/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14873	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/19/2021	Expiration Date:	06/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14866	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/18/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14867	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/18/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14868	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/18/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14865	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	05/12/2021	Expiration Date:	09/30/2021
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M14508 and **10 mL** Mg (10,000 mg/L) M14676 and brought up to volume.		

Standard Log #:	M14860	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	06/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14861	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	06/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14862	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	05/12/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14863	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/12/2021	Expiration Date:	06/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14864	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/12/2021	Expiration Date:	06/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14857	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14858	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14859	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14854	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14855	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14856	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14850	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14851	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14852	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	05/05/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14853	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14847	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/04/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14848	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/04/2021	Expiration Date:	05/02/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14849	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/04/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14846	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	04/29/2021	Lot #:	400175-1081-AG
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

		Instrument:	CETAC
Standard Log #:	M14842	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14843	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/19/2021	Expiration Date:	04/19/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard ID#:	M14844	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14845	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M14838	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14839	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14840	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	04/28/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14841	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14835	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14836	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14837	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14832	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard ID#:	M14833	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	04/21/2021	Lot #:	18-102WLX
Expiration Date (if any):	04/30/2022	Catalog #:	INT-A1

Standard ID#:	M14834	Vendor:	Custom Assurance Std
Analyst:	NAH	Chemical:	Ca 20000 Mg,Na 10000: THardness
Date Received:	04/21/2021	Lot #:	16-022AB
Expiration Date (if any):	04/30/2022	Catalog #:	XCTIWI-1-500

Standard Log #:	M14828	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14829	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14830	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	04/21/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14831	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14825	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14826	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14827	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/20/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14824	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14821	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14395 , **15 mL** Fe (10,000 mg/L) M14738 , **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 , **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14788 , **2.5 mLs Na 10,000 ug/mL** M14736 ,**2.5 mLs k 10,000 ug/mL** 14625 **2.5 mLs S 10,000 ug/mL** M14570 , **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14822	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14395 and 15 **mL** 10000 mg/L Fe M14738 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.	

		Instrument:	ICP 6500
Standard Log #:	M14823	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.	

MRL BASE STD M14820 Analyst NAH

Prep Date 04/15/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	XX
Al	400	M14737	10000	2	XX
Ba	10	M14772	1000	0.5	XX
Be	4	M14203	1000	0.2	09/21
Cd	5	M14740	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14676	10000	2.5	XX
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14684	1000	0.5	XX
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	XX
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14741	10000	5	XX
Na	1000	M14736	10000	5	XX
As	20	M14621	1000	1	XX
Ca	500	M14740	10000	2.5	XX
Fe	300	M14738	10000	1.5	XX
Se	20	M14624	1000	1	XX
Tl	20	M14674	1000	1	XX
Si	100	M14735	1000	5	XX
B	20	M14675	1000	1	09/21
Li	20	M14681	1000	1	XX
W	50	MXXX	1000	2.5	XXXXX
Ti	10	M14674	1000	0.5	XX
Sr	10	M14775	1000	0.5	XX
Sn	50	M14774	1000	2.5	XX
S	300	M14773	10000	1.5	XX

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M14815	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14816	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14817	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	04/15/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14818	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14819	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14812	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14813	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14814	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/14/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14811	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	04/13/2021	Expiration Date:	09/2021
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **1 mL** of Si (1000 mg/L) M14477. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14736. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14676, **10 mL** of Fe (10,000 mg/L) M14676, **10 mL** of Ca (10,000 mg/L) M14740 and **10 mL** Al (10,000 mg/L) M14478. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	GFAA
Standard Log #:	M14808	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14809	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14810	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14803	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14804	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14805	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	04/07/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14806	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14807	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14800	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14801	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14802	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/06/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14799	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	04/06/2021	Lot #:	A0417285
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M14797	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	04/05/2021	Lot #:	S2-MEB703691
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-SPK-1

Standard ID#:	M14798	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	04/05/2021	Lot #:	S2-MEB703690
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-GFCAL-1

Standard Log #:	M14792	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	04/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14793	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	03/31/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14794	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

Standard Log #:	M14795	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14796	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14789	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14790	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14791	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/30/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14787	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Phosphorus 10,000 mg/L
Date Received:	03/29/2021	Lot #:	AR18-111PY
Expiration Date (if any):	3/29/2022	Catalog #:	PLP9-3Y

Standard ID#:	M14788	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/29/2021	Lot #:	4-070MF
Expiration Date (if any):	03/29/2021	Catalog #:	XCTWI-5-500

Standard Log #:	M14786	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/25/2021	Expiration Date:	03/25/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14785	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	03/24/2021	Expiration Date:	08/24/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC208 and brought up to volume.		

Standard Log #:	M14780	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14781	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14782	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	03/24/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14783	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14784	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14777	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14778	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14779	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/23/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14772	Vendor:	CPI
Analyst:	NAH	Chemical:	Ba 1000 mg/mL
Date Received:	03/22/2021	Lot #:	994634-134
Expiration Date (if any):	09/2022	Catalog #:	S4400-100041

Standard ID#:	M14773	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/mL
Date Received:	03/22/2021	Lot #:	1050965-34
Expiration Date (if any):	09/2022	Catalog #:	4400-10M544

Standard ID#:	M14774	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1066479-21
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000613

Standard ID#:	M14775	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1096004-1
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000531

Standard ID#:	M14776	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/23/2021	Lot #:	56-049CR
Expiration Date (if any):	03/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M14767	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14768	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	03/17/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14769	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14770	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14771	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14764	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14765	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14766	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14763	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	TCLP Acid Washed Filters
Date Received:	01/05/21	Lot #:	400182-0364-T
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

Standard Log #:	M14758	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	04/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14759	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	03/10/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14760	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14761	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14762	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14755	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14756	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14757	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14754	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Mod.
Date Received:	03/04/2021	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

		Instrument:	GFAA
Standard Log #:	M14751	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14752	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14753	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14748	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14749	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14750	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/02/2021	Expiration Date:	03/02/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14745	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14746	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14747	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	03/02/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14742	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14743	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14744	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/01/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14740	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Calcium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1072921-23
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M91

Standard ID#:	M14741	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Potassium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1053109-37
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M411

Standard ID#:	M14735	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Silicon 1000 µg/mL
Date Received:	02/25/2021	Lot #:	1047570-64
Expiration Date (if any):	08/20/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14736	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Sodium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1055526-35
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M521

Standard ID#:	M14737	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Aluminum 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1077245-17
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M11

Standard ID#:	M14738	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Iron 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1034257-40
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M261

Standard ID#:	M14739	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Magnesium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1075232-5
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M311

Standard Log #:	M14731	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14732	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14733	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14734	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14728	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14729	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14730	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14725	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14726	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14727	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14720	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14721	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14722	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14723	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard ID#:	M14724	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Potassium Permanganate
Date Received:	02/08/2021	Lot #:	201466
Expiration Date (if any):	Suggested Retest 04/202	Catalog #:	P279

		Instrument:	HydraII
Standard Log #:	M14717	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14718	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14719	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14713	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14714	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14715 (1) & (2)	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	02/3/2021	Lot #:	2023715-500
Expiration Date (if any):	08/31/2022	Catalog #:	10M67-1-500

Standard ID#:	M14716	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Phosphorus 10000 mg/L
Date Received:	02/08/2021	Lot #:	AR18-111PY
Expiration Date (if any):	02/28/2022	Catalog #:	PLP9--3Y

Standard Log #:	M14708	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14709	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14710	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	02/03/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14711	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14712	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14705	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14706	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14707	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/02/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14702	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/27/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14703	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14704	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14699	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14700	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14701	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/28/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14696	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14697	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14698	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14694	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) N/A **3.2 mL** of As (1000 mg/L) M14621 **3.2 mL** of Se (1000 mg/L) M14624 **0.08 mL** of Pb (10,000 mg/L) M14202 **1.0 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14695	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M14622 **1.0 mL** of As (1000 mg/L) M14621 **2.0 mL** of Se (1000 mg/L) M14624 **0.045 mL** of Pb (10,000 mg/L) M14202 **0.4 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14689	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14690	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14691	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	01/20/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14692	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14693	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14686	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14687	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14688	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/19/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14680	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	01/15/2021	Lot #:	1047870-29
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14681	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	01/15/2021	Lot #:	104768-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000291

Standard ID#:	M14682	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	01/15/2021	Lot #:	S4400-1000101
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000101

Standard ID#:	M14683	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	01/15/2021	Lot #:	1096004-1
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000531

Standard ID#:	M14684	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	01/15/2021	Lot #:	1075718-2
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000343

Standard ID#:	M14685	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	01/18/2021	Lot #:	XCTWI-4-500
Expiration Date (if any):	01/30/2022	Catalog #:	14-242AB

Standard ID#:	M14674	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	01/15/2021	Lot #:	1038255-27
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000623

Standard ID#:	M14675	Vendor:	CPI
Analyst:	NAH	Chemical:	B 1000 mg/L
Date Received:	01/15/2021	Lot #:	1024903-65
Expiration Date (if any):	07/2022	Catalog #:	S4400-100074

Standard ID#:	M14676	Vendor:	CPI
Analyst:	NAH	Chemical:	M 10000 mg/L
Date Received:	01/15/2021	Lot #:	1013353
Expiration Date (if any):	07/2022	Catalog #:	4400-10M311

Standard ID#:	M14677	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	01/15/2021	Lot #:	1050965-25
Expiration Date (if any):	07/2022	Catalog #:	4400-10M544

Standard ID#:	M14678	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	01/15/2021	Lot #:	1079898-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-10M391

Standard ID#:	M14679	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	01/15/2021	Lot #:	1034527-40
Expiration Date (if any):	07/2022	Catalog #:	4400-10M261

Standard Log #:	M14673	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/13/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M14623	1000	0.01
As	2	M14621	1000	0.1
Pb	2	M14202	10000	0.01
Sb	2	M14622	1000	0.1
Se	2	M14624	1000	0.1
Tl	2	M14626	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14670	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14671	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

Standard Log #:	M14672	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	01/12/2021	Expiration Date:	01/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14667	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14668	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14669	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	01/12/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14664	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14665	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14666	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14663	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	8 µg/L As 10 µg/L Pb 8 µg/L Sb 16 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	01/06/2021	Expiration Date:	09/2021

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M14621	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14626	10,000
Se	1	1000	M14624	10,000
Sb	1	1000	M14622	10,000
Ag	0.1	1000	M14623	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	0.8	10,000	8
Pb	1.0	10,000	10
Tl	1.0	10,000	10
Se	1.6	10,000	16
Sb	0.8	10,000	8
Ag	0.6	1000	0.6

		Instrument:	GFAA
Standard Log #:	M14660	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14661	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14662	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

MRL BASE STD M14659 Analyst NAH

Prep Date 01/04/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	02/22
Al	400	M14478	10000	2	02/22
Ba	10	M14568	1000	0.5	05/22
Be	4	M14203	1000	0.2	09/21
Cd	5	M14201	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14472	10000	2.5	02/22
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14569	1000	0.5	05/22
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	02/22
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14436	10000	5	02/22
Na	1000	M14559	10000	5	02/22
As	20	M14621	1000	1	02/22
Ca	500	M14476	10000	2.5	02/22
Fe	300	M14470	10000	1.5	02/22
Se	20	M14624	1000	1	02/22
Tl	20	M14626	1000	1	02/22
Si	100	M14435	1000	5	02/22
B	20	M14131	1000	1	07/21
Li	20	M14127	1000	1	07/21
W	50	xxxxxxxx	1000	2.5	xxxxxx
Ti	10	M14009	1000	0.5	04/21
Sr	10	M14007	1000	0.5	04/21
Sn	50	M14008	1000	2.5	04/21
S	300	M14570	10000	1.5	05/22

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M14658	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	1/04/2021	Expiration Date:	03/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **15 mL** Fe (10,000 mg/L) M14470, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14628, **2.5 mLs Na 10,000 ug/mL** M14473 ,**2.5 mLs k 10,000 ug/mL** M14436 **2.5 mLs S 10,000 ug/mL** M14570, **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14656	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14639, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **0.5 mL** Mo (1000 mg/L) M14569, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) xxxxxxx, **0.5 mL** Si (1000 mg/L) M14567, **0.5 mL** S (10000 mg/L) M14372, **0.5 mL** K (10000 mg/L) M14436, and **0.5 mL** Na (10000 mg/L) M14559		

		Instrument:	ICP 6500
Standard Log #:	M14657	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14359 and 15 **mL** 10000 mg/L Fe M14470 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M1359 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14655	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	01/04/2021	Expiration Date:	03/30/2021

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14628, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14435 and 1 mL M13859 Ce
0.25 ug/L Std. - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14559.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M14472, **10 mL** of Fe (10,000 mg/L) M14470, **10 mL** of Ca (10,000 mg/L) M14476 and **10 mL** Al (10,000 mg/L) M14478.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L)
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)

INORGANIC
CLP FORMS
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066849
Analytical Method:	EPA 410.4	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197021	Analysis Date/Time	11/03/2021 13:03
Analytical Prep Batch #:	83211	Prep. Date/Time:	11/02/2021 10:30
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	50	U	18	50	75	75

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066849
Analytical Method:	EPA 9040C	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196890	Analysis Date/Time	10/28/2021 14:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.29		0.1	0.1	0.1	0.1

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066848
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/03/2021 00:47
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	60		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066848
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 20:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.3	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	28		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066848
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 22:53
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066845
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/03/2021 00:05
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	77		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066845
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 19:13
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.25	J	0.12	0.20	0.40	0.40

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066845
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 19:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066845
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 21:32
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066847
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/03/2021 00:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	76		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066847
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 20:07
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.66		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	28		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066847
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 22:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066840
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 17:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.49		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	37	M	0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066840
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 20:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066840
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/02/2021 23:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	91		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066846
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/03/2021 00:19
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	76		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066846
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/29/2021 08:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066846
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 19:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.26	J	0.12	0.20	0.40	0.40

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066846
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 22:24
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.50	J	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892

Lab Sample ID: 1068041

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/26/21	16:57	15.00	13.66	91	90	110
Nitrate Nitrogen	4/26/21	16:57	3.50	3.336	95	90	110
Sulfate	4/26/21	16:57	25.00	23.21	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197021 Lab Sample ID: 1071459

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	11/3/21 13:03	400.0	387.7	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156

Lab Sample ID: 1072158

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	9/27/21	15:55	50.0	46.51	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892

Lab Sample ID: 1067749

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/28/21	14:06	15.00	14.60	97	90	110
Nitrate Nitrogen	10/28/21	14:06	3.500	3.587	102	90	110
Sulfate	10/28/21	14:06	25.00	24.84	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892

Lab Sample ID: 1067753

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/28/21	18:01	15.00	14.63	98	90	110
Nitrate Nitrogen	10/28/21	18:01	3.500	3.580	102	90	110
Sulfate	10/28/21	18:01	25.00	24.88	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892

Lab Sample ID: 1067757

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/28/21	21:01	15.00	14.64	98	90	110
Nitrate Nitrogen	10/28/21	21:01	3.500	3.577	102	90	110
Sulfate	10/28/21	21:01	25.00	24.87	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892

Lab Sample ID: 1067759

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/29/21	07:43	15.00	14.58	97	90	110
Nitrate Nitrogen	10/29/21	07:43	3.500	3.587	102	90	110
Sulfate	10/29/21	07:43	25.00	24.82	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892

Lab Sample ID: 1067762

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/29/21	09:14	15.00	14.52	97	90	110
Nitrate Nitrogen	10/29/21	09:14	3.500	3.565	102	90	110
Sulfate	10/29/21	09:14	25.00	24.79	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197009

Lab Sample ID: 1069708

ICAL Calibration #: ICAL 0550

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
	11/2/21	23:12	50.0	48.21	96	90	110
Total Inorganic Carbon	11/2/21	23:12	50.0	48.21	96	90	110
Total Organic Carbon	11/2/21	23:12	50.0	48.21	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197009

Lab Sample ID: 1069711

ICAL Calibration #: ICAL 0550

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
	11/3/21	01:00	50.0	50.02	100	90	110
Total Inorganic Carbon	11/3/21	01:00	50.0	50.02	100	90	110
Total Organic Carbon	11/3/21	01:00	50.0	50.02	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156

Lab Sample ID: 1071037

ICAL Calibration #: ICAL 0550

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/4/21	15:19	50.0	48.98	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156

Lab Sample ID: 1071040

ICAL Calibration #: ICAL 0550

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/4/21	18:50	50.0	47.41	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156

Lab Sample ID: 1071045

ICAL Calibration #: ICAL 0550

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/4/21	21:53	50.0	47.31	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197021

Lab Sample ID: 1071461

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	11/3/21	13:03	400.0	392.5	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197021

Lab Sample ID: 1071463

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	11/3/21	13:03	400.0	394.9	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197021

Lab Sample ID: 1071465

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	11/3/21	13:03	400.0	394.9	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156

Lab Sample ID: 1072164

ICAL Calibration #: ICAL 0550

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/4/21	23:12	50.0	46.49	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197021

Lab Sample ID: 1071460

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	11/03/2021 13:03	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

3-1

INITIAL CALIBRATION BLANKS

ICB

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156 Lab Sample ID: 1072159

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	09/27/2021 16:08	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

3-1

ICB

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892 Lab Sample ID: 1068042

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/27/2021 10:28	0.5847	U	1.0	1.5
Nitrate Nitrogen	04/27/2021 10:28	0	U	0.12	0.20
Sulfate	04/27/2021 10:28	0.7141	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892 Lab Sample ID: 1067754

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/28/2021 18:19	0.5845	U	1.0	1.5
Nitrate Nitrogen	10/28/2021 18:19	0.08050	U	0.12	0.20
Sulfate	10/28/2021 18:19	0.7074	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892 Lab Sample ID: 1067758

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/28/2021 21:20	0.5943	U	1.0	1.5
Nitrate Nitrogen	10/28/2021 21:20	0.07980	U	0.12	0.20
Sulfate	10/28/2021 21:20	0.7182	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892 Lab Sample ID: 1067760

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/29/2021 08:01	0.5871	U	1.0	1.5
Nitrate Nitrogen	10/29/2021 08:01	0	U	0.12	0.20
Sulfate	10/29/2021 08:01	0.7120	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892 Lab Sample ID: 1067764

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/29/2021 09:32	0.6099	U	1.0	1.5
Nitrate Nitrogen	10/29/2021 09:32	0.08220	U	0.12	0.20
Sulfate	10/29/2021 09:32	0.7285	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197009 Lab Sample ID: 1069712

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0550 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
	11/03/2021 01:14	0	U	0.5	1.5
Total Inorganic Carbon	11/03/2021 01:14	0	U	0.5	1.5
Total Organic Carbon	11/03/2021 01:14	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156

Lab Sample ID: 1071041

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0550

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/04/2021 19:03	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156 Lab Sample ID: 1071046

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0550 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/04/2021 22:06	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197021 Lab Sample ID: 1071462

Analytical Prep Batch # Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	11/03/2021 13:03	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197021

Lab Sample ID: 1071464

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	11/03/2021 13:03	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197021 Lab Sample ID: 1071466

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	11/03/2021 13:03	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156

Lab Sample ID: 1072165

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #: ICAL 0550

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/04/2021 23:25	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 196892 Lab Sample ID: 1067751

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/28/2021 14:42	0.6094	U	1.0	1.5
Nitrate Nitrogen	10/28/2021 14:42	0.08920	U	0.12	0.20
Sulfate	10/28/2021 14:42	0.7334	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197021 Lab Sample ID: 1069190

Analytical Prep Batch # 83211 Preparation Date/Time: 11/02/2021 10:30

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total COD	11/03/2021 13:03	0	U	18	37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197009 Lab Sample ID: 1069710

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0550 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
	11/02/2021 23:38	0.12	U	0.5	1.5
Total Inorganic Carbon	11/02/2021 23:38	0.12	U	0.5	1.5
Total Organic Carbon	11/02/2021 23:38	0.12	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

SDG No.: 165486

Analytical Run #: 197156 Lab Sample ID: 1071039

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0550 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/04/2021 15:45	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1067755	Parent Sample No.:	1066840
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	196892	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	10/28/2021	Analysis Time: --------	18:37

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	15.0		7.6		8.00	92			
Nitrate Nitrogen	88-111	2.43		0.49		2.00	97			
Sulfate	87-112	43.6		37		8.00	82			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1069192	Parent Sample No.:	1066849
Analytical Prep Batch #	83211	Analytical Preparation Date/Time:	11/02/2021 10:30
Analytical Run #:	197021	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 11/03/2021 Analysis Time: -------- 13:03

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
COD	90-110	148		BDL	U	148	100		SP

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1071043	Parent Sample No.:	1066840
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	197156	ICAL Calibration #:	ICAL 0550

Analysis Type	*Initial Analysis*	Analysis Date: -----	11/04/2021	Analysis Time: --------	21:07

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	48.1		BDL	U	50.0	96		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1067756	Parent Sample No.:	1067755
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	196892	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	10/28/2021	Analysis Time: --------	18:55

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	15.3		7.6		8.00	96			
Nitrate Nitrogen	88-111	2.47		0.49		2.00	99			
Sulfate	87-112	43.8		37		8.00	85			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1069193	Parent Sample No.:	1069192
Analytical Prep Batch #	83211	Analytical Preparation Date/Time:	11/02/2021 10:30
Analytical Run #:	197021	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 11/03/2021 Analysis Time: -------- 13:03

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
COD	90-110	153		BDL	U	148	103		SP

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix:	LIQUID	SDG No.:	165486
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1071044	Parent Sample No.:	1071043
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	197156	ICAL Calibration #:	ICAL 0550

Analysis Type *Initial Analysis* Analysis Date: ----- 11/04/2021 Analysis Time: -------- 21:20

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	48.1		BDL	U	50.0	96		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54-IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID

SDG No.: 165486

% Solid for Sample:

Concentration Units: S.U.

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 196890

ICAL Calibration #:

Sample #: 1067505

Parent Sample #: 1066849

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
pH	10/28/2021	14:00	1	7.29		7.27		0		ELEC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54MW13

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix: LIQUID
SDG No.: 165486
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch # 1
Analytical Preparation Date/Time 0
Analytical Run #: 196892
ICAL Calibration #:
Sample #: 1067752
Parent Sample #: 1066840

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	10/28/2021	17:43	10	7.6		7.63		0		
Nitrate Nitrogen	10/28/2021	17:43	10	0.49		0.482		2		
Sulfate	10/28/2021	17:43	10	37		37.1		0		

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54-IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID

SDG No.: 165486

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 83211

Analytical Run #: 197021

ICAL Calibration #:

Sample #: 1069194

Parent Sample #: 1066849

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
COD	11/03/2021	13:03	20	18	U	18	U	0		SP

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54MW13

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID

SDG No.: 165486

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 197156

ICAL Calibration #: ICAL 0550

Sample #: 1071042

Parent Sample #: 1066840

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	11/04/2021	20:47	20	0.5	U	0.5	U	0		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **54MW13**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix: LIQUID
SDG No.: 165486
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 196892
ICAL Calibration #:
Sample #: 1067756
Parent Sample #: 1067755

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	10/28/2021	18:55	15	15.0		15.3		1		
Nitrate Nitrogen	10/28/2021	18:55	15	2.43		2.47		1		
Sulfate	10/28/2021	18:55	15	43.6		43.8		0		

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description

54-IDW

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

Matrix: LIQUID
SDG No.: 165486

% Solid for Sample:
Concentration Units: mg/L

Analytical Prep Batch # 83211
Analytical Preparation Date/Time 11/02/2021 10:30

Analytical Run #: 197021
ICAL Calibration #:

Sample #: 1069193
Parent Sample #: 1069192

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
COD	11/03/2021	13:03	20	148		153		3		SP

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **54MW13**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix: LIQUID
SDG No.: 165486
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 197156
ICAL Calibration #: ICAL 0550
Sample #: 1071044
Parent Sample #: 1071043

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	11/04/2021	21:20	20	48.1		48.1		0		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

LCS Source: SPEX and Ultra

SDG No.: 165486

Concentration Units: mg/L

Analytical Run #: 196892

Sample No.:#: 1067750

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	10/28/2021 14:24	87-111	14.19		15.00	95		
Nitrate Nitrogen	10/28/2021 14:24	88-111	3.570		3.500	102		
Sulfate	10/28/2021 14:24	87-112	24.87		25.00	99		

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

LCS Source: SPEX and Ultra SDG No.: 165486

Concentration Units: mg/L

Analytical Run #: 197021 Sample No.:#: 1069191

Analytical Prep Batch #: 83211 Preparation Date/Time: 11/02/2021 10:30

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
COD	11/03/2021 13:03	90-110	387.7		400.0	97		SP

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

LCS Source: SPEX and Ultra

SDG No.: 165486

Concentration Units: mg/L

Analytical Run #: 197009

Sample No.:#: 1069709

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0550

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
	11/02/2021 23:25	85-111	48.42		50.0	97		TOC
Total Inorganic Carbon	11/02/2021 23:25	85-111	48.42		50.0	97		TOC
Total Organic Carbon	11/02/2021 23:25	85-111	48.42		50.0	97		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54

LCS Source: SPEX and Ultra

SDG No.: 165486

Concentration Units: mg/L

Analytical Run #: 197156

Sample No.:#: 1071038

Analytical Prep Batch #: 0

Preparation Date/Time:

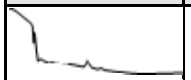
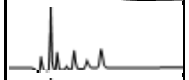
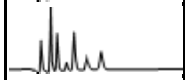
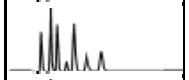
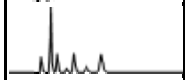
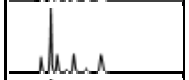
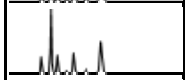
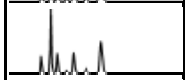
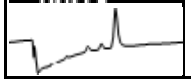
ICAL Calibration #: ICAL 0550

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	11/04/2021 15:32	85-111	50.81		50.0	102		TOC

INORGANICS
RAW DATA
DOCUMENTS

Sequence: 042621 - IC3602A
Last Update Operator: AQUION

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	STD1	1.0000	Calibration Standard	1	2	5000	Anions 1.0	IC3602A	Finished
	STD2	1.0000	Calibration Standard	2	3	5000	Anions 1.0	IC3602A	Finished
	STD3	1.0000	Calibration Standard	3	4	5000	Anions 1.0	IC3602A	Finished
	STD4	1.0000	Calibration Standard	4	5	5000	Anions 1.0	IC3602A	Finished
	STD5	1.0000	Calibration Standard	5	6	5000	Anions 1.0	IC3602A	Finished
	STD6	1.0000	Calibration Standard	6	7	5000	Anions 1.0	IC3602A	Finished
	STD7	1.0000	Calibration Standard	7	8	5000	Anions 1.0	IC3602A	Finished
	STD8	1.0000	Calibration Standard	8	9	5000	Anions 1.0	IC3602A	Finished
	STD9	1.0000	Calibration Standard	9	10	5000	Anions 1.0	IC3602A	Finished
	ICV	1.0000	Unknown		11	5000	Anions 1.0	IC3602A	Finished
	ICB	1.0000	Unknown		23	5000	Anions 1.0	IC3602A	Finished

Calibration Concentrations

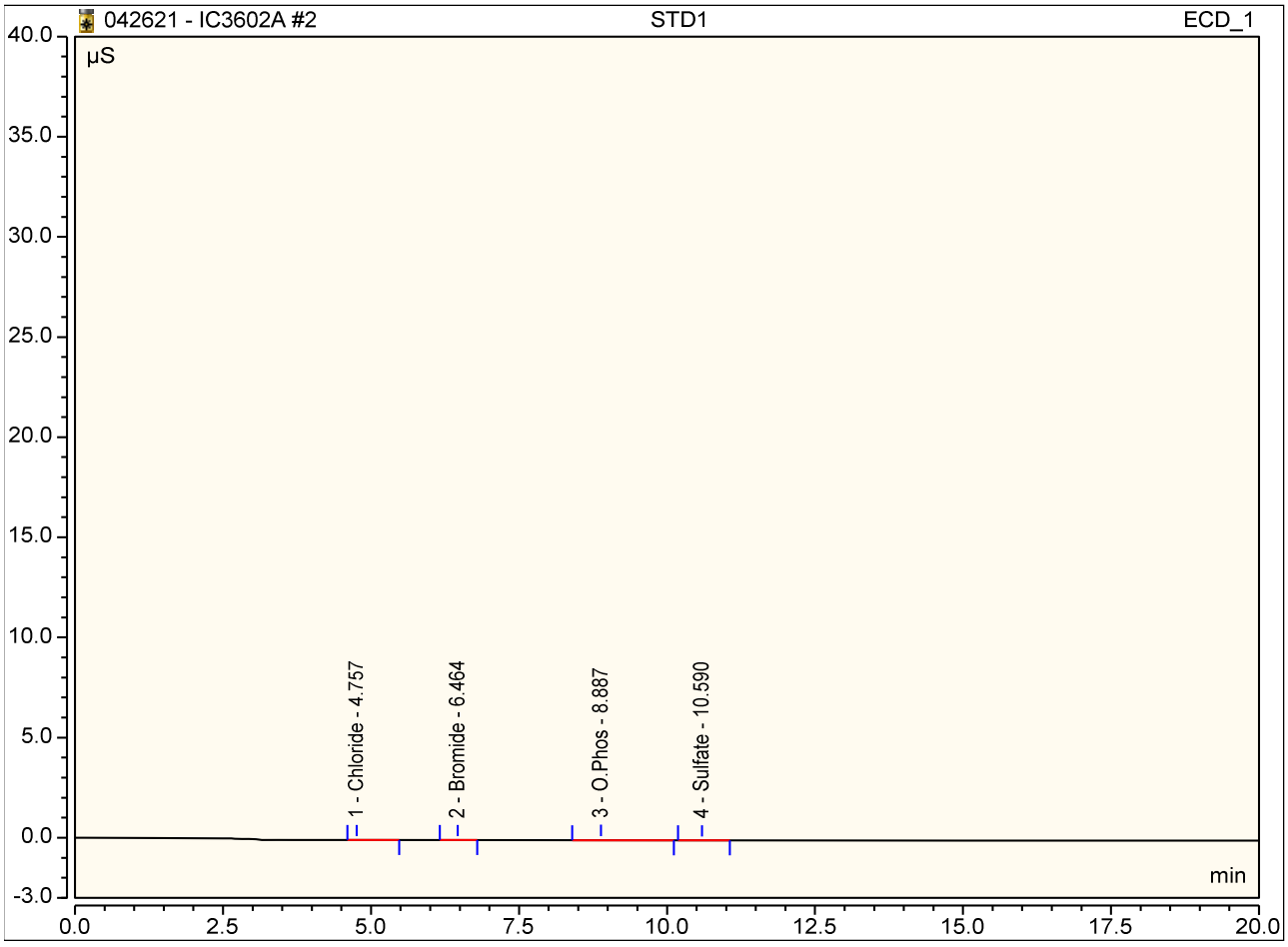
Instrument:AQUION 4	Cal. File: IC3602A				ICV	IC3596 IC3599		Analyst/Date: TMG 04/26/2021		
Analyte	Cal Level 1 (mg/L)	Cal Level 2 (mg/L)	Cal Level 3 (mg/L)	Cal Level 4 (mg/L)	Cal Level 5 (mg/L)	Cal Level 6 (mg/L)	Cal Level 7 (mg/L)	Cal Level 8 (mg/L)	Cal Level 9 (mg/L)	ICV (mg/L)
Fluoride	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Chloride	0.0	0.5	0.75	1.0	5.0	10.0	20.0	30.0	40.0	15.0
Bromide	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrite	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrate	0.0	0.1	0.30	0.5	1.0	2.0	5.0	7.0		3.5
O-Phoshorous	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Sulfate	0.0	0.5	0.75	1.0	5.0	10.0	30.0	50.0	70.0	25.0

RJ 05/06/2021

Peak Integration Report

Sample Name:	**STD1**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 13:57**	*Run Time:*	**20.00**

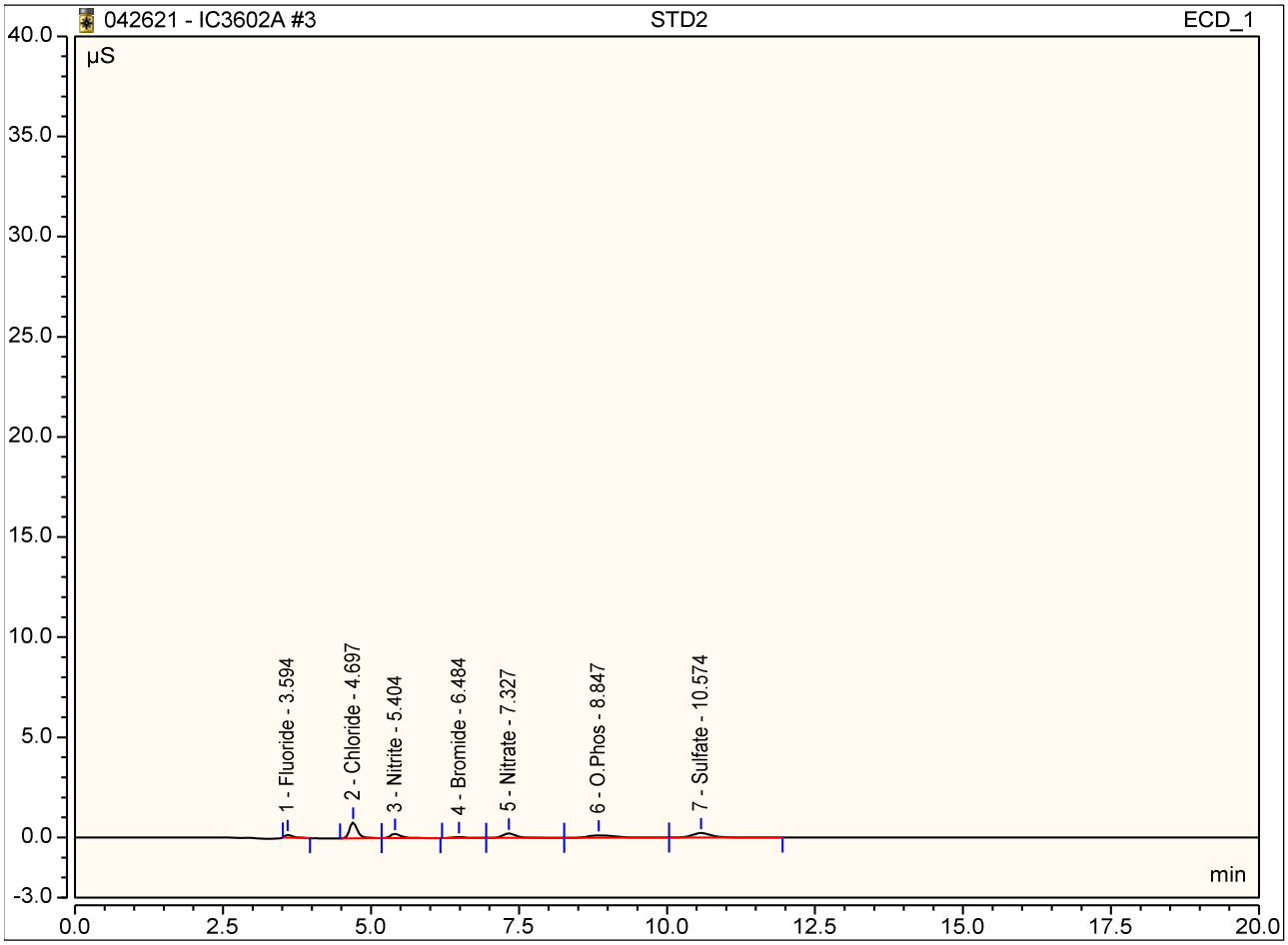
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.76	Chloride	0.002	0.005	0.5812
2	6.46	Bromide	0.001	0.002	n.a.
3	8.89	O.Phos	0.011	0.021	n.a.
4	10.59	Sulfate	0.001	0.003	0.7007



Peak Integration Report

Sample Name:	**STD2**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 14:17**	*Run Time:*	**20.00**

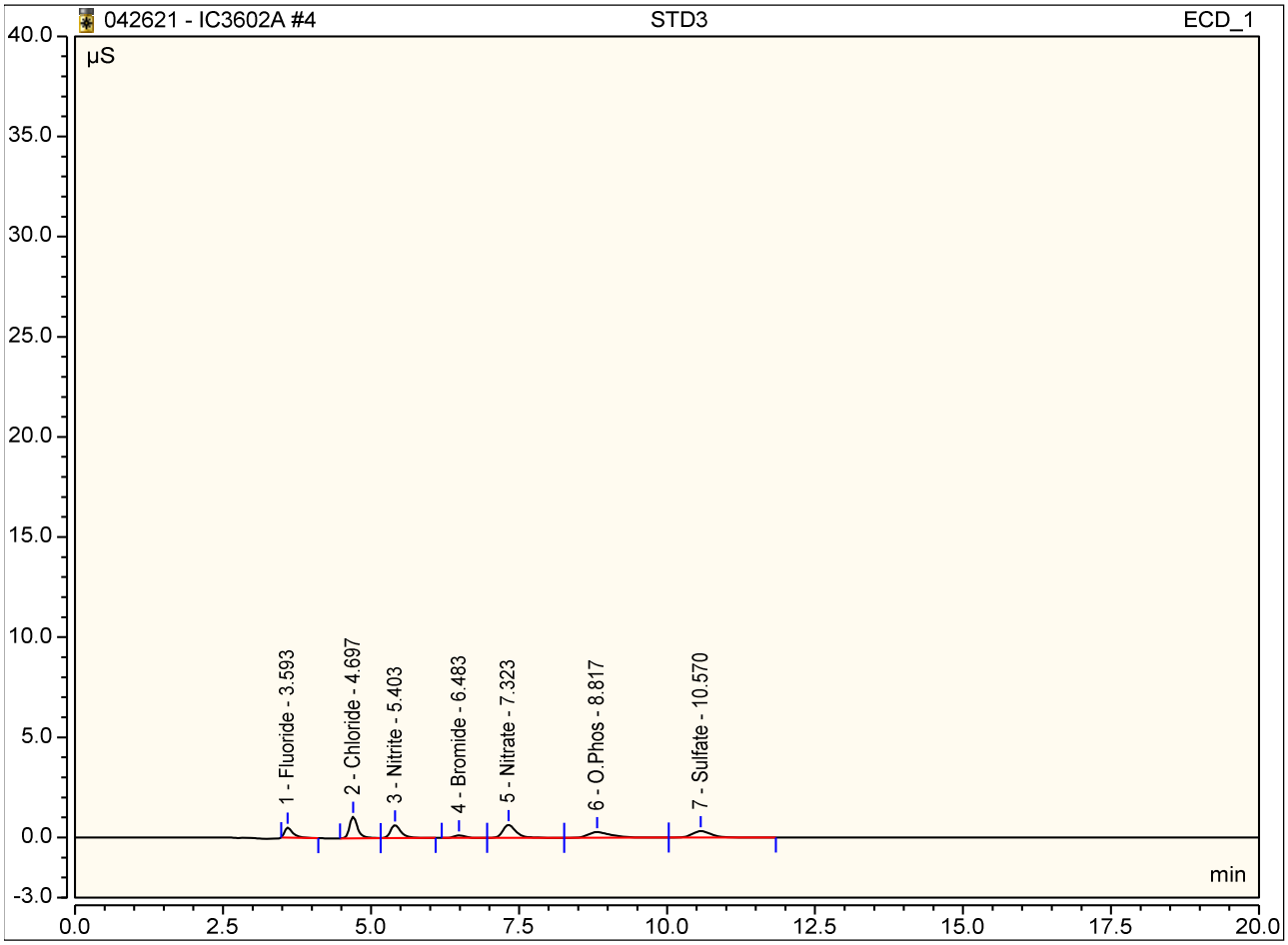
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.020	0.135	0.1309
2	4.70	Chloride	0.127	0.783	0.9998
3	5.40	Nitrite	0.044	0.213	0.1113
4	6.48	Bromide	0.010	0.046	0.0954
5	7.33	Nitrate	0.057	0.220	0.1671
6	8.85	O.Phos	0.059	0.122	0.0635
7	10.57	Sulfate	0.086	0.224	1.1155



Peak Integration Report

Sample Name:	**STD3**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 14:37**	*Run Time:*	**20.00**

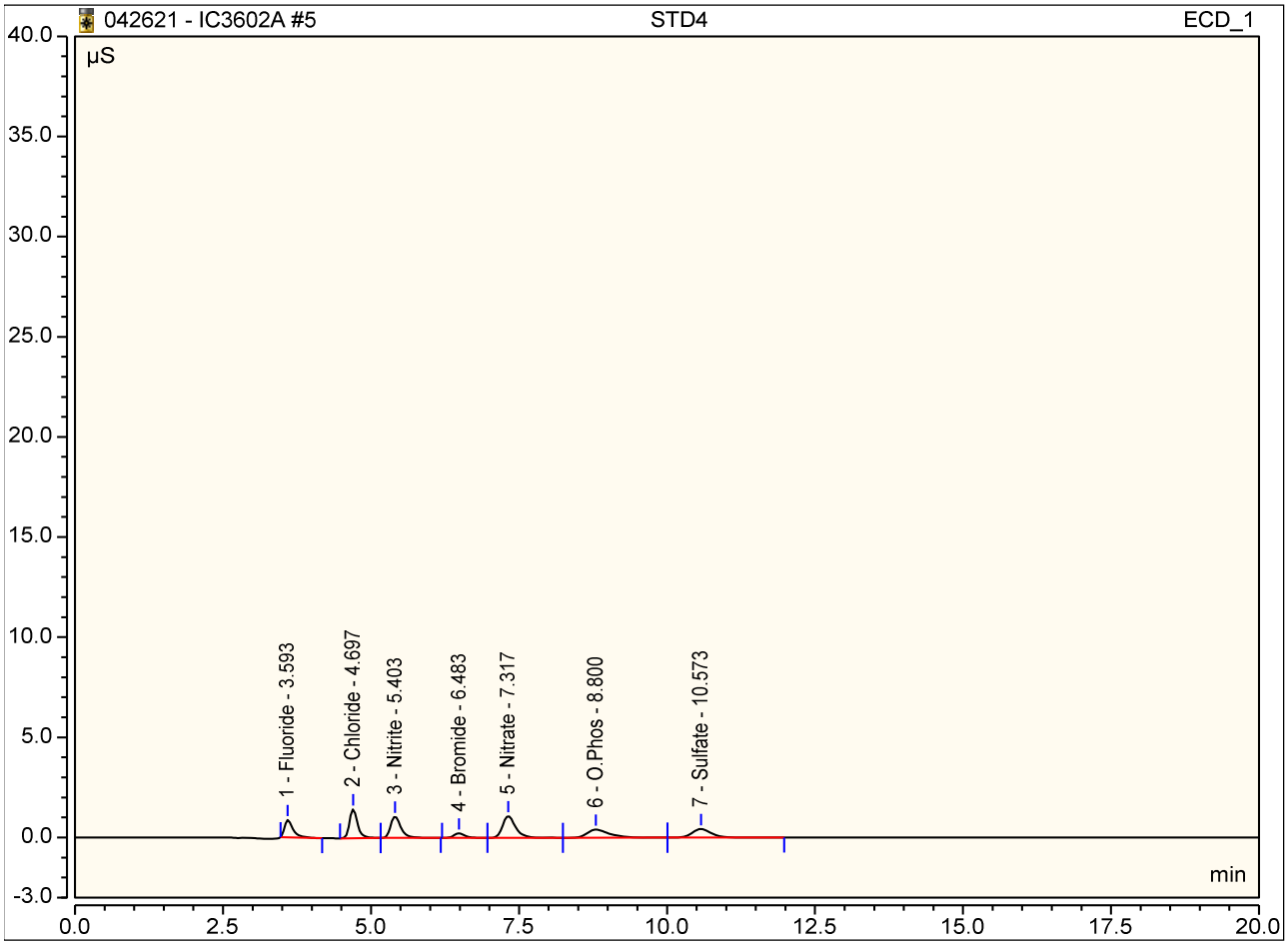
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.081	0.497	0.2981
2	4.70	Chloride	0.174	1.072	1.1555
3	5.40	Nitrite	0.132	0.636	0.3004
4	6.48	Bromide	0.029	0.133	0.2916
5	7.32	Nitrate	0.166	0.643	0.3379
6	8.82	O.Phos	0.124	0.278	0.3469
7	10.57	Sulfate	0.123	0.323	1.2980



Peak Integration Report

Sample Name:	**STD4**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 14:57**	*Run Time:*	**20.00**

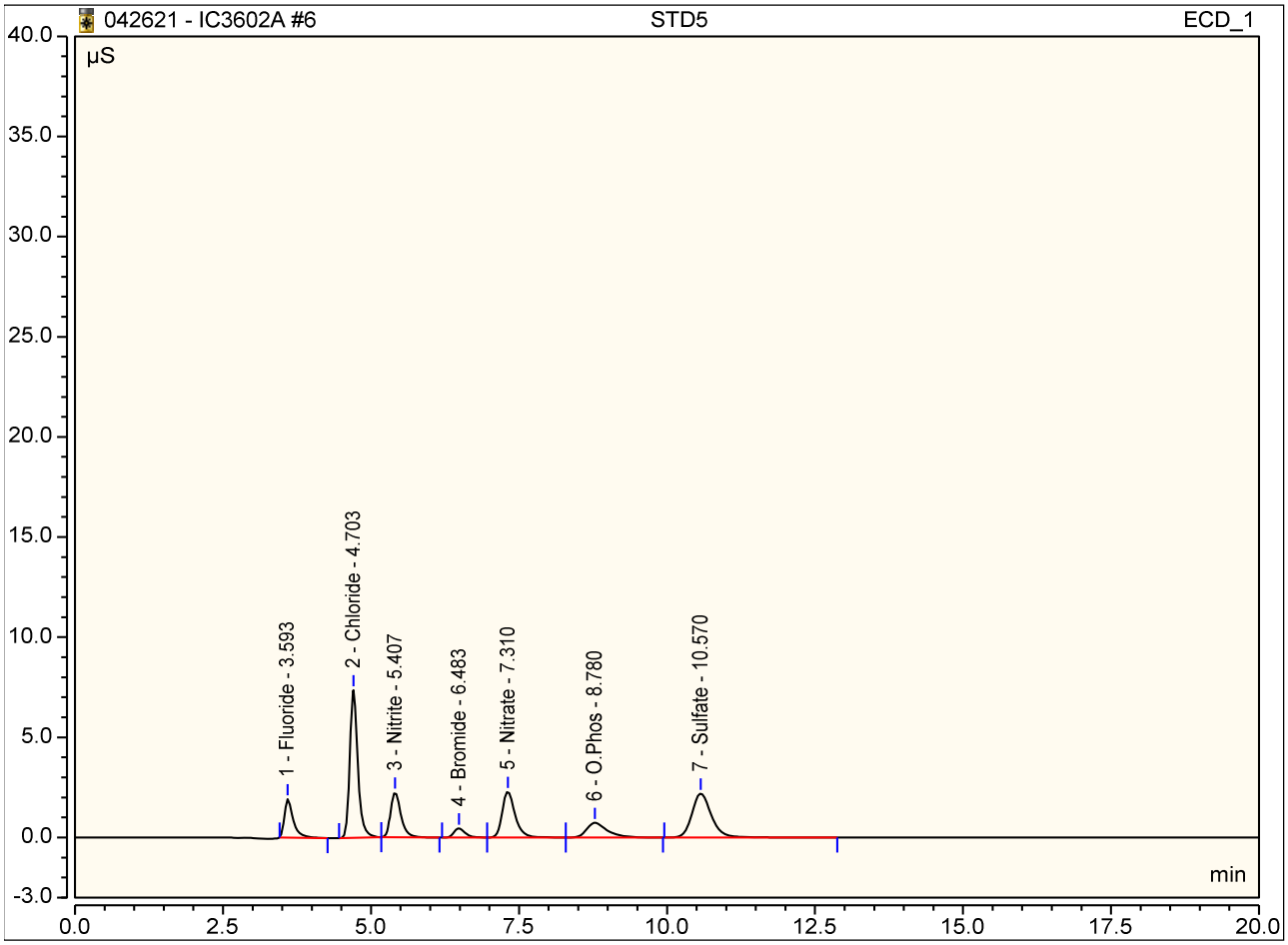
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.150	0.880	0.4868
2	4.70	Chloride	0.234	1.448	1.3560
3	5.40	Nitrite	0.222	1.069	0.4938
4	6.48	Bromide	0.048	0.222	0.4892
5	7.32	Nitrate	0.277	1.080	0.5121
6	8.80	O.Phos	0.176	0.409	0.5701
7	10.57	Sulfate	0.165	0.433	1.5061



Peak Integration Report

Sample Name:	**STD5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 15:17**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.335	1.918	0.9947
2	4.70	Chloride	1.170	7.371	4.4751
3	5.41	Nitrite	0.461	2.244	1.0069
4	6.48	Bromide	0.100	0.459	1.0213
5	7.31	Nitrate	0.584	2.282	0.9928
6	8.78	O.Phos	0.296	0.735	1.0881
7	10.57	Sulfate	0.836	2.196	4.7988

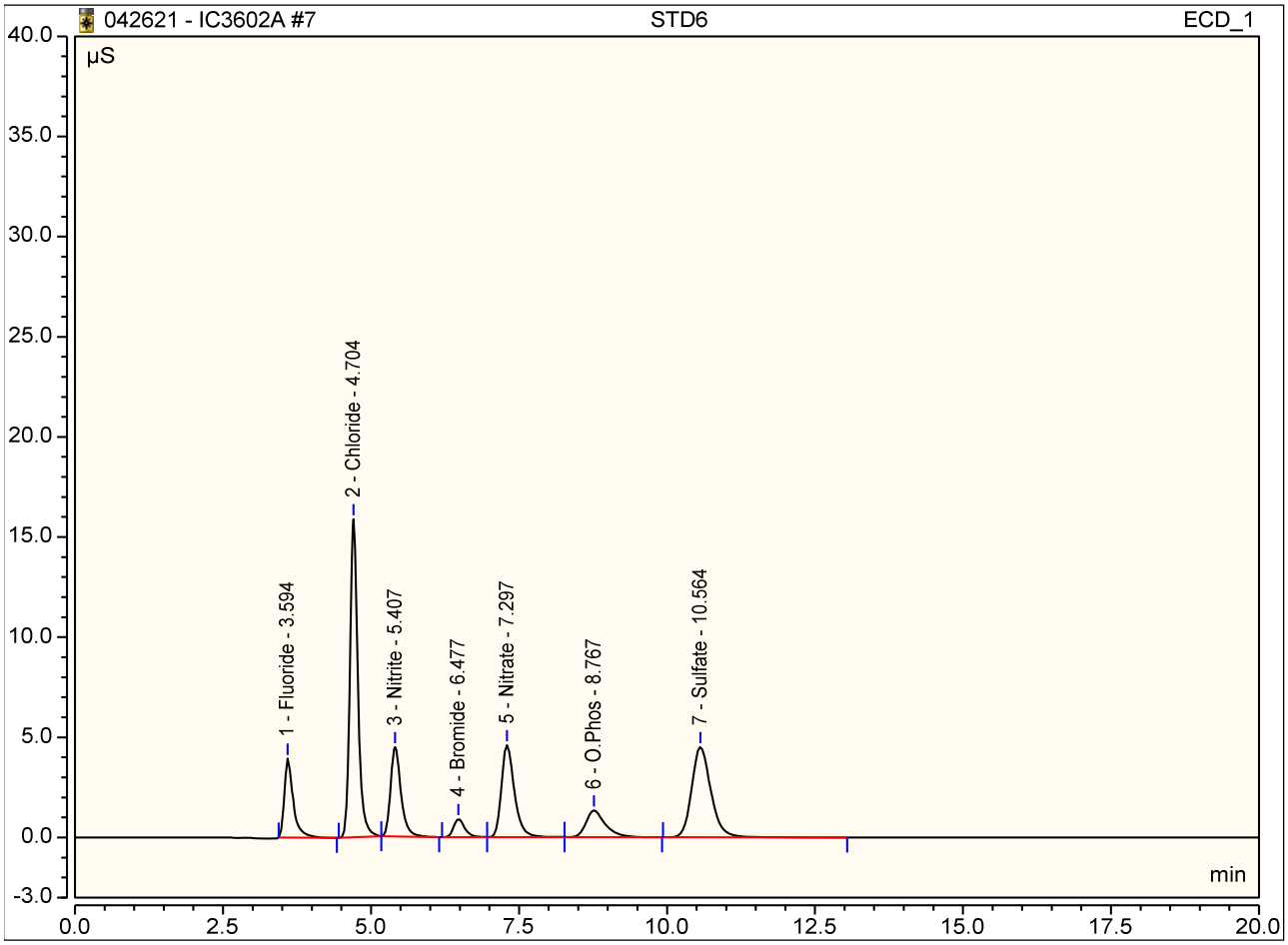


Chromeleon (c) Dionex 1996-2009
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**STD6**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 15:37**	*Run Time:*	**20.00**

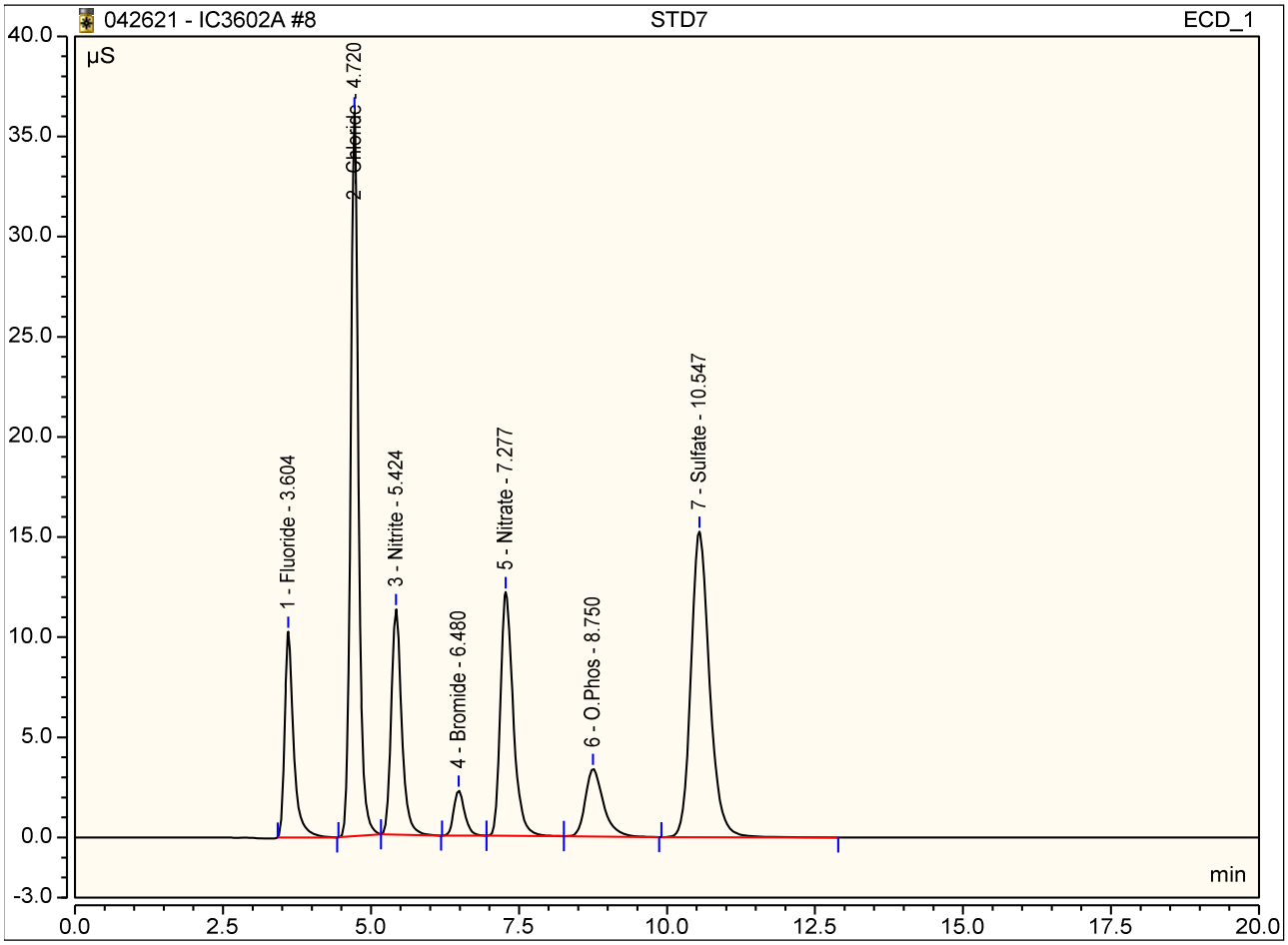
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.694	3.939	1.9793
2	4.70	Chloride	2.475	15.887	8.8219
3	5.41	Nitrite	0.915	4.462	1.9810
4	6.48	Bromide	0.196	0.904	2.0129
5	7.30	Nitrate	1.169	4.589	1.9100
6	8.77	O.Phos	0.507	1.334	2.0002
7	10.56	Sulfate	1.705	4.511	9.0620



Peak Integration Report

Sample Name:	**STD7**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 15:57**	*Run Time:*	**20.00**

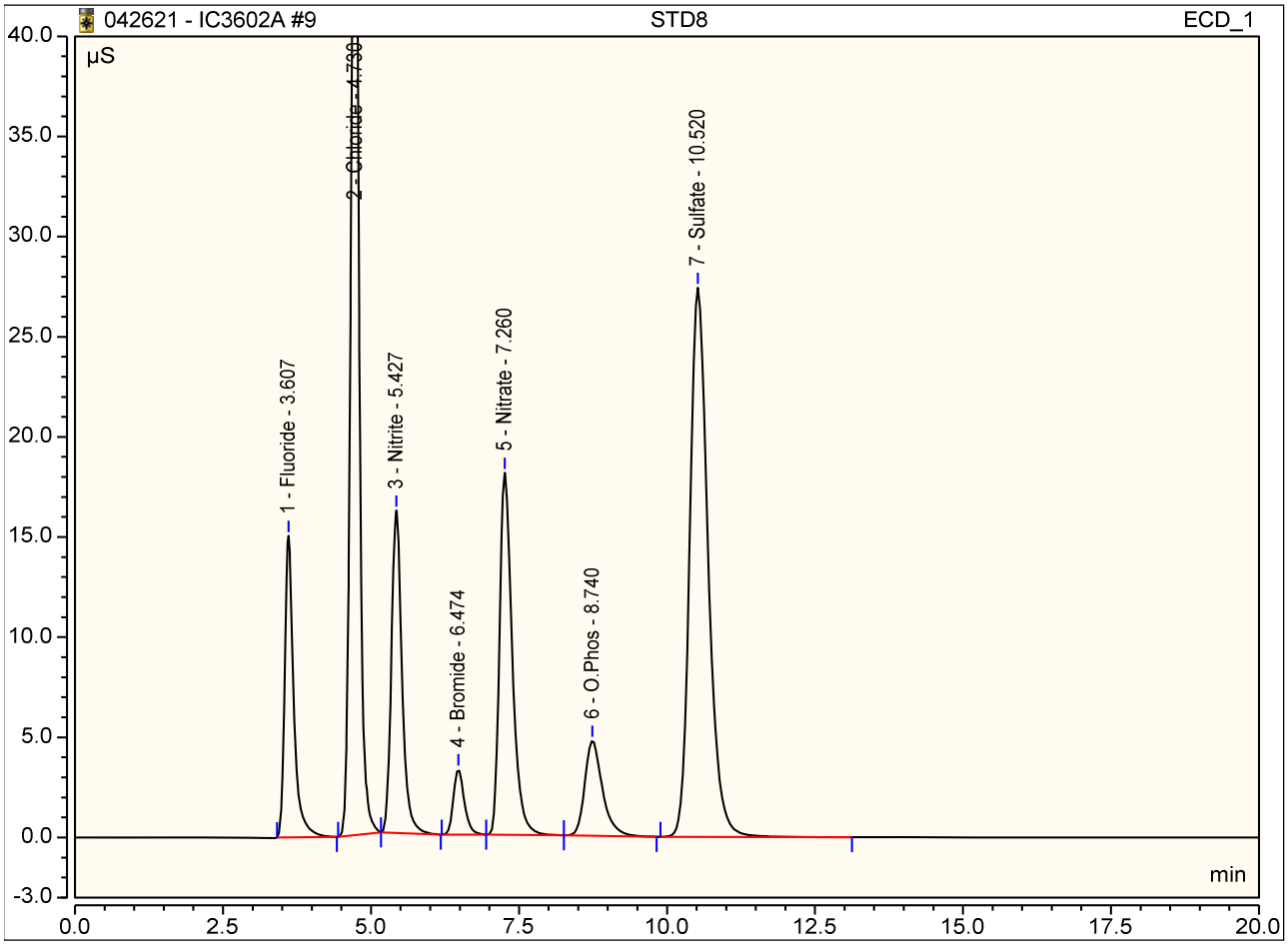
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.60	Fluoride	1.801	10.272	5.0101
2	4.72	Chloride	5.574	36.153	19.1491
3	5.42	Nitrite	2.325	11.275	5.0066
4	6.48	Bromide	0.486	2.263	4.9922
5	7.28	Nitrate	3.044	12.166	4.8487
6	8.75	O.Phos	1.196	3.382	4.9732
7	10.55	Sulfate	5.562	15.252	27.9879



Peak Integration Report

Sample Name:	**STD8**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 16:17**	*Run Time:*	**20.00**

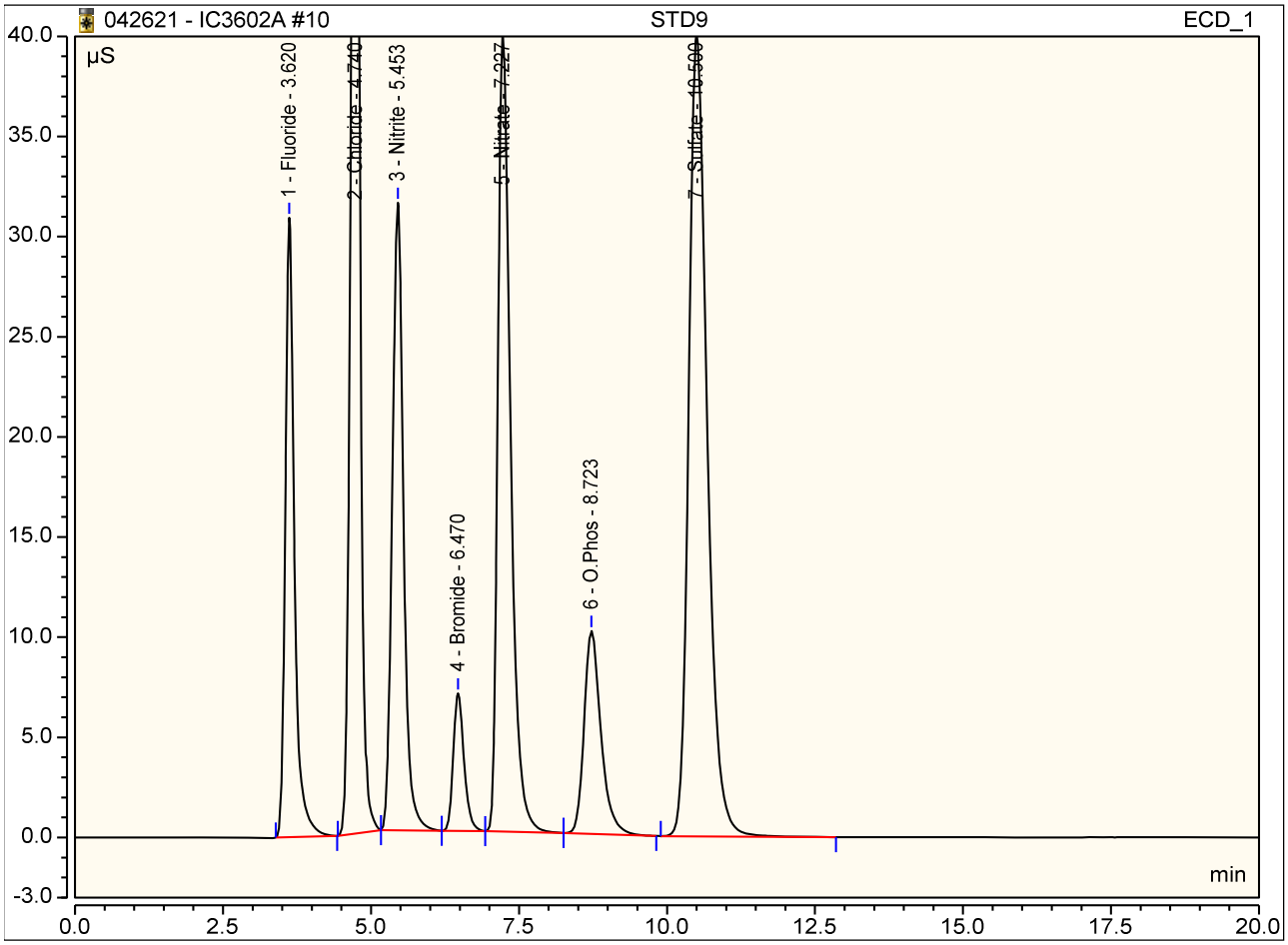
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	2.637	15.048	7.2999
2	4.73	Chloride	8.769	55.885	29.7944
3	5.43	Nitrite	3.348	16.093	7.2041
4	6.47	Bromide	0.697	3.262	7.1617
5	7.26	Nitrate	4.501	18.075	7.1314
6	8.74	O.Phos	1.637	4.743	6.8778
7	10.52	Sulfate	9.897	27.424	49.2574



Peak Integration Report

Sample Name:	**STD9**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 16:37**	*Run Time:*	**20.00**

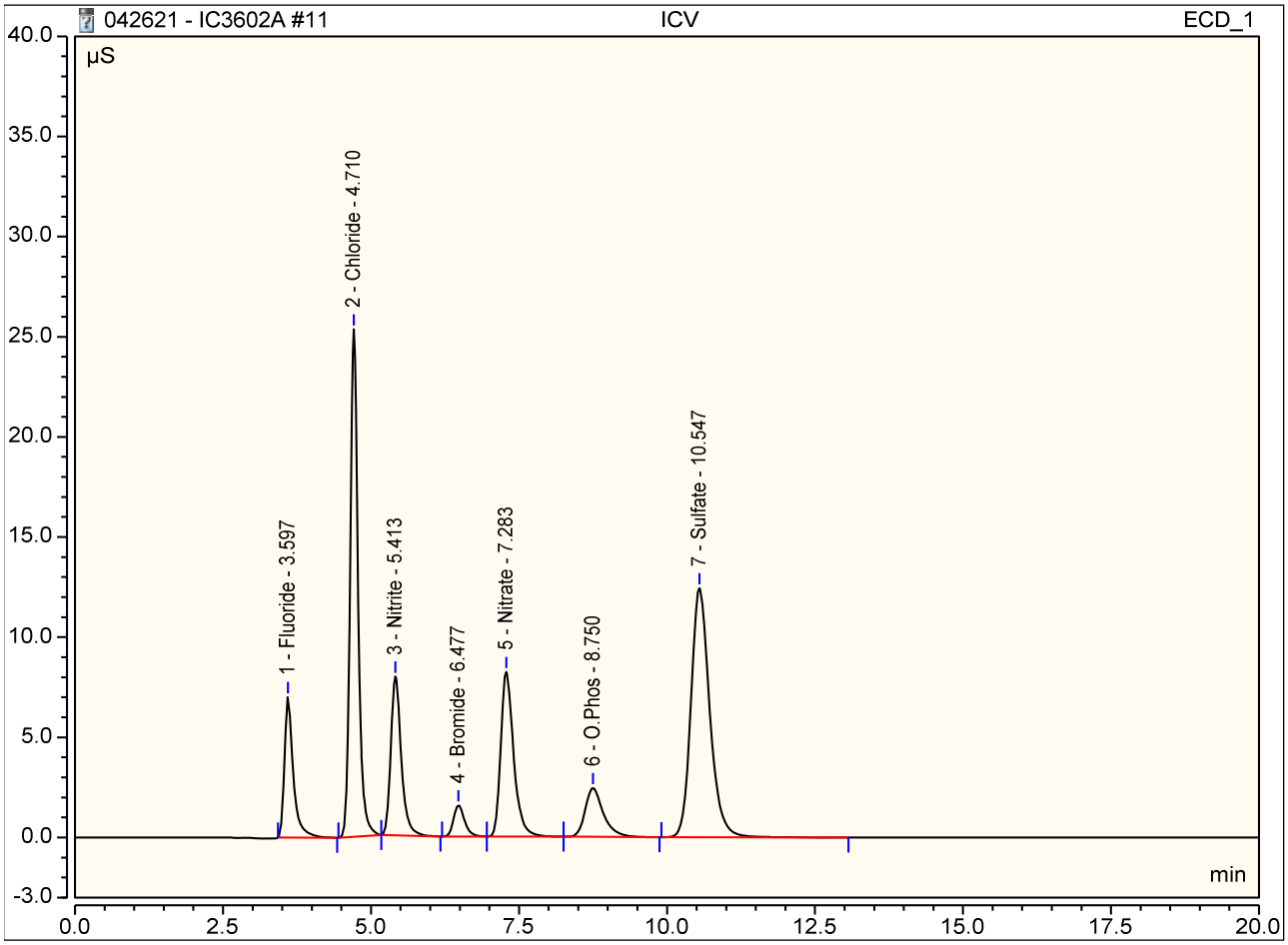
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.62	Fluoride	5.521	30.932	15.2019
2	4.74	Chloride	12.107	74.563	40.9170
3	5.45	Nitrite	6.874	31.339	14.7710
4	6.47	Bromide	1.445	6.872	14.8532
5	7.23	Nitrate	9.938	39.842	15.6520
6	8.72	O.Phos	3.344	10.135	14.2505
7	10.50	Sulfate	14.435	40.069	71.5237



Peak Integration Report

Sample Name:	**ICV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 16:57**	*Run Time:*	**20.00**

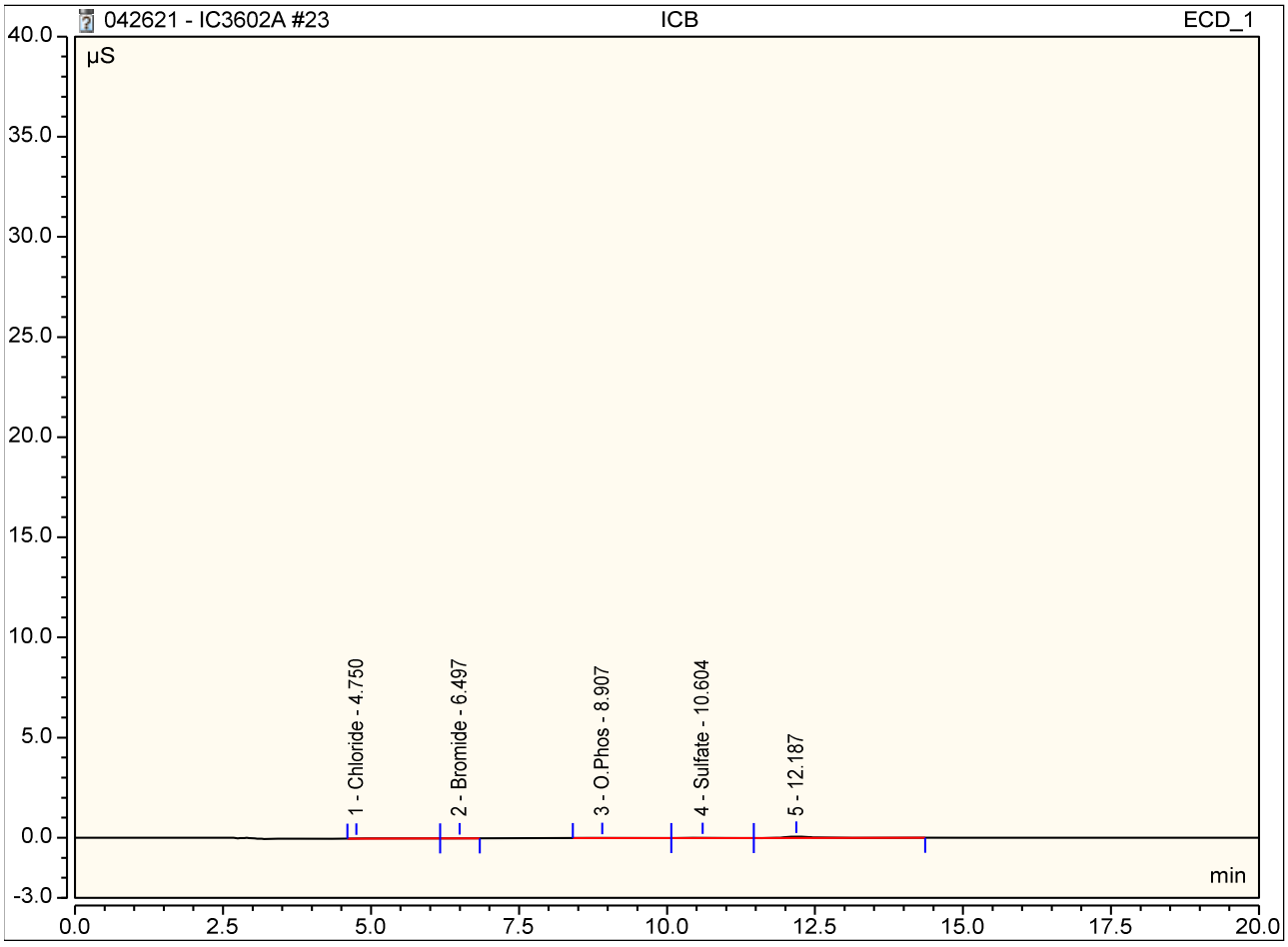
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.60	Fluoride	1.219	7.014	3.4149
2	4.71	Chloride	3.927	25.333	13.6600
3	5.41	Nitrite	1.632	7.933	3.5197
4	6.48	Bromide	0.338	1.559	3.4673
5	7.28	Nitrate	2.079	8.216	3.3362
6	8.75	O.Phos	0.873	2.441	3.5784
7	10.55	Sulfate	4.589	12.436	23.2125



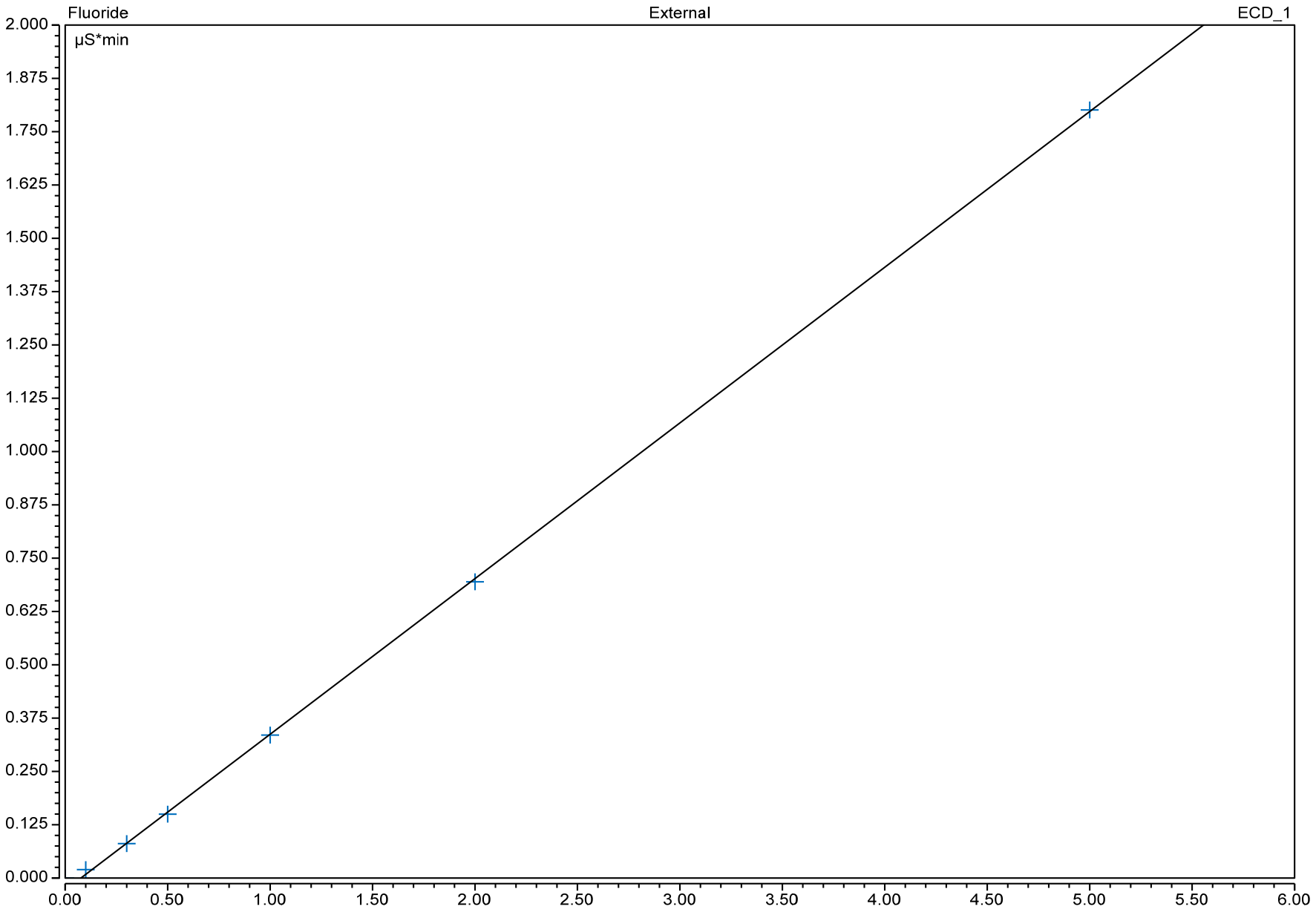
Peak Integration Report

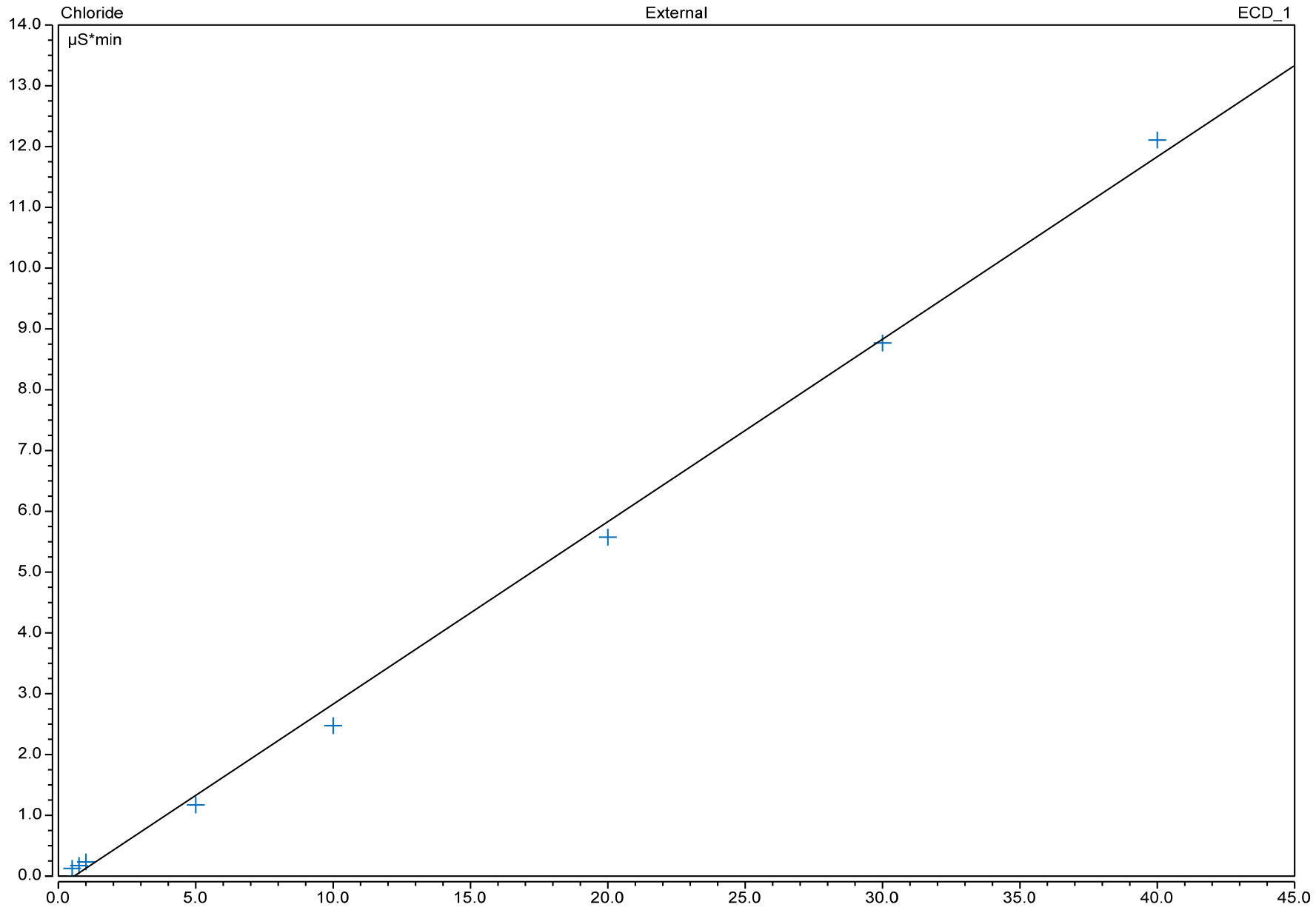
Sample Name:	**ICB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Apr-2021 / 10:28**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.75	Chloride	0.003	0.004	0.5847
2	6.50	Bromide	0.001	0.004	0.0025
3	8.91	O.Phos	0.006	0.011	n.a.
4	10.60	Sulfate	0.004	0.010	0.7141

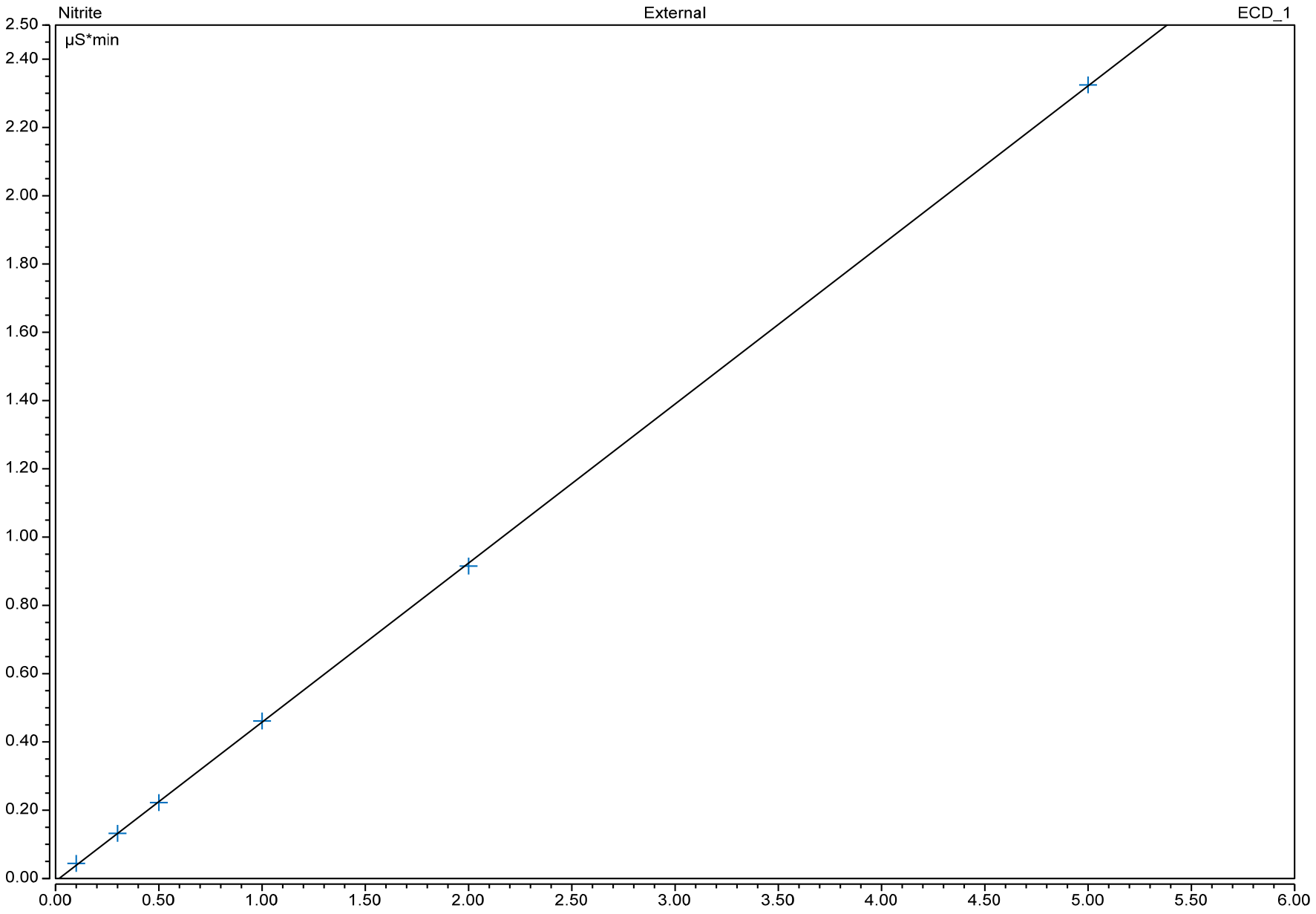


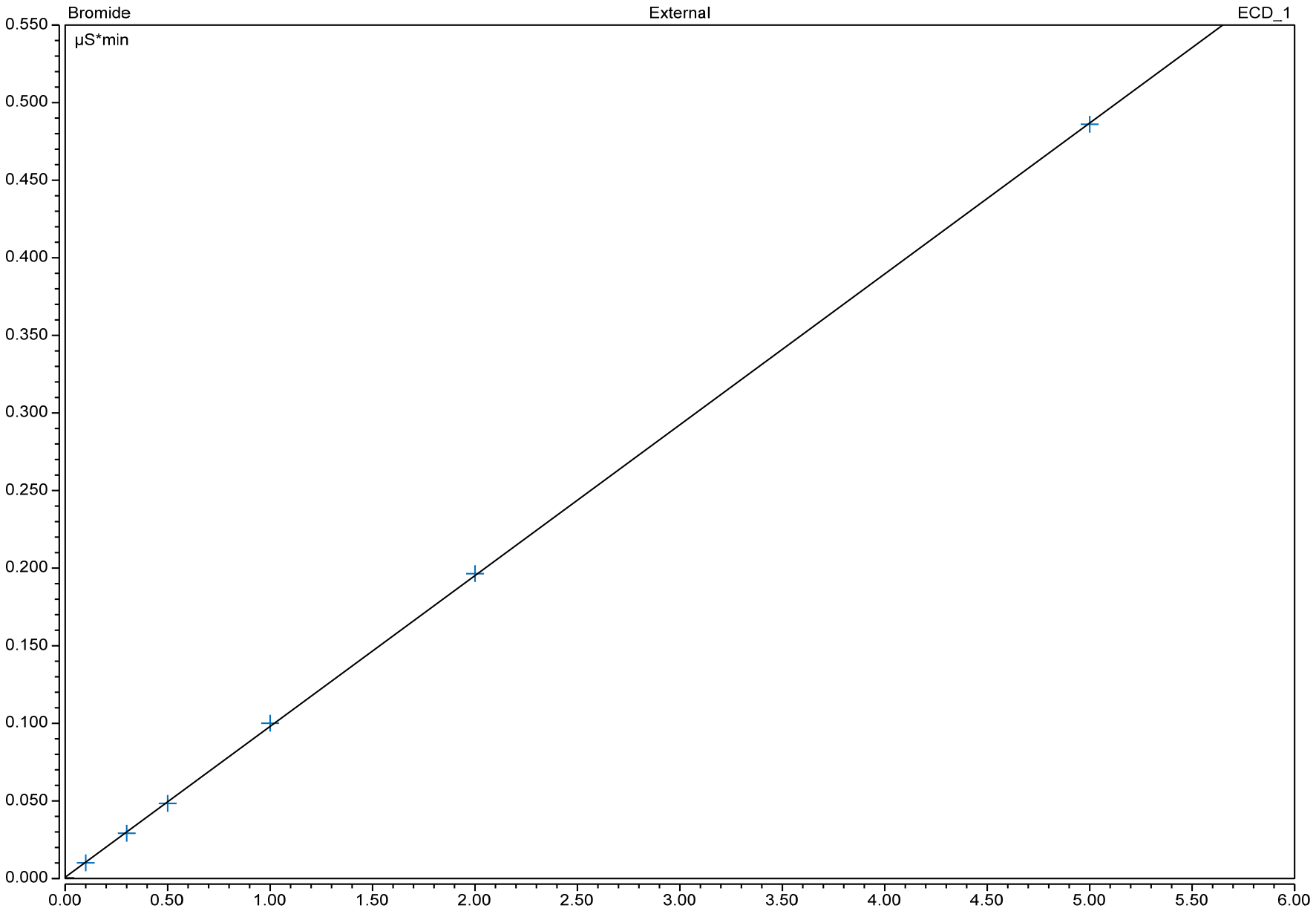
Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset*	*Area*	*6*	*1.4622*	*0.99990*	*-0.0281*	*0.3650*	*0.0000*
2	Chloride	Lin, WithOffset	Area	9	6.7889	0.99763	-0.1728	0.3001	0.0000
3	Nitrite	Lin, WithOffset	Area	6	0.8487	0.99996	-0.0078	0.4659	0.0000
4	Bromide	Lin, WithOffset	Area	7	1.0465	0.99995	0.0008	0.0972	0.0000
5	Nitrate	Lin, WithOffset	Area	7	4.7550	0.99874	-0.0496	0.6381	0.0000
6	O.Phos	Lin, WithOffset	Area	7	5.8978	0.99805	0.0438	0.2316	0.0000
7	Sulfate	Lin, WithOffset	Area	9	6.4325	0.99826	-0.1416	0.2038	0.0000
Maximum					**6.7889**	0.99996			
Minimum					0.8487	**0.99763**			


Fluoride
External
ECD_1
µS*min
2.000
1.875
1.750
1.625
1.500
1.375
1.250
1.125
1.000
0.875
0.750
0.625
0.500
0.375
0.250
0.125
0.000
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00

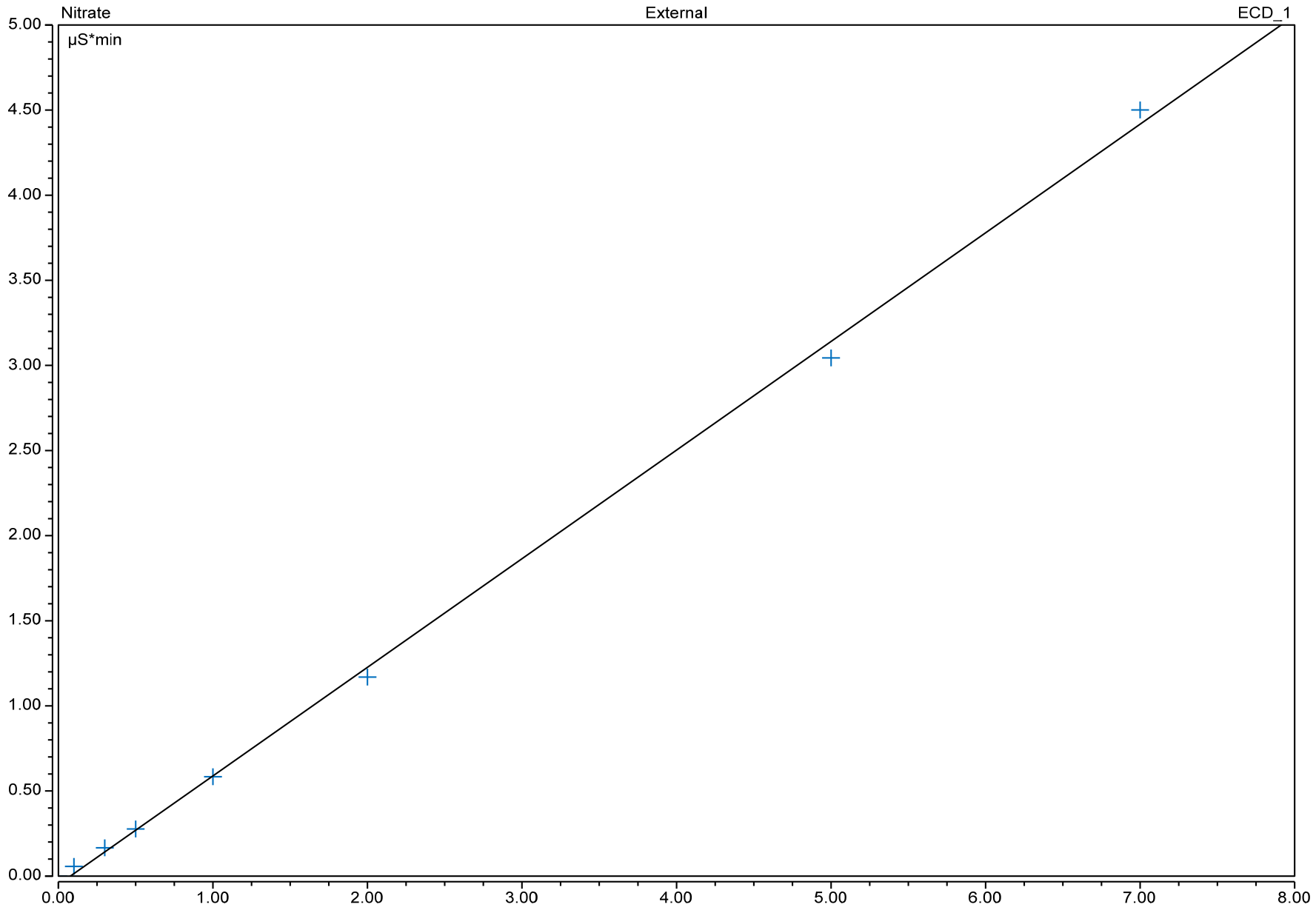

Chloride
External
ECD_1
µS*min
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0

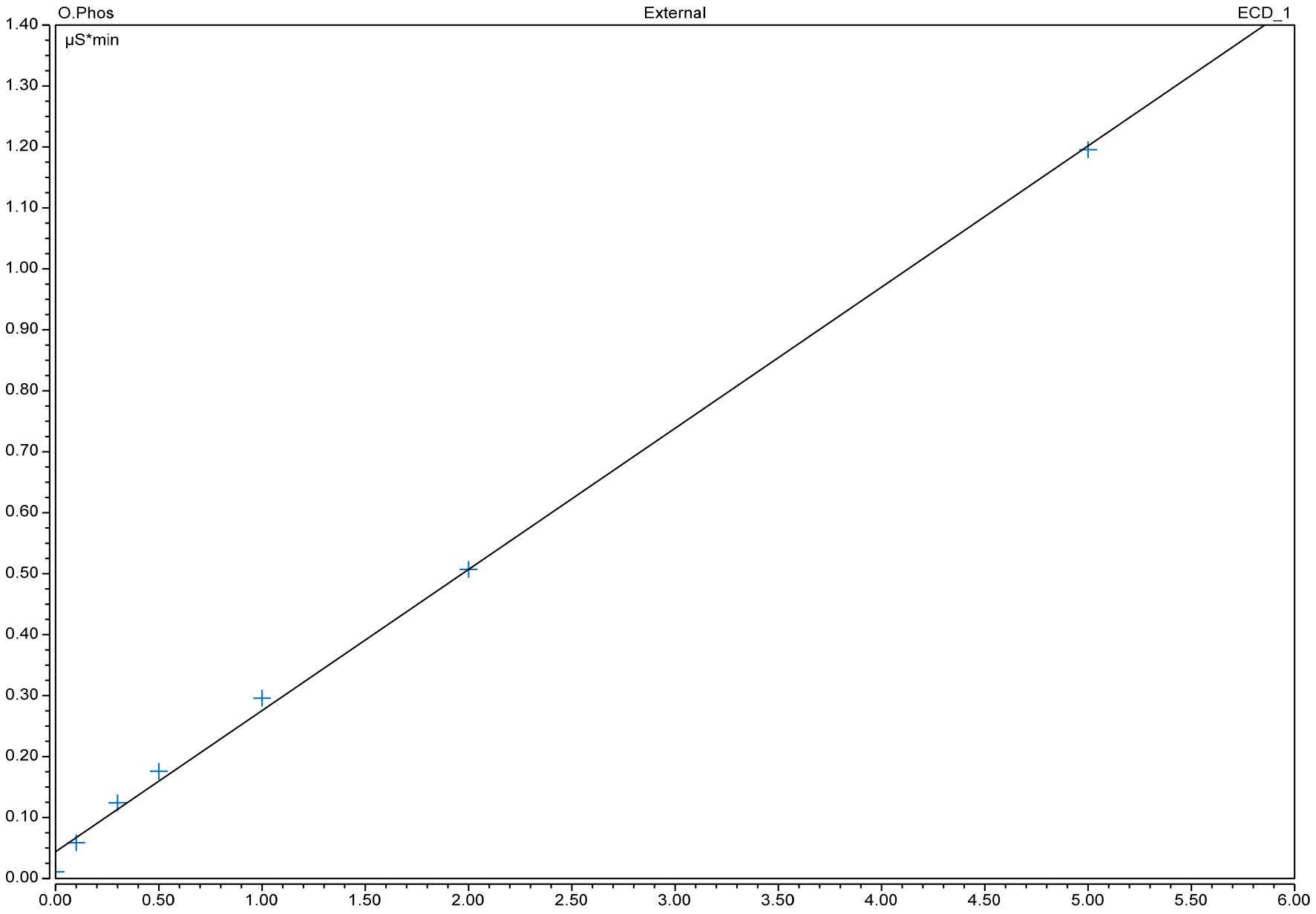
Calibration Plot

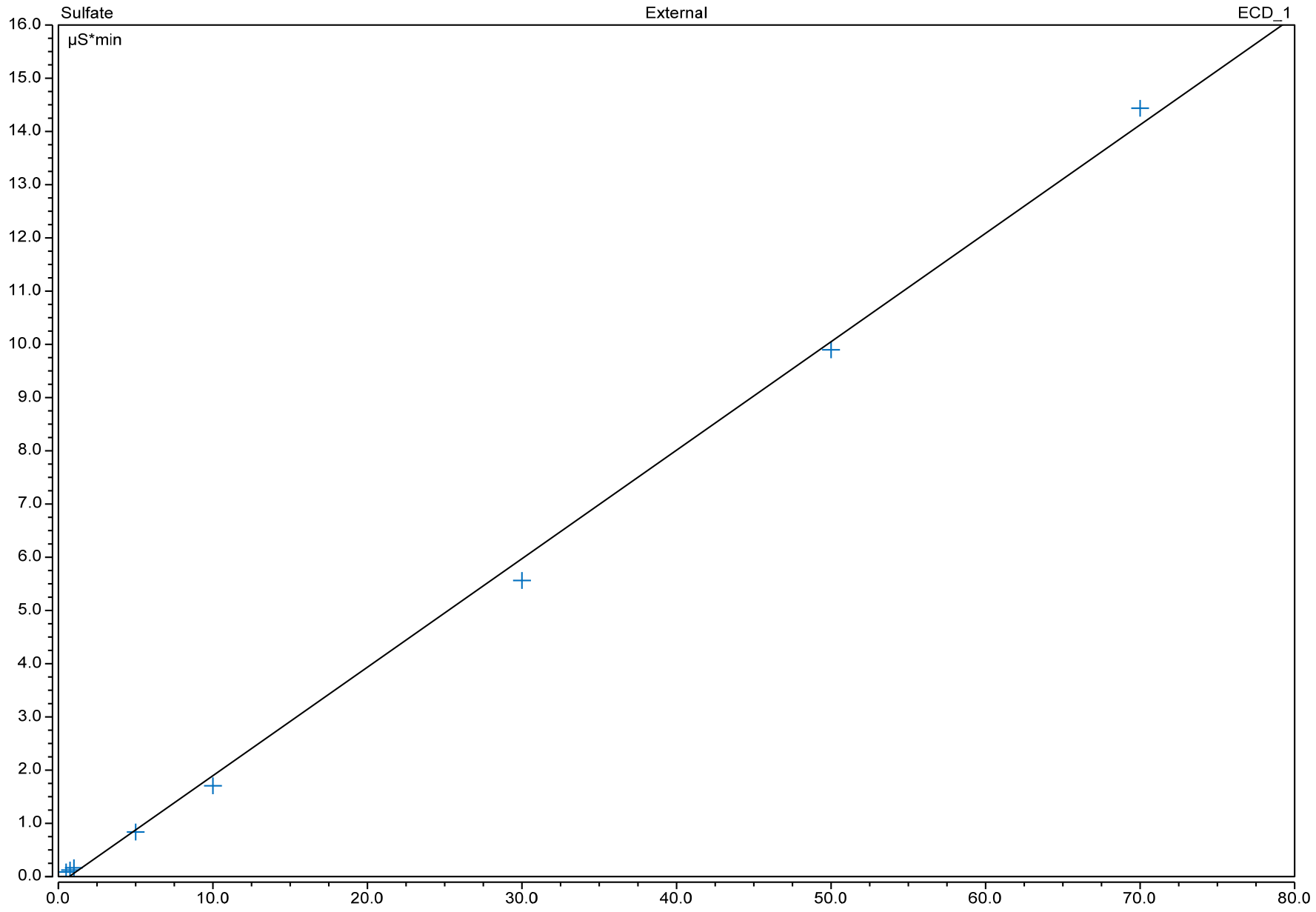



Bromide
External
ECD_1
µS*min
0.550
0.500
0.450
0.400
0.350
0.300
0.250
0.200
0.150
0.100
0.050
0.000
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00

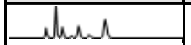
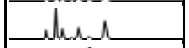
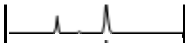
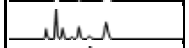
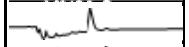
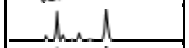
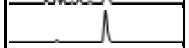
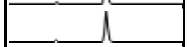
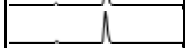
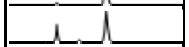
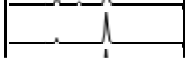
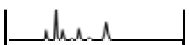
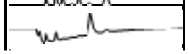
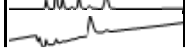
Calibration Plot

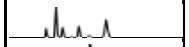
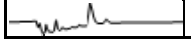



O.Phos
External
ECD_1
µS*min
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00


Sulfate
External
ECD_1
µS*min
16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0

Sequence: 102821 - 196891 196892
Last Update Operator: aquion

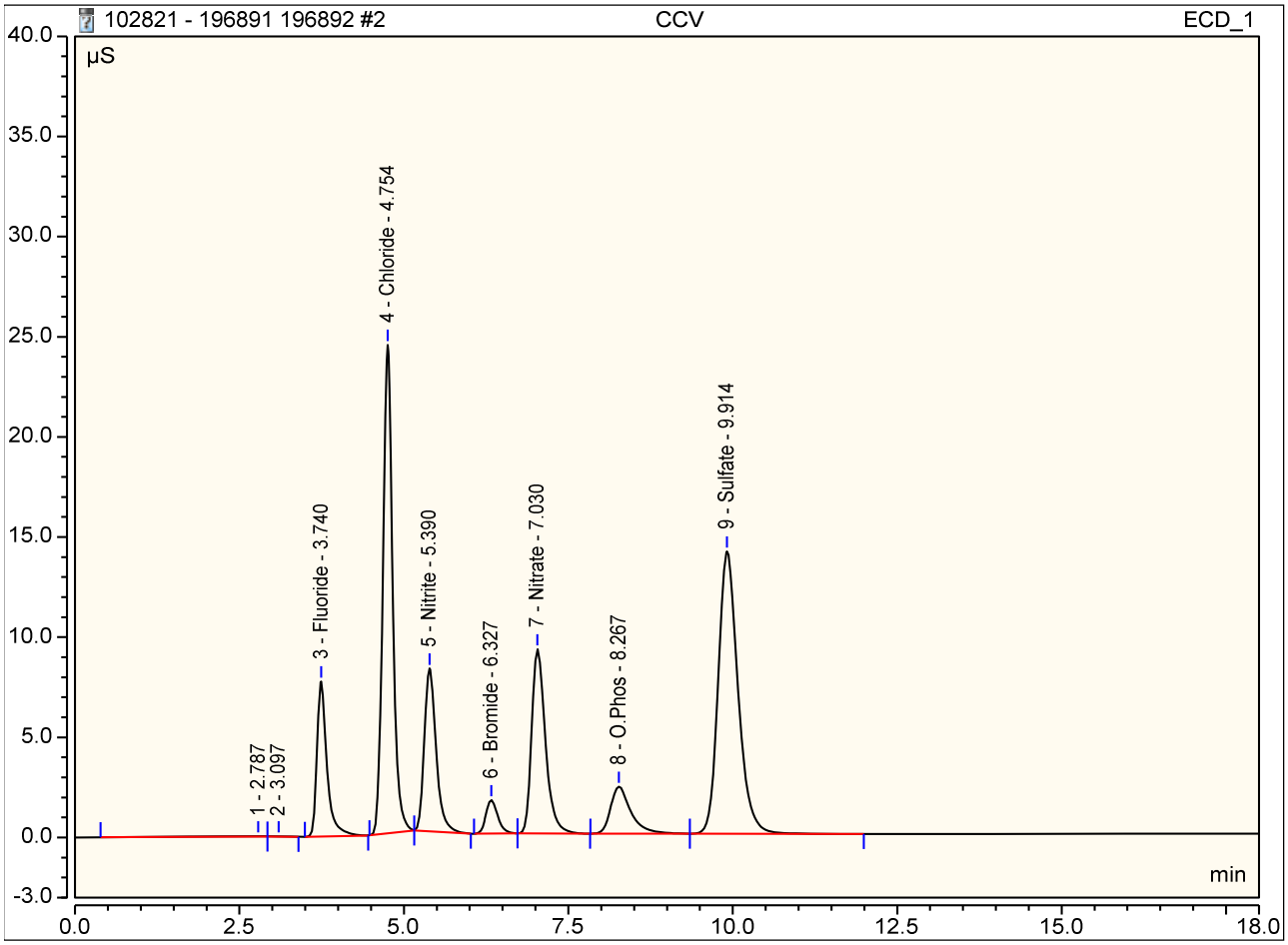
ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		2	5000	Anions	IC3602A	Finished
	LCSW	1.0000	Unknown		3	5000	Anions	IC3602A	Finished
	MBW	1.0000	Unknown		4	5000	Anions	IC3602A	Finished
	1066840	1.0000	Unknown		13	5000	Anions	IC3602A	Finished
	DUP1066840	1.0000	Unknown		14	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		15	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		16	5000	Anions	IC3602A	Finished
	MSW1066840	1.0000	Unknown		17	5000	Anions	IC3602A	Finished
	MSDW1066840	1.0000	Unknown		18	5000	Anions	IC3602A	Finished
	1066845	1.0000	Unknown		19	5000	Anions	IC3602A	Finished
	1066845X5	1.0000	Unknown		20	5000	Anions	IC3602A	Finished
	1066846	1.0000	Unknown		21	5000	Anions	IC3602A	Finished
	1066847	1.0000	Unknown		22	5000	Anions	IC3602A	Finished
	1066848	1.0000	Unknown		23	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		25	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		26	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		29	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		30	5000	Anions	IC3602A	Finished

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	1066846X5	1.0000	Unknown		33	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		34	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		35	5000	Anions	IC3602A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 14:06**	*Run Time:*	**18.00**

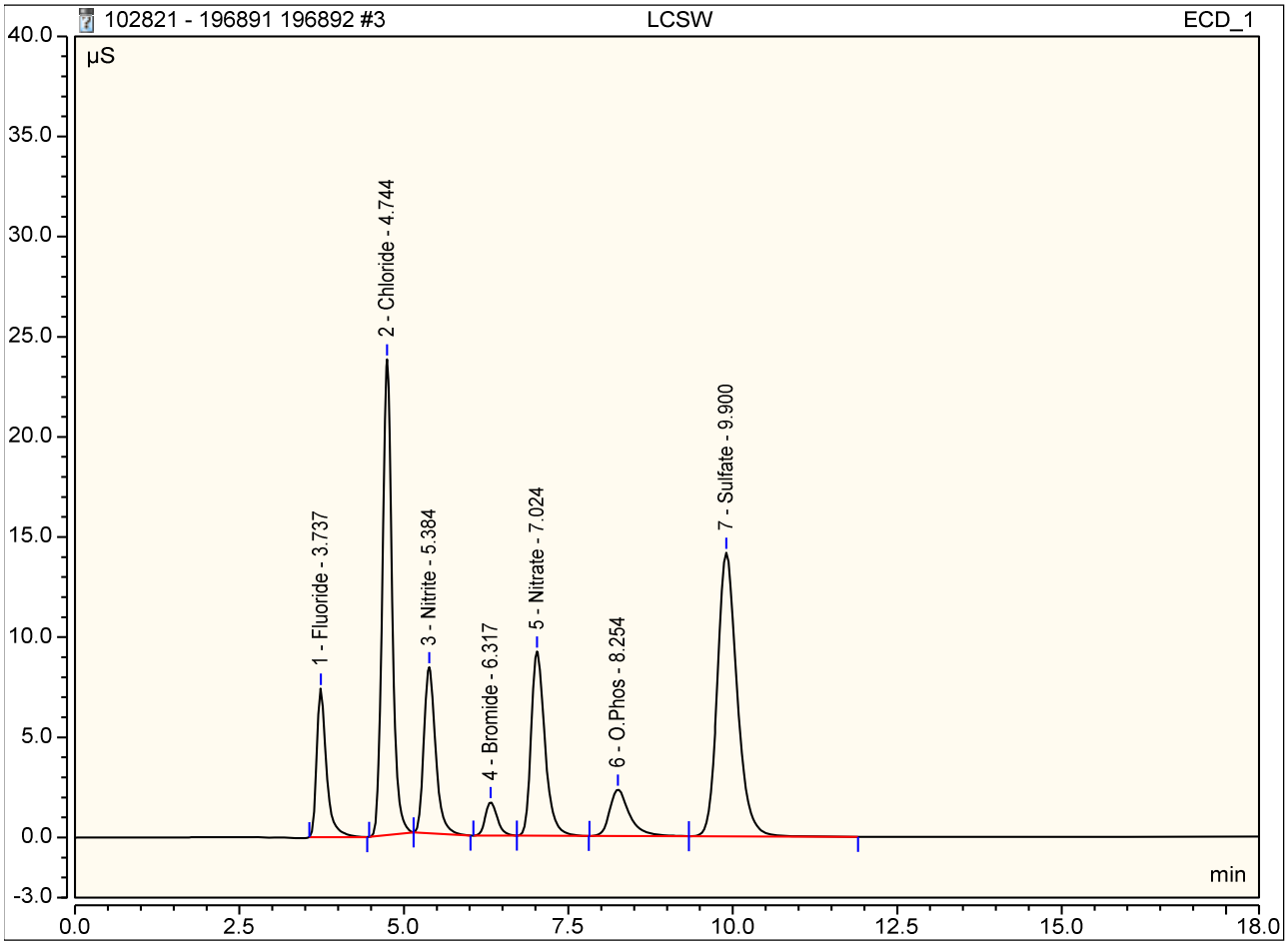
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
3	3.74	Fluoride	1.357	7.742	3.7954
4	4.75	Chloride	4.210	24.392	14.6047
5	5.39	Nitrite	1.688	8.123	3.6396
6	6.33	Bromide	0.352	1.674	3.6140
7	7.03	Nitrate	2.239	9.204	3.5869
8	8.27	O.Phos	0.835	2.347	3.4164
9	9.91	Sulfate	4.921	14.092	24.8405



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 14:24**	*Run Time:*	**18.00**

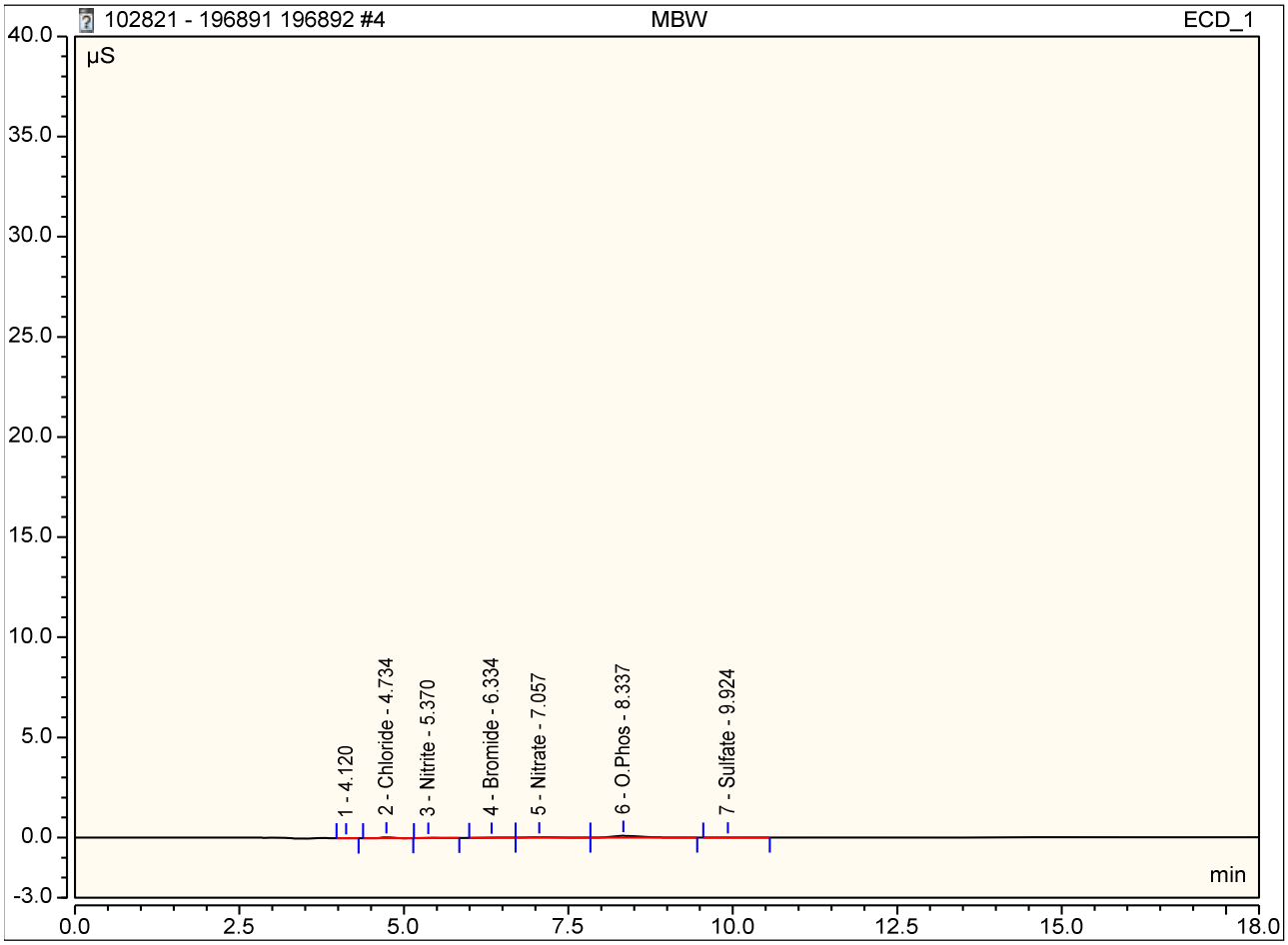
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.74	Fluoride	1.281	7.416	3.5850
2	4.74	Chloride	4.087	23.766	14.1928
3	5.38	Nitrite	1.721	8.302	3.7114
4	6.32	Bromide	0.352	1.675	3.6113
5	7.02	Nitrate	2.228	9.200	3.5698
6	8.25	O.Phos	0.804	2.319	3.2830
7	9.90	Sulfate	4.927	14.161	24.8690



Peak Integration Report

Sample Name:	**MBW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 14:42**	*Run Time:*	**18.00**

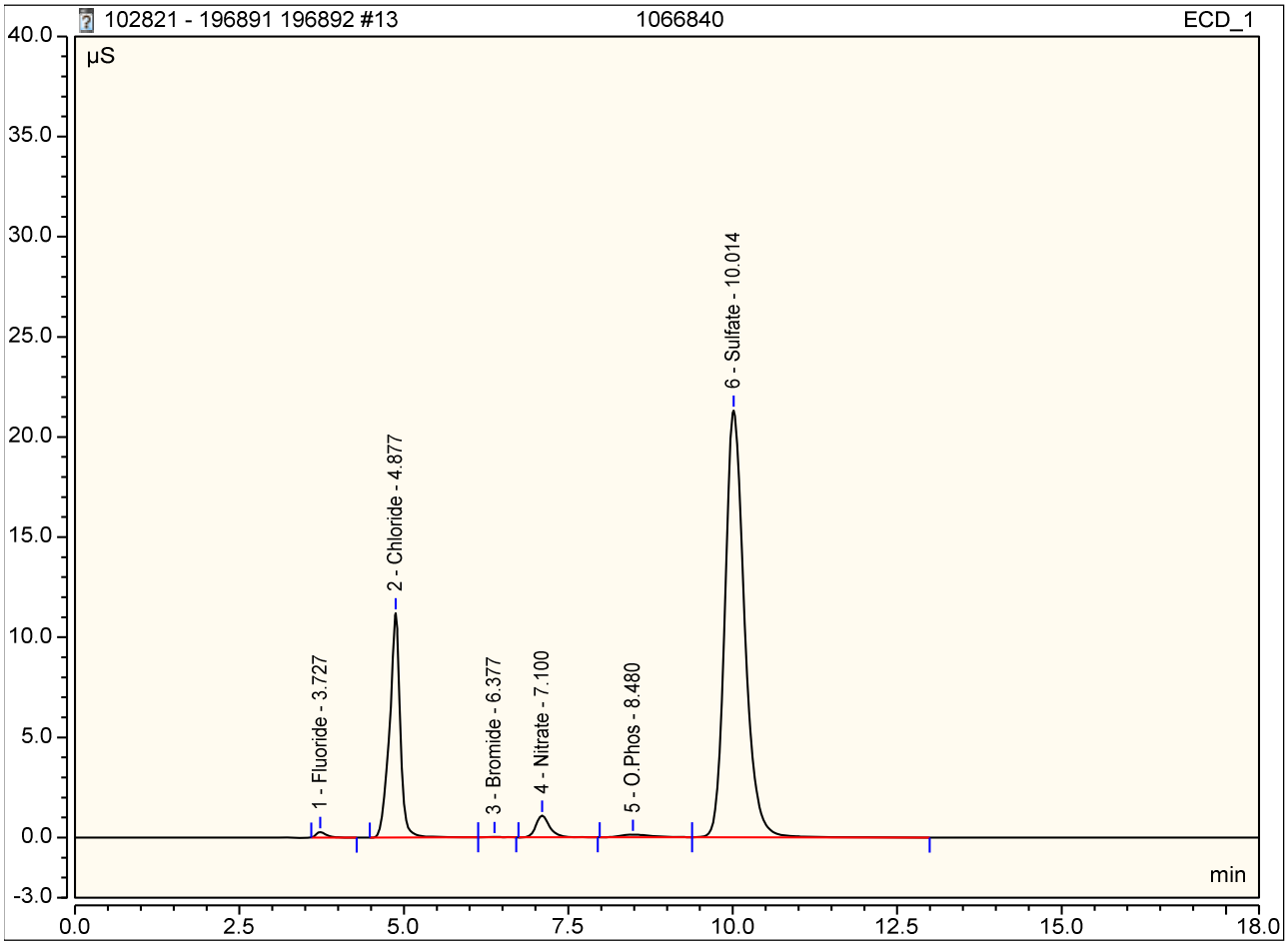
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.73	Chloride	0.010	0.048	0.6094
3	5.37	Nitrite	0.004	0.019	0.0256
4	6.33	Bromide	0.002	0.009	0.0149
5	7.06	Nitrate	0.007	0.023	0.0892
6	8.34	O.Phos	0.042	0.086	n.a.
7	9.92	Sulfate	0.008	0.022	0.7334



Peak Integration Report

Sample Name:	**1066840**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 17:25**	*Run Time:*	**18.00**

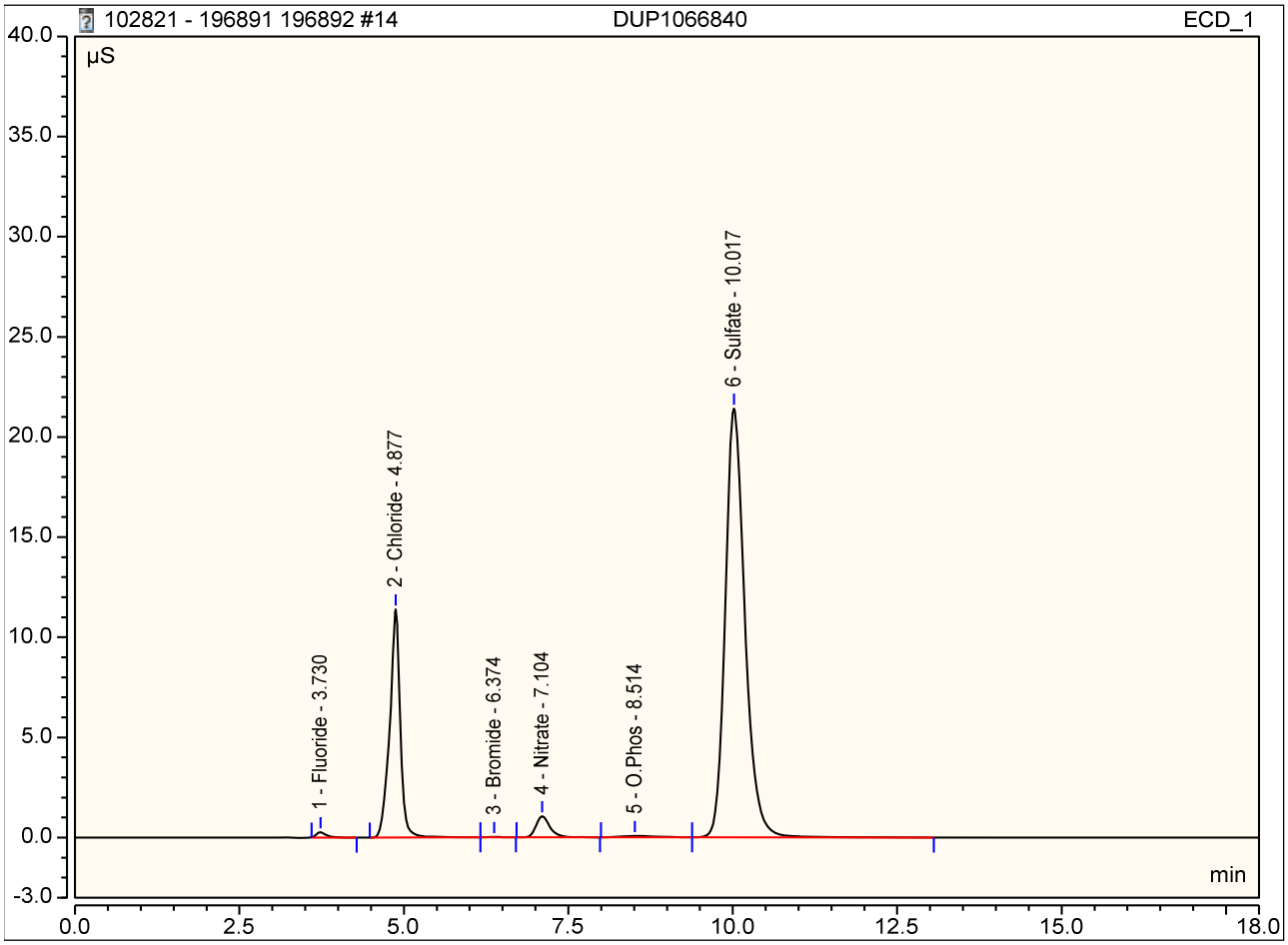
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.73	Fluoride	0.049	0.274	0.2113
2	4.88	Chloride	2.112	11.206	7.6118
3	6.38	Bromide	0.004	0.017	0.0291
4	7.10	Nitrate	0.265	1.080	0.4929
5	8.48	O.Phos	0.069	0.133	0.1086
6	10.01	Sulfate	7.366	21.303	36.8406



Peak Integration Report

Sample Name:	**DUP1066840**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 17:43**	*Run Time:*	**18.00**

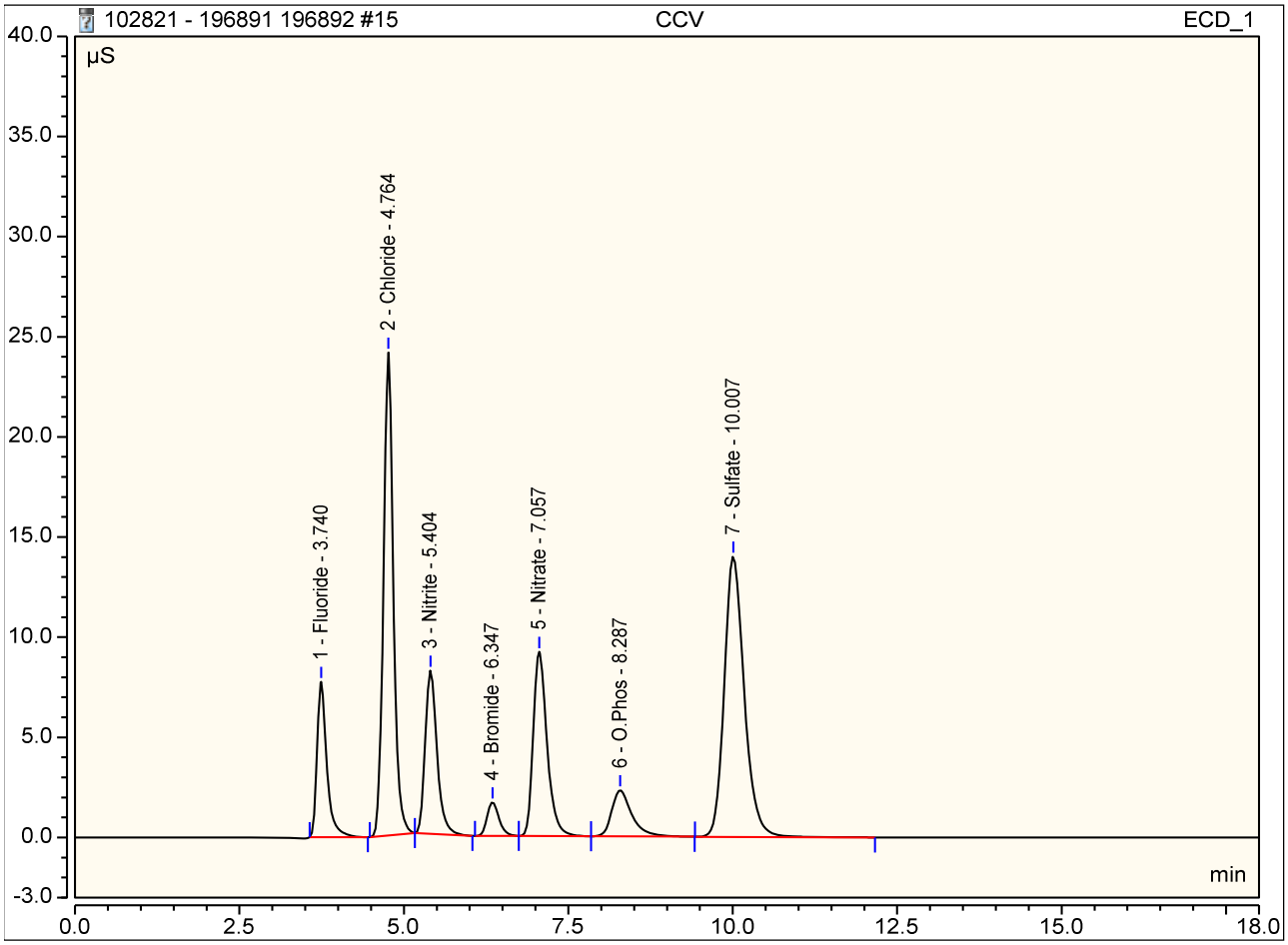
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.73	Fluoride	0.047	0.263	0.2050
2	4.88	Chloride	2.117	11.401	7.6286
3	6.37	Bromide	0.003	0.013	0.0181
4	7.10	Nitrate	0.258	1.051	0.4815
5	8.51	O.Phos	0.037	0.068	n.a.
6	10.02	Sulfate	7.412	21.403	37.0663



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 18:01**	*Run Time:*	**18.00**

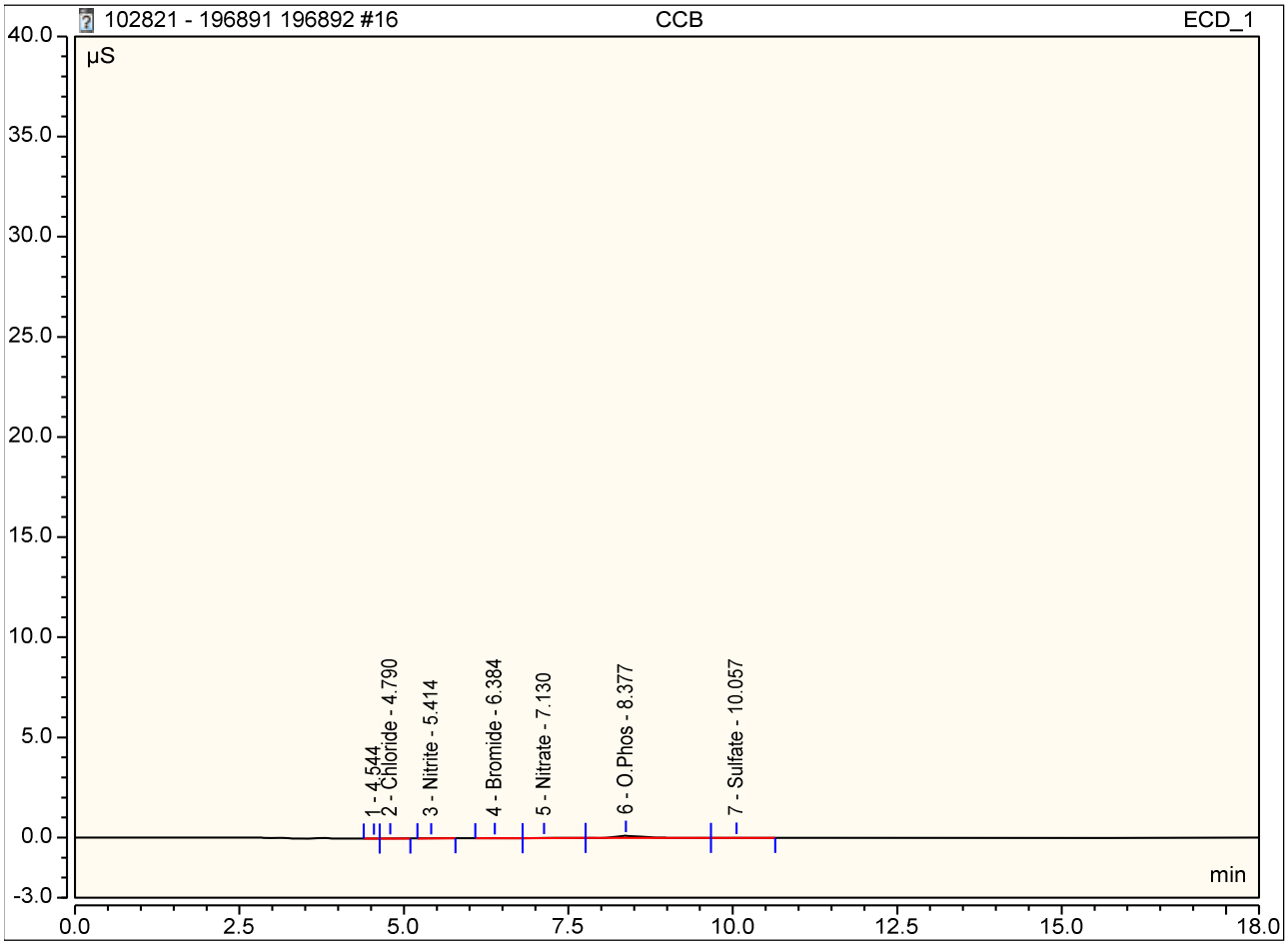
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.74	Fluoride	1.339	7.758	3.7438
2	4.76	Chloride	4.217	24.112	14.6256
3	5.40	Nitrite	1.700	8.154	3.6663
4	6.35	Bromide	0.355	1.681	3.6435
5	7.06	Nitrate	2.234	9.191	3.5795
6	8.29	O.Phos	0.815	2.306	3.3304
7	10.01	Sulfate	4.930	13.993	24.8833



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 18:19**	*Run Time:*	**18.00**

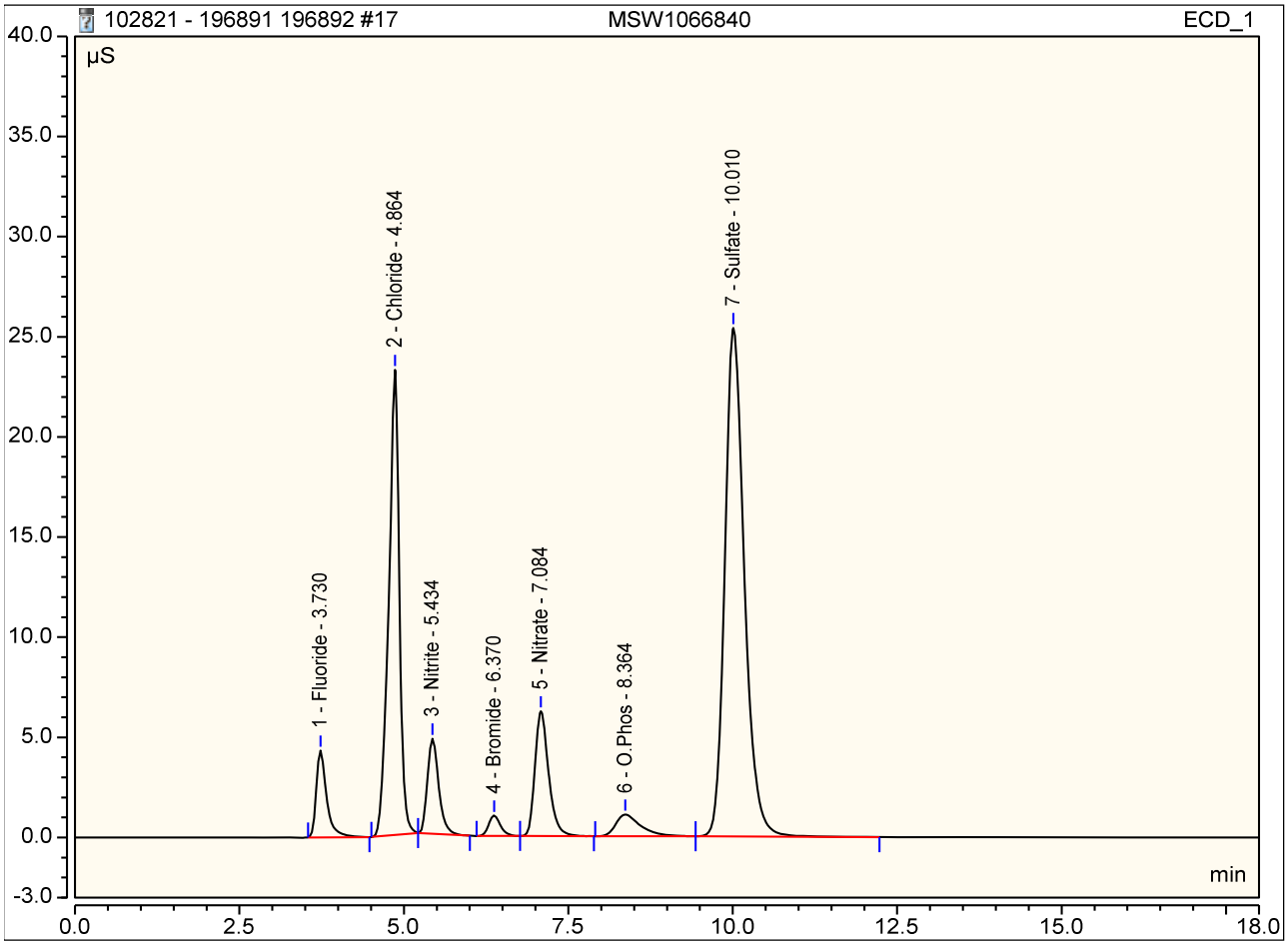
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.79	Chloride	0.003	0.015	0.5845
3	5.41	Nitrite	0.001	0.003	0.0185
4	6.38	Bromide	0.002	0.009	0.0162
5	7.13	Nitrate	0.002	0.006	0.0805
6	8.38	O.Phos	0.052	0.107	0.0372
7	10.06	Sulfate	0.003	0.007	0.7074



Peak Integration Report

Sample Name:	**MSW1066840**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 18:37**	*Run Time:*	**18.00**

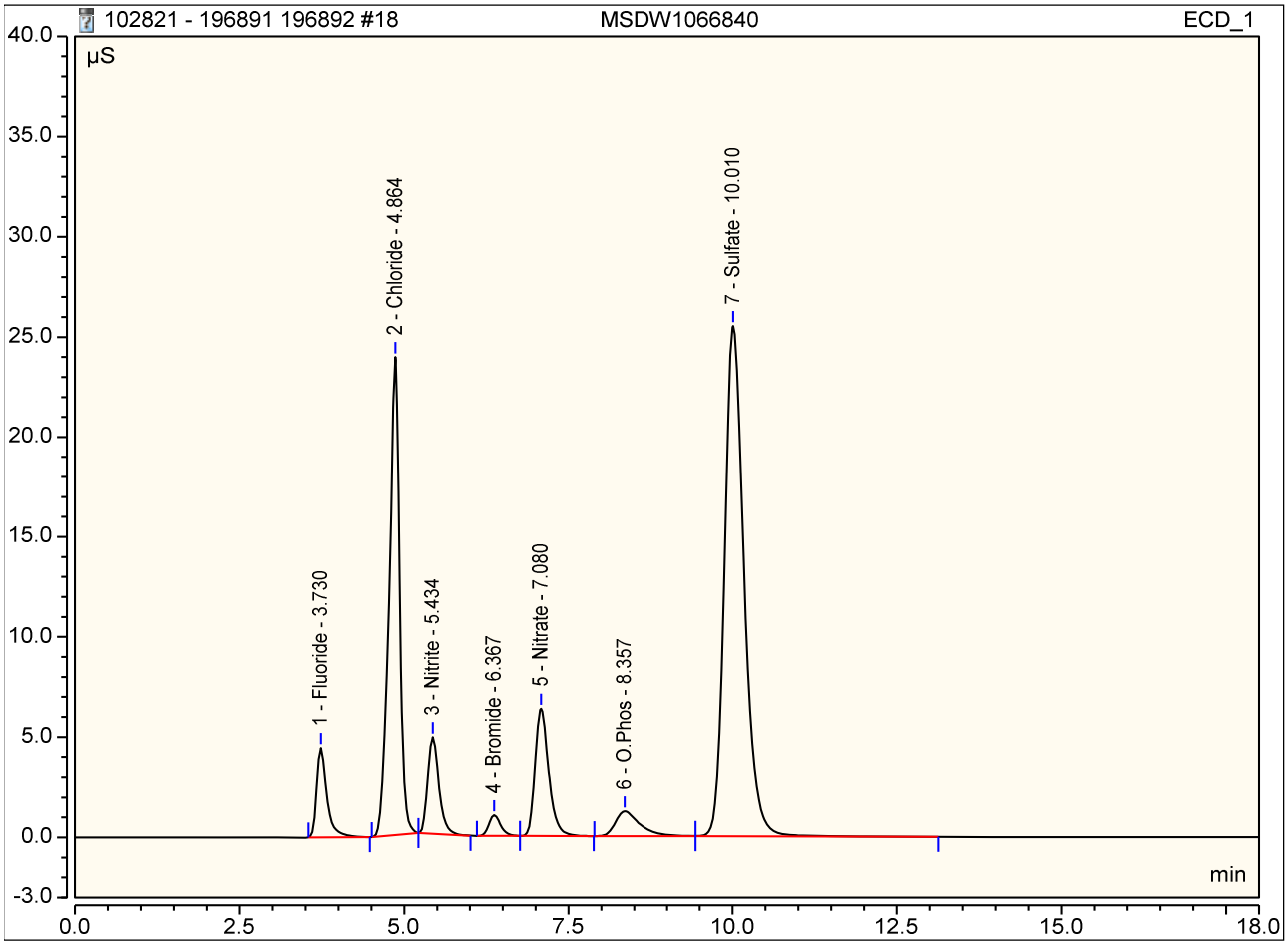
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.73	Fluoride	0.790	4.338	2.2422
2	4.86	Chloride	4.343	23.228	15.0455
3	5.43	Nitrite	0.948	4.750	2.0516
4	6.37	Bromide	0.213	1.019	2.1834
5	7.08	Nitrate	1.504	6.234	2.4341
6	8.36	O.Phos	0.478	1.083	1.8730
7	10.01	Sulfate	8.738	25.386	43.5695



Peak Integration Report

Sample Name:	**MSDW1066840**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 18:55**	*Run Time:*	**18.00**

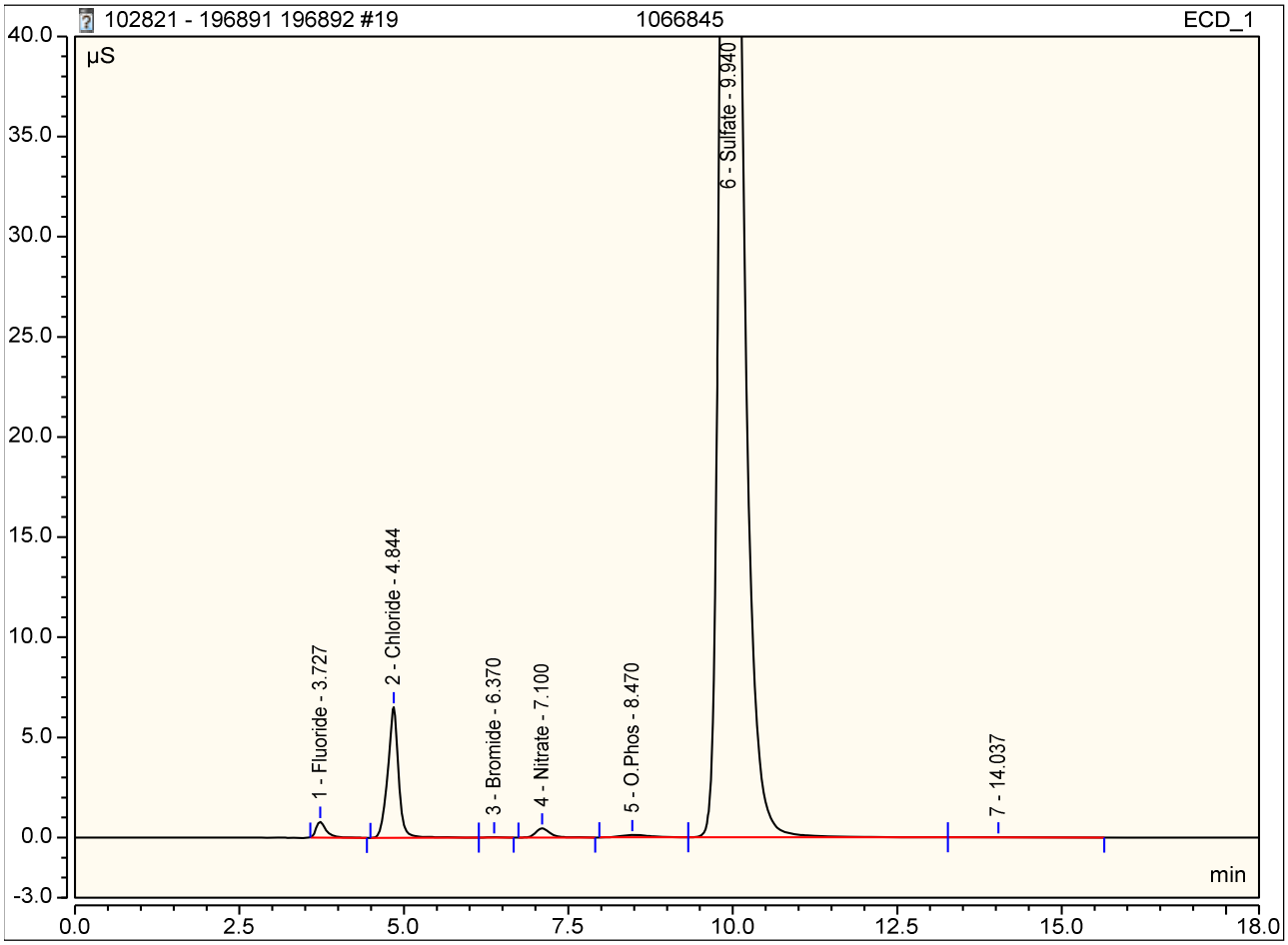
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.73	Fluoride	0.807	4.448	2.2874
2	4.86	Chloride	4.405	23.874	15.2524
3	5.43	Nitrite	0.958	4.803	2.0723
4	6.37	Bromide	0.216	1.036	2.2128
5	7.08	Nitrate	1.527	6.345	2.4702
6	8.36	O.Phos	0.535	1.242	2.1226
7	10.01	Sulfate	8.778	25.491	43.7680



Peak Integration Report

Sample Name:	**1066845**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 19:13**	*Run Time:*	**18.00**

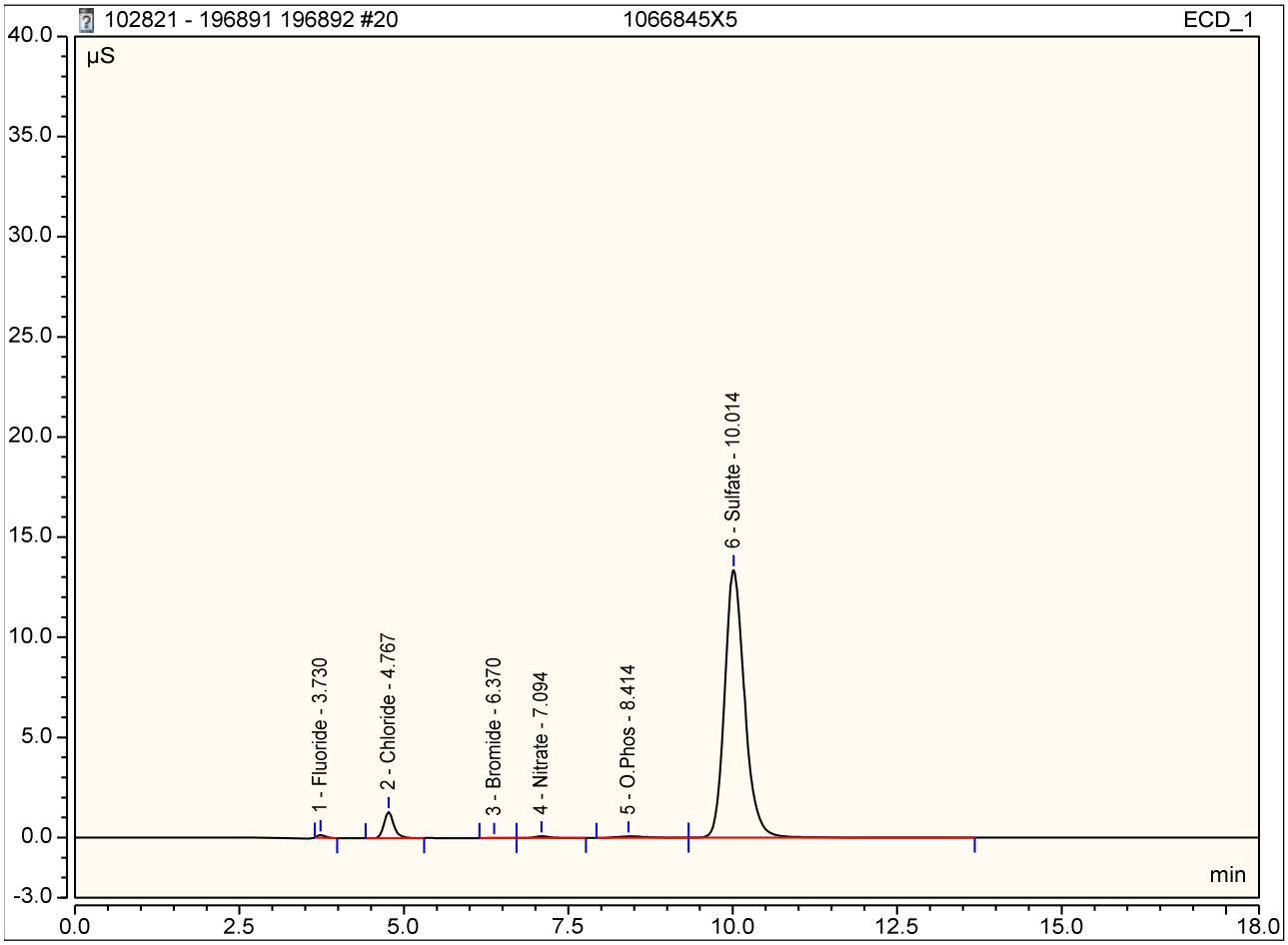
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.73	Fluoride	0.142	0.789	0.4669
2	4.84	Chloride	1.232	6.515	4.6796
3	6.37	Bromide	0.003	0.012	0.0186
4	7.10	Nitrate	0.112	0.455	0.2532
5	8.47	O.Phos	0.062	0.122	0.0773
6	9.94	Sulfate	29.529	83.620	145.5856



Peak Integration Report

Sample Name:	**1066845X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 19:31**	*Run Time:*	**18.00**

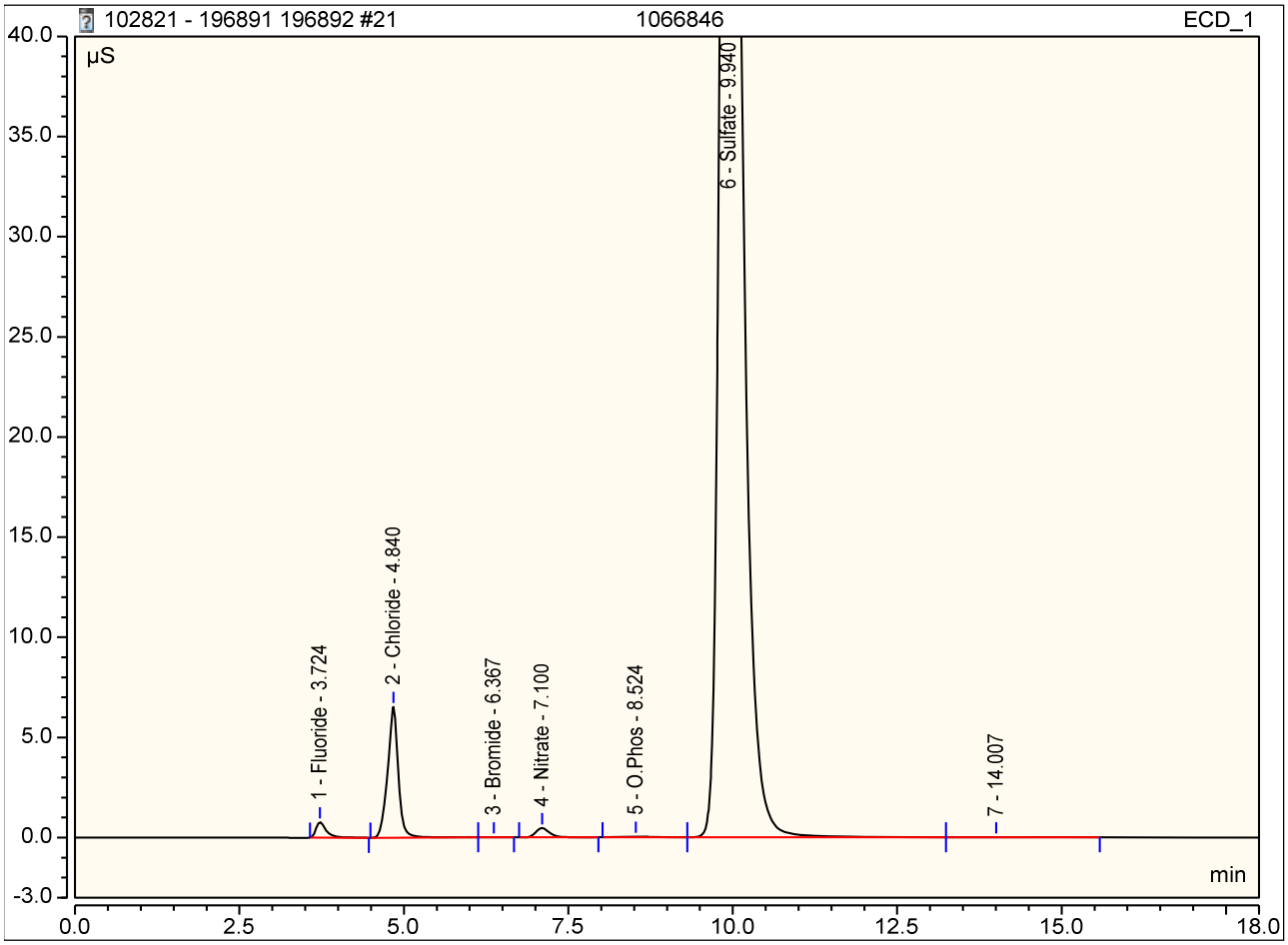
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.73	Fluoride	0.017	0.128	0.1247
2	4.77	Chloride	0.232	1.313	1.3496
3	6.37	Bromide	0.001	0.005	0.0034
4	7.09	Nitrate	0.022	0.086	0.1116
5	8.41	O.Phos	0.037	0.073	n.a.
6	10.01	Sulfate	4.715	13.363	23.8308



Peak Integration Report

Sample Name:	**1066846**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 19:49**	*Run Time:*	**18.00**

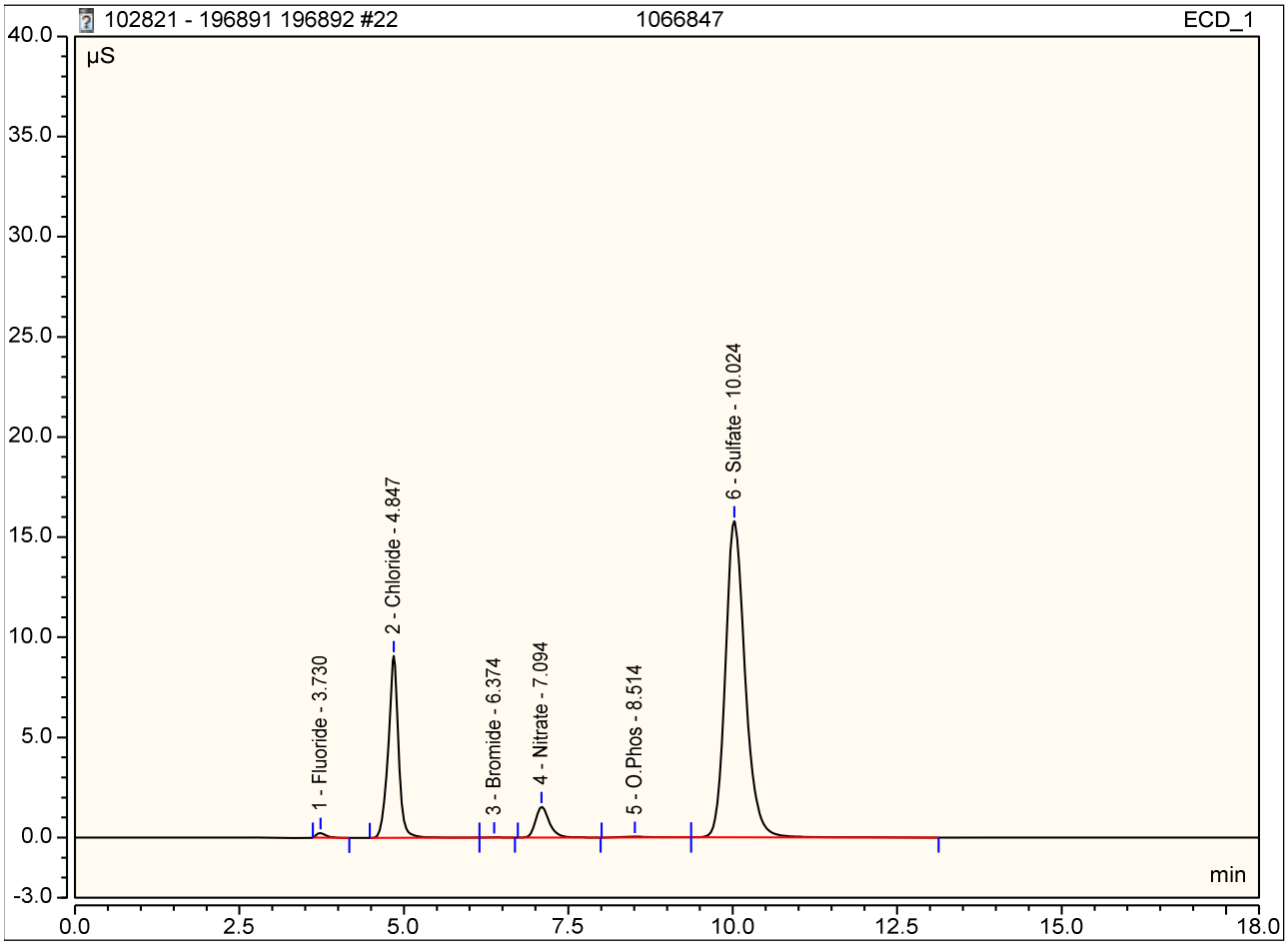
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.72	Fluoride	0.139	0.768	0.4569
2	4.84	Chloride	1.230	6.537	4.6749
3	6.37	Bromide	0.003	0.012	0.0178
4	7.10	Nitrate	0.113	0.460	0.2550
5	8.52	O.Phos	0.019	0.035	n.a.
6	9.94	Sulfate	29.203	82.724	143.9860



Peak Integration Report

Sample Name:	**1066847**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 20:07**	*Run Time:*	**18.00**

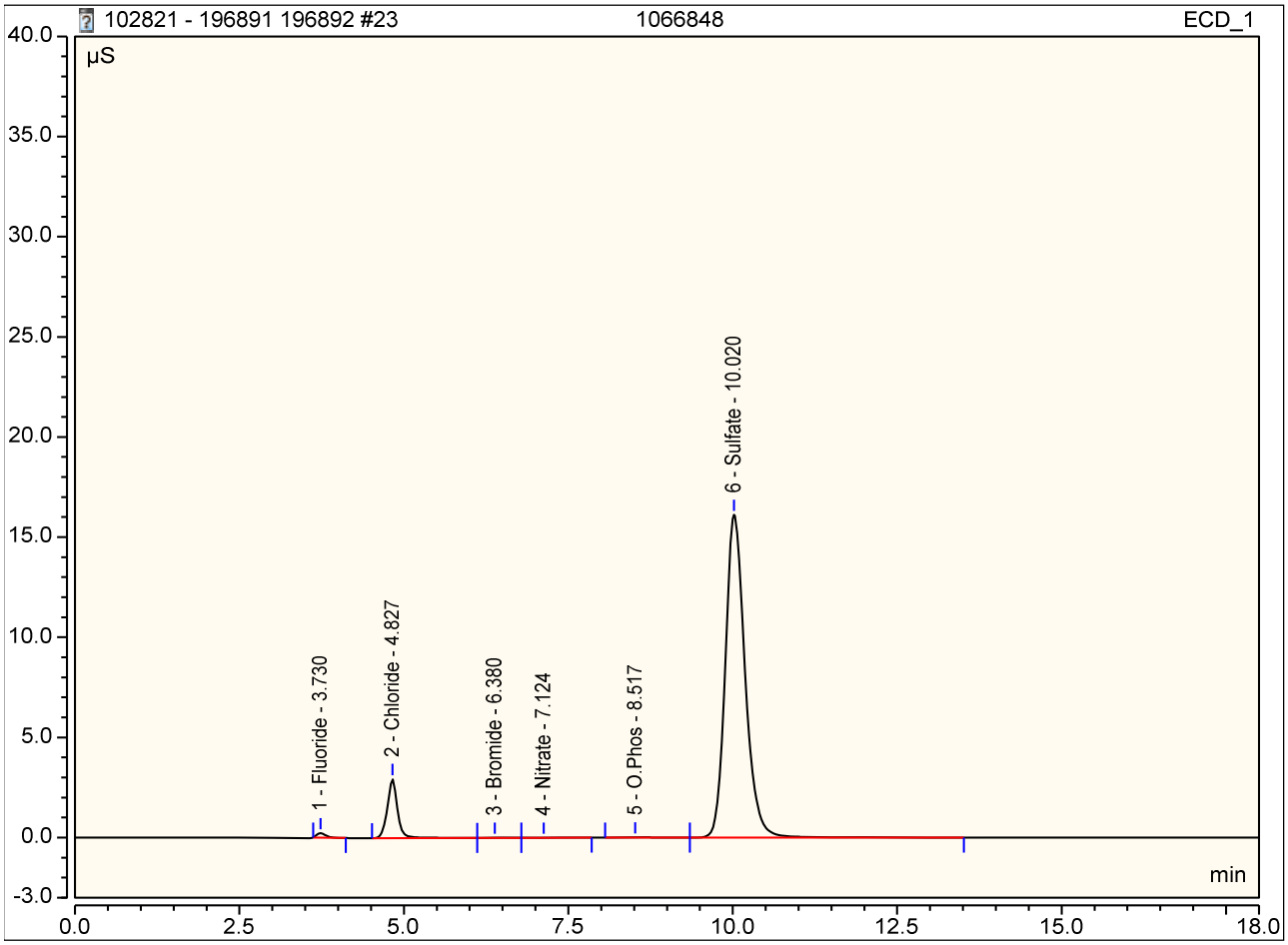
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.73	Fluoride	0.038	0.233	0.1805
2	4.85	Chloride	1.648	9.085	6.0682
3	6.37	Bromide	0.003	0.015	0.0256
4	7.09	Nitrate	0.375	1.534	0.6647
5	8.51	O.Phos	0.020	0.037	n.a.
6	10.02	Sulfate	5.511	15.787	27.7382



Peak Integration Report

Sample Name:	**1066848**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 20:25**	*Run Time:*	**18.00**

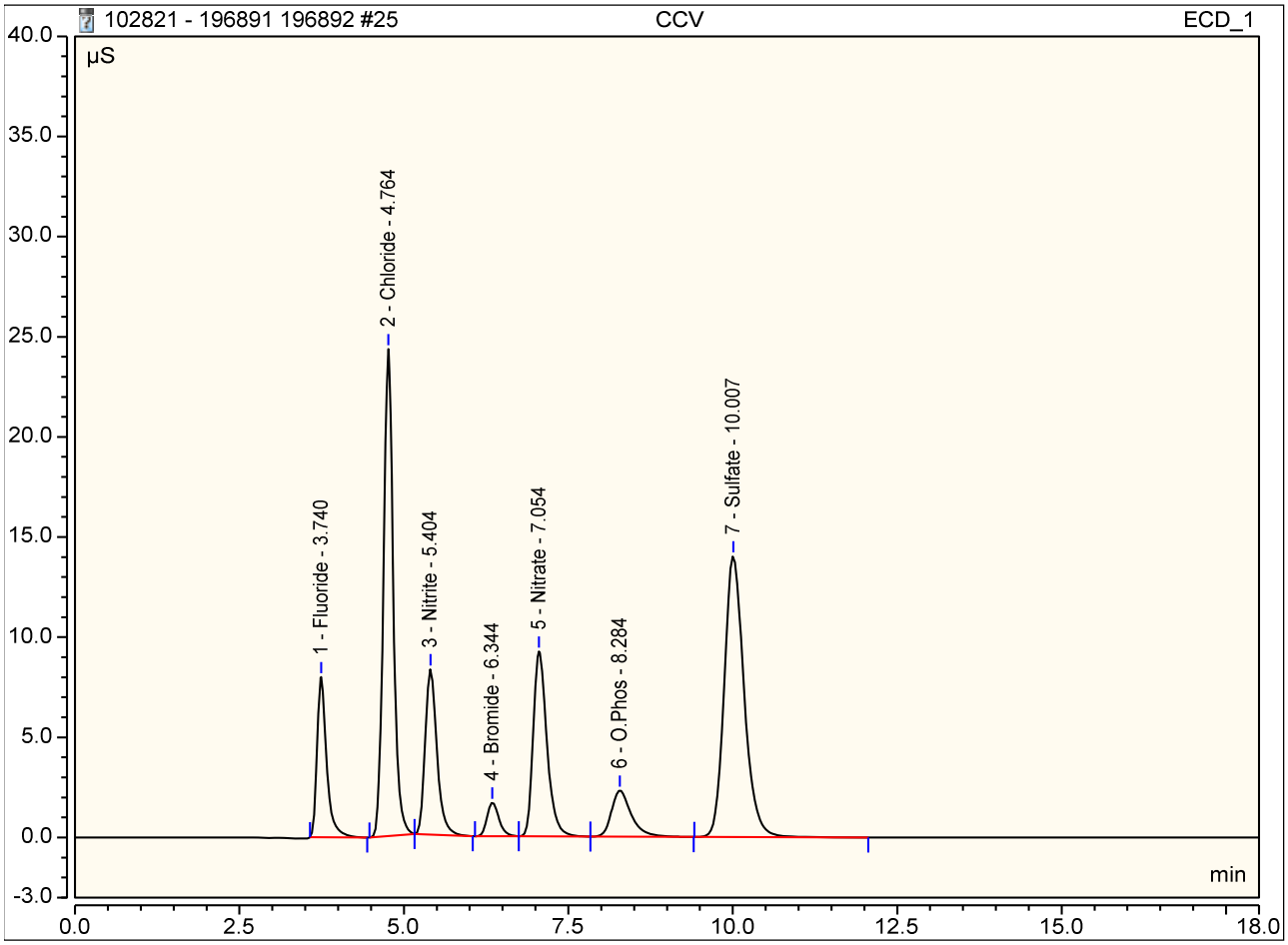
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.73	Fluoride	0.035	0.225	0.1737
2	4.83	Chloride	0.530	2.956	2.3402
3	6.38	Bromide	0.003	0.012	0.0189
4	7.12	Nitrate	0.003	0.010	0.0820
5	8.52	O.Phos	0.010	0.018	n.a.
6	10.02	Sulfate	5.621	16.121	28.2767



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 21:01**	*Run Time:*	**18.00**

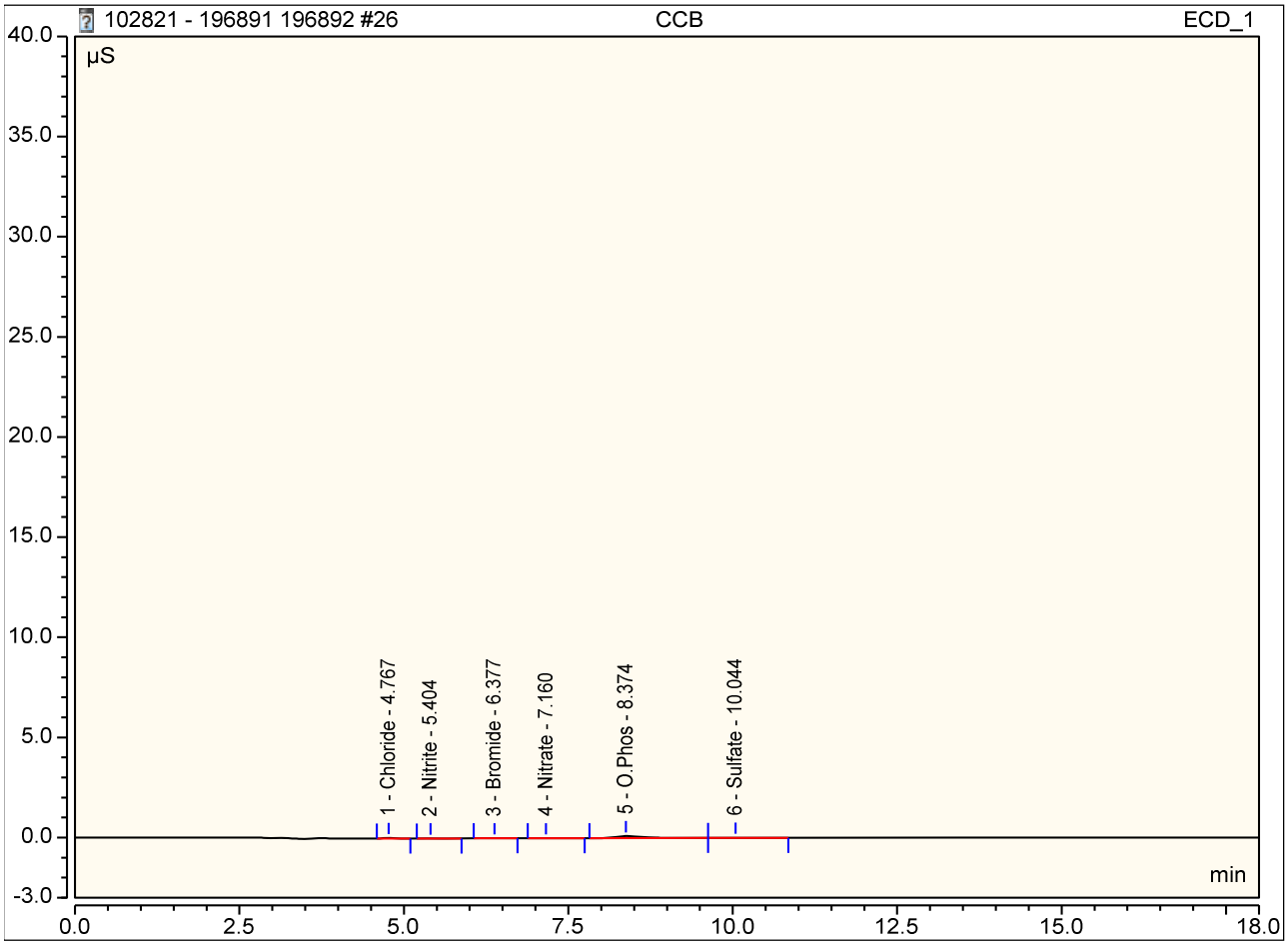
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.74	Fluoride	1.352	8.011	3.7816
2	4.76	Chloride	4.221	24.309	14.6387
3	5.40	Nitrite	1.714	8.253	3.6962
4	6.34	Bromide	0.355	1.686	3.6419
5	7.05	Nitrate	2.233	9.229	3.5772
6	8.28	O.Phos	0.804	2.307	3.2809
7	10.01	Sulfate	4.926	14.024	24.8669



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**28-Oct-2021 / 21:20**	*Run Time:*	**18.00**

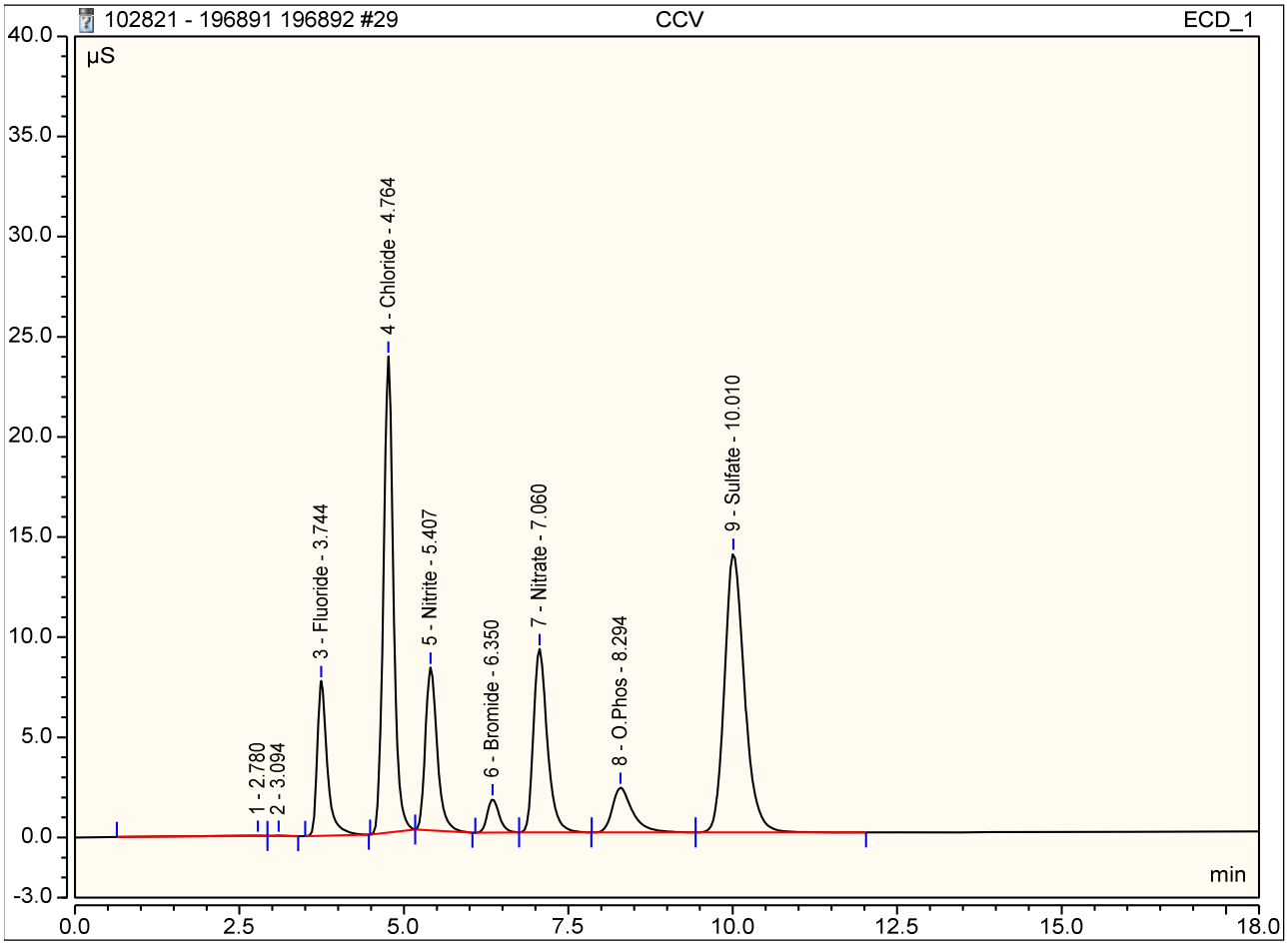
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.77	Chloride	0.006	0.031	0.5943
2	5.40	Nitrite	0.001	0.004	0.0188
3	6.38	Bromide	0.001	0.003	n.a.
4	7.16	Nitrate	0.001	0.004	0.0798
5	8.37	O.Phos	0.047	0.097	0.0126
6	10.04	Sulfate	0.005	0.013	0.7182



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Oct-2021 / 07:43**	*Run Time:*	**18.00**

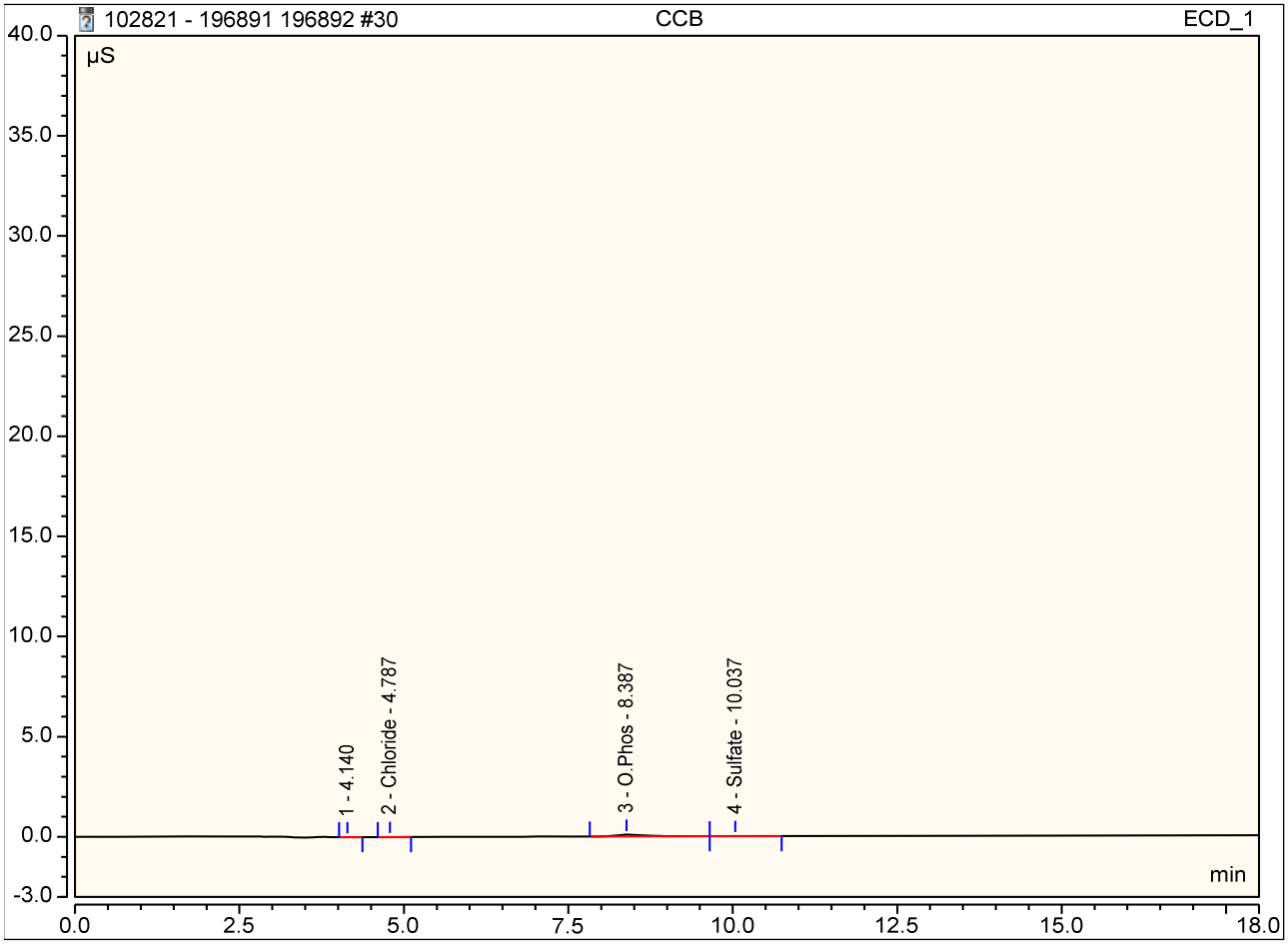
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
3	3.74	Fluoride	1.359	7.723	3.8002
4	4.76	Chloride	4.204	23.775	14.5828
5	5.41	Nitrite	1.696	8.130	3.6579
6	6.35	Bromide	0.352	1.666	3.6177
7	7.06	Nitrate	2.239	9.155	3.5873
8	8.29	O.Phos	0.799	2.235	3.2613
9	10.01	Sulfate	4.917	13.917	24.8228



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Oct-2021 / 08:01**	*Run Time:*	**18.00**

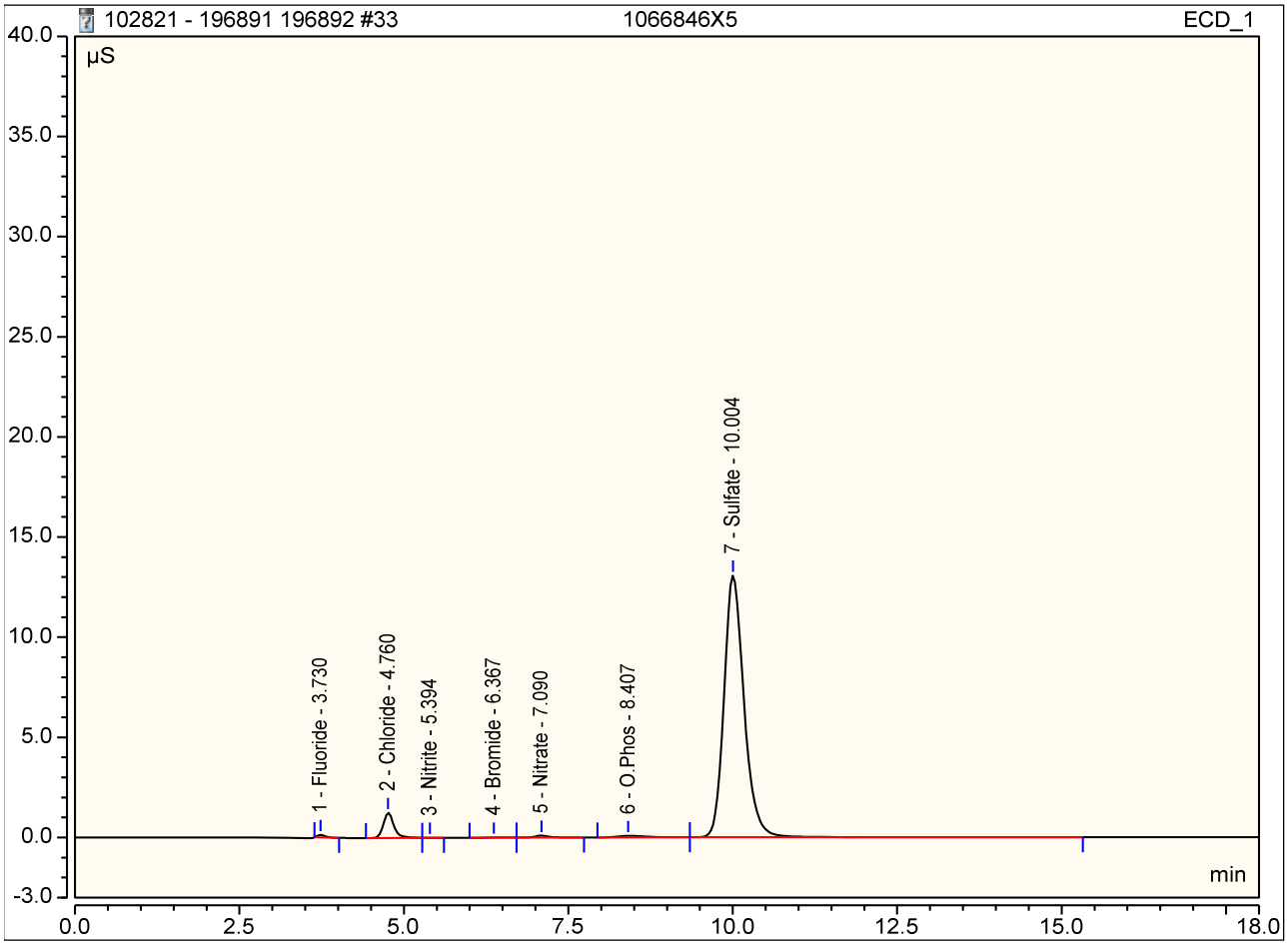
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.79	Chloride	0.003	0.019	0.5871
3	8.39	O.Phos	0.042	0.083	n.a.
4	10.04	Sulfate	0.004	0.009	0.7120



Peak Integration Report

Sample Name:	**1066846X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Oct-2021 / 08:55**	*Run Time:*	**18.00**

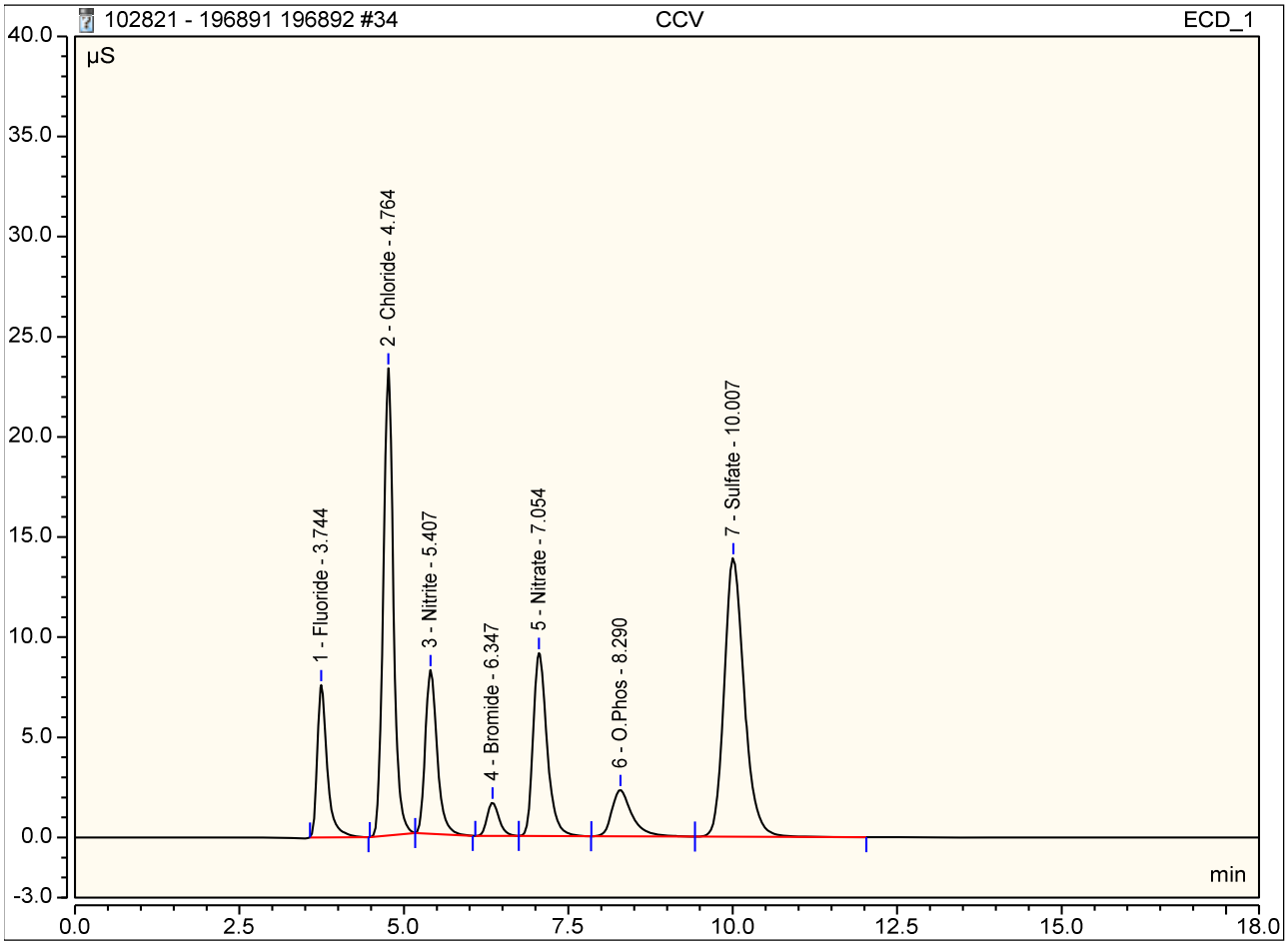
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.73	Fluoride	0.018	0.125	0.1255
2	4.76	Chloride	0.230	1.248	1.3429
3	5.39	Nitrite	0.001	0.003	0.0179
4	6.37	Bromide	0.002	0.008	0.0113
5	7.09	Nitrate	0.024	0.096	0.1154
6	8.41	O.Phos	0.042	0.083	n.a.
7	10.00	Sulfate	4.629	13.070	23.4077



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Oct-2021 / 09:14**	*Run Time:*	**18.00**

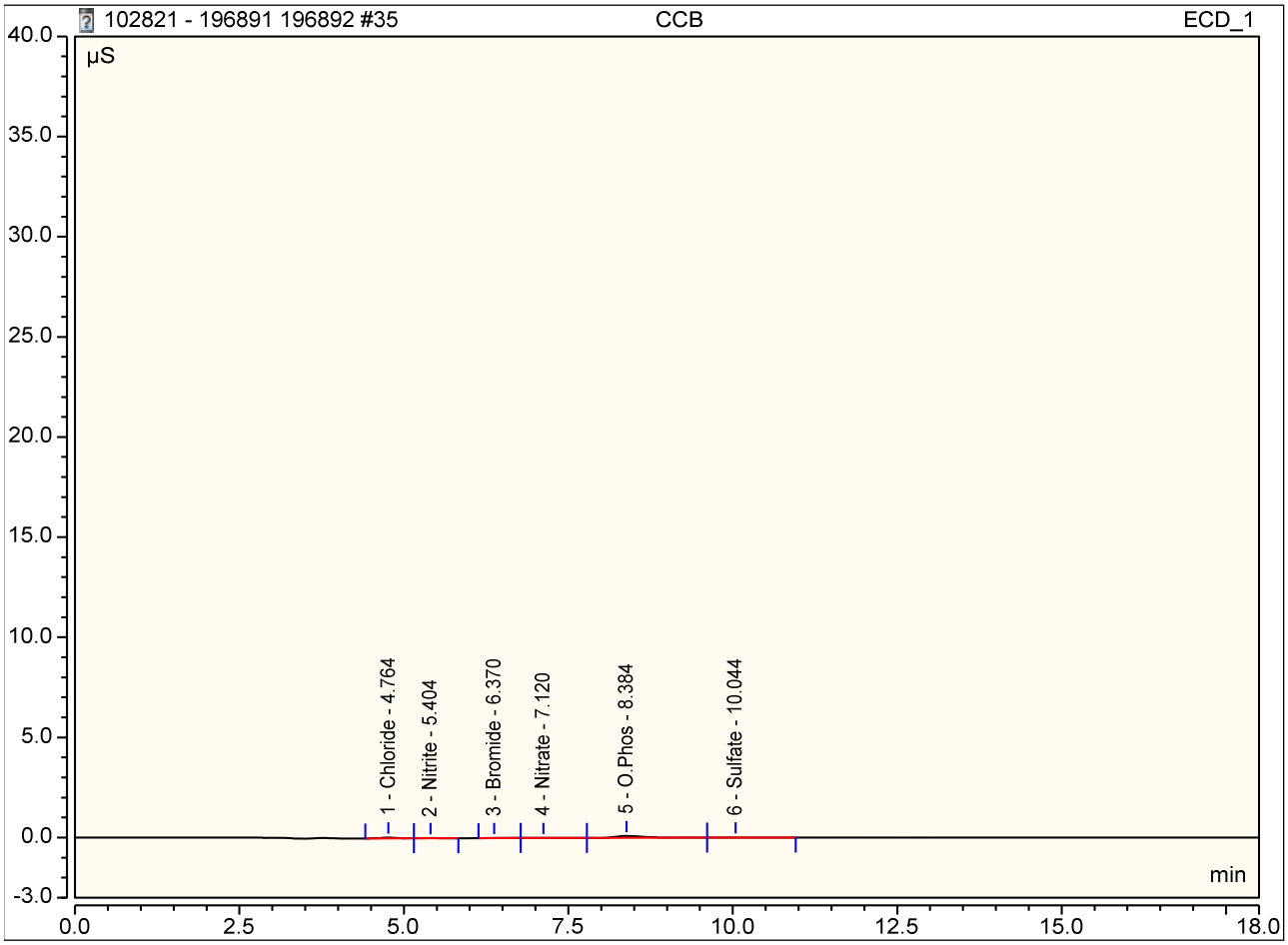
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.74	Fluoride	1.333	7.608	3.7279
2	4.76	Chloride	4.186	23.319	14.5220
3	5.41	Nitrite	1.705	8.172	3.6762
4	6.35	Bromide	0.352	1.665	3.6096
5	7.05	Nitrate	2.225	9.135	3.5649
6	8.29	O.Phos	0.818	2.314	3.3428
7	10.01	Sulfate	4.910	13.913	24.7876



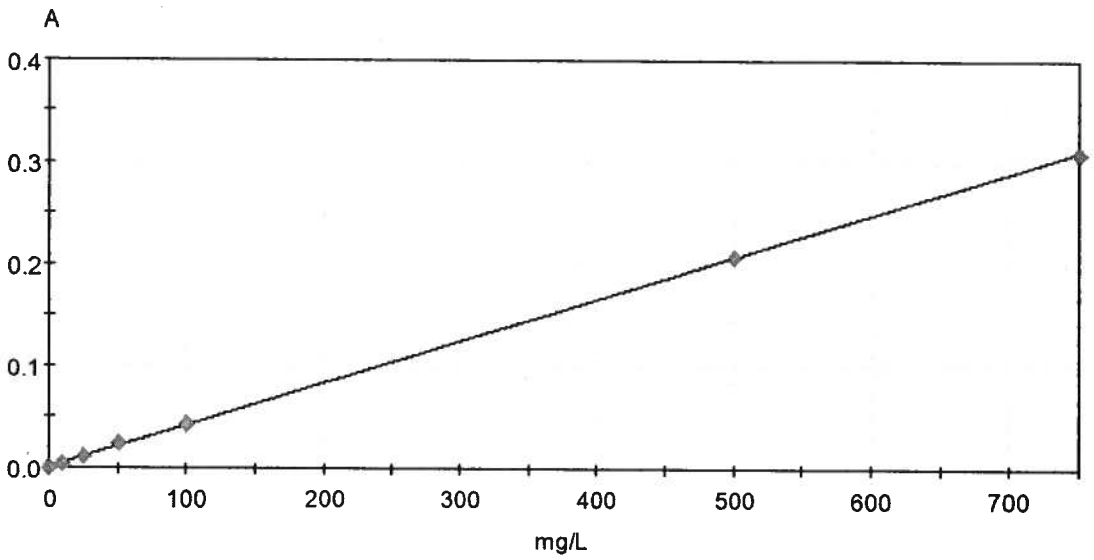
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Oct-2021 / 09:32**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.76	Chloride	0.010	0.047	0.6099
2	5.40	Nitrite	0.003	0.012	0.0224
3	6.37	Bromide	0.001	0.006	0.0070
4	7.12	Nitrate	0.003	0.010	0.0822
5	8.38	O.Phos	0.048	0.096	0.0165
6	10.04	Sulfate	0.007	0.018	0.7285



Method:	W51710.mqa (600 nm)
Last modified:	10/13/2021 13:32:30 by CTLABORATORIES\SPEC
Spectrophotometer:	GENESYS 30
Serial number:	9A1W117104
Firmware:	104
Autozero:	11/03/2021 12:39:36
Measured:	11/03/2021 13:03:51 by CTLABORATORIES\SPEC
Result filename:	196967 197021 DATA.rqa



Curve parameters: y = 4.129621E-04 x + 9.141997E-04
Residual error: 0.0016 Correlation coefficient: 0.99993
Date: 10/13/2021 13:31:43 Autozero 10/13/2021 13:29:02

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]
ICV	1	0.161	387.7
ICB	1	-0.004	-11.9
CCV	1	0.163	392.5
CCB	1	-0.005	-14.3
1069191	1	0.161	387.7
1069190	1	-0.005	-14.3
1069197	1	0.029	68.0
1060823		0.058	discarded
1060823x2	1	0.030	70.4
1061696	1	0.016	36.5
1061738	1	0.013	29.3
CCV	1	0.164	394.9
CCB	1	-0.003	-9.5
1066849	1	-0.001	-4.6
1066849MS	1	0.062	147.9
1066849MSD	1	0.064	152.8

RLB
11/3/21

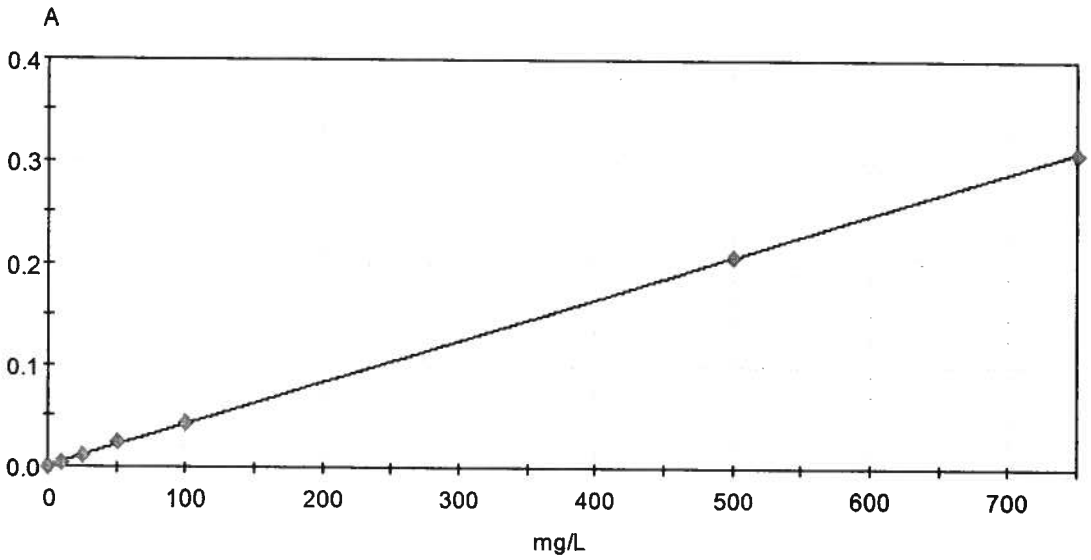
1066849DUP	1	0.000	-2.2
1067793	1	0.050	118.9
CCV	1	0.164	394.9
CCB	1	-0.005	-14.3
1068752	1	0.160	385.2
1068751	1	-0.006	-16.7
1066374	1	0.013	29.3
1066374MS	1	0.078	186.7
1066374MSD	1	0.077	184.2
1066375	1	0.105	252.0
1066379	1	0.013	29.3
~~* 1066380~~	~~1~~	~~0.075~~	~~179.4~~
~~* 1066381~~	~~1~~	~~0.063~~	~~150.3~~
1066382	1	0.009	19.6
CCV	1	0.163	392.5
CCB	1	-0.005	-14.3
1066383	1	0.000	-2.2
1066459	1	0.003	5.1
1066459MS	1	0.077	184.2
1066459MSD	1	0.072	172.1
1066864	1	0.007	14.7
1066934X20	1	0.191	460.3
~~* 1066956X10~~	~~1~~	~~0.096~~	~~230.3~~
~~* 1066957X500~~	~~1~~	~~0.100~~	~~239.9~~
1066958X20	1	0.099	237.5
1066959X20	1	0.170	409.4
CCV	1	0.165	397.3
CCB	1	-0.006	-16.7
1066960X20	1	0.026	60.7
~~* 1066961X20~~	~~1~~	~~0.384~~	~~927.7~~ ... Range
1067828	1	0.035	82.5
CCV	1	0.163	392.5
CCB	1	-0.004	-11.9

RLB 11/3/21

*1060823 set up on Re-Run

* Re Run

Method:	W51710.mqa (600 nm)
Last modified:	10/13/2021 13:32:30 by CTLABORATORIES\SPEC
Spectrophotometer:	GENESYS 30
Serial number:	9A1W117104
Firmware:	104
Autozero:	11/05/2021 14:49:31
Measured:	11/05/2021 15:00:04 by CTLABORATORIES\SPEC
Result filename:	196967 RERUN.rqa



Curve parameters: y = 4.129621E-04 x + 9.141997E-04
Residual error: 0.0016 Correlation coefficient: 0.99993
Date: 10/13/2021 13:31:43 Autozero 10/13/2021 13:29:02

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]
ICV	1	0.161	387.7
ICB	1	0.001	0.2
CCV	1	0.167	402.2
CCB	1	0.003	5.1
1060823X2	1	0.031	72.9
1066380	1	0.006	12.3
1066381	1	0.001	0.2
1066956 X10	1	0.041	97.1
1066957 X500	1	0.105	252.0
1066961 X50	1	0.165	397.3
CCV	1	0.164	394.9
CCB	1	0.000	-2.2

RLS
11/5/21

pH - Mettler Toledo Seven Easy

Date:	10/28/2021	Analyst:	HLB	Lims #:	196890	Slope (%)	98%

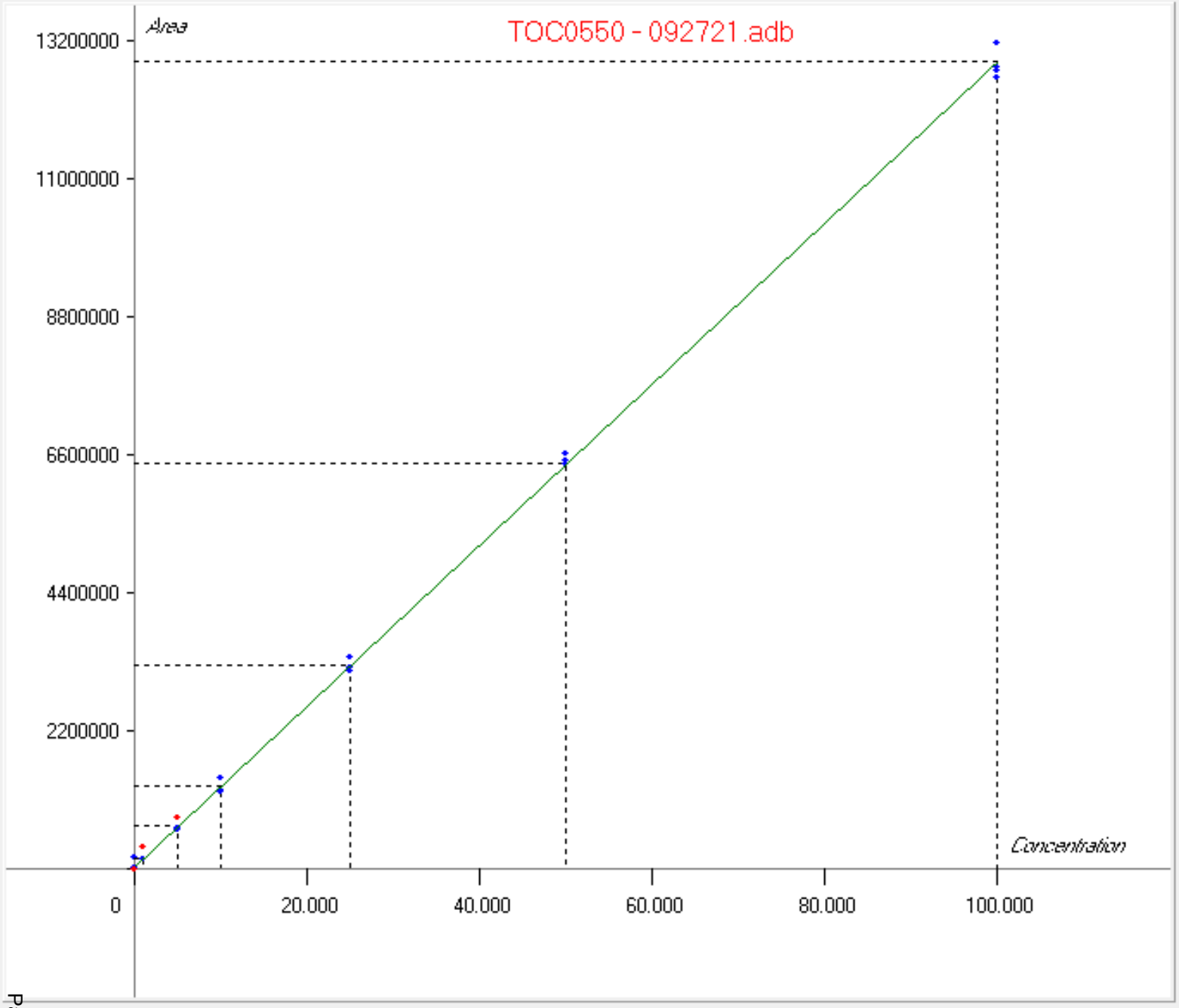
GRP	Sample ID#	Matrix	Temp (°C)*	Result	
1	BUFFER 7		24.4	6.98	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11	1066849	GW	10.1	7.29	
dup 11	1066849	GW	10.1	7.27	
12	BUFFER 7		23.1	7.02	
13					
14					
15					
16					
17					
18					
19					
20					
21					
23					
dup 23					
24	BUFFER 7				
25					
dup 25					
26					
dup 26					

To datacapture: Save CSV file under the TSS datacapture folder.

*Temperature of samples should be room temperature around 25°C

Buffer Standard IDs:

pH 4: WC205 pH 7: WC234 pH 10: WC275



Cursor Position

Concentration	Area
119.800 mg/l	9927500

A2	0
A1	128303
A0	48746
Correlation	0.99971
Order	1
Volume	100 µl
Conc.	100.00
Area	13178706

Conc.	Area	Sel.
0	202065	
0	37348	
0	0	
0	0	
0	0	
1	377250	
1	169594	
1	180562	

Used Value
Ignored Value

CurveNo:1 CurveType:TC

09/30/2021

Analysis Name TOC0550 - 092721.adb

Template Name CURVE TEMP.tdb
Method Name N / A
Operator KMT

Date Monday, September 27, 2021
Time 13:26

Start Oven Temp. 757 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0550 INST: TOCW
ICAL STOCK 0549 ICV STOCK 0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	This Analysis	Sep 27 2021, 13:26	13178706	100	1	0.99971	100 µl	Yes
	A2: 0		*A1: 128302.547262599*		*A0: 48745.8532633808*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	BLANK	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 13:37:03	3.08	443859	1	758	2	-	-
2	9/27/2021 13:40:22	0.00	0	0	757	2	-	Yes
3	9/27/2021 13:44:23	0.00	0	0	758	2	-	Yes
4	9/27/2021 13:48:25	0.00	0	0	758	2	-	Yes
5	9/27/2021 13:52:26	0.00	0	0	759	2	-	Yes

2	2	Unknown	BLANK	1 x

	TC	**0.00**	**0**	**0.00**	**100 µl**		

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 13:57:18	1.19	201872	1	758	2	-	-
2	9/27/2021 14:00:22	0.00	0	0	757	2	-	Yes
3	9/27/2021 14:04:23	0.00	0	0	758	2	-	Yes
4	9/27/2021 14:08:24	0.00	0	0	758	2	-	Yes
5	9/27/2021 14:12:26	0.00	0	0	758	2	-	Yes

3	S1	Standard	TC Std 0.00 mg/l	1 x

	TC	**ZERO !**	**59853**	**161.11**	**100 µl**		

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 14:17:18	1.19	202065	1	759	2	-	Yes
2	9/27/2021 14:20:14	ZERO !	37348	1	758	2	-	Yes
3	9/27/2021 14:22:32	0.00	0	1	758	2	-	Yes
4	9/27/2021 14:26:34	0.00	0	1	758	2	-	Yes
5	9/27/2021 14:30:35	0.00	0	1	758	2	-	-

4	S2	Standard	TC Std 1.00 mg/l	1 x

	TC	**0.99**	**175386**	**2.58**	**100 µl**		

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 14:35:29	2.56	377250	1	758	2	-	-
2	9/27/2021 14:38:37	0.94	169594	1	756	2	-	Yes
3	9/27/2021 14:40:54	1.03	180562	1	756	2	-	Yes
4	9/27/2021 14:43:15	0.98	175011	1	756	2	-	Yes
5	9/27/2021 14:45:33	0.99	176380	1	755	2	-	Yes

5 S3 Standard TC Std. 5.00 mg/l 1 x

TC **4.77** **660702** **0.27** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 14:48:44	6.07	827529	1	756	2	-	-
2	9/27/2021 14:51:59	4.79	662991	1	755	2	-	Yes
3	9/27/2021 14:54:28	4.75	658750	1	755	2	-	Yes
4	9/27/2021 14:56:57	4.77	661088	1	755	2	-	Yes
5	9/27/2021 14:59:28	4.76	659982	1	755	2	-	Yes

---

6 S4 Standard TC Std. 10.00 mg/l 1 x

TC **9.89** **1317979** **7.80** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 15:02:47	11.09	1471288	1	756	2	-	Yes
2	9/27/2021 15:06:13	9.45	1260726	1	755	2	-	Yes
3	9/27/2021 15:08:49	9.42	1257215	1	756	2	-	Yes
4	9/27/2021 15:11:24	9.62	1282688	1	755	2	-	Yes

---

7 S5 Standard TC Std. 25.00 mg/l 1 x

TC **24.88** **3240820** **3.07** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 15:15:00	25.99	3382999	1	756	2	-	Yes
2	9/27/2021 15:18:33	24.38	3176357	1	755	2	-	Yes
3	9/27/2021 15:21:23	24.32	3168579	1	755	2	-	Yes
4	9/27/2021 15:24:09	24.84	3235348	1	755	2	-	Yes

---

8 S6 Standard TC Std. 50.00 mg/l 1 x

TC **50.66** **6549163** **0.94** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 15:27:57	51.33	6634136	1	755	2	-	Yes
2	9/27/2021 15:31:33	50.18	6487387	1	755	2	-	Yes
3	9/27/2021 15:34:30	50.56	6535264	1	755	2	-	Yes
4	9/27/2021 15:37:30	50.59	6539867	1	755	2	-	Yes

---

9 S7 Standard TC Std. 100.00 mg/l 1 x

TC **99.72** **12843101** **1.82** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 15:41:18	102.34	13178706	1	755	2	-	Yes
2	9/27/2021 15:45:11	99.38	12799759	1	755	2	-	Yes
3	9/27/2021 15:48:22	99.05	12757369	1	755	2	-	Yes
4	9/27/2021 15:51:24	98.11	12636571	1	754	2	-	Yes

---

10 S8 Unknown ICV - 50.00 mg/L 1 x

TC **46.51** **6015986** **1.58** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 15:55:21	47.46	6138507	1	754	2	-	Yes
2	9/27/2021 15:59:01	45.68	5909159	1	754	2	-	Yes
3	9/27/2021 16:01:52	46.33	5992790	1	754	2	-	Yes
4	9/27/2021 16:04:42	46.57	6023491	1	754	2	-	Yes

---

11 S9 Unknown ICB 1 x

TC **ZERO !** **44571** **70.11** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	9/27/2021 16:08:30	1.23	206216	1	753	2	-	-
2	9/27/2021 16:11:32	0.16	69805	1	753	2	-	Yes
3	9/27/2021 16:13:42	ZERO !	46530	1	753	2	-	Yes
4	9/27/2021 16:15:56	0.10	61949	1	753	2	-	Yes
5	9/27/2021 16:18:05	0	0	0	753	2	-	Yes

Analysis Name 110221 - 197009.adb

Template Name 110221 - 197009.tdb
Method Name N / A
Operator KMT

Date Tuesday, November 2, 2021
Time 22:52

Start Oven Temp. 750 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0550 INST: TOCW
CCV 0553 LCS 0554

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0550 - 092721	Sep 27 2021, 13:26	13178706	100	1	0.99971	100 µl	Yes
	A2: 0		*A1: 128302.547262599*		*A0: 48745.8532633808*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/2/2021 22:52:45	0.67	134897	1	751	2	-	-
2	11/2/2021 22:55:42	0	0	0	750	2	-	Yes
3	11/2/2021 22:59:43	0	0	0	753	2	-	Yes
4	11/2/2021 23:03:44	0	0	0	754	2	-	Yes
5	11/2/2021 23:07:45	0	0	0	755	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**48.21**	**6233806**	**0.83**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/2/2021 23:12:38	48.39	6257839	1	757	2	-	Yes
2	11/2/2021 23:16:14	47.67	6164323	1	757	2	-	Yes
3	11/2/2021 23:19:06	48.17	6228807	1	757	2	-	Yes
4	11/2/2021 23:22:05	48.60	6284257	1	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**48.42**	**6261832**	**0.69**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/2/2021 23:25:54	48.76	6304768	1	757	2	-	Yes
2	11/2/2021 23:29:30	48.14	6225793	1	758	2	-	Yes
3	11/2/2021 23:32:19	48.13	6223990	1	758	2	-	Yes
4	11/2/2021 23:35:13	48.67	6292777	1	758	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.12**	**63810**	**6.48**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/2/2021 23:38:54	0.58	122719	1	759	2	-	-
2	11/2/2021 23:41:50	0.10	61928	1	758	2	-	Yes
3	11/2/2021 23:44:00	0.16	69596	1	757	2	-	Yes
4	11/2/2021 23:46:09	0.12	63691	1	757	2	-	Yes
5	11/2/2021 23:48:17	0.09	60026	1	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	3	Unknown	1066840	1 x

		TC	**91.49**	**11787265**		**0.34**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/2/2021 23:51:18	91.74	11819077	1	757	2	-	Yes
	2	11/2/2021 23:54:55	91.48	11785937	1	758	2	-	Yes
	3	11/2/2021 23:58:01	91.69	11813141	1	758	2	-	Yes
	4	11/3/2021 0:01:04	91.05	11730908	1	759	2	-	Yes
6	4	Unknown	1066845					1 x	
		TC	**76.88**	**9912300**		**0.26**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/3/2021 0:05:04	76.90	9915322	1	759	2	-	Yes
	2	11/3/2021 0:08:41	76.85	9909353	1	758	2	-	Yes
	3	11/3/2021 0:11:47	76.63	9880724	1	758	2	-	Yes
	4	11/3/2021 0:14:57	77.12	9943803	1	757	2	-	Yes
7	5	Unknown	1066846					1 x	
		TC	**76.29**	**9837088**		**0.31**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/3/2021 0:19:02	76.59	9875633	1	758	2	-	Yes
	2	11/3/2021 0:22:48	76.18	9823004	1	757	2	-	Yes
	3	11/3/2021 0:25:47	76.35	9844609	1	756	2	-	Yes
	4	11/3/2021 0:29:04	76.04	9805109	1	756	2	-	Yes
8	6	Unknown	1066847					1 x	
		TC	**76.42**	**9854128**		**0.75**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/3/2021 0:33:01	77.27	9962636	1	756	2	-	Yes
	2	11/3/2021 0:36:45	76.02	9802662	1	755	2	-	Yes
	3	11/3/2021 0:39:57	76.09	9810924	1	755	2	-	Yes
	4	11/3/2021 0:43:03	76.32	9840292	1	755	2	-	Yes
9	7	Unknown	1066848					1 x	
		TC	**59.55**	**7689595**		**0.45**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/3/2021 0:47:04	59.50	7682821	1	755	2	-	Yes
	2	11/3/2021 0:50:44	59.90	7733885	1	754	2	-	Yes
	3	11/3/2021 0:53:54	59.24	7649476	1	754	2	-	Yes
	4	11/3/2021 0:56:48	59.57	7692201	1	754	2	-	Yes
10	S1	Unknown	CCV					1 x	
		TC	**50.02**	**6466974**		**0.28**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/3/2021 1:00:40	50.22	6491879	1	754	2	-	Yes
	2	11/3/2021 1:04:20	49.88	6448524	1	754	2	-	Yes
	3	11/3/2021 1:07:24	49.99	6462560	1	754	2	-	Yes
	4	11/3/2021 1:10:31	50.01	6464934	1	753	2	-	Yes
11	8	Unknown	CCB					1 x	
		TC	**ZERO !**	**-327914272**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/3/2021 1:14:21	0.62	127760	1	754	2	-	-
	2	11/3/2021 1:17:23	ZERO !	-1311657088	1	753	2	-	Yes
	3	11/3/2021 1:21:25	0	0	0	753	6	-	Yes
	4	11/3/2021 1:25:26	0	0	0	755	5	-	Yes
	5	11/3/2021 1:29:27	0	0	0	755	4	-	Yes

Analysis Name 110421B - 197155 197156.adb

Template Name 110421B - 197155 197156.tdb
Method Name N / A
Operator KMT

Date Thursday, November 4, 2021
Time 14:49

Start Oven Temp. 776 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0550 INST: TOCW
CCV 0558 LCS 0559 SPIKE 0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0550 - 092721	Sep 27 2021, 13:26	13178706	100	1	0.99971	100 µl	Yes
	A2: 0		*A1: 128302.547262599*		*A0: 48745.8532633808*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**617558**	**195.32**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 15:00:05	18.53	2426637	1	774	2	-	Yes
2	11/4/2021 15:04:35	ZERO !	43597	1	772	2	-	Yes
3	11/4/2021 15:06:43	0	0	0	771	2	-	Yes
4	11/4/2021 15:10:45	0	0	0	769	2	-	Yes
5	11/4/2021 15:14:46	0	0	0	769	2	-	-

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**48.98**	**6332307**	**1.30**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 15:19:37	49.85	6445020	1	768	2	-	Yes
2	11/4/2021 15:23:19	48.36	6253403	1	767	2	-	Yes
3	11/4/2021 15:26:09	48.70	6296802	1	766	2	-	Yes
4	11/4/2021 15:29:02	48.99	6334006	1	765	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**50.81**	**6568026**	**0.87**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 15:32:46	51.32	6633680	1	764	2	-	Yes
2	11/4/2021 15:36:28	51.00	6592349	1	764	2	-	Yes
3	11/4/2021 15:39:23	50.31	6503265	1	763	2	-	Yes
4	11/4/2021 15:42:11	50.62	6542810	1	763	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**42161**	**139.89**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 15:45:57	0.60	125102	1	763	2	-	Yes
2	11/4/2021 15:48:59	0	0	0	761	2	-	Yes
3	11/4/2021 15:53:01	ZERO !	43542	1	761	2	-	Yes
4	11/4/2021 15:55:15	0	0	0	760	2	-	Yes
5	11/4/2021 15:59:16	0	0	0	760	2	-	-

15	S1	Unknown	CCV				1 x		
		TC	**47.41**	**6130996**	**1.22**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/4/2021 18:50:30	46.92	6068758	1	752	2	-	Yes
	2	11/4/2021 18:53:58	47.00	6078800	1	751	2	-	Yes
	3	11/4/2021 18:56:47	48.18	6230300	1	751	2	-	Yes
	4	11/4/2021 18:59:38	47.52	6146127	1	752	2	-	Yes

16	13	Unknown	CCB				1 x		
		TC	**0.00**	**0**	**0.00**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/4/2021 19:03:12	0	0	0	752	2	-	Yes
	2	11/4/2021 19:07:49	0	0	0	752	2	-	Yes
	3	11/4/2021 19:11:50	0	0	0	752	2	-	Yes
	4	11/4/2021 19:15:52	0	0	0	752	2	-	Yes

22	19	Unknown	1066840				1 x		
		TC	**ZERO !**	**-78771**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/4/2021 20:26:35	ZERO !	-185154	1	753	2	-	Yes
	2	11/4/2021 20:31:03	0	0	0	752	2	-	-
	3	11/4/2021 20:35:05	0	0	0	753	2	-	Yes
	4	11/4/2021 20:39:06	0	0	0	753	2	-	Yes
	5	11/4/2021 20:43:08	ZERO !	-129933	1	752	2	-	Yes
23	20	Unknown	DUP1066840				1 x		
		TC	**ZERO !**	**-73385**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/4/2021 20:47:12	ZERO !	-122347	1	752	2	-	Yes
	2	11/4/2021 20:51:35	ZERO !	-171194	1	752	2	-	Yes
	3	11/4/2021 20:55:02	0	0	0	752	2	-	-
	4	11/4/2021 20:59:04	0	0	0	752	2	-	Yes
	5	11/4/2021 21:03:05	0	0	0	752	2	-	Yes
24	21	Unknown	MSW1066840				1 x		
		TC	**48.07**	**6216223**		**0.87**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/4/2021 21:07:59	47.80	6182089	1	753	2	-	Yes
	2	11/4/2021 21:11:21	47.62	6159119	1	752	2	-	Yes
	3	11/4/2021 21:13:59	48.51	6272223	1	752	2	-	Yes
	4	11/4/2021 21:16:38	48.34	6251461	1	752	2	-	Yes
25	22	Unknown	MSDW1066840				1 x		
		TC	**48.09**	**6219964**		**1.05**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/4/2021 21:20:11	48.69	6296415	1	752	2	-	Yes
	2	11/4/2021 21:23:29	48.30	6246343	1	751	2	-	Yes
	3	11/4/2021 21:26:07	47.87	6190941	1	752	2	-	Yes
	4	11/4/2021 21:28:43	47.52	6146159	1	751	2	-	Yes
26	23	Unknown	1066845				1 x		
		TC	**ZERO !**	**-161263**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11/4/2021 21:32:13	ZERO !	-116206	1	752	2	-	Yes
	2	11/4/2021 21:36:45	0	0	0	752	2	-	-
	3	11/4/2021 21:40:48	ZERO !	-157550	1	752	2	-	Yes
	4	11/4/2021 21:44:26	ZERO !	-164464	1	752	2	-	Yes
	5	11/4/2021 21:48:24	ZERO !	-206833	1	753	2	-	Yes
27	S1	Unknown	CCV				1 x		
		TC	**47.31**	**6118450**		**1.27**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.

1		11/4/2021 21:53:19	46.71	6041701	1	753	2	-	Yes
2		11/4/2021 21:57:03	46.97	6075723	1	752	2	-	Yes
3		11/4/2021 21:59:53	47.46	6137412	1	752	2	-	Yes
4		11/4/2021 22:02:42	48.09	6218965	1	751	2	-	Yes

---

28 24 Unknown CCB 1 x

	TC	**0.00**	**0**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 22:06:35	0	0	0	752	2	-	Yes
2	11/4/2021 22:11:12	0	0	0	752	2	-	Yes
3	11/4/2021 22:15:13	0	0	0	752	2	-	Yes
4	11/4/2021 22:19:14	0	0	0	752	2	-	Yes

---

29 25 Unknown 1066846 1 x

	TC	**0.50**	**112649**	**8.12**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 22:24:08	0.82	154347	1	753	2	-	-
2	11/4/2021 22:26:56	0.50	112931	1	752	2	-	Yes
3	11/4/2021 22:29:02	0.58	123216	1	751	2	-	Yes
4	11/4/2021 22:31:09	0.51	113563	1	751	2	-	Yes
5	11/4/2021 22:33:14	0.41	100886	1	751	2	-	Yes

---

30 26 Unknown 1066847 1 x

	TC	**ZERO !**	**-104033**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 22:36:09	0.53	116206	1	752	2	-	-
2	11/4/2021 22:38:50	ZERO !	-91580	1	751	2	-	Yes
3	11/4/2021 22:42:28	ZERO !	-118862	1	752	2	-	Yes
4	11/4/2021 22:46:15	ZERO !	-46053	1	752	2	-	Yes
5	11/4/2021 22:49:03	ZERO !	-159638	1	752	2	-	Yes

---

31 27 Unknown 1066848 1 x

	TC	**ZERO !**	**-137833**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 22:53:30	0.37	96168	1	752	2	-	-
2	11/4/2021 22:56:06	ZERO !	-131716	1	751	2	-	Yes
3	11/4/2021 23:00:06	ZERO !	-151571	1	752	2	-	Yes
4	11/4/2021 23:03:55	ZERO !	-155314	1	752	2	-	Yes
5	11/4/2021 23:07:52	ZERO !	-112731	1	752	2	-	Yes

---

32 S2 Unknown CCV 1 x

	TC	**46.49**	**6014090**	**1.31**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 23:12:06	45.86	5932926	1	752	2	-	Yes
2	11/4/2021 23:15:39	46.14	5968520	1	751	2	-	Yes
3	11/4/2021 23:18:26	47.22	6107384	1	751	2	-	Yes
4	11/4/2021 23:21:21	46.75	6047531	1	751	2	-	Yes

---

33 28 Unknown CCB 1 x

	TC	**0.00**	**0**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11/4/2021 23:25:05	0	0	0	752	2	-	Yes
2	11/4/2021 23:29:42	0	0	0	752	2	-	Yes
3	11/4/2021 23:33:43	0	0	0	752	2	-	Yes
4	11/4/2021 23:37:45	0	0	0	752	2	-	Yes

INORGANICS
LOGBOOK
DOCUMENTS

WANIONS IC QSM 5.0 Anion Run
196892 on 10/29/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1068041						WANIONS IC QSM 5.0				
		Sulfate		ICV							
		Nitrate Nitrogen		ICV							
		Chloride		ICV							
	1068042						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICB							
		Chloride		ICB							
		Sulfate		ICB							
	1067749						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1067750						WANIONS IC QSM 5.0				
		Chloride		LCSW				0			
		Nitrate Nitrogen		LCSW				0			
		Sulfate		LCSW				0			
	1067751						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
196892 on 10/29/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
165486	1066840		10/27/2021 09:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride		*							
		Nitrate Nitrogen		*							
		Sulfate		*							
	1067752		10/27/2021 09:00				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		DUP	1066840			0			
		Chloride		DUP	1066840			0			
		Sulfate		DUP	1066840			0			
	1067753						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1067754						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
	1067755		10/27/2021 09:00				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSW	1066840			0			
		Chloride		MSW	1066840			0			
		Sulfate		MSW	1066840			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
196892 on 10/29/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1067756		10/27/2021	09:00				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSDW 1067755				0			
		Chloride			MSDW 1067755				0			
		Sulfate			MSDW 1067755				0			
165486	1066845		10/27/2021	10:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate										
		Chloride										
		Nitrate Nitrogen										
165486	1066845		10/27/2021	10:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate	***RERUN***									
		Nitrate Nitrogen	***RERUN***									
		Chloride	***RERUN***									
165486	1066846		10/27/2021	10:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
165486	1066847		10/27/2021	12:10		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
196892 on 10/29/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
165486	1066848		10/27/2021 13:07		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
165487	1066854		10/27/2021 15:08		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
	1067757						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1067758						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
	1067759						WANIONS IC QSM 5.0				
		Chloride		CCV				0			
		Sulfate		CCV				0			
		Nitrate Nitrogen		CCV				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
196892 on 10/29/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1067760						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
165486	1066846		10/27/2021 10:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Chloride	***RERUN***								
	1067762						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1067764						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

72

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
196891 196892	10/28/2021	TMG	RLD	10/29/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3	Yes		Yes		
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

Aquion Run Log - System 4

Start Date	Start Time	End Date	End Time	Analyst	Lims Run #(s)	Calibration ID#	Data File	CCV ID's	LCS ID's	Spike ID's	Total Cond.	Pressure (Mpa)	Flow (mL/min)	Comments	Reviewed/Date
08/18/21	12:43	08/19/21	01:58	TMG	194566 194567	IC3602A	081821 -	IC3740 IC3748	IC3741 IC3749	IC3742 IC3750	21.49	1140	0.94		RLD 09/22/2021
08/19/21	11:38	08/19/21	23:23	TMG	194623 194625 194633	IC3602A	081921 -	IC3751 IC3754	IC3752 IC3755	IC3753 IC3756	21.56	1135	0.94		RLD 09/22/2021
08/20/21	11:03	08/20/21	17:59	TMG	194648 194649	IC3602A	082021 -	IC3751 IC3754	IC3752 IC3755	IC3753 IC3756	21.22	1139	0.94		RLD 09/22/2021
08/24/21	10:42	08/25/21	08:42	TMG	194751 194752	IC3602A	082421 -	IC3751 IC3757	IC3752 IC3758	IC3753 IC3759	21.39	1132	0.94		RLD 09/22/2021
08/25/21	9:49	08/25/21	16:26	TMG	194796 194799	IC3602A	082521 -	IC3751 IC3757	IC3752 IC3758	IC3753 IC3759	22.02	1130	0.94		RLD 09/22/2021
08/26/21	13:56	08/26/21	19:57	TMG	194850 194851	IC3602A	082621 -	IC3764 IC3767	IC3765 IC3768	IC3766 IC3769	21.49	1132	0.94		RLD 09/22/2021
08/27/21	9:30	08/27/21	16:26	TMG	194876 194878	IC3602A	082721 -	IC3764 IC3767	IC3765 IC3768	IC3766 IC3769	21.52	1128	0.94		RLD 09/22/2021
08/30/21	11:47	08/30/21	19:37	TMG	194932 194933	IC3602A	083021 -	IC3764 IC3767	IC3765 IC3768	IC3766 IC3769	21.36	1134	0.94		RLD 09/22/2021
08/31/21	10:10	09/01/21	09:28	TMG	194971 195005 MDL	IC3602A	083121 -	IC3764 IC3770	IC3765 IC3771	IC3766 IC3772	21.26	1132	0.94		RLD 09/22/2021
09/01/21	12:06	09/01/21	17:32	TMG	195025 1950026	IC3602A	090121 -	IC3764 IC3770	IC3765 IC3771	IC3766 IC3772	21.44	1126	0.94		RLD 09/22/2021
09/02/21	12:45	09/02/21	18:10	TMG	195080 195082	IC3602A	090221 -	IC3775 IC3778	IC3776 IC3779	IC3777 IC3780	21.01	1129	0.94		RLD 09/22/2021
09/03/21	10:47	09/07/21	08:59	TMG	195119 195120	IC3602A	090321 -	IC3775 IC3778	IC3776 IC3779	IC3777 IC3780	20.99	1131	0.94		RLD 09/22/2021
09/08/21	12:23	09/08/21	18:24	TMG	195218 195219	IC3602A	090821 -	IC3775 IC3778	IC3776 IC3779	IC3777 IC3780	20.67	1132	0.94		RLD 09/22/2021
09/09/21	12:21	09/10/21	10:27	TMG	195250 195251	IC3602A	090921 -	IC3781 IC3784	IC3782 IC3785	IC3783 IC3786	20.77	1129	0.94		RLD 09/22/2021
09/10/21	12:56	09/13/21	09:15	TMG	195312	IC3602A	091021 -	IC3781 IC3784	IC3782 IC3785	IC3783 IC3786	21.35	1131	0.94		RLD 09/22/2021
09/13/21	14:01	09/13/21	17:20	TMG	195352	IC3602A	091321 -	IC3781 IC3784	IC3782 IC3785	IC3783 IC3786	21.11	1131	0.94		RLD 09/22/2021
09/14/21	14:05	09/15/21	10:03	TMG	195401 195402 195411	IC3602A	091421 -	IC3781 IC3784	IC3782 IC3785	IC3783 IC3786	20.82	1134	0.94		RLD 09/22/2021
09/15/21	11:40	09/20/21	10:32	TMG	195437 195438	IC3602A	091521 -	IC3781 IC3784	IC3782 IC3785	IC3783 IC3786	21.39	1125	0.94		RLD 09/22/2021
09/16/21	13:16	09/17/21	10:16	TMG	195521 195522	IC3602A	091621 -	IC3790 IC3793	IC3791 IC3794	IC3792 IC3795	21.3	1121	0.94		RLD 09/22/2021
09/17/21	13:00	09/17/21	22:02	TMG	195546	IC3062A	091721 -	IC3790 IC3793	IC3791 IC3794	IC3792 IC3795	21.44	1120	0.94		RLD 09/22/2021
09/20/21	14:58	09/20/21	17:05	TMG	195612	IC3602A	092021 -	IC3790 IC3793	IC3791 IC3794	IC3792 IC3795	21.13	1122	0.94		RLD 09/22/2021
09/21/21	12:19	09/22/21	13:19	TMG	195635 195636 195686	IC3602A	092121 -	IC3790 IC3796	IC3791 IC3797	IC3792 IC3798	20.8	1121	0.94		
09/22/21	14:33	09/23/21	09:48	TMG	195700 195702	IC3602A	092221 -	IC3790 IC3796	IC3791 IC3797	IC3792 IC3798	21.5	1119	0.94		
09/23/21	13:29	09/24/21	09:26	TMG	195753 195754	IC3602A	092321 -	IC3799 IC3802	IC3800 IC3803	IC3801 IC3804	21.3	1119	0.94		
09/28/21	13:53	09/28/21	21:25	TMG	195885 195886	IC3602A	092821 -	IC3799 IC3805	IC3800 IC3806	IC3801 IC3807	21.31	1133	0.94		
09/29/21	12:26	09/30/21	10:22	TMG	195928 195929 195938 195939	IC3602A	092921 -	IC3799 IC3805	IC3800 IC3806	IC3801 IC3807	21.07	1130	0.94		
09/30/21	13:24	10/01/21	10:31	TMG	195973 195974	IC3602A	093021 -	IC3808 IC3811	IC3809 IC3812	IC3810 IC3813	21.42	1127	0.94		
10/01/21	12:20	10/01/21	19:16	TMG	196011	IC3602A	100121 -	IC3808 IC3811	IC3809 IC3812	IC3810 IC3813	21.46	1126	0.94		
10/05/21	12:51	10/06/21	09:11	TMG	196112	IC3602A	100521 -	IC3808 IC3811	IC3809 IC3812	IC3810 IC3813	21.16	1133	0.94		
10/06/21	14:24	10/07/21	10:10	TMG	196163 196164	IC3602A	100621 -	IC3808 IC3811	IC3809 IC3812	IC3810 IC3813	21.22	1127.5	0.94		
10/07/21	14:03	10/07/21	18:16	TMG	196207	IC3602A	100721 -	IC3814 IC3817	IC3815 IC3818	IC3816 IC3819	21.31	1125.91	0.94		
10/08/21	12:15	10/11/21	09:26	TMG	196230	IC3602A	100821 -	IC3814 IC3817	IC3815 IC3818	IC3816 IC3819	21.07	1129.77	0.94		
10/13/21	14:45	10/14/21	09:20	TMG	196323 196324	IC3602A	101321 -	IC3814 IC3817	IC3815 IC3818	IC3816 IC3819	21.09	1131.35	0.94		
10/14/21	14:16	10/15/21	20:33	TMG	196355 196366 196412 196417	IC3602A	101421 -	IC3822 IC3825	IC3823 IC3826	IC3824 IC3827	21.33	1127.92	0.94		
10/19/21	12:45	10/20/21	09:09	TMG	196483	IC3602A	101921 -	IC3822 IC3825	IC3823 IC3826	IC3824 IC3827	21.25	1137.14	0.94		
10/20/21	12:33	10/21/21	10:22	TMG	196516 MDL	IC3602A	102021 -	IC3822 IC3825	IC3823 IC3826	IC3824 IC3827	21.61	1139.53	0.94		
10/22/21	12:37	10/22/21	15:01	TMG	196697	IC3602A	102221 -	IC3830 IC3833	IC3831 IC3834	IC3832 IC3835	21.03	1152.18	0.94		
10/25/21	12:38	10/25/21	23:29	TMG	196740 196741	IC3602A	102521 -	IC3830 IC3833	IC3831 IC3834	IC3832 IC3835	21.17	1161.28	0.94		
10/26/21	11:30	10/27/21	10:23	TMG	196795 196796 PT	IC3602A	102621 -	IC3830 IC3836	IC3831 IC3837	IC3832 IC3838	21.16	1159.12	0.94		
10/27/21	13:56	10/28/21	09:34	TMG	196851 196852	IC3602A	102721 -	IC3830 IC3836	IC3831 IC3837	IC3832 IC3838	21.56	1151.87	0.94		
10/28/21	14:06	10/29/21	09:32	TMG	196891 196892	IC3602A	102821 -	IC3842 IC3845	IC3843 IC3846	IC3844 IC3847	21.52	1137.91	0.94		
10/29/21	11:48	10/29/21	17:49	TMG	196929 196932	IC3602A	102921 -	IC3842 IC3845	IC3843 IC3846	IC3844 IC3847	21.89	1135.56	0.94		

WCOD QSM Analytical Run
197021 on 11/15/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
165486	1066849		10/27/2021 13:45		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	COD QSM		GW	4	
		54-IDW						83211			
	1069190						COD QSM				
				MBW				83211			
	1069191						COD QSM				
				LCSW				83211			
	1069192		10/27/2021 13:45				COD QSM				
		54-IDW		MSW	1066849			83211			
	1069193		10/27/2021 13:45				COD QSM				
		54-IDW		MSDW	1069192			83211			
	1069194		10/27/2021 13:45				COD QSM				
		54-IDW		DUP	1066849			83211			
	1069197						COD QSM				
				LQCKW				83211			
	1071459						WCOD QSM				
				ICV							
	1071460						WCOD QSM				
				ICB							
	1071461						WCOD QSM				
				CCV							
	1071462						WCOD QSM				
				CCB							
	1071463						WCOD QSM				
				CCV							
	1071464						WCOD QSM				
				CCB							
	1071465						WCOD QSM				
				CCV							
	1071466						WCOD QSM				
				CCB							

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp3149.tmp Page 1 of 1

WCOD QSM Analytical Run
197021 on 11/15/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

19 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

COD Data Validation Checklist

		Method: Chemical Oxygen Demand EPA 410.4			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
196967, 197021	11/3,5/2021	RLB			

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Does a digestion sheet accompany the data package?	---	Yes				
2. Does the digestion sheet include all reagent and standard prep log numbers?	---	Yes				
3. Was a passing calibration test applied to sample analysis?	≥0.995	Yes				
4. Was a passing ICV analyzed immediately after the calibration?	90-110%	Yes				
5. Was a passing ICB analyzed immediately after the ICV?	< |LOD| or client/project specific	Yes				
6. Were CCVs and CCB analyzed at the required frequency?	1 per 10 samples	Yes				
7. Did analyzed CCVs meet the required acceptance criteria?	90-110%	Yes				
8. Did analyzed CCBs meet the acceptance criteria?	< |LOD| or client/project specific	Yes				
9. Was a Method Blank prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes				
10. Was the method blank within acceptance criteria?	< |LOD| or client/project specific	Yes				
11. Was an LCS prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes				
12. Did the LCS meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes				
13. Was an MS and MSD prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes				
14. Did the MS/ MSD's meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits		No			M flagged affected sample.

15. Did the MS/MSD's meet the RPD criteria?	Within in-house or contract/program specific limits	Yes				
16. Was a Duplicate prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	NA				
17. Did the Duplicate meet the RPD criteria?	Within in-house or contract/program specific limits	NA				
18. Were the samples digested within hold time?	28 days	Yes				
19. Was the max temperature(s) for reactor(s) documented?	---	Yes				
20. Was the method specifed temperature reached?		Yes				
21. Were reagents/standards used before expiration date?	---	Yes				
22. Are all samples on the job lists accounted for?	---	Yes				

CHEMICAL OXYGEN DEMAND REAGENT LOG

Prep Batch(es): 83211, 83202
Date/Time/Analyst: 11/02/2021 12:50 RLB
Run(s): 197021, 196967
Date/Time/Analyst: 11/03/2021 13:03 RLB

Reagents:	W #	Exp Date
ICAL Preparation	W51710	01/12/2022
CCV Preparation	W51712	01/12/2022
LCS/ICV Preparation	W51713	01/12/2022
Silver Sulfate Acid	W51528	09/09/2022
Potassium Dichromate Dig Solution	W50710	05/05/2022

Spiked Samples:	W #	Exp Date
Spiking Solution	W51711	01/12/2022

Concentration 2000 mg/L
Volume of Spike Used 0.2 mL
Final Sample Volume 2.5 mL
Final Spike Concentration 148.2 mg/L

Date: 11/02/2021
Time: 13:20

COD DIGESTION BLOCK TEMPS

	A	B
Temperature (Max) 150°C ± 2°C:		

	E	D
Temperature (Max) 150°C ± 2°C:	150	150

GENESYS 30 Instrument Run Logbook

Date	Start Time	End Time	Analyst	Test/Analyte	Calibration Test #	Run #/ Comments
11/03/21	12:35	13:05	RLB	COD	CODW51710	196967, 197021
11/05/21	14:45	15:00	RLB	COD	CODW51710	196967 RERUN
11/09/21	14:00	14:27	RLB	COD	CODW51710	197265, 197268
11/11/21	15:20	15:35	RLB	COD	CODW51710	197268 RERUN

197021

PrepWrkSht2
on 11/2/2021

Prep Batch: 83211, 83202

Date Prepped: 11/2/21

Prepped By: RLB

Date Entered:

CCV 1

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1069190	MBW 3	0	COD QSM			LIQUID			
	1069191	LCSW 2	0	COD QSM			LIQUID			
165486 X	1066849	8,9,10,11		COD QSM	WESTON SOLUTIONS, INC.	54-IDW	GROUND WATER	10/27/21 13:45	11/9/21	4
	1069192	MSW	1066849	COD QSM		54-IDW	GROUND WATER	10/27/21 13:45		
	1069193	MSDW	1069192	COD QSM		54-IDW	GROUND WATER	10/27/21 13:45		
	1069194	DUP	1066849	COD QSM		54-IDW	GROUND WATER	10/27/21 13:45		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpCF63.tmp

WPH Analytical Run
196890 on 11/1/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
165486	1066849		10/27/2021	13:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	PH		GW	**4**	
		54-IDW											
	1067505		10/27/2021	13:45					PH				
		54-IDW			DUP	1066849				0			

2 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

pH Data Validation Checklist

		Method: pH EPA 150.1, SM 4500-H+B, EPA 9040C, EPA 9045D			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
196889, 196890	10/28/2021	HLB	SRW	10/29/2021	YES

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Was the calibration slope recorded on the bench sheet?	95-110%	Yes		Yes		
2. Were reagents/standards used before expiration date?	---	Yes		Yes		
3. Were duplicates analyzed at the appropriate frequency?	1 every 20 samples of the same matrix	Yes		Yes		
4. Were the duplicates within acceptable limits?	Differ by $\leq$ 0.10 pH units	Yes		Yes		
5. Are all samples on the job lists accounted for?	---	Yes		Yes		
6. Were SM 4500-H+B samples bracketed by calibration buffer 7?	Every 10 samples, Differ by $\leq$ 0.10 pH units	Yes		Yes		

Mettler Toledo (Easy Seven) pH Calibration & Maintenance Run Logb

		pH Buffer Reference ID #			3 Point Calibration				
Date	Analyst	pH 7	pH 4	pH 10	1st Buffer	2nd Buffer	3rd Buffer	Slope (95-110%)	Temp ° C
10/27/21	HLB	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.04	98%	24.9
10/28/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.01	98%	24.5
10/29/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.01	98%	24.6
11/01/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.03	4	10.09	98%	17.5

Mettler Toledo (Easy Seven) Instrument Run Logbook

Date	Start Time	End Time	Analyst	Analyte	Lims Run #(s)
10/28/21	14:00	14:30	HLB	PH	196889, 196890

W CARBON, INORG & ORG Analytical Run
197009 on 11/8/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1069708							W CARBON, INORG & ORG				
					CCV				0			
	1069709							W CARBON, INORG & ORG				
					LCSW				0			
	1069710							W CARBON, INORG & ORG				
					MBW				0			
165486	1066840		10/27/2021	09:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	CARBON, INORG & ORG		GW	4	
		54MW13			Designated MS/MSD							
165486	1066845		10/27/2021	10:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	CARBON, INORG & ORG		GW	4	
		54MW10										
165486	1066846		10/27/2021	10:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	CARBON, INORG & ORG		GW	4	
		54TW10										
165486	1066847		10/27/2021	12:10		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	CARBON, INORG & ORG		GW	4	
		54MW12										
165486	1066848		10/27/2021	13:07		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	CARBON, INORG & ORG		GW	4	
		54MW1										
	1069711							W CARBON, INORG & ORG				
					CCV				0			
	1069712							W CARBON, INORG & ORG				
					CCB				0			

10 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060		Independent Data Review Checklist		Instrument: TOCW
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
197009	11/02/2021	KMT	RLD	11/10/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments**
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	Yes		Yes		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WORGANIC CARBON QSM 5.0 Analytical Run
197156 on 11/8/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1072158						WORGANIC CARBON QSM 5.0				
				ICV							
	1072159						WORGANIC CARBON QSM 5.0				
				ICB							
	1071037						WORGANIC CARBON QSM 5.0				
				CCV				0			
	1071038						WORGANIC CARBON QSM 5.0				
				LCSW				0			
	1071039						WORGANIC CARBON QSM 5.0				
				MBW				0			
	1071040						WORGANIC CARBON QSM 5.0				
				CCV				0			
	1071041						WORGANIC CARBON QSM 5.0				
				CCB				0			
165486	1066840		10/27/2021 09:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ORGAN CARBON T QSM 5.0		GW	4	
		54MW13		Designated MS/MSD							
	1071042		10/27/2021 09:00				ORGAN CARBON T QSM 5.0				
		54MW13		DUP 1066840				0			
	1071043		10/27/2021 09:00				ORGAN CARBON T QSM 5.0				
		54MW13		MSW 1066840				0			
	1071044		10/27/2021 09:00				ORGAN CARBON T QSM 5.0				
		54MW13		MSDW 1071043				0			
165486	1066845		10/27/2021 10:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ORGAN CARBON T QSM 5.0		GW	4	
		54MW10									
	1071045						WORGANIC CARBON QSM 5.0				
				CCV				0			
	1071046						WORGANIC CARBON QSM 5.0				
				CCB				0			
165486	1066846		10/27/2021 10:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ORGAN CARBON T QSM 5.0		GW	4	
		54TW10									
165486	1066847		10/27/2021 12:10		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ORGAN CARBON T QSM 5.0		GW	4	
		54MW12									
165486	1066848		10/27/2021 13:07		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ORGAN CARBON T QSM 5.0		GW	4	
		54MW1									
	1072164						WORGANIC CARBON QSM 5.0				
				CCV							

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WORGANIC CARBON QSM 5.0 Analytical Run
197156 on 11/8/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1072165						WORGANIC CARBON QSM 5.0				
				CCB							

19 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
197155, 197156	11/4,5/2021	KMT	RLD	11/10/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	Yes		Yes		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

TOC Instrument Run Logbook

Start Date	Start Time	End Date	End Time	Analyst	LIMs Run #	Matrix (S or W)	Calibration ID #	COMMENTS
11/1/2021	09:40	11/1/2021	13:35	KMT	196720	S	0544	
11/1/2021	13:59	11/1/2021	22:28	KMT	196721	S	0544	
11/2/2021	10:47	11/2/2021	15:11	KMT	196722	S	0544	
11/2/2021	22:52	11/3/2021	01:14	KMT	197009	W	0550	
11/3/2021	17:32	11/4/2021	01:08	~~KMT~~	DT(197010,197011,197012) 197013,197014,197016	W	0550	
11/4/2021	08:41	11/4/2021	13:56	TMG	197013,197014,197016 RR	W	0550	
11/4/2021	15:00	11/4/2021	23:25	KMT	197155 197156	W	0550	
11/5/2021	08:42	11/5/2021	09:55	KMT	197155 RR	W	0550	
11/5/2021	10:58	11/5/2021	13:55	KMT	196723	S	0544	
11/8/2021	10:24	11/8/2021	12:51	TMG	197207, 197208, 196724, 197210	S	0544	
11/8/2021	13:22	11/8/2021	16:24	KMT	197211	S	0544	
11/9/2021	09:24	11/9/2021	12:29	KMT	197237	S	0544	
11/9/2021	12:48	11/9/2021	15:47	KMT	197239	S	0544	
11/10/2021	08:59	11/10/2021	11:59	KMT	197306	S	0544	
11/10/2021	12:18	11/10/2021	15:23	KMT	197307	S	0544	
11/11/2021	11:43	11/11/2021	14:54	KMT	197308	S	0544	

Reviewed By:_____

① TMG KMT 11/3/21

SUBCONTRACTED ANALYSIS DOCUMENTS

eurofins | Environment Testing America

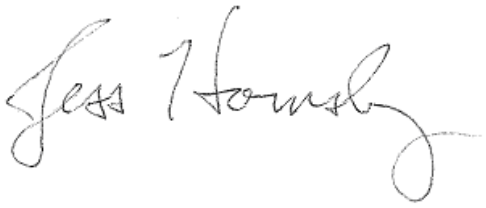
ANALYTICAL REPORT

Job Number: 810-6301-1

Job Description: Chlorite, Chlorate

For:
CT Laboratories
Environmental & Analytical Services
1230 Lange Court
Baraboo, WI 53913

Attention: Jodi Serstad



Approved for release.
Jess Hornsby
Project Manager II
11/22/2021 8:26 AM

Designee for
Jaclyn Gatchell, Project Manager
110 S Hill Street, South Bend, IN, 46617
(574)233-4777
jaclyn.gatchell@eurofinset.com
11/22/2021

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Table of Contents

Cover Title Page 1

Data Summaries 4

Definitions 4

Case Narrative 5

Detection Summary 6

Client Sample Results 7

Action Limits 8

Default Detection Limits 9

QC Sample Results 10

QC Association 11

Chronicle 12

Certification Summary 13

Method Summary 14

Sample Summary 15

Manual Integration Summary 16

Reagent Traceability 19

Organic Sample Data 20

HPLC/IC 20

Method 300.0 20

Method 300.0 QC Summary 21

Method 300.0 Sample Data 27

Standards Data 32

Method 300.0 ICAL Data 32

Method 300.0 CCAL Data 39

Raw QC Data 47

Method 300.0 Blank Data 47

Table of Contents

Method 300.0 LCS/LCSD Data 51
Method 300.0 MS/MSD Data 52
Method 300.0 Run Logs 56
Method 300.0 Prep Data 58
Shipping and Receiving Documents 59
Client Chain of Custody 60
Sample Receipt Checklist 61

Definitions/Glossary

Client: CT Laboratories
Job ID: 810-6301-1
Project/Site: Chlorite, Chlorate

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 10/29/2021 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.8º C.

HPLC/IC
Method 300.0: The matrix spike (MS) recoveries for Chlorate in analytical batch 810-6747 were outside control limits at 84% (90-110% Limit). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300.0: The matrix spike duplicate (MSD) recoveries for Chlorate in analytical batch 810-6747 were outside control limits at 83% (90-110% Limit). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300.0: The matrix spike (MS) recoveries for Chlorate in analytical batch 810-6747 were outside control limits at 82% (90-110% Limit). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300.0: The matrix spike duplicate (MSD) recoveries for Chlorate in analytical batch 810-6747 were outside control limits at 82% (90-110% Limit). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: CT Laboratories
Job ID: 810-6301-1
Project/Site: Chlorite, Chlorate

Client Sample ID: 1066840 54MW13 — Lab Sample ID: 810-6301-1

No Detections.

Client Sample ID: 1066845 54MW10 — Lab Sample ID: 810-6301-2

No Detections.

Client Sample ID: 106846 54TW10 — Lab Sample ID: 810-6301-3

No Detections.

Client Sample ID: 1066847 54MW12 — Lab Sample ID: 810-6301-4

No Detections.

Client Sample ID: 1066848 54MW1 — Lab Sample ID: 810-6301-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 1066840 54MW13
Lab Sample ID: 810-6301-1
Date Collected: 10/27/21 09:00
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/05/21 23:03	1
Chlorate	<10	F1	10		ug/L			11/05/21 23:03	1

Client Sample ID: 1066845 54MW10
Lab Sample ID: 810-6301-2
Date Collected: 10/27/21 10:40
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/06/21 00:24	1
Chlorate	<10		10		ug/L			11/06/21 00:24	1

Client Sample ID: 106846 54TW10
Lab Sample ID: 810-6301-3
Date Collected: 10/27/21 10:40
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/06/21 00:51	1
Chlorate	<10		10		ug/L			11/06/21 00:51	1

Client Sample ID: 1066847 54MW12
Lab Sample ID: 810-6301-4
Date Collected: 10/27/21 12:10
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/06/21 02:13	1
Chlorate	<10	F1	10		ug/L			11/06/21 02:13	1

Client Sample ID: 1066848 54MW1
Lab Sample ID: 810-6301-5
Date Collected: 10/27/21 13:07
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/06/21 03:34	1
Chlorate	<10		10		ug/L			11/06/21 03:34	1

Action Limit Summary

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Client Sample ID: 1066840 54MW13 — Lab Sample ID: 810-6301-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	PA DW MCL Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Client Sample ID: 1066845 54MW10 — Lab Sample ID: 810-6301-2

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	PA DW MCL Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Client Sample ID: 106846 54TW10 — Lab Sample ID: 810-6301-3

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	PA DW MCL Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Client Sample ID: 1066847 54MW12 — Lab Sample ID: 810-6301-4

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	PA DW MCL Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Client Sample ID: 1066848 54MW1 — Lab Sample ID: 810-6301-5

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	PA DW MCL Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Default Detection Limits

Client: CT Laboratories
Job ID: 810-6301-1
Project/Site: Chlorite, Chlorate

Method: 300.0 - Anions, Ion Chromatography

Analyte	RL		Units
Chlorate	10	7.9	ug/L
Chlorite	10	5.9	ug/L

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 810-6747/4
Matrix: Water
Analysis Batch: 6747

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/05/21 17:48	1
Chlorate	<10		10		ug/L			11/05/21 17:48	1

Lab Sample ID: LCS 810-6747/5
Matrix: Water
Analysis Batch: 6747

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorite			250	258		ug/L		103	90 - 110		
Chlorate			250	252		ug/L		101	90 - 110		

Lab Sample ID: 810-6301-1 MS
Matrix: Water
Analysis Batch: 6747

Client Sample ID: 1066840 54MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorite	<10		250	272		ug/L		109	90 - 110		
Chlorate	<10	F1	250	209	F1	ug/L		84	90 - 110		

Lab Sample ID: 810-6301-1 MSD
Matrix: Water
Analysis Batch: 6747

Client Sample ID: 1066840 54MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorite	<10		250	260		ug/L		104	90 - 110	4	20
Chlorate	<10	F1	250	208	F1	ug/L		83	90 - 110	0	20

Lab Sample ID: 810-6301-4 MS
Matrix: Water
Analysis Batch: 6747

Client Sample ID: 1066847 54MW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorite	<10		250	259		ug/L		104	90 - 110		
Chlorate	<10	F1	250	205	F1	ug/L		82	90 - 110		

Lab Sample ID: 810-6301-4 MSD
Matrix: Water
Analysis Batch: 6747

Client Sample ID: 1066847 54MW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorite	<10		250	264		ug/L		106	90 - 110	2	20
Chlorate	<10	F1	250	205	F1	ug/L		82	90 - 110	0	20

QC Association Summary

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

HPLC/IC

Analysis Batch: 6747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-6301-1	1066840 54MW13	Total/NA	Water	300.0	
810-6301-2	1066845 54MW10	Total/NA	Water	300.0	
810-6301-3	106846 54TW10	Total/NA	Water	300.0	
810-6301-4	1066847 54MW12	Total/NA	Water	300.0	
810-6301-5	1066848 54MW1	Total/NA	Water	300.0	
MB 810-6747/4	Method Blank	Total/NA	Water	300.0	
LCS 810-6747/5	Lab Control Sample	Total/NA	Water	300.0	
810-6301-1 MS	1066840 54MW13	Total/NA	Water	300.0	
810-6301-1 MSD	1066840 54MW13	Total/NA	Water	300.0	
810-6301-4 MS	1066847 54MW12	Total/NA	Water	300.0	
810-6301-4 MSD	1066847 54MW12	Total/NA	Water	300.0	

Lab Chronicle

Client: CT Laboratories
Job ID: 810-6301-1
Project/Site: Chlorite, Chlorate

Client Sample ID: 1066840 54MW13
Lab Sample ID: 810-6301-1
Date Collected: 10/27/21 09:00
Matrix: Water
Date Received: 10/29/21 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/05/21 23:03	JL	EA SB

Client Sample ID: 1066845 54MW10
Lab Sample ID: 810-6301-2
Date Collected: 10/27/21 10:40
Matrix: Water
Date Received: 10/29/21 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/06/21 00:24	JL	EA SB

Client Sample ID: 106846 54TW10
Lab Sample ID: 810-6301-3
Date Collected: 10/27/21 10:40
Matrix: Water
Date Received: 10/29/21 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/06/21 00:51	JL	EA SB

Client Sample ID: 1066847 54MW12
Lab Sample ID: 810-6301-4
Date Collected: 10/27/21 12:10
Matrix: Water
Date Received: 10/29/21 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/06/21 02:13	JL	EA SB

Client Sample ID: 1066848 54MW1
Lab Sample ID: 810-6301-5
Date Collected: 10/27/21 13:07
Matrix: Water
Date Received: 10/29/21 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/06/21 03:34	JL	EA SB

Laboratory References:

EA SB = Eurofins Eaton Analytical - South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: CT Laboratories
Job ID: 810-6301-1
Project/Site: Chlorite, Chlorate

Laboratory: Eurofins Eaton Analytical - South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999766900	08-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chlorate

Method Summary

Client: CT Laboratories
Job ID: 810-6301-1
Project/Site: Chlorite, Chlorate

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton Analytical - South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-6301-1	1066840 54MW13	Water	10/27/21 09:00	10/29/21 09:15
810-6301-2	1066845 54MW10	Water	10/27/21 10:40	10/29/21 09:15
810-6301-3	106846 54TW10	Water	10/27/21 10:40	10/29/21 09:15
810-6301-4	1066847 54MW12	Water	10/27/21 12:10	10/29/21 09:15
810-6301-5	1066848 54MW1	Water	10/27/21 13:07	10/29/21 09:15

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Eaton Analytical - Job No.: 810-6301-1

SDG No.:

Instrument ID: IC-FT Analysis Batch Number: 6553

Lab Sample ID: IC 810-6553/1 Client Sample ID:

Date Analyzed: 11/03/21 14:27 Lab File ID: 110321A_2.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	5.50	Incomplete Integration	lovickj	11/04/21 15:55

Lab Sample ID: IC 810-6553/2 Client Sample ID:

Date Analyzed: 11/03/21 14:56 Lab File ID: 110321A_3.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	5.48	Incomplete Integration	lovickj	11/04/21 15:54

Lab Sample ID: IC 810-6553/3 Client Sample ID:

Date Analyzed: 11/03/21 15:24 Lab File ID: 110321A_4.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	5.48	Incomplete Integration	lovickj	11/04/21 15:54

Lab Sample ID: IC 810-6553/4 Client Sample ID:

Date Analyzed: 11/03/21 15:52 Lab File ID: 110321A_5.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	5.47	Incomplete Integration	lovickj	11/04/21 15:53

Lab Sample ID: ICRT 810-6553/5 Client Sample ID:

Date Analyzed: 11/03/21 16:19 Lab File ID: 110321A_6.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	5.47	Incomplete Integration	lovickj	11/04/21 15:41

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Eaton Analytical - Job No.: 810-6301-1

SDG No.:

Instrument ID: IC-FT Analysis Batch Number: 6747

Lab Sample ID: CCVL 810-6747/1 Client Sample ID:

Date Analyzed: 11/05/21 16:27 Lab File ID: 110521A_8.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	5.47	Incomplete Integration	lovickj	11/08/21 09:47

Lab Sample ID: CCB 810-6747/3 Client Sample ID:

Date Analyzed: 11/05/21 17:21 Lab File ID: 110521A_10.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorate		Invalid Compound ID	lovickj	11/08/21 09:47

Lab Sample ID: MB 810-6747/4 Client Sample ID:

Date Analyzed: 11/05/21 17:48 Lab File ID: 110521A_11.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorate		Invalid Compound ID	lovickj	11/08/21 09:47

Lab Sample ID: CCV 810-6747/18 Client Sample ID:

Date Analyzed: 11/06/21 01:18 Lab File ID: 110521A_24.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	5.46	Incomplete Integration	lovickj	11/08/21 10:19

Lab Sample ID: CCB 810-6747/19 Client Sample ID:

Date Analyzed: 11/06/21 01:45 Lab File ID: 110521A_25.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorate		Invalid Compound ID	lovickj	11/08/21 10:19
Chlorite		Invalid Compound ID	lovickj	11/08/21 10:19

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Eaton Analytical - Job No.: 810-6301-1

SDG No.:

Instrument ID: IC-FT Analysis Batch Number: 6747

Lab Sample ID: CCV 810-6747/32 Client Sample ID:

Date Analyzed: 11/06/21 07:37 Lab File ID: 110521A_38.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	5.45	Incomplete Integration	lovickj	11/08/21 10:21

Lab Sample ID: CCB 810-6747/33 Client Sample ID:

Date Analyzed: 11/06/21 08:04 Lab File ID: 110521A_39.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorate		Invalid Compound ID	lovickj	11/08/21 10:21

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Eaton Analytical - South B Job No.: 810-6301-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC-300B CalSS_00002	12/31/21	07/30/21	MilliQ Water, Lot 073021	100 mL	IC-BR-CalSt_00002	2500 uL	Bromide	25 mg/L
					IC-CLO2-CalSt_00002	2500 uL	Chlorite	25 mg/L
					IC-CLO3-CalSt_00002	2500 uL	Chlorate	25 mg/L
.IC-BR-CalSt_00002	07/30/22	Inorganic Venture, Lot S2-BR704965			(Purchased Reagent)		Bromide	1000 ug/mL
.IC-CLO2-CalSt_00002	07/30/22	Inorganic Venture, Lot P2-CLOX687554			(Purchased Reagent)		Chlorite	1000 ug/mL
.IC-CLO3-CalSt_00002	07/30/22	Inorganic Venture, Lot R2-CLOX689874			(Purchased Reagent)		Chlorate	1000 ug/mL

Method 300.0

Anions (IC) by Method 300.0

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Eaton Analytical - South Bend Job No.: 810-6301-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 110521A_12.d

Lab ID: LCS 810-6747/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chlorite	250	258	103	90-110	
Chlorate	250	252	101	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Eaton Analytical - South Bend Job No.: 810-6301-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 110521A_20.d

Lab ID: 810-6301-1 MS Client ID: 1066840 54MW13 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chlorite	250	<10	272	109	90-110	
Chlorate	250	<10	209	84	90-110	F1

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Eaton Analytical - South Bend Job No.: 810-6301-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 110521A_27.d

Lab ID: 810-6301-4 MS Client ID: 1066847 54MW12 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chlorite	250	<10	259	104	90-110	
Chlorate	250	<10	205	82	90-110	F1

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Eaton Analytical - South Bend Job No.: 810-6301-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 110521A_21.d

Lab ID: 810-6301-1 MSD Client ID: 1066840 54MW13 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chlorite	250	260	104	4	20	90-110	
Chlorate	250	208	83	0	20	90-110	F1

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Eaton Analytical - South Bend Job No.: 810-6301-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 110521A_28.d

Lab ID: 810-6301-4 MSD Client ID: 1066847 54MW12 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chlorite	250	264	106	2	20	90-110	
Chlorate	250	205	82	0	20	90-110	F1

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Eaton Analytical - Sout Job No.: 810-6301-1

SDG No.:

Lab File ID: 110521A_11.d Lab Sample ID: MB 810-6747/4

Matrix: Water Date Extracted:

Instrument ID: IC-FT Date Analyzed: 11/05/2021 17:48

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 810-6747/5	110521A_12.d	11/05/2021 18:15
1066840 54MW13	810-6301-1	110521A_19.d	11/05/2021 23:03
1066840 54MW13 MS	810-6301-1 MS	110521A_20.d	11/05/2021 23:30
1066840 54MW13 MSD	810-6301-1 MSD	110521A_21.d	11/05/2021 23:57
1066845 54MW10	810-6301-2	110521A_22.d	11/06/2021 00:24
106846 54TW10	810-6301-3	110521A_23.d	11/06/2021 00:51
1066847 54MW12	810-6301-4	110521A_26.d	11/06/2021 02:13
1066847 54MW12 MS	810-6301-4 MS	110521A_27.d	11/06/2021 02:40
1066847 54MW12 MSD	810-6301-4 MSD	110521A_28.d	11/06/2021 03:07
1066848 54MW1	810-6301-5	110521A_29.d	11/06/2021 03:34

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: 1066840 54MW13 Lab Sample ID: 810-6301-1

Matrix: Water Lab File ID: 110521A_19.d

Analysis Method: 300.0 Date Collected: 10/27/2021 09:00

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/05/2021 23:03

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	<10		10
14866-68-3	Chlorate	<10	F1	10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: 1066845 54MW10 Lab Sample ID: 810-6301-2

Matrix: Water Lab File ID: 110521A_22.d

Analysis Method: 300.0 Date Collected: 10/27/2021 10:40

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/06/2021 00:24

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	<10		10
14866-68-3	Chlorate	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: 106846 54TW10 Lab Sample ID: 810-6301-3

Matrix: Water Lab File ID: 110521A_23.d

Analysis Method: 300.0 Date Collected: 10/27/2021 10:40

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/06/2021 00:51

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	<10		10
14866-68-3	Chlorate	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: 1066847 54MW12 Lab Sample ID: 810-6301-4

Matrix: Water Lab File ID: 110521A_26.d

Analysis Method: 300.0 Date Collected: 10/27/2021 12:10

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/06/2021 02:13

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	<10		10
14866-68-3	Chlorate	<10	F1	10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: 1066848 54MW1 Lab Sample ID: 810-6301-5

Matrix: Water Lab File ID: 110521A_29.d

Analysis Method: 300.0 Date Collected: 10/27/2021 13:07

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/06/2021 03:34

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	<10		10
14866-68-3	Chlorate	<10		10

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton Analytical - South B Job No.: 810-6301-1 Analy Batch No.: 6553

SDG No.:

Instrument ID: IC-FT GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2021 14:27 Calibration End Date: 11/03/2021 16:46 Calibration ID: 1901

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-6553/1	110321A_2.d
Level 2	IC 810-6553/2	110321A_3.d
Level 3	IC 810-6553/3	110321A_4.d
Level 4	IC 810-6553/4	110321A_5.d
Level 5	ICRT 810-6553/5	110321A_6.d
Level 6	IC 810-6553/6	110321A_7.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Chlorite	5.497	5.483	5.483	5.467	5.470	5.483					5.197 - 5.744	5.481
Bromide	10.727	10.727	10.730	10.703	10.700	10.710					10.165 - 11.235	10.716
Chlorate	11.630	11.627	11.623	11.600	11.600	11.607					11.020 - 12.180	11.615

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Eaton Analytical - South B Job No.: 810-6301-1 Analy Batch No.: 6553

SDG No.:

Instrument ID: IC-FT GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2021 14:27 Calibration End Date: 11/03/2021 16:46 Calibration ID: 1901

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-6553/1	110321A_2.d
Level 2	IC 810-6553/2	110321A_3.d
Level 3	IC 810-6553/3	110321A_4.d
Level 4	IC 810-6553/4	110321A_5.d
Level 5	ICRT 810-6553/5	110321A_6.d
Level 6	IC 810-6553/6	110321A_7.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Chlorite	45701600 44980348	49028200 46409592	44644370	45870840	Lin	-120550.51	46272763.9							1.0000		0.9950
Bromide	48394200 43156908	48815150 44217770	44065040	43958376	Lin	-23423.393	44038886.9							1.0000		0.9950
Chlorate	42658600 38275864	37788900 39052806	38940910	38227780	Lin	-73323.443	38970254.6							1.0000		0.9950

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Eaton Analytical - South B Job No.: 810-6301-1 Analy Batch No.: 6553

SDG No.:

Instrument ID: IC-FT GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2021 14:27 Calibration End Date: 11/03/2021 16:46 Calibration ID: 1901

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-6553/1	110321A_2.d
Level 2	IC 810-6553/2	110321A_3.d
Level 3	IC 810-6553/3	110321A_4.d
Level 4	IC 810-6553/4	110321A_5.d
Level 5	ICRT 810-6553/5	110321A_6.d
Level 6	IC 810-6553/6	110321A_7.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Chlorite	Lin	457016 46409592	980564	4464437	11467710	22490174	0.0100 1.00	0.0200	0.100	0.250	0.500
Bromide	Lin	483942 44217770	976303	4406504	10989594	21578454	0.0100 1.00	0.0200	0.100	0.250	0.500
Chlorate	Lin	426586 39052806	755778	3894091	9556945	19137932	0.0100 1.00	0.0200	0.100	0.250	0.500

Curve Type Legend
Lin = Linear

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Eaton Analytical - South B Job No.: 810-6301-1 Analy Batch No.: 6553

SDG No.:

Instrument ID: IC-FT GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2021 14:27 Calibration End Date: 11/03/2021 16:46 Calibration ID: 1901

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-6553/1	110321A_2.d
Level 2	IC 810-6553/2	110321A_3.d
Level 3	IC 810-6553/3	110321A_4.d
Level 4	IC 810-6553/4	110321A_5.d
Level 5	ICRT 810-6553/5	110321A_6.d
Level 6	IC 810-6553/6	110321A_7.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Chlorite	24.8	19.0 *	-0.9	0.2	-2.3	0.6	50	10	10	10	10	10
Bromide	15.2	13.5 *	0.6	0.0	-1.9	0.5	50	10	10	10	10	10
Chlorate	28.3	6.4	1.8	-1.2	-1.4	0.4	50	10	10	10	10	10

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

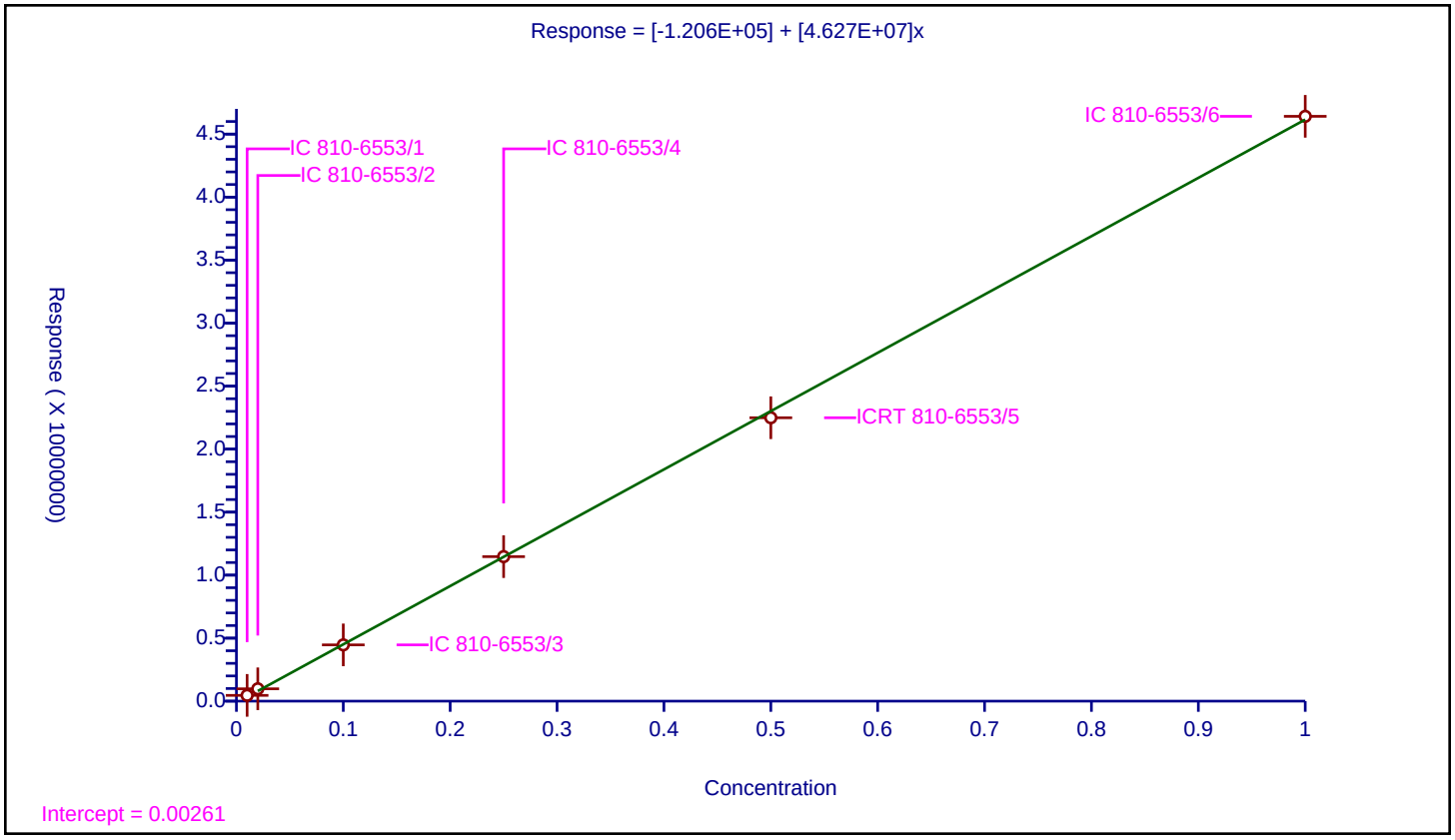
Curve Coefficients

Intercept:	-1.206E+05
Slope:	4.627E+07

Error Coefficients

Standard Error:	312000
Relative Standard Error:	15.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 810-6553/1	0.01	457016.0			45701600.0	Y
2	IC 810-6553/2	0.02	980564.0			49028200.0	Y
3	IC 810-6553/3	0.1	4464437.0			44644370.0	Y
4	IC 810-6553/4	0.25	11467710.0			45870840.0	Y
5	ICRT 810-6553/5	0.5	22490174.0			44980348.0	Y
6	IC 810-6553/6	1.0	46409592.0			46409592.0	Y



Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

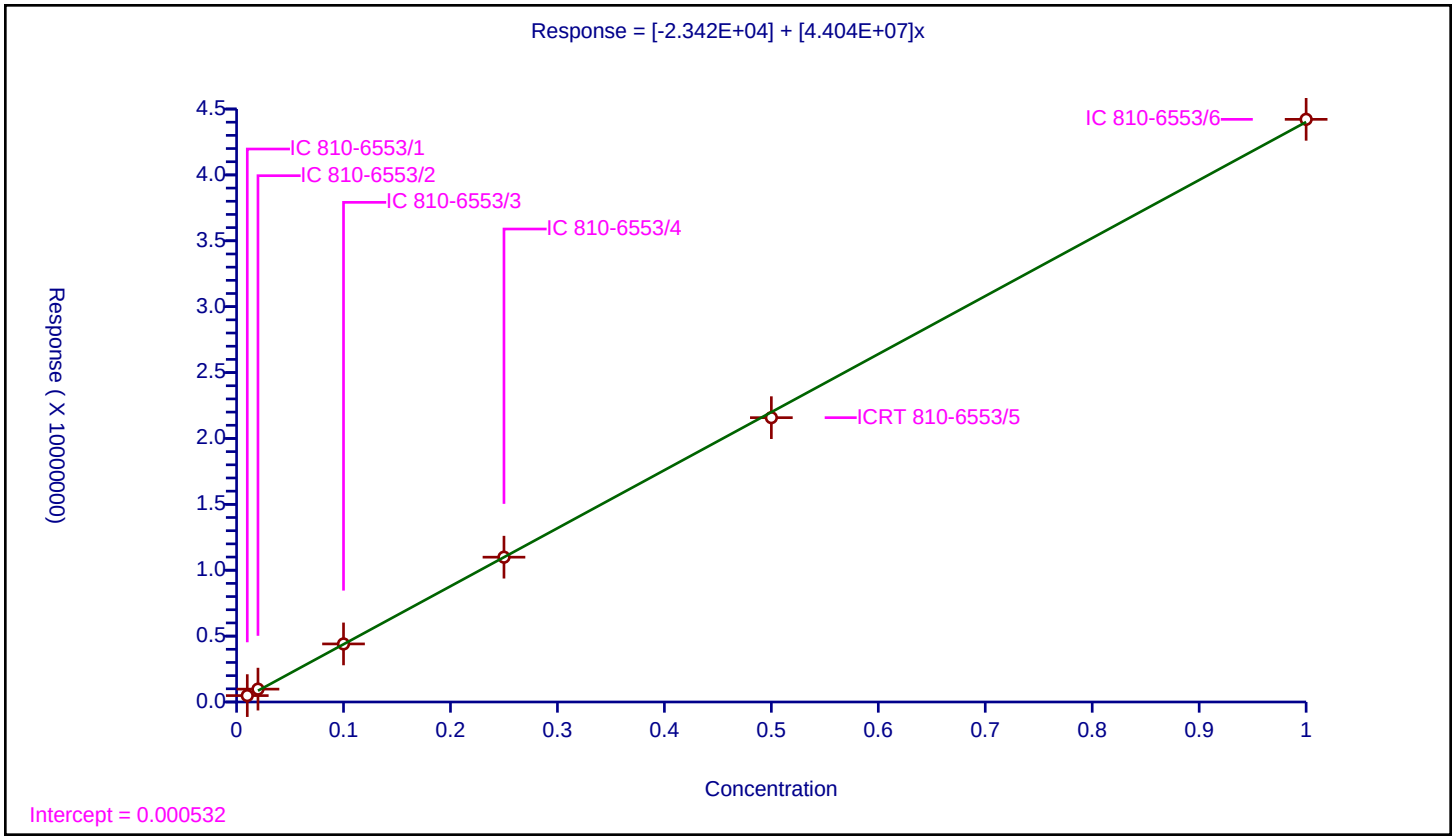
Curve Coefficients

Intercept:	-2.342E+04
Slope:	4.404E+07

Error Coefficients

Standard Error:	242000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 810-6553/1	0.01	483942.0			48394200.0	Y
2	IC 810-6553/2	0.02	976303.0			48815150.0	Y
3	IC 810-6553/3	0.1	4406504.0			44065040.0	Y
4	IC 810-6553/4	0.25	10989594.0			43958376.0	Y
5	ICRT 810-6553/5	0.5	21578454.0			43156908.0	Y
6	IC 810-6553/6	1.0	44217770.0			44217770.0	Y



Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

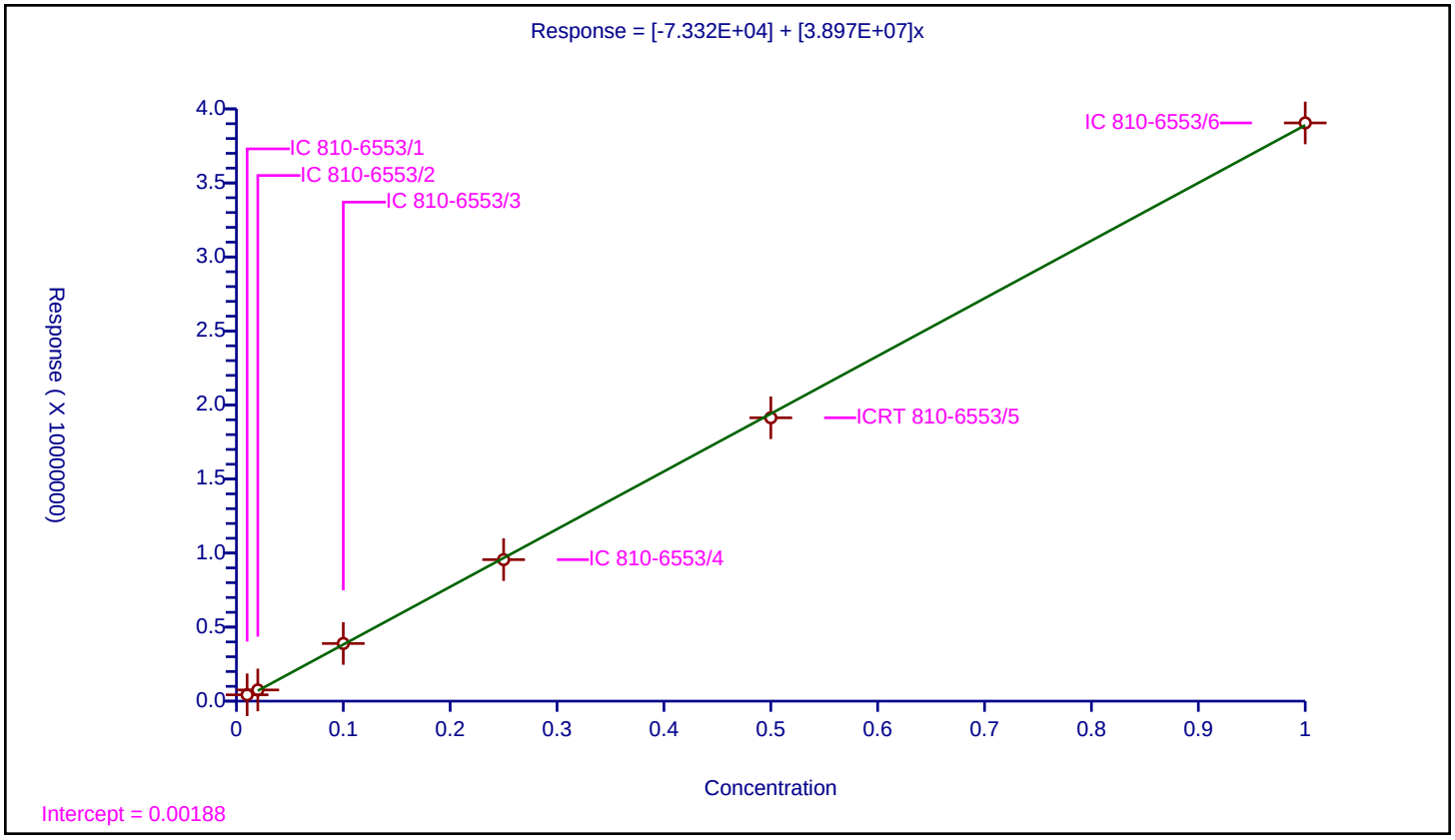
Curve Coefficients

Intercept:	-7.332E+04
Slope:	3.897E+07

Error Coefficients

Standard Error:	181000
Relative Standard Error:	14.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 810-6553/1	0.01	426586.0			42658600.0	Y
2	IC 810-6553/2	0.02	755778.0			37788900.0	Y
3	IC 810-6553/3	0.1	3894091.0			38940910.0	Y
4	IC 810-6553/4	0.25	9556945.0			38227780.0	Y
5	ICRT 810-6553/5	0.5	19137932.0			38275864.0	Y
6	IC 810-6553/6	1.0	39052806.0			39052806.0	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Lab Sample ID: CCVL 810-6747/1 Calibration Date: 11/05/2021 16:27

Instrument ID: IC-FT Calib Start Date: 11/03/2021 14:27

GC Column: IonPac AS-19 ID: Calib End Date: 11/03/2021 16:46

Lab File ID: 110521A_8.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		45703700		12.5	10.0	125	50-150
Bromide	Lin		59167300		14.0	10.0	140	50-150
Chlorate	Lin		49766600		14.7	10.0	147	50-150

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Lab Sample ID: CCVL 810-6747/1 Calibration Date: 11/05/2021 16:27

Instrument ID: IC-FT Calib Start Date: 11/03/2021 14:27

GC Column: IonPac AS-19 ID: Calib End Date: 11/03/2021 16:46

Lab File ID: 110521A_8.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.47	5.20	5.74
Bromide	10.60	10.17	11.24
Chlorate	11.48	11.02	12.18

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Lab Sample ID: CCV 810-6747/2 Calibration Date: 11/05/2021 16:54

Instrument ID: IC-FT Calib Start Date: 11/03/2021 14:27

GC Column: IonPac AS-19 ID: Calib End Date: 11/03/2021 16:46

Lab File ID: 110521A_9.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		47043512		257	250	103	90-110
Bromide	Lin		44440924		253	250	101	90-110
Chlorate	Lin		38936136		252	250	101	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Lab Sample ID: CCV 810-6747/2 Calibration Date: 11/05/2021 16:54

Instrument ID: IC-FT Calib Start Date: 11/03/2021 14:27

GC Column: IonPac AS-19 ID: Calib End Date: 11/03/2021 16:46

Lab File ID: 110521A_9.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.47	5.20	5.74
Bromide	10.60	10.17	11.24
Chlorate	11.50	11.02	12.18

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Lab Sample ID: CCV 810-6747/18 Calibration Date: 11/06/2021 01:18

Instrument ID: IC-FT Calib Start Date: 11/03/2021 14:27

GC Column: IonPac AS-19 ID: Calib End Date: 11/03/2021 16:46

Lab File ID: 110521A_24.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		44933208		245	250	98	90-110
Bromide	Lin		43201188		246	250	98	90-110
Chlorate	Lin		37338688		241	250	97	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Lab Sample ID: CCV 810-6747/18 Calibration Date: 11/06/2021 01:18

Instrument ID: IC-FT Calib Start Date: 11/03/2021 14:27

GC Column: IonPac AS-19 ID: Calib End Date: 11/03/2021 16:46

Lab File ID: 110521A_24.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.46	5.20	5.74
Bromide	10.68	10.17	11.24
Chlorate	11.56	11.02	12.18

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Lab Sample ID: CCV 810-6747/32 Calibration Date: 11/06/2021 07:37

Instrument ID: IC-FT Calib Start Date: 11/03/2021 14:27

GC Column: IonPac AS-19 ID: Calib End Date: 11/03/2021 16:46

Lab File ID: 110521A_38.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		45992960		251	250	100	90-110
Bromide	Lin		43302528		246	250	99	90-110
Chlorate	Lin		37759528		244	250	98	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Lab Sample ID: CCV 810-6747/32 Calibration Date: 11/06/2021 07:37

Instrument ID: IC-FT Calib Start Date: 11/03/2021 14:27

GC Column: IonPac AS-19 ID: Calib End Date: 11/03/2021 16:46

Lab File ID: 110521A_38.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.45	5.20	5.74
Bromide	10.69	10.17	11.24
Chlorate	11.57	11.02	12.18

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 810-6747/4

Matrix: Water Lab File ID: 110521A_11.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/05/2021 17:48

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	<10		10
14866-68-3	Chlorate	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 810-6747/3

Matrix: Water Lab File ID: 110521A_10.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/05/2021 17:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	<10		10
14866-68-3	Chlorate	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 810-6747/19

Matrix: Water Lab File ID: 110521A_25.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/06/2021 01:45

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	<10		10
14866-68-3	Chlorate	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 810-6747/33

Matrix: Water Lab File ID: 110521A_39.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/06/2021 08:04

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	<10		10
14866-68-3	Chlorate	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 810-6747/5

Matrix: Water Lab File ID: 110521A_12.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/05/2021 18:15

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	258		10
14866-68-3	Chlorate	252		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: 1066840 54MW13 MS Lab Sample ID: 810-6301-1 MS

Matrix: Water Lab File ID: 110521A_20.d

Analysis Method: 300.0 Date Collected: 10/27/2021 09:00

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/05/2021 23:30

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	272		10
14866-68-3	Chlorate	209		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: 1066847 54MW12 MS Lab Sample ID: 810-6301-4 MS

Matrix: Water Lab File ID: 110521A_27.d

Analysis Method: 300.0 Date Collected: 10/27/2021 12:10

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/06/2021 02:40

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	259		10
14866-68-3	Chlorate	205		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: 1066840 54MW13 MSD Lab Sample ID: 810-6301-1 MSD

Matrix: Water Lab File ID: 110521A_21.d

Analysis Method: 300.0 Date Collected: 10/27/2021 09:00

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/05/2021 23:57

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	260		10
14866-68-3	Chlorate	208		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton Analytical - South Job No.: 810-6301-1

SDG No.:

Client Sample ID: 1066847 54MW12 MSD Lab Sample ID: 810-6301-4 MSD

Matrix: Water Lab File ID: 110521A_28.d

Analysis Method: 300.0 Date Collected: 10/27/2021 12:10

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 11/06/2021 03:07

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 6747 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14998-27-7	Chlorite	264		10
14866-68-3	Chlorate	205		10

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Instrument ID: IC-FT Start Date: 11/03/2021 14:27

Analysis Batch Number: 6553 End Date: 11/04/2021 08:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 810-6553/1		11/03/2021 14:27	1	110321A_2.d	IonPac AS-19
IC 810-6553/2		11/03/2021 14:56	1	110321A_3.d	IonPac AS-19
IC 810-6553/3		11/03/2021 15:24	1	110321A_4.d	IonPac AS-19
IC 810-6553/4		11/03/2021 15:52	1	110321A_5.d	IonPac AS-19
ICRT 810-6553/5		11/03/2021 16:19	1	110321A_6.d	IonPac AS-19
IC 810-6553/6		11/03/2021 16:46	1	110321A_7.d	IonPac AS-19
ICV 810-6553/7		11/03/2021 17:13	1		IonPac AS-19
CCVL 810-6553/8		11/03/2021 17:40	1		IonPac AS-19
CCV 810-6553/9		11/03/2021 18:07	1		IonPac AS-19
CCB 810-6553/10		11/03/2021 18:34	1		IonPac AS-19
ZZZZZ		11/03/2021 19:01	1		IonPac AS-19
ZZZZZ		11/03/2021 19:28	1		IonPac AS-19
ZZZZZ		11/03/2021 19:55	1		IonPac AS-19
ZZZZZ		11/03/2021 20:22	1		IonPac AS-19
ZZZZZ		11/03/2021 20:49	1		IonPac AS-19
ZZZZZ		11/03/2021 21:16	1		IonPac AS-19
ZZZZZ		11/03/2021 21:43	1		IonPac AS-19
ZZZZZ		11/03/2021 22:10	1		IonPac AS-19
ZZZZZ		11/03/2021 22:37	1		IonPac AS-19
ZZZZZ		11/03/2021 23:04	1		IonPac AS-19
ZZZZZ		11/03/2021 23:31	1		IonPac AS-19
ZZZZZ		11/03/2021 23:59	1		IonPac AS-19
ZZZZZ		11/04/2021 00:26	1		IonPac AS-19
ZZZZZ		11/04/2021 00:53	1		IonPac AS-19
CCV 810-6553/25		11/04/2021 01:20	1		IonPac AS-19
CCB 810-6553/26		11/04/2021 01:47	1		IonPac AS-19
ZZZZZ		11/04/2021 02:14	1		IonPac AS-19
ZZZZZ		11/04/2021 02:41	1		IonPac AS-19
ZZZZZ		11/04/2021 03:08	1		IonPac AS-19
ZZZZZ		11/04/2021 03:35	1		IonPac AS-19
ZZZZZ		11/04/2021 04:02	1		IonPac AS-19
ZZZZZ		11/04/2021 04:29	1		IonPac AS-19
ZZZZZ		11/04/2021 04:56	1		IonPac AS-19
ZZZZZ		11/04/2021 05:23	1		IonPac AS-19
ZZZZZ		11/04/2021 05:50	1		IonPac AS-19
ZZZZZ		11/04/2021 06:17	1		IonPac AS-19
ZZZZZ		11/04/2021 06:44	1		IonPac AS-19
ZZZZZ		11/04/2021 07:11	1		IonPac AS-19
CCV 810-6553/39		11/04/2021 07:38	1		IonPac AS-19
CCB 810-6553/40		11/04/2021 08:05	1		IonPac AS-19

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Eaton Analytical - South Be Job No.: 810-6301-1

SDG No.:

Instrument ID: IC-FT Start Date: 11/05/2021 16:27

Analysis Batch Number: 6747 End Date: 11/06/2021 08:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVL 810-6747/1		11/05/2021 16:27	1	110521A_8.d	IonPac AS-19
CCV 810-6747/2		11/05/2021 16:54	1	110521A_9.d	IonPac AS-19
CCB 810-6747/3		11/05/2021 17:21	1	110521A_10.d	IonPac AS-19
MB 810-6747/4		11/05/2021 17:48	1	110521A_11.d	IonPac AS-19
LCS 810-6747/5		11/05/2021 18:15	1	110521A_12.d	IonPac AS-19
ZZZZZ		11/05/2021 20:21	1		IonPac AS-19
ZZZZZ		11/05/2021 20:48	1		IonPac AS-19
ZZZZZ		11/05/2021 21:15	1		IonPac AS-19
ZZZZZ		11/05/2021 21:42	1		IonPac AS-19
ZZZZZ		11/05/2021 22:09	1		IonPac AS-19
ZZZZZ		11/05/2021 22:36	1		IonPac AS-19
810-6301-1	1066840 54MW13	11/05/2021 23:03	1	110521A_19.d	IonPac AS-19
810-6301-1 MS	1066840 54MW13 MS	11/05/2021 23:30	1	110521A_20.d	IonPac AS-19
810-6301-1 MSD	1066840 54MW13 MSD	11/05/2021 23:57	1	110521A_21.d	IonPac AS-19
810-6301-2	1066845 54MW10	11/06/2021 00:24	1	110521A_22.d	IonPac AS-19
810-6301-3	106846 54TW10	11/06/2021 00:51	1	110521A_23.d	IonPac AS-19
CCV 810-6747/18		11/06/2021 01:18	1	110521A_24.d	IonPac AS-19
CCB 810-6747/19		11/06/2021 01:45	1	110521A_25.d	IonPac AS-19
810-6301-4	1066847 54MW12	11/06/2021 02:13	1	110521A_26.d	IonPac AS-19
810-6301-4 MS	1066847 54MW12 MS	11/06/2021 02:40	1	110521A_27.d	IonPac AS-19
810-6301-4 MSD	1066847 54MW12 MSD	11/06/2021 03:07	1	110521A_28.d	IonPac AS-19
810-6301-5	1066848 54MW1	11/06/2021 03:34	1	110521A_29.d	IonPac AS-19
ZZZZZ		11/06/2021 04:01	1		IonPac AS-19
ZZZZZ		11/06/2021 04:28	1		IonPac AS-19
ZZZZZ		11/06/2021 04:55	1		IonPac AS-19
ZZZZZ		11/06/2021 05:22	1		IonPac AS-19
ZZZZZ		11/06/2021 05:49	1		IonPac AS-19
ZZZZZ		11/06/2021 06:16	1		IonPac AS-19
ZZZZZ		11/06/2021 06:43	1		IonPac AS-19
ZZZZZ		11/06/2021 07:10	1		IonPac AS-19
CCV 810-6747/32		11/06/2021 07:37	1	110521A_38.d	IonPac AS-19
CCB 810-6747/33		11/06/2021 08:04	1	110521A_39.d	IonPac AS-19

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Eaton Analytical - So Job No.: 810-6301-1

SDG No.:

Batch Number: 6747 Batch Start Date: 11/05/21 16:27 Batch Analyst: Lovick, James

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC-300B CalSS 00002					
CCVL 810-6747/1		300.0		40 uL					
CCV 810-6747/2		300.0		1000 uL					
LCS 810-6747/5		300.0		100 uL					
810-6301-A-1 MS	1066840 54MW13	300.0	T	100 uL					
810-6301-A-1 MSD	1066840 54MW13	300.0	T	100 uL					
CCV 810-6747/18		300.0		1000 uL					
810-6301-A-4 MS	1066847 54MW12	300.0	T	100 uL					
810-6301-A-4 MSD	1066847 54MW12	300.0	T	100 uL					
CCV 810-6747/32		300.0		1000 uL					

Batch Notes	
Filter ID	17046739
Eluent 1 ID	079619

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

Sub-Contract Laboratory Chain-of-Custody and Purchase Order

810-6301 COC

PURCHASE ORDER #: 165486 EEA-IN *The PO# must appear on all invoice and reports!*

Upon Receipt of Samples, please verify that samples were received in acceptable condition then sign this form and fax to (608)356-2766 or email to the project . ...ample temperature, upon receipt, must be recorded on this document unless thermal preservation is not a method requirement.

Ship to: Eurofins Eaton Analytical - IN
110 South Hill Street
South Bend, IN 46617

Return Invoice and Results to: bszymanski@ctlaboratories.com

Government UPS Shipping Acct ? Y (N)

CTLaboratories
Brett M Szymanski
1230 Lange Court
Baraboo WI 53913

Ship by: Speedee ☐ UPS Grnd ☐ UPS 2nd ☐ UPS NDA ☒

Date Due: Standard TAT *RUSH TURNAROUND NEEDED? Y or (N) (Circle One)*

Project Name: RADFORD AAP SWMU 54 **Project State:** VA

Analytical/QC Criteria: NONE INDICATED STATE (DOD QSM) NELAP (Circle one) OTHER_____

Report results as EDD? N (Y) (Circle one and indicate type: ERIS & Excel) Data Deliverable Package LEVEL: IV

CTLabs ID#	Sample Date/Time	Matrix	Sample Description	Analyses / Method		Cost
1066840	10/27/2021 09:00	GROUND WATER	54MW13 (Designated MS/MSD)	CHLORATE/CHLORITE	300.1	
1066845	10/27/2021 10:40	GROUND WATER	54MW10	CHLORATE/CHLORITE	300.1	
1066846	10/27/2021 10:40	GROUND WATER	54TW10	CHLORATE/CHLORITE	300.1	
1066847	10/27/2021 12:10	GROUND WATER	54MW12	CHLORATE/CHLORITE	300.1	
1066848	10/27/2021 13:07	GROUND WATER	54MW1	CHLORATE/CHLORITE	300.1	

Relinquished by: Brett Szymanski Date/Time: 10/28/2021 10:45

Received by: K Du Date/Time: 10-29-2021 Receipt Temperature (C) 1.8

0910

COMMENTS: PLEASE LOG USING THE SAMPLE DESCRIPTIONS. 54MW13 IS A DESIGNATED MS/MSD SAMPLE.

REPORT ALL SOLIDS ON A DRY WEIGHT BASIS UNLESS OTHERWISE INDICATED

Form #: FPM1-01
Effective Date: 02/15/14

Login Sample Receipt Checklist

Client: CT Laboratories

Job Number: 810-6301-1

Login Number: 6301
List Number: 1
Creator: DePriest, Kellie

List Source: Eurofins Eaton Analytical - South Bend

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

CHAIN OF CUSTODY,
PM CONFIRMATION
AND
SAMPLE CONDITION FORMS
DOCUMENTS

Rev 02/2017

Page 1 of 1

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757)819-5310
Project Name: Radford AAP
Project #: SWMU 54
Location: Radford, VA
Sampled By: M. Ewald, P. Taylor

Folder #: 165486
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMU 54
Logged By: erc PM: BMS

ge Court, Baraboo, WI 53913
56-2760 Fax 608-356-2766
www.ctlaboratories.com

IA SDWA NPDES
Other _____

Report To: Tony Pace
EMAIL: pacet@westonsolutions.com
Company: Weston Solutions
Address: 2 Eaton St., Ste. 603
Invoice To: Hampton, VA 23669
EMAIL:
Company:
Address: Same

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

ANALYSES REQUESTED

Turnaround Time
Normal RUSH*
Date Needed: _____
*Rush analysis requires prior CT Laboratories' approval
Surcharges
24 hr 200%
2-3 days 100%
4-9 days 50%

Matrix:
GW - groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - mist/waste

CT Collection Date	Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC (9060A)	Anions (9056A)	TIC (9060A)	Chlorate/Chlorite (300.1)	TAL Metals	COD 410.4	pH 9040C	Total # Containers	Designated MS/MSD	Fill in Spaces with Bottles per Test	CT Lab ID # (Lab use only)
10/27	0900	GW	Grab		54MW13	N	3	3	9	3					MS/MSD		1066840
10/27	1040	GW	Grab		54MW10	N	1	1	3	1							45
10/27	1040	GW	Grab		54TW10	N	1	1	3	1							46
10/27	1210	GW	Grab		54MW12	N	1	1	3	1							47
10/27	1307	GW	Grab		54MW1	N	1	1	3	1							48
10/27	1345	GW	Grab		54-IDW	N					1	1	1				49

Relinquished By: [signature] Date/Time: 10/27/2021 1730 Received By: Fedex Date/Time: 10/27/2021 1730

Date/Time: 10/28/21 1015 Received for Laboratory by: [signature] Date/Time: 10/28/21 1015

Lab Use Only
Ice Present Yes No
Temp 2.0 IR Gun 27
Cooler # 6316

Cooler Receipt Form

Ice Present ~~YES~~ NO

Observed Temperature 20

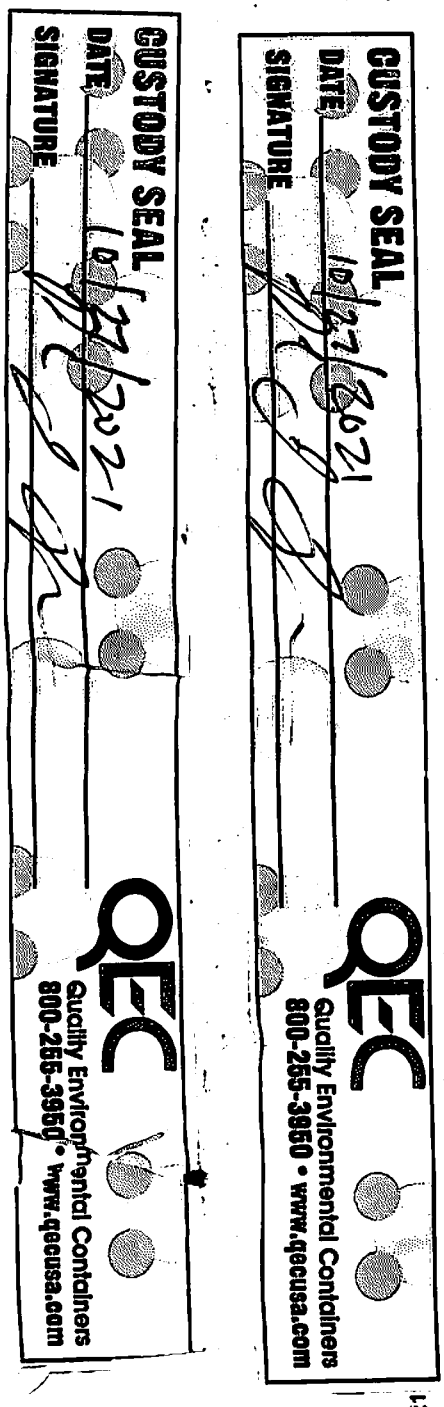
Actual Temperature 20

IR Gun # 27

Initials BNC

Date 10/28/21 Time 941

Cooler #: 631C



ORIGIN ID:WALA (770) 855-6275
PAUL TAYLOR
WESTON SOLUTIONS, INC.
305 ROANOKE ST.

CHRISTIANSBURG, VA 24073
UNITED STATES US

SHIP DATE: 27OCT21
ACTWGT: 50.00 LB
CAD: 105591775/INET4400
DIMS: 25x15x14 IN

BILL SENDER

TO SAMPLE RECEIVING
CT LABORATORIES
1230 LANGE COURT

BARABOO WI 53913
(608) 356-2760 REF 03886 552 500 3310
INV
PO. DEPT

56DJ3114BAFE4A

FedEx Express

THU - 28 OCT 10:30A
PRIORITY OVERNIGHT

1 of 2
TRK# 0201 7750 3583 6759
MASTER

XH LNRA

53913
WI-US MSN

PM Login Confirmation

Folder #: 165486

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU 54 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 166146

Project Manager: *BMS* **Date Received:** 10/28/21 **Log Date:** 10/28/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 2 oC

SAMPLE #: 1066840 **DESCR:** 54MW13 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2021 **Time:** 09:00

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)			***DESIGNATED MATRIX SPIKE***	11/10/2021	11/9/2021		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)			***DESIGNATED MATRIX SPIKE***	10/29/2021	11/9/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)			***DESIGNATED MATRIX SPIKE***	11/24/2021	11/9/2021		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)			***DESIGNATED MATRIX SPIKE***		11/9/2021		Logged

SAMPLE #: 1066845 **DESCR:** 54MW10 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2021 **Time:** 10:40

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)				11/10/2021	11/9/2021		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/29/2021	11/9/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp4E29.tmp

Folder #: 165486 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU 54

SAMPLE #: 1066845 **DESCR:** 54MW10 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2021 **Time:** 10:40

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				11/24/2021	11/9/2021		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)					11/9/2021		Logged

SAMPLE #: 1066846 **DESCR:** 54TW10 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2021 **Time:** 10:40

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)				11/10/2021	11/9/2021		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/29/2021	11/9/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				11/24/2021	11/9/2021		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)					11/9/2021		Logged

SAMPLE #: 1066847 **DESCR:** 54MW12 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2021 **Time:** 12:10

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)				11/10/2021	11/9/2021		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/29/2021	11/9/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				11/24/2021	11/9/2021		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)					11/9/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp4E29.tmp

Folder #: 165486 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU 54

SAMPLE #: 1066848 **DESCR:** 54MW1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2021 **Time:** 13:07

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)				11/10/2021	11/9/2021		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/29/2021	11/9/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				11/24/2021	11/9/2021		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)					11/9/2021		Logged

SAMPLE #: 1066849 **DESCR:** 54-IDW **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2021 **Time:** 13:45

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
203	PH	(EPA 9040C)					11/9/2021		Entered
989	COD QSM	(EPA 410.4)				11/24/2021	11/9/2021		NeedPrep
1183	ICP K TOTAL QSM 5.0	(EPA 6010C)				4/25/2022	11/9/2021		Logged
1190	ICP NA TOTAL QSM 5.0	(EPA 6010C)				4/25/2022	11/9/2021		Logged
1200	ICP TOTAL QSM 5.0	(EPA 6010C)				4/25/2022	11/9/2021		Logged
			Total Aluminum						
			Total Antimony						
			Total Arsenic						
			Total Barium						
			Total Beryllium						
			Total Cadmium						
			Total Calcium						
			Total Chromium						
			Total Cobalt						
			Total Copper						
			Total Iron						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp4E29.tmp

Folder #: 165486 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU 54

SAMPLE #: 1066849 **DESCR:** 54-IDW **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2021 **Time:** 13:45

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Total Lead						
			Total Magnesium						
			Total Manganese						
			Total Nickel						
			Total Selenium						
			Total Silver						
			Total Thallium						
			Total Vanadium						
			Total Zinc						
1208	MERCURY TOTAL QSM 5.0	(EPA 7470A)				11/24/2021	11/9/2021		NeedPrep

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp4E29.tmp

Folder #: 165486 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU 54

Invoice Number: 166146 **Preliminary Invoice Estimate:** $1,402.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	7	$12.00	0.00	$84.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	7	$12.00	0.00	$84.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	7	$12.00	0.00	$84.00
CARBON, INORG & ORG	GROUND WATER	7	$28.00	0.00	$196.00
COD QSM	GROUND WATER	1	$18.00	0.00	$18.00
ICP K TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP NA TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Aluminum	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Antimony	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Arsenic	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Barium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Beryllium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cadmium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Calcium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Chromium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cobalt	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Copper	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Iron	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Lead	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Magnesium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Manganese	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Nickel	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Selenium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Silver	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Thallium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Vanadium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Zinc	GROUND WATER	1	$3.50	0.00	$3.50
MERCURY TOTAL QSM 5.0	GROUND WATER	1	$23.00	0.00	$23.00
ORGAN CARBON T QSM 5.0	GROUND WATER	7	$28.00	0.00	$196.00

PH	GROUND WATER	1	$10.00	0.00	$10.00
SUB CHLORATE/CHLORITE	GROUND WATER	7	$90.00	0.00	$630.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**8**	COD
HNO3	**1**	HG,ICP,K,NA
MISC	**7**	CHLORATE/CHLORITE
UNPRES PL	**8**	pH
VOA	**21**	

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	165486	Print Date / Time:	10/28/2021	09:53	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	10/28/2021	09:41	erc
Project Name:	RADFORD AAP SWMU 54	Log-In Date / Time / By:	10/28/2021	09:53	erc
Project Phase:	RADFORD, VA	Project #:			PM: BMS
Coolers:	6316	Temperature:	2.0 C		On Ice: **Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	7750 3583 6759		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 10/27/2021 AND SIGNED.

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?		Tests
1066840	54MW13					
		VOA	1	/		
		VOA	1	/		
		VOA	1	/		
		VOA	1	N	/ N	
		VOA	1	N	/ N	
		VOA	1	N	/ N	
		VOA	1	N	/ N	
		VOA	1	N	/ N	
		VOA	1	N	/ N	
		Total # of Containers of Type (*VOA*) = 9				
1066840	54MW13					
		UNPRES PL	1	N	/ N	ANIONS
		UNPRES PL	1	N	/ N	ANIONS
		UNPRES PL	1		/	Anions
		Total # of Containers of Type (*UNPRES PL*) = 3				
1066840	54MW13					
		MISC	1	N	/ N	CHLORATE/CHLORITE
		MISC	1	N	/ N	CHLORATE/CHLORITE
		MISC	1	N	/ N	CHLORATE/CHLORITE
		Total # of Containers of Type (*MISC*) = 3				
1066840	54MW13					
		H2SO4 PL	1	Y	/ N	TOC
		H2SO4 PL	1	Y	/ N	TOC

		H2SO4 PL	1	Y / N		TOC
		Total # of Containers of Type (*H2SO4 PL*) = 3				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1066845	54MW10				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type (*VOA*) = 3			
1066845	54MW10				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type (*UNPRES PL*) = 1			
1066845	54MW10				
		MISC	1	/	CHLORATE/CHLORITE
		Total # of Containers of Type (*MISC*) = 1			
1066845	54MW10				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type (*H2SO4 PL*) = 1			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1066846	54TW10				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type (*VOA*) = 3			
1066846	54TW10				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type (*UNPRES PL*) = 1			
1066846	54TW10				
		MISC	1	/	CHLORATE/CHLORITE
		Total # of Containers of Type (*MISC*) = 1			
1066846	54TW10				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type (*H2SO4 PL*) = 1			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1066847	54MW12				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type (*VOA*) = 3			
1066847	54MW12				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type (*UNPRES PL*) = 1			

1066847	54MW12						
		MISC	1		/		CHLORATE/CHLORITE
		Total # of Containers of Type	(***MISC***) = **1**				
1066847	54MW12						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1066848	54MW1						
		VOA	1		/		
		VOA	1		/		
		VOA	1		/		
		Total # of Containers of Type	(***VOA***) = **3**				
1066848	54MW1						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**				
1066848	54MW1						
		MISC	1		/		CHLORATE/CHLORITE
		Total # of Containers of Type	(***MISC***) = **1**				
1066848	54MW1						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1066849	54-IDW						
		H2SO4 PL	1	Y	/	N	COD
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				
1066849	54-IDW						
		HNO3	1	Y	/	N	HG,ICP,K,NA
		Total # of Containers of Type	(***HNO3***) = **1**				
1066849	54-IDW						
		UNPRES PL	1		/		pH
		Total # of Containers of Type	(***UNPRES PL***) = **1**				

Condition Code *Condition Description*

1 Sample Received OK

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

ANALYTICAL SUMMARY REPORT

This report at a minimum contains the following information:

Analytical Report of Test Results
Description of QC Qualifiers
Chain of Custody (copy)
Quality Control Summary (if applicable)
Case Narrative (if applicable)
Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

ANALYTICAL SAMPLE DATA

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU 54
Project Phase: RADFORD, VA
Project #:
Folder #: 165486
Purchase Order #:
Contract #: 3313

Arrival Temperature: 2
Report Date: 11/23/2021
Date Received: 10/28/2021
Reprint Date: 11/23/2021

CT LAB#: 1066840 Sample Description: 54MW13 Client Sample #: Sampled: 10/27/2021 09:00

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Total Inorganic Carbon	***91***	mg/L	0.5	1.5	3.0	3.0	1.00			11/2/21 23:51	KMT	EPA 9060A	^
Chloride	***7.6***	mg/L	1.0	1.5	3.0	3.0	1.00			10/28/21 17:25	TMG	EPA 9056A	
Nitrate Nitrogen	***0.49***	mg/L	0.12	0.20	0.40	0.40	1.00			10/28/21 17:25	TMG	EPA 9056A	
Sulfate	***37***	mg/L	0.80	1.5	3.0	3.0	1.00	M		10/28/21 17:25	TMG	EPA 9056A	
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U		11/4/21 20:26	KMT	EPA 9060A	
Sub Lab Results													
Chlorate	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1	
Chlorite	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1	

CT LAB#: 1066845 Sample Description: 54MW10 Client Sample #: Sampled: 10/27/2021 10:40

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Total Inorganic Carbon	***77***	mg/L	0.5	1.5	3.0	3.0	1.00			11/3/21 00:05	KMT	EPA 9060A	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1066845 Sample Description: 54MW10 Client Sample #: Sampled: 10/27/2021 10:40

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Chloride	***4.7***	mg/L	1.0	1.5	3.0	3.0	1.00			10/28/21 19:13	TMG	EPA 9056A
Nitrate Nitrogen	***0.25***	mg/L	0.12	0.20	0.40	0.40	1.00	J		10/28/21 19:13	TMG	EPA 9056A
Sulfate	***120***	mg/L	4.0	7.5	15	15	5.00			10/28/21 19:31	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U		11/4/21 21:32	KMT	EPA 9060A
Sub Lab Results												
Chlorate	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1
Chlorite	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1

CT LAB#: 1066846 Sample Description: 54TW10 Client Sample #: Sampled: 10/27/2021 10:40

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Total Inorganic Carbon	***76***	mg/L	0.5	1.5	3.0	3.0	1.00			11/3/21 00:19	KMT	EPA 9060A	^
Chloride	***4.7***	mg/L	1.0	1.5	3.0	3.0	1.00			10/28/21 19:49	TMG	EPA 9056A	
Nitrate Nitrogen	***0.26***	mg/L	0.12	0.20	0.40	0.40	1.00	J		10/28/21 19:49	TMG	EPA 9056A	
Sulfate	***120***	mg/L	4.0	7.5	15	15	5.00			10/29/21 08:55	TMG	EPA 9056A	
Total Organic Carbon	***0.50***	mg/L	0.5	1.5	3.0	3.0	1.00	J		11/4/21 22:24	KMT	EPA 9060A	
Sub Lab Results													
Chlorate	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1	
Chlorite	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1	

CT LAB#: 1066847 Sample Description: 54MW12 Client Sample #: Sampled: 10/27/2021 12:10

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1066847 Sample Description: 54MW12 Client Sample #: Sampled: 10/27/2021 12:10

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Total Inorganic Carbon	***76***	mg/L	0.5	1.5	3.0	3.0	1.00			11/3/21 00:33	KMT	EPA 9060A	^
Chloride	***6.1***	mg/L	1.0	1.5	3.0	3.0	1.00			10/28/21 20:07	TMG	EPA 9056A	
Nitrate Nitrogen	***0.66***	mg/L	0.12	0.20	0.40	0.40	1.00			10/28/21 20:07	TMG	EPA 9056A	
Sulfate	***28***	mg/L	0.80	1.5	3.0	3.0	1.00			10/28/21 20:07	TMG	EPA 9056A	
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U		11/4/21 22:36	KMT	EPA 9060A	
Sub Lab Results													
Chlorate	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1	
Chlorite	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1	

CT LAB#: 1066848 Sample Description: 54MW1 Client Sample #: Sampled: 10/27/2021 13:07

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Total Inorganic Carbon	***60***	mg/L	0.5	1.5	3.0	3.0	1.00			11/3/21 00:47	KMT	EPA 9060A	^
Chloride	***2.3***	mg/L	1.0	1.5	3.0	3.0	1.00	J		10/28/21 20:25	TMG	EPA 9056A	
Nitrate Nitrogen	<0.20	mg/L	0.12	0.20	0.40	0.40	1.00	U		10/28/21 20:25	TMG	EPA 9056A	
Sulfate	***28***	mg/L	0.80	1.5	3.0	3.0	1.00			10/28/21 20:25	TMG	EPA 9056A	
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U		11/4/21 22:53	KMT	EPA 9060A	
Sub Lab Results													
Chlorate	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1	
Chlorite	***ATTACHED***						1.00			11/22/21 00:00	SUB	300.1	

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1066849 Sample Description: 54-IDW Client Sample #: Sampled: 10/27/2021 13:45

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
pH	***7.29***	S.U.	0.1	0.1	0.1	0.1	1.00			10/28/21 14:00	HLB	EPA 9040C	^
COD	<50	mg/L	18	50	75	75	1.00	U	11/2/2021 10:30	11/3/21 13:03	RLB	EPA 410.4	^
Metals Results													
Total Potassium	***1600***	ug/L	120	250	500	500	1.00		10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Sodium	***27800***	ug/L	200	500	700	700	1.00		10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Aluminum	***312***	ug/L	29	60	120	120	1.00		10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Antimony	<10	ug/L	4.4	10	20	20	1.00	U	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Arsenic	<20	ug/L	7.7	20	40	40	1.00	U	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Barium	***99.9***	ug/L	0.71	2.0	4.0	4.0	1.00		10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Beryllium	<3.0	ug/L	0.95	3.0	8.0	8.0	1.00	U	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Cadmium	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Calcium	***76600***	ug/L	17	50	100	100	1.00		10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Chromium	***2.7***	ug/L	1.1	2.5	5.0	5.0	1.00	J	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Cobalt	<2.5	ug/L	0.55	2.5	5.0	5.0	1.00	U	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Copper	***23.8***	ug/L	5.2	20	40	40	1.00	J	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Iron	***742***	ug/L	11	40	80	80	1.00		10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Lead	***8.4***	ug/L	1.4	2.0	4.0	4.0	1.00		10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Magnesium	***30100***	ug/L	10	25	40	40	1.00		10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Manganese	***18.7***	ug/L	1.4	3.0	5.0	5.0	1.00		10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Nickel	<3.0	ug/L	1.5	3.0	5.0	5.0	1.00	U	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Selenium	<20	ug/L	10	20	40	40	1.00	U	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Silver	<2.5	ug/L	1.1	2.5	5.0	5.0	1.00	U M	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Thallium	<20	ug/L	6.8	20	40	40	1.00	U	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Vanadium	<3.0	ug/L	1.3	3.0	5.0	5.0	1.00	U	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Zinc	***11.3***	ug/L	4.5	10	20	20	1.00	J	10/28/2021 16:20	10/29/21 15:08	NAH	EPA 6010C	
Total Mercury	<0.080	ug/L	0.020	0.080	0.12	0.12	1.00	U M	11/3/2021 14:45	11/5/21 11:08	MDS	EPA 7470A	

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method . DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted . The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

Submitted by: Brett M. Szymanski
Project Manager
608-356-2760

QC Qualifiers

Code	Description
B	Analyte detected in the associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
I	Incubator temperature was outside acceptance limits during test period.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was below detection limit.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Specified calibration criteria was not met.

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
Wisconsin (DATCP) Bacteriology ID# 289
Louisiana NELAP (primary) ID# 115843
Illinois NELAP Lab ID# 200073
Kansas NELAP Lab ID# E-10368
Virginia NELAP Lab ID# 460203
ISO/IEC 17025-2005 A2LA Cert # 3806.01
DoD-ELAP A2LA 3806.01

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court• Baraboo, WI 53913• 608356-2760
www.ctlaboratories.com

QC Summary Report

WESTON SOLUTIONS, INC. **Project Name:** **RADFORD AAP SWMU 54**

SDG #: 0 **Folder #: 165486** **Project #:**

Duplicate

Analytical Run #:	196892	Analysis Date:	10/28/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1067752	Analysis Time:	17:43	Prep Date/Time:		Method:	SW9056A
Parent Sample #:	1066840	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	7.63	mg/L	7.6				3.0	0	10
Nitrate Nitrogen	0.482	mg/L	0.49				0.40	2	10
Sulfate	37.1	mg/L	37				3.0	0	10

Lab Control Spike Water

Analytical Run #:	196892	Analysis Date:	10/28/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1067750	Analysis Time:	14:24	Prep Date/Time:		Method:	SW9056A
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Chloride	14.19	mg/L			15.00	95	87	---	111		
Nitrate Nitrogen	3.570	mg/L			3.500	102	88	---	111		
Sulfate	24.87	mg/L			25.00	99	87	---	112		

Method Blank Water

Analytical Run #:	196892	Analysis Date:	10/28/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1067751	Analysis Time:	14:42	Prep Date/Time:		Method:	SW9056A
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	1.0	mg/L		U	0		1.5		
Nitrate Nitrogen	0.12	mg/L		U	0		0.20		
Sulfate	0.8	mg/L		U	0		1.5		

Matrix Spike Duplicate Water

Analytical Run #:	196892	Analysis Date:	10/28/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1067756	Analysis Time:	18:55	Prep Date/Time:		Method:	SW9056A
Parent Sample #:	1067755	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	15.3	mg/L	7.6		8.00	96	87 --- 111	1	15
Nitrate Nitrogen	2.47	mg/L	0.49		2.00	99	88 --- 111	1	15
Sulfate	43.8	mg/L	37		8.00	85	87 --- 112	0	15

Matrix Spike Water

Analytical Run #:	196892	Analysis Date:	10/28/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1067755	Analysis Time:	18:37	Prep Date/Time:		Method:	SW9056A
Parent Sample #:	1066840	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	15.0	mg/L	7.6		8.00	92	87 --- 111		15
Nitrate Nitrogen	2.43	mg/L	0.49		2.00	97	88 --- 111		15
Sulfate	43.6	mg/L	37		8.00	82	87 --- 112		15

Lab Control Spike Water

Analytical Run #:	197009	Analysis Date:	11/2/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1069709	Analysis Time:	23:25	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	KMT	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Inorganic Carbon	48.42	mg/L			50.0	97	85 --- 111		

Method Blank Water

Analytical Run #:	197009	Analysis Date:	11/2/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1069710	Analysis Time:	23:38	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	KMT	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Inorganic Carbon	0.5	mg/L		U	0		1.5		

Duplicate

Analytical Run #:	197021	Analysis Date:	11/3/2021	Prep Batch #:	83211	Matrix:	GROUND WATER
CTLab #:	1069194	Analysis Time:	13:03	Prep Date/Time:	11/02/2021 10:30	Method:	E410.4
Parent Sample #:	1066849	Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
COD	18.0	mg/L	<18.0	U				0	20

Lab Control Spike Water

Analytical Run #:	197021	Analysis Date:	11/3/2021	Prep Batch #:	83211	Matrix:	LIQUID
CTLab #:	1069191	Analysis Time:	13:03	Prep Date/Time:	11/02/2021 10:30	Method:	E410.4
Parent Sample #:		Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
COD	387.7	mg/L			400.0	97	90 --- 110		

LOQ Check Water

Analytical Run #:	197021	Analysis Date:	11/3/2021	Prep Batch #:	83211	Matrix:	LIQUID
CTLab #:	1069197	Analysis Time:	13:03	Prep Date/Time:	11/02/2021 10:30	Method:	E410.4
Parent Sample #:		Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
COD	68.00	mg/L			75.00	91	90 --- 110		

Method Blank Water

Analytical Run #:	197021	Analysis Date:	11/3/2021	Prep Batch #:	83211	Matrix:	LIQUID
CTLab #:	1069190	Analysis Time:	13:03	Prep Date/Time:	11/02/2021 10:30	Method:	E410.4
Parent Sample #:		Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total COD	18	mg/L		U	0		37		

Matrix Spike Duplicate Water

Analytical Run #:	197021	Analysis Date:	11/3/2021	Prep Batch #:	83211	Matrix:	GROUND WATER
CTLab #:	1069193	Analysis Time:	13:03	Prep Date/Time:	11/02/2021 10:30	Method:	E410.4
Parent Sample #:	1069192	Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
COD	153	mg/L	BDL		148	103	90 --- 110	3	20

Matrix Spike Water

Analytical Run #:	197021	Analysis Date:	11/3/2021	Prep Batch #:	83211	Matrix:	GROUND WATER
CTLab #:	1069192	Analysis Time:	13:03	Prep Date/Time:	11/02/2021 10:30	Method:	E410.4
Parent Sample #:	1066849	Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
COD	148	mg/L	BDL		148	100	90 --- 110		20

Duplicate

Analytical Run #:	197156	Analysis Date:	11/4/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1071042	Analysis Time:	20:47	Prep Date/Time:		Method:	SW9060
Parent Sample #:	1066840	Analyst:	KMT	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	0.5	mg/L	<0.5	U			1.5	0	20

Lab Control Spike Water

Analytical Run #:	197156	Analysis Date:	11/4/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1071038	Analysis Time:	15:32	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	KMT	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	50.81	mg/L			50.0	102	85 --- 111		20

Method Blank Water

Analytical Run #:	197156	Analysis Date:	11/4/2021	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1071039	Analysis Time:	15:45	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	KMT	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	0.5	mg/L		U	0		1.5		

Matrix Spike Duplicate Water

Analytical Run #:	197156	Analysis Date:	11/4/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1071044	Analysis Time:	21:20	Prep Date/Time:		Method:	SW9060
Parent Sample #:	1071043	Analyst:	KMT	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	48.1	mg/L	BDL		50.0	96	85 --- 111	0	20

Matrix Spike Water

Analytical Run #:	197156	Analysis Date:	11/4/2021	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1071043	Analysis Time:	21:07	Prep Date/Time:		Method:	SW9060
Parent Sample #:	1066840	Analyst:	KMT	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	48.1	mg/L	BDL		50.0	96	85 --- 111		20

Duplicate

Analytical Run #:	196907	Analysis Date:	10/29/2021	Prep Batch #:	83162	Matrix:	GROUND WATER
CTLab #:	1067499	Analysis Time:	15:22	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:	1066849	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Aluminum	363	ug/L	312				120	15	20
Total Antimony	4.40	ug/L	<4.40	U			20	0	20
Total Arsenic	7.70	ug/L	<7.70	U			40	0	20
Total Barium	102	ug/L	99.9				4.0	2	20
Total Beryllium	0.950	ug/L	<0.950	U			8.0	0	20
Total Cadmium	0.410	ug/L	<0.410	U			2.0	0	20
Total Calcium	76300	ug/L	76600				100	0	20
Total Chromium	2.4	ug/L	2.7				5.0	12	20
Total Cobalt	0.550	ug/L	<0.550	U			5.0	0	20
Total Copper	24.5	ug/L	23.8				40	3	20
Total Iron	780	ug/L	742				80	5	20
Total Lead	10.5	ug/L	8.4				4.0	22	20
Total Magnesium	29900	ug/L	30100				40	1	20
Total Manganese	23.4	ug/L	18.7				5.0	22	20
Total Nickel	1.50	ug/L	<1.50	U			5.0	0	20
Total Selenium	10.0	ug/L	<10.0	U			40	0	20
Total Silver	1.10	ug/L	<1.10	U			5.0	0	20
Total Thallium	6.80	ug/L	<6.80	U			40	0	20
Total Vanadium	1.30	ug/L	<1.30	U			5.0	0	20
Total Zinc	11.3	ug/L	11.3				20	0	20

Lab Control Spike Water

Analytical Run #:	196907	Analysis Date:	10/29/2021	Prep Batch #:	83162	Matrix:	LIQUID
CTLab #:	1067501	Analysis Time:	14:56	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Total Aluminum	776.0	ug/L			800.0	97	86	---	115		
Total Antimony	213.0	ug/L			200.0	106	88	---	113		
Total Arsenic	841.0	ug/L			800.0	105	87	---	113		
Total Barium	792.0	ug/L			800.0	99	88	---	113		
Total Beryllium	20.10	ug/L			20.0	100	89	---	112		
Total Cadmium	19.60	ug/L			20.0	98	88	---	113		
Total Calcium	184000	ug/L			200000	92	87	---	113		
Total Chromium	83.50	ug/L			80.0	104	90	---	113		
Total Cobalt	207.0	ug/L			200.0	104	89	---	114		
Total Copper	114.0	ug/L			100.0	114	86	---	114		
Total Iron	421.0	ug/L			400.0	105	87	---	115		
Total Lead	203.0	ug/L			200.0	102	86	---	113		
Total Magnesium	93600	ug/L			100000	94	85	---	113		
Total Manganese	198.0	ug/L			200.0	99	90	---	114		
Total Nickel	200.0	ug/L			200.0	100	88	---	113		
Total Selenium	861.0	ug/L			800.0	108	83	---	114		
Total Silver	18.90	ug/L			20.0	94	84	---	115		
Total Thallium	792.0	ug/L			800.0	99	85	---	114		
Total Vanadium	209.0	ug/L			200.0	104	90	---	111		
Total Zinc	227.0	ug/L			200.0	114	87	---	115		

Method Blank Water

Analytical Run #:	196907	Analysis Date:	10/29/2021	Prep Batch #:	83162	Matrix:	LIQUID
CTLab #:	1067500	Analysis Time:	15:02	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Aluminum	29	ug/L		U	0		60		
Total Antimony	4.4	ug/L		U	0		10		
Total Arsenic	7.7	ug/L		U	0		20		
Total Barium	0.71	ug/L		U	0		2.0		
Total Beryllium	0.95	ug/L		U	0		4.0		
Total Cadmium	0.41	ug/L		U	0		1.0		
Total Calcium	19	ug/L		U	0		50		
Total Chromium	1.1	ug/L		U	0		2.5		
Total Cobalt	0.55	ug/L		U	0		2.5		
Total Copper	5.2	ug/L		U	0		20		
Total Iron	18.90	ug/L			0		40		
Total Lead	1.4	ug/L		U	0		2.0		
Total Magnesium	10	ug/L		U	0		20		
Total Manganese	1.4	ug/L		U	0		2.5		
Total Nickel	1.5	ug/L		U	0		2.5		
Total Selenium	10	ug/L		U	0		20		
Total Silver	1.1	ug/L		U	0		2.5		
Total Thallium	6.8	ug/L		U	0		20		
Total Vanadium	1.3	ug/L		U	0		2.5		
Total Zinc	4.5	ug/L		U	0		10		

Matrix Spike Duplicate Water

Analytical Run #:	196907	Analysis Date:	10/29/2021	Prep Batch #:	83162	Matrix:	GROUND WATER
CTLab #:	1067503	Analysis Time:	15:52	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:	1067502	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Total Aluminum	1310	ug/L	312		800	125	86	---	115	5	20
Total Antimony	212	ug/L	BDL		200	106	88	---	113	3	20
Total Arsenic	840	ug/L	BDL		800	105	87	---	113	2	20
Total Barium	880	ug/L	99.9		800	98	88	---	113	3	20
Total Beryllium	20.3	ug/L	BDL		20.0	102	89	---	112	2	20
Total Cadmium	19.3	ug/L	BDL		20.0	96	88	---	113	3	20
Total Calcium	260000	ug/L	76600		200000	92	87	---	113	6	20
Total Chromium	85.6	ug/L	2.7		80.0	104	90	---	113	2	20
Total Cobalt	203	ug/L	BDL		200	102	89	---	114	2	20
Total Copper	148	ug/L	23.8		100	124	86	---	114	3	20
Total Iron	1100	ug/L	742		400	90	87	---	115	5	20
Total Lead	207	ug/L	8.4		200	99	86	---	113	1	20
Total Magnesium	125000	ug/L	30100		100000	95	85	---	113	6	20
Total Manganese	219	ug/L	18.7		200	100	90	---	114	3	20
Total Nickel	197	ug/L	BDL		200	98	88	---	113	2	20
Total Selenium	851	ug/L	BDL		800	106	83	---	114	2	20
Total Silver	14.2	ug/L	BDL		20.0	71	84	---	115	3	20
Total Thallium	774	ug/L	BDL		800	97	85	---	114	1	20
Total Vanadium	210	ug/L	BDL		200	105	90	---	111	2	20
Total Zinc	236	ug/L	11.3		200	112	87	---	115	3	20

Matrix Spike Water

Analytical Run #:	196907	Analysis Date:	10/29/2021	Prep Batch #:	83162	Matrix:	GROUND WATER
CTLab #:	1067502	Analysis Time:	15:28	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:	1066849	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Total Aluminum	1240	ug/L	312		800	116	86	---	115		20
Total Antimony	205	ug/L	BDL		200	102	88	---	113		20
Total Arsenic	825	ug/L	BDL		800	103	87	---	113		20
Total Barium	856	ug/L	99.9		800	95	88	---	113		20
Total Beryllium	19.8	ug/L	BDL		20.0	99	89	---	112		20
Total Cadmium	18.8	ug/L	BDL		20.0	94	88	---	113		20
Total Calcium	246000	ug/L	76600		200000	85	87	---	113		20
Total Chromium	83.9	ug/L	2.7		80.0	102	90	---	113		20
Total Cobalt	199	ug/L	BDL		200	100	89	---	114		20
Total Copper	143	ug/L	23.8		100	119	86	---	114		20
Total Iron	1050	ug/L	742		400	77	87	---	115		20
Total Lead	205	ug/L	8.4		200	98	86	---	113		20
Total Magnesium	118000	ug/L	30100		100000	88	85	---	113		20
Total Manganese	212	ug/L	18.7		200	97	90	---	114		20
Total Nickel	193	ug/L	BDL		200	96	88	---	113		20
Total Selenium	833	ug/L	BDL		800	104	83	---	114		20
Total Silver	14.7	ug/L	BDL		20.0	74	84	---	115		20
Total Thallium	766	ug/L	BDL		800	96	85	---	114		20
Total Vanadium	205	ug/L	BDL		200	102	90	---	111		20
Total Zinc	230	ug/L	11.3		200	109	87	---	115		20

Duplicate

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	GROUND WATER
CTLab #:	1067496	Analysis Time:	15:22	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:	1066849	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	1500	ug/L	1600				500	6	20

Duplicate

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	GROUND WATER
CTLab #:	1067496	Analysis Time:	15:22	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:	1066849	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	27800	ug/L	27800				700	0	20

Lab Control Spike Water

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	LIQUID
CTLab #:	1067495	Analysis Time:	14:56	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	98500	ug/L			100000	98	86 --- 114		

Lab Control Spike Water

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	LIQUID
CTLab #:	1067495	Analysis Time:	14:56	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	100000	ug/L			100000	100	87 --- 115		

Method Blank Water

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	LIQUID
CTLab #:	1067494	Analysis Time:	15:02	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	120	ug/L		U	0		250		

Method Blank Water

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	LIQUID
CTLab #:	1067494	Analysis Time:	15:02	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	200	ug/L		U	0		350		

Matrix Spike Duplicate Water

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	GROUND WATER
CTLab #:	1067498	Analysis Time:	15:52	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:	1067497	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	99400	ug/L	1600		100000	98	86 --- 114	5	20

Matrix Spike Duplicate Water

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	GROUND WATER
CTLab #:	1067498	Analysis Time:	15:52	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:	1067497	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	129000	ug/L	27800		100000	101	87 --- 115	5	20

Matrix Spike Water

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	GROUND WATER
CTLab #:	1067497	Analysis Time:	15:28	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:	1066849	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	94700	ug/L	1600		100000	93	86 --- 114		20

Matrix Spike Water

Analytical Run #:	196908	Analysis Date:	10/29/2021	Prep Batch #:	83161	Matrix:	GROUND WATER
CTLab #:	1067497	Analysis Time:	15:28	Prep Date/Time:	10/28/2021 16:20	Method:	SW6010
Parent Sample #:	1066849	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	123000	ug/L	27800		100000	95	87 --- 115		20

Duplicate

Analytical Run #:	197150	Analysis Date:	11/5/2021	Prep Batch #:	83168	Matrix:	GROUND WATER
CTLab #:	1067771	Analysis Time:	11:11	Prep Date/Time:	11/03/2021 14:45	Method:	SW7470A
Parent Sample #:	1066849	Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Mercury	0.0200	ug/L	<0.0200	U			0.12	0	20

Lab Control Spike Water

Analytical Run #:	197150	Analysis Date:	11/5/2021	Prep Batch #:	83168	Matrix:	LIQUID
CTLab #:	1067770	Analysis Time:	10:52	Prep Date/Time:	11/03/2021 14:45	Method:	SW7470A
Parent Sample #:		Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Mercury	1.94	ug/L			2.00	97	82 --- 119		

Method Blank Water

Analytical Run #:	197150	Analysis Date:	11/5/2021	Prep Batch #:	83168	Matrix:	LIQUID
CTLab #:	1067769	Analysis Time:	10:58	Prep Date/Time:	11/03/2021 14:45	Method:	SW7470A
Parent Sample #:		Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Mercury	0.020	ug/L		U	0		0.06		

Matrix Spike Duplicate Water

Analytical Run #:	197150	Analysis Date:	11/5/2021	Prep Batch #:	83168	Matrix:	GROUND WATER
CTLab #:	1067773	Analysis Time:	11:43	Prep Date/Time:	11/03/2021 14:45	Method:	SW7470A
Parent Sample #:	1067772	Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Total Mercury	0.54	ug/L	BDL		2.0	27	82	---	119	10	20

Matrix Spike Water

Analytical Run #:	197150	Analysis Date:	11/5/2021	Prep Batch #:	83168	Matrix:	GROUND WATER
CTLab #:	1067772	Analysis Time:	11:39	Prep Date/Time:	11/03/2021 14:45	Method:	SW7470A
Parent Sample #:	1066849	Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Mercury	0.59	ug/L	BDL		2.0	30	82 --- 119		20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	165486	Print Date / Time:	10/28/2021	09:53	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	10/28/2021	09:41	erc
Project Name:	RADFORD AAP SWMU 54	Log-In Date / Time / By:	10/28/2021	09:53	erc
Project Phase:	RADFORD, VA	Project #:		PM:	BMS
Coolers:	6316	Temperature:	2.0 C	On Ice:	**Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	7750 3583 6759		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 10/27/2021 AND SIGNED.

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?		Tests
1066840	54MW13					
		VOA	1	/		
		VOA	1	/		
		VOA	1	/		
		VOA	1	N /	N	
		VOA	1	N /	N	
		VOA	1	N /	N	
		VOA	1	N /	N	
		VOA	1	N /	N	
		VOA	1	N /	N	
		Total # of Containers of Type (*VOA*) = 9				
1066840	54MW13					
		UNPRES PL	1	N /	N	ANIONS
		UNPRES PL	1	N /	N	ANIONS
		UNPRES PL	1	/		Anions
		Total # of Containers of Type (*UNPRES PL*) = 3				
1066840	54MW13					
		MISC	1	N /	N	CHLORATE/CHLORITE
		MISC	1	N /	N	CHLORATE/CHLORITE
		MISC	1	N /	N	CHLORATE/CHLORITE
		Total # of Containers of Type (*MISC*) = 3				
1066840	54MW13					
		H2SO4 PL	1	Y /	N	TOC
		H2SO4 PL	1	Y /	N	TOC

		H2SO4 PL	1	Y / N		TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 3**			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1066845	54MW10				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type	**(*VOA*) = 3**		
1066845	54MW10				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1066845	54MW10				
		MISC	1	/	CHLORATE/CHLORITE
		Total # of Containers of Type	**(*MISC*) = 1**		
1066845	54MW10				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1066846	54TW10				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type	**(*VOA*) = 3**		
1066846	54TW10				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1066846	54TW10				
		MISC	1	/	CHLORATE/CHLORITE
		Total # of Containers of Type	**(*MISC*) = 1**		
1066846	54TW10				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1066847	54MW12				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type	**(*VOA*) = 3**		
1066847	54MW12				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		

1066847	54MW12						
		MISC	1		/		CHLORATE/CHLORITE
		Total # of Containers of Type	(***MISC***) = **1**				
1066847	54MW12						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1066848	54MW1						
		VOA	1		/		
		VOA	1		/		
		VOA	1		/		
		Total # of Containers of Type	(***VOA***) = **3**				
1066848	54MW1						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**				
1066848	54MW1						
		MISC	1		/		CHLORATE/CHLORITE
		Total # of Containers of Type	(***MISC***) = **1**				
1066848	54MW1						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1066849	54-IDW						
		H2SO4 PL	1	Y	/	N	COD
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				
1066849	54-IDW						
		HNO3	1	Y	/	N	HG,ICP,K,NA
		Total # of Containers of Type	(***HNO3***) = **1**				
1066849	54-IDW						
		UNPRES PL	1		/		pH
		Total # of Containers of Type	(***UNPRES PL***) = **1**				

Condition Code *Condition Description*

1 Sample Received OK

Rev 02/2017

Page 1 of 1

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757)819-5310
Project Name: Radford AAP
Project #: SWMU 54
Location: Radford, VA
Sampled By: M. Ewald, P. Taylor

Folder #: 165486
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMU 54
Logged By: erc PM: BMS

ge Court, Baraboo, WI 53913
56-2760 Fax 608-356-2766
www.ctlaboratories.com

IA SDWA NPDES
Other _____

Report To: Tony Pace
EMAIL: pacet@westonsolutions.com
Company: Weston Solutions
Address: 2 Eaton St., Ste. 603
Invoice To: Hampton, VA 23669
EMAIL:
Company:
Address: Same

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

ANALYSES REQUESTED

Turnaround Time
Normal RUSH*
Date Needed: _____
*Rush analysis requires prior CT Laboratories' approval
Surcharges
24 hr 200%
2-3 days 100%
4-9 days 50%

Matrix:
GW - groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - meat/waste

CT Collection Date	Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC (9060A)	Anions (9056A)	TIC (9060A)	Chlorate/Chlorite (300.1)	TAL Metals	COD 410.4	pH 9040C	Total # Containers	Designated MS/MSD	Fill in Spaces with Bottles per Test	CT Lab ID # (Lab use only)
10/27	0900	GW	Grab		54MW13	N	3	3	9	3					MS/MSD		1066840
10/27	1040	GW	Grab		54MW10	N	1	1	3	1							45
10/27	1040	GW	Grab		54TW10	N	1	1	3	1							46
10/27	1210	GW	Grab		54MW12	N	1	1	3	1							47
10/27	1307	GW	Grab		54MW1	N	1	1	3	1							48
10/27	1345	GW	Grab		54-IDW	N					1	1	1				944

Relinquished By: [signature] Date/Time: 10/27/2021 1730 Received By: Fedex Date/Time: 10/27/2021 1730

Date/Time: 10/28/21 1045 Received for Laboratory by: [signature] Date/Time: 10/28/21 1045

Lab Use Only
Ice Present Yes No
Temp 2.0 IR Gun 27
Cooler # 6316

Cooler Receipt Form

Ice Present ~~YES~~ NO

Observed Temperature 20

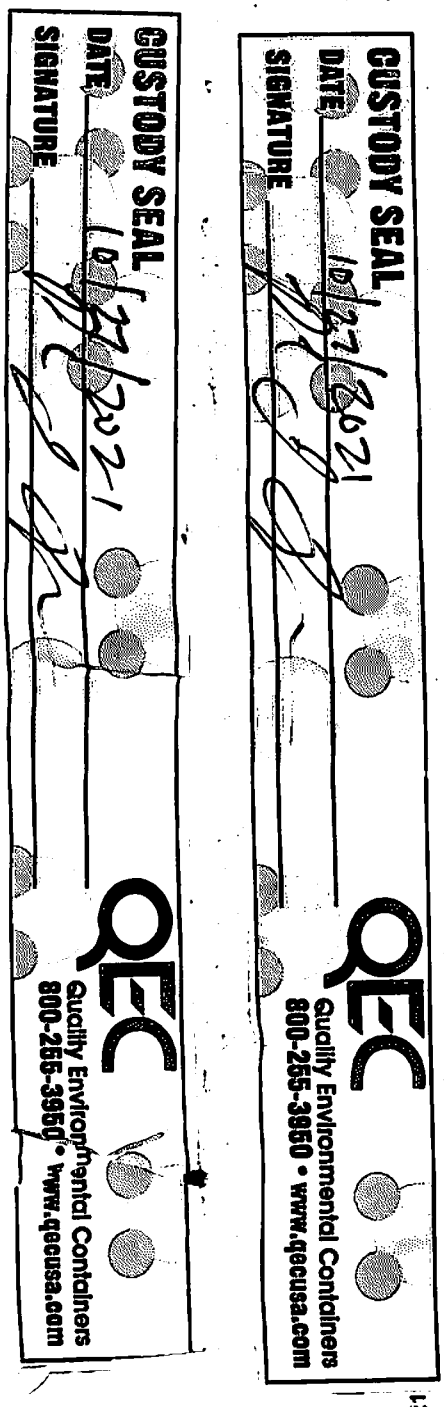
Actual Temperature 20

IR Gun # 27

Initials BNC

Date 10/28/21 Time 941

Cooler #: 631C



ORIGIN ID:WALA (770) 855-6275
PAUL TAYLOR
WESTON SOLUTIONS, INC.
305 ROANOKE ST.

CHRISTIANSBURG, VA 24073
UNITED STATES US

SHIP DATE: 27OCT21
ACTWGT: 50.00 LB
CAD: 105591775/INET4400
DIMS: 25x15x14 IN

BILL SENDER

TO SAMPLE RECEIVING
CT LABORATORIES
1230 LANGE COURT

BARABOO WI 53913
(608) 356-2760 REF 03886 552 500 3310
INV
PO. DEPT

56DJ3114BAFE4A

FedEx Express

THU - 28 OCT 10:30A
PRIORITY OVERNIGHT

1 of 2
TRK# 0201 7750 3583 6759
MASTER

XH LNRA

53913
WI-US MSN

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Eaton Analytical - South Bend
110 S Hill Street
South Bend, IN 46617
Tel: (574)233-4777

Laboratory Job ID: 810-6301-1
Client Project/Site: Chlorite, Chlorate

For:
CT Laboratories
Environmental & Analytical Services
1230 Lange Court
Baraboo, Wisconsin 53913

Attn: Jodi Serstad

Jaclyn Gatchell

Authorized for release by:
11/18/2021 4:18:24 PM

Jaclyn Gatchell, Project Manager
(574)233-4777
jaclyn.gatchell@eurofinset.com

Pre Liminary Data

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
QC Sample Results 7
QC Association Summary 8
Lab Chronicle 9
Certification Summary 10
Method Summary 11
Sample Summary 12
Chain of Custody 13
Receipt Checklists 14

Preliminary Data

Definitions/Glossary

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Preliminary Data

Job ID: 810-6301-1

Laboratory: Eurofins Eaton Analytical - South Bend

Narrative

Job Narrative
810-6301-1

Comments
No additional comments.

Receipt
The samples were received on 10/29/2021 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.8º C.

HPLC/IC
Method 300.0: The matrix spike (MS) recoveries for Chlorate in analytical batch 810-6747 were outside control limits at 84% (90-110% Limit). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300.0: The matrix spike duplicate (MSD) recoveries for Chlorate in analytical batch 810-6747 were outside control limits at 83% (90-110% Limit). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300.0: The matrix spike (MS) recoveries for Chlorate in analytical batch 810-6747 were outside control limits at 82% (90-110% Limit). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300.0: The matrix spike duplicate (MSD) recoveries for Chlorate in analytical batch 810-6747 were outside control limits at 82% (90-110% Limit). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Preliminary Data

Detection Summary

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Client Sample ID: 1066840 54MW13 — Lab Sample ID: 810-6301-1

No Detections.

Client Sample ID: 1066845 54MW10 — Lab Sample ID: 810-6301-2

No Detections.

Client Sample ID: 106846 54TW10 — Lab Sample ID: 810-6301-3

No Detections.

Client Sample ID: 1066847 54MW12 — Lab Sample ID: 810-6301-4

No Detections.

Client Sample ID: 1066848 54MW1 — Lab Sample ID: 810-6301-5

No Detections.

Preliminary Data

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Client Sample ID: 1066840 54MW13
Lab Sample ID: 810-6301-1
Date Collected: 10/27/21 09:00
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			11/05/21 23:03	1
Chlorite	<10		10		ug/L			11/05/21 23:03	1

Client Sample ID: 1066845 54MW10
Lab Sample ID: 810-6301-2
Date Collected: 10/27/21 10:40
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			11/06/21 00:24	1
Chlorite	<10		10		ug/L			11/06/21 00:24	1

Client Sample ID: 106846 54TW10
Lab Sample ID: 810-6301-3
Date Collected: 10/27/21 10:40
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			11/06/21 00:51	1
Chlorite	<10		10		ug/L			11/06/21 00:51	1

Client Sample ID: 1066847 54MW12
Lab Sample ID: 810-6301-4
Date Collected: 10/27/21 12:10
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			11/06/21 02:13	1
Chlorite	<10		10		ug/L			11/06/21 02:13	1

Client Sample ID: 1066848 54MW1
Lab Sample ID: 810-6301-5
Date Collected: 10/27/21 13:07
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			11/06/21 03:34	1
Chlorite	<10		10		ug/L			11/06/21 03:34	1

Preliminary Data

QC Sample Results

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 810-6747/4
Matrix: Water
Analysis Batch: 6747

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/05/21 17:48	1

Lab Sample ID: LCS 810-6747/5
Matrix: Water
Analysis Batch: 6747

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorite			250	258		ug/L		103	90 - 110		

Lab Sample ID: 810-6301-1 MS
Matrix: Water
Analysis Batch: 6747

Client Sample ID: 1066840 54MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorate	<10	F1	250	209	F1	ug/L		84	90 - 110		
Chlorite	<10		250	229		ug/L		92	90 - 110		

Lab Sample ID: 810-6301-1 MSD
Matrix: Water
Analysis Batch: 6747

Client Sample ID: 1066840 54MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorate	<10	F1	250	208	F1	ug/L		83	90 - 110	0	20
Chlorite	<10		250	230		ug/L		92	90 - 110	0	20

Lab Sample ID: 810-6301-4 MS
Matrix: Water
Analysis Batch: 6747

Client Sample ID: 1066847 54MW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorate	<10	F1	250	205	F1	ug/L		82	90 - 110		
Chlorite	<10		250	259		ug/L		104	90 - 110		

Lab Sample ID: 810-6301-4 MSD
Matrix: Water
Analysis Batch: 6747

Client Sample ID: 1066847 54MW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorate	<10	F1	250	205	F1	ug/L		82	90 - 110	0	20
Chlorite	<10		250	264		ug/L		106	90 - 110	2	20

Preliminary Data

QC Association Summary

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

HPLC/IC

Analysis Batch: 6747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-6301-1	1066840 54MW13	Total/NA	Water	300.0	
810-6301-2	1066845 54MW10	Total/NA	Water	300.0	
810-6301-3	106846 54TW10	Total/NA	Water	300.0	
810-6301-4	1066847 54MW12	Total/NA	Water	300.0	
810-6301-5	1066848 54MW1	Total/NA	Water	300.0	
MB 810-6747/4	Method Blank	Total/NA	Water	300.0	
LCS 810-6747/5	Lab Control Sample	Total/NA	Water	300.0	
810-6301-1 MS	1066840 54MW13	Total/NA	Water	300.0	
810-6301-1 MSD	1066840 54MW13	Total/NA	Water	300.0	
810-6301-4 MS	1066847 54MW12	Total/NA	Water	300.0	
810-6301-4 MSD	1066847 54MW12	Total/NA	Water	300.0	

Preliminary Data

Lab Chronicle

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Client Sample ID: 1066840 54MW13
Date Collected: 10/27/21 09:00
Date Received: 10/29/21 09:15

Lab Sample ID: 810-6301-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/05/21 23:03	JL	EA SB

Client Sample ID: 1066845 54MW10
Date Collected: 10/27/21 10:40
Date Received: 10/29/21 09:15

Lab Sample ID: 810-6301-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/06/21 00:24	JL	EA SB

Client Sample ID: 106846 54TW10
Date Collected: 10/27/21 10:40
Date Received: 10/29/21 09:15

Lab Sample ID: 810-6301-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/06/21 00:51	JL	EA SB

Client Sample ID: 1066847 54MW12
Date Collected: 10/27/21 12:10
Date Received: 10/29/21 09:15

Lab Sample ID: 810-6301-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/06/21 02:13	JL	EA SB

Client Sample ID: 1066848 54MW1
Date Collected: 10/27/21 13:07
Date Received: 10/29/21 09:15

Lab Sample ID: 810-6301-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	6747	11/06/21 03:34	JL	EA SB

Laboratory References:
EA SB = Eurofins Eaton Analytical - South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Preliminary Data

Accreditation/Certification Summary

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Laboratory: Eurofins Eaton Analytical - South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999766900	08-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chlorate

Preliminary Data

Method Summary

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton Analytical - South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Preliminary Data

Sample Summary

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-6301-1	1066840 54MW13	Water	10/27/21 09:00	10/29/21 09:15
810-6301-2	1066845 54MW10	Water	10/27/21 10:40	10/29/21 09:15
810-6301-3	106846 54TW10	Water	10/27/21 10:40	10/29/21 09:15
810-6301-4	1066847 54MW12	Water	10/27/21 12:10	10/29/21 09:15
810-6301-5	1066848 54MW1	Water	10/27/21 13:07	10/29/21 09:15

Preliminary Data

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

Sub-Contract Laboratory Chain-of-Custody and Purchase Order

PURCHASE ORDER #: 165486 EEA-IN

The PO# must appear on all invoice and reports!

810-6301 COC

Upon Receipt of Samples, please verify that samples were received in acceptable condition then sign this form and fax to (608)356-2766 or email to the project . ... Sample temperature, upon receipt, must be recorded on this document unless thermal preservation is not a method requirement.

Ship to: Eurofins Eaton Analytical - IN
110 South Hill Street
South Bend, IN 46617

Return Invoice and Results to: **bszymanski@ctlaboratories.com**

CTLaboratories
Brett M Szymanski
1230 Lange Court
Baraboo WI 53913

Government UPS Shipping Acct ? Y (N)

Ship by: Speedee ☐ UPS Grnd ☐ UPS 2nd ☐ UPS NDA [X]

Date Due: Standard TAT ***RUSH TURNAROUND NEEDED? Y or (N) (Circle One)***

Project Name: RADFORD AAP SWMU 54 **Project State:** VA

Analytical/QC Criteria: NONE INDICATED STATE (DOD QSM) NELAP (Circle one) OTHER_____

Report results as EDD? N (Y) (Circle one and indicate type: ERIS & Excel) Data Deliverable Package LEVEL: IV

CTLabs ID#	Sample Date/Time	Matrix	Sample Description	Analyses / Method		Cost
1066840	10/27/2021 09:00	GROUND WATER	54MW13 (Designated MS/MSD)	CHLORATE/CHLORITE	300.1	
1066845	10/27/2021 10:40	GROUND WATER	54MW10	CHLORATE/CHLORITE	300.1	
1066846	10/27/2021 10:40	GROUND WATER	54TW10	CHLORATE/CHLORITE	300.1	
1066847	10/27/2021 12:10	GROUND WATER	54MW12	CHLORATE/CHLORITE	300.1	
1066848	10/27/2021 13:07	GROUND WATER	54MW1	CHLORATE/CHLORITE	300.1	

Relinquished by: Brett Szymanski Date/Time: 10/28/2021 10:45

Received by: KDW Date/Time: 10.29.2021 0910 Receipt Temperature (C) 1.8

COMMENTS: PLEASE LOG USING THE SAMPLE DESCRIPTIONS. 54MW13 IS A DESIGNATED MS/MSD SAMPLE.

REPORT ALL SOLIDS ON A DRY WEIGHT BASIS UNLESS OTHERWISE INDICATED

Form #: FPM1-01
Effective Date: 02/15/14

Preliminary Data

Login Sample Receipt Checklist

Client: CT Laboratories

Job Number: 810-6301-1

Login Number: 6301
List Number: 1
Creator: DePriest, Kellie

List Source: Eurofins Eaton Analytical - South Bend

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Preliminary Data

CT LABORATORIES

delivering more than data from your environmental analyses

ANALYTICAL RESULTS FOR:

ANTHONY PACE
WESTON SOLUTIONS, INC.
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

PROJECT SITE:	RFAAP SWMUs 49&54; RADFORD, VA
DOD CONTRACT #:	
PROJECT #:	
SDG:	***169098***
FOLDERS:	169098, 169156, 169199, 169227
PREPARED:	May 20, 2022
TOTAL # OF PAGES:	1974

The data contained in the following report have been reviewed by the appropriate CT Laboratories' LLC staff members. In addition, CT Laboratories LLC certifies that to the best of our knowledge that the analyses reported herein are true, complete and correct within the limits of the methods employed and that they follow the applicable requirements as specified by the project plan, state-specific, NELAC or DOD QSM requirements. The estimated uncertainty of measurement is only available upon request. The reported results relate only to the tested samples. This report shall not be reproduced, except in full, without written approval of CT Laboratories LLC.

APPROVED BY: Brett Szymanski
PROJECT MANAGER

Certifications: IL (NELAP 200073), KS (NELAP E-10368), WI (157066030), DOD ELAP (A2LA 3806.01), VA (NELAP 460203), LA (primary NELAP 115843), ISO17025 (A2LA 3806.01)

CT LABORATORIES

delivering more than data from your environmental analyses

Table of Contents

Section	Page
Cover Page	1
Table of Contents	2
Case Narrative and Summary of Detects (if applicable)	3
Data Qualifier Sheet	8
Sample Delivery Group Summary	10
QC Batch Cross Reference	11
VOC QC Summary Documents	15
VOC Sample Data Documents	129
VOC ICAL Documents	250
VOC CCV Documents	347
VOC QC Documents	414
VOC Logbook Documents	436
Metals CLP Forms Documents	474
Metals Raw Data Documents	615
Metals Logbook Documents	1110
Inorganic CLP Forms Documents	1390
Inorganic Raw Data Documents	1587
Inorganic Logbook Documents	1763
Subcontracted Analysis Documents	1820
Chain of Custody, PM Confirmation and Sample Condition Forms	1929

CT LABORATORIES

delivering more than data from your environmental analyses

Case Narrative

Client: Weston Solutions
Project: RFAAP SWMUs 49&54, Radford, VA
Sample Receipt Dates: 04/26/2022, 04/28/2022, 04/29/2022, 04/30/2022
SDG #: *169098* (Folder #'s 169098, 169156, 169199, 169227)

Twenty-four water samples were received and analyzed for a variety of parameters, including: VOCs, Dissolved Gases, Metals, pH, COD, Anions, Chlorate/Chlorite, TIC and TOC. Three Trip Blanks were included with the VOCs. The Chlorate/Chlorite analysis was subcontracted to Eurofins Eaton Analytical in South Bend, IN. The assigned sample ID number, date sampled, and date received are indicated in the attached Project Summary. The samples were received intact and at a temperature within method specified acceptance limits. A breakdown of sample receipt information can be found on the Sample Condition Report located in the last section of the data package and any exceptions are noted below. The analyses were performed following DOD QSM 5.4 requirements.

Manual integrations may have been performed on the data provided with this package. If manual integrations were performed, a Reason #(s) was included on the raw data that corresponds to the "Index Key for Manual Integration Rationale." The raw data includes a "Before" and "After" manual integration illustration. The manual integrations were initialed and dated by the analyst, as well as, by the person reviewing the data.

Sample Receipt

Several of the samples that arrived at CT Labs on 04/28/2022 were past the 48-hour hold time for Nitrate upon receipt. The client instructed the lab to proceed with the analysis of these samples.

Sample Analysis and Quality Control

Volatile Analysis:

The samples were analyzed using US EPA Methods 8260C (VOC) and RSK-175 (Dissolved Gases). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Surrogate Recovery Data
Matrix Spike/Matrix Spike Duplicate Recovery Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log
Chromatograms

All analysis results met the method specified quality control criteria with the following exceptions:

Detailed reports were provided for the 8260 data for all detected compounds, as well as, for those compounds manually integrated (if applicable). Compounds not reported on the form 1's were either not detected or did not meet identification criteria so they were reported as non-detects.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

VOC (8260C) Water Analysis

Analytical Run # 211603

All analytical results for this run met the method/project specified quality control criteria for the targeted compounds.

Dissolved Gases (RSK-175) Analysis

Analytical Run # 211667 (Methane, Ethene, Ethane)

All analytical results for this run met the method/project specified quality control criteria.

Metals Analysis:

The samples were analyzed using US EPA Methods 6010C (ICP) and 7470A (Hg). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Initial and Continuing Calibration Verification
Blanks Summary
ICP Interference Check Data
Spike Sample Recovery
Duplicates Data
Laboratory Control Sample Data
Analysis Run Log

All analysis results met the method specified quality control criteria with the following exceptions:

ICP Metals (6010C) Water Analysis

Continuing Calibration Verification (CCV) standards were analyzed at two levels (CCV1 & CCV2) with potentially differing wavelengths. Data associated with CCV's were evaluated based on the concentration of the element in the samples and compared to the appropriate CCV level/wavelength.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Analytical Run # 211581

The Initial Calibration Verification Low-Level (ICVLL) standard had a recovery outside the specified limits for selenium. The samples were reanalyzed using an acceptable ICVLL standard.

The Duplicate (DUP) for sample # 1136212 was not applicable for aluminum, antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, nickel, selenium, silver, thallium, vanadium, and zinc because the parent sample results were less than five times the Limit of Quantitation (LOQ). A

Matrix Spike Duplicate (MSD) was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

Analytical Run # 211628

Silver was detected in the Method Blank (MB) greater than the Method Detection Limit (MDL) but less than ½ the Reporting Limit (RL). The sample was reanalyzed for silver.

The DUP for sample # 1137439 was not applicable for aluminum, antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc because the parent sample results were less than five times the LOQ. An MSD was analyzed to demonstrate precision and was unacceptable for aluminum and iron. The parent sample was reported and qualified with a "Y" flag for the failing elements.

The Matrix Spike (MS) and MSD for sample # 1137439 had recoveries outside the specified limits for aluminum and iron. A Serial Dilution (L) was analyzed and was not applicable for aluminum and iron because the parent sample raw results were less than 50 times the LOQ. A Post Digestion Spike (PDS) was analyzed and was acceptable. The parent sample was reported and not qualified.

ICP Sodium & Potassium (6010C) Water Analysis

Analytical Run # 211582

The DUP for sample # 1136212 was not applicable for sodium and potassium because the parent sample results were less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

Analytical Run # 211629

The DUP for sample # 1137439 was not applicable for sodium and potassium because the parent sample results were less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

CVAA Mercury (7470A) Water Analysis

Analytical Run # 211699

The DUP for sample # 1136212 was not applicable for mercury because the parent sample result was less than five times the LOQ. An MSD was analyzed to demonstrate precision and was unacceptable. The parent sample was reported and qualified with a "Y" flag for mercury.

The MS and MSD for sample # 1136212 had recoveries outside the specified limits for mercury. The parent sample was reported and qualified with an "M" flag for the failing element.

Inorganic Analysis:

The samples were analyzed using US EPA Methods 9060A (TIC/TOC), 9040C (pH), 410.4 (COD) and 9056A (Anions). All samples were analyzed within the holding time unless noted below. The following summaries of quality control procedures are included:

Duplicate Analysis Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log
Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Anions (9056A) Water Analysis

Analytical Run # 211440

The MS and the MSD for sample # 1134804 had a low recovery for sulfate. The parent sample result for this compound was qualified with an "M" flag.

Analytical Run # 211534

Sample #'s 1136203 & 1136204 were received past the 48-hour hold time for the nitrate analyses. The nitrate results for these samples were qualified with an "H" flag.

The MS for sample # 1136203 had a low recovery for sulfate. The parent sample result for this compound was qualified with an "M" flag.

Analytical Run # 211592

The MS and the MSD for sample # 1136674 had a low recovery for sulfate. The parent sample result for this compound was qualified with an "M" flag.

Analytical Run # 211602

All analytical results for this run met the method/project specified quality control criteria.

COD (410.4) Water Analysis

Analytical Run # 211565

All analytical results for this run met the method/project specified quality control criteria.

Analytical Run # 211650

All analytical results for this run met the method/project specified quality control criteria.

pH (9040C) Water Analysis

Analytical Run # 211555

All analytical results for this run met the method/project specified quality control criteria.

Analytical Run # 211639

All analytical results for this run met the method/project specified quality control criteria.

TIC (9060A) Water Analysis

Analytical Run # 211530

All analytical results for this run met the method/project specified quality control criteria.

Analytical Run # 211613

All analytical results for this run met the method/project specified quality control criteria.

TOC (9060A) Water Analysis

Analytical Run # 211696

All analytical results for this run met the method/project specified quality control criteria.

Analytical Run # 211697

All analytical results for this run met the method/project specified quality control criteria.

CT LABORATORIES

delivering more than data from your environmental analyses

Data Qualifiers

Code	Description
A	Analyte averaged calibration criteria within acceptable limits.
B	Analyte detected in associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was not above the detection level.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Calibration criteria exceeded.

CT LABORATORIES

delivering more than data from your environmental analyses

MANUAL INTEGRATION REASON CODES

CTLaboratories has identified four general cases with valid reasons supporting the use of manual integration techniques. These codes are used on chromatograms in this data package to document the reasons for manual integrations per CTLaboratories' SOP SS-10 current revision.

#1: **Data system failed to select the correct peak or missed the peak entirely.**
In some cases the chromatography system selects and integrates the "wrong peak". In this case the analyst must correct the selection and force the system to integrate the proper peak. In other instances the system may miss the peak completely. In this case the analyst manually integrated the peak

#2: **Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.**
This phenomenon is common at low concentrations where the signal to noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low or high area counts for the target compound.

#3: Improperly Integrated Isomers and/or coeluting compounds.
For when the system fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations may be inaccurate, and they must be corrected by manual integration. Prime examples are compounds that are unresolved and integrated improperly when present at low concentrations in standards or samples.

#4: System Established Incorrect Baseline.
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and may be corrected via manual procedures.

#5: Miscellaneous.
Some situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the group supervisor. If the form of manual integration is not clearly covered by these four cases, then review and approval by the group supervisor or the *QA/QC* Supervisor will be required.

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

Sample Delivery Group

169098

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMUs 49&54
Project #:

	CT Sample #	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
1	1134804	169098		54MW13	GROUND WATER	04/25/2022	04/26/2022
2	1134805	169098		54MW10	GROUND WATER	04/25/2022	04/26/2022
3	1136202	169156		TB1	TRIP BLANK	04/26/2022	04/28/2022
4	1136203	169156		13MW5	GROUND WATER	04/26/2022	04/28/2022
5	1136204	169156		13MW4	GROUND WATER	04/26/2022	04/28/2022
6	1136205	169156		13MW3	GROUND WATER	04/26/2022	04/28/2022
7	1136206	169156		49MW04	GROUND WATER	04/26/2022	04/28/2022
8	1136207	169156		49TW04	GROUND WATER	04/26/2022	04/28/2022
9	1136208	169156		13MW2	GROUND WATER	04/26/2022	04/28/2022
10	1136209	169156		54MW12	GROUND WATER	04/26/2022	04/28/2022
11	1136210	169156		54TW12	GROUND WATER	04/26/2022	04/28/2022
12	1136211	169156		54MW1	GROUND WATER	04/26/2022	04/28/2022
13	1136212	169156		54IDW	GROUND WATER	04/26/2022	04/28/2022
14	1136213	169156		49MW05	GROUND WATER	04/27/2022	04/28/2022
15	1136214	169156		49MW02	GROUND WATER	04/27/2022	04/28/2022
16	1136215	169156		48MW3	GROUND WATER	04/27/2022	04/28/2022
17	1136216	169156		48MW2	GROUND WATER	04/27/2022	04/28/2022
18	1136217	169156		48MW6	GROUND WATER	04/27/2022	04/28/2022
19	1136587	169199		TB2	TRIP BLANK	04/28/2022	04/29/2022
20	1136588	169199		50MW2	GROUND WATER	04/28/2022	04/29/2022
21	1136671	169199		50TW2	GROUND WATER	04/28/2022	04/29/2022
22	1136672	169199		49MW01	GROUND WATER	04/28/2022	04/29/2022
23	1136673	169199		49MW03	GROUND WATER	04/28/2022	04/29/2022
24	1136674	169199		48MW7	GROUND WATER	04/28/2022	04/29/2022
25	1137437	169227		TB3	TRIP BLANK	04/29/2022	04/30/2022
26	1137438	169227		48MW1	GROUND WATER	04/29/2022	04/30/2022
27	1137439	169227		49IDW	GROUND WATER	04/29/2022	04/30/2022

CT LABORATORIES
delivering more than data from your environmental analyses
1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

QC Batch Cross Reference Summary

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMUs 49&54
Project #:
Report Date: 05/20/2022
Date Received: 04/28/2022
SDG #: 169098

Inorganic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136212	pH	EPA 9040C	GROUND WATER		211555
1137439	pH	EPA 9040C	GROUND WATER		211639

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1134804	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		211530
1134805	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		211530
1136209	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		211613
1136210	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		211613
1136211	Carbon , Total Inorganic and Orga	EPA 9060A	GROUND WATER		211613

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136212	COD QSM	EPA 410.4	GROUND WATER	95239	211565
1137439	COD QSM	EPA 410.4	GROUND WATER	95270	211650

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1134804	Anions QSM 5.0	EPA 9056A	GROUND WATER		211440
1134805	Anions QSM 5.0	EPA 9056A	GROUND WATER		211440
1136203	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136204	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136205	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136206	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136207	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136208	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136209	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136210	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136211	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136213	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136214	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136215	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136216	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136217	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534

CT LABORATORIES
delivering more than data from your environmental analyses

Project Name: RADFORD AAP SWMUs 49&54
Project #:
SDG #: 169098

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136588	Anions QSM 5.0	EPA 9056A	GROUND WATER		211592
1136671	Anions QSM 5.0	EPA 9056A	GROUND WATER		211592
1136672	Anions QSM 5.0	EPA 9056A	GROUND WATER		211592
1136673	Anions QSM 5.0	EPA 9056A	GROUND WATER		211592
1136674	Anions QSM 5.0	EPA 9056A	GROUND WATER		211592
1137438	Anions QSM 5.0	EPA 9056A	GROUND WATER		211602
1134805	Anions QSM 5.0	EPA 9056A	GROUND WATER		211440
1136203	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136205	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136207	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136215	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136217	Anions QSM 5.0	EPA 9056A	GROUND WATER		211534
1136588	Anions QSM 5.0	EPA 9056A	GROUND WATER		211592
1136671	Anions QSM 5.0	EPA 9056A	GROUND WATER		211592
1137438	Anions QSM 5.0	EPA 9056A	GROUND WATER		211602

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1134804	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1134805	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136203	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136204	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136205	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136206	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136207	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136208	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136209	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136210	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136211	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136213	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136214	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136215	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136216	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136217	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211696
1136588	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211697
1136671	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211697
1136672	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211697
1136673	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211697
1136674	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211697
1137438	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		211697

Metal Parameters

CT LABORATORIES
delivering more than data from your environmental analyses

Project Name: RADFORD AAP SWMUs 49&54
Project #:
SDG #: 169098

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136212	Potassium, Total QSM 5.0	EPA 6010C	GROUND WATER	95236	211582
1137439	Potassium, Total QSM 5.0	EPA 6010C	GROUND WATER	95267	211629

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136212	Sodium, Total QSM 5.0	EPA 6010C	GROUND WATER	95236	211582
1137439	Sodium, Total QSM 5.0	EPA 6010C	GROUND WATER	95267	211629

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136212	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	95236	211581
1137439	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	95267	211628
1136212	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	95236	211581
1137439	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	95267	211628

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136212	Mercury, Total QSM	EPA 7470A	GROUND WATER	95243	211699
1137439	Mercury, Total QSM	EPA 7470A	GROUND WATER	95243	211699

Organic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136202	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		211603
1136203	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136204	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136205	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136206	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136207	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136208	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136213	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136214	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136215	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136216	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136217	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136587	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		211603
1136588	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136671	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136672	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136673	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1136674	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603
1137437	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		211603
1137438	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		211603

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136203	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667

CT LABORATORIES
delivering more than data from your environmental analyses

Project Name: RADFORD AAP SWMUs 49&54
Project #:
SDG #: 169098

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1136204	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136205	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136206	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136207	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136208	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136213	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136214	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136215	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136216	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136217	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136588	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136671	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136672	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136673	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1136674	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667
1137438	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	95280	211667

Summary of Methods Associated with SDG

SDG: 169098

Company: WESTON SOLUTIONS, INC.

Project Name: RADFORD AAP SWMUs 49&54

Matrix	Analytical Method	Prep Method	Cleanup Methods (if applicable)
GROUND WATER	EPA 9040C	NONE	
GROUND WATER	EPA 9060A	NONE	
GROUND WATER	EPA 410.4	EPA 414	
GROUND WATER	EPA 6010C	EPA 3010A	
GROUND WATER	EPA 6010C	EPA 3010A	
GROUND WATER	EPA 6010C	EPA 3010A	
GROUND WATER	EPA 7470A	EPA 7470A	
GROUND WATER	EPA 8260C	EPA 5030B	
TRIP BLANK	EPA 8260C	EPA 5030B	
GROUND WATER	RSK 175	RSK175M	
GROUND WATER	EPA 9056A	NONE	
GROUND WATER	EPA 9060A	NONE	

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL SUMMARY
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136208
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:50	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136208
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:51	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136208
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:51	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136208
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:51	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136205
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:30	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136205
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:24	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136205
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:24	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	6.0		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	0.61	J	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136205
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:24	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	0.95	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136204
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:26	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136204
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 13:55	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136204
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 13:55	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136204
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 13:55	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	0.68	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136203
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:05	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136203
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:52	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136203
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:52	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136203
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:52	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1137438
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 11:02	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137438
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 21:11	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	0.61	J	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137438
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 21:11	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.73	J	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137438
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 21:11	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	2.4		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136216
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:07	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.58	J	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136216
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 17:47	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136216
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 17:47	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	29		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	3.4		0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136216
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 17:47	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.7		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136215
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/06/2022 / 09:24	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136215
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/06/2022 / 09:24	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	75		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	10		0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136215
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/06/2022 / 09:24	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	13		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136215
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:03	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136217
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:38	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:		Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136217
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:15	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	J	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136217
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:15	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	2.0		0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136217
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:15	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.4		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136674
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:59	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136674
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:42	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136674
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:42	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136674
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:42	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136672
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:50	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136672
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:43	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136672
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:43	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	3.0		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136672
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:43	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136214
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:58	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	2.7		0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136214
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:49	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136214
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:49	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136214
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:49	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136673
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:55	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136673
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:13	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136673
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:13	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136673
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:13	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136206
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:42	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136206
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:53	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136206
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:53	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	0.74	J	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136206
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:53	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136213
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:55	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136213
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:20	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136213
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:20	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136213
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:20	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136207
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:46	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136207
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136207
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:22	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	0.70	J	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136207
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136588
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:42	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136588
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:45	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136588
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:45	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	0.71	J	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136588
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:45	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	0.72	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136671
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:46	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136671
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:14	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136671
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:14	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	0.78	J	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136671
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:14	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	0.70	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description: **TB1**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136202
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:23	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136202
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:23	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136202
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:23	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136587
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:53	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136587
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:53	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136587
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:53	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137437
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137437
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137437
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1138360
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
74-84-0	Ethane	05/04/2022	09:02	0.38	U	0.38	1.0	***0.4***
74-85-1	Ethene	05/04/2022	09:02	0.59	U	0.59	1.4	***0.6***
74-82-8	Methane	05/04/2022	09:02	0.45	U	0.45	1.0	***0.4***

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1139090
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	211603	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	05/05/2022	08:55	0.38	U	0.38	1.2	***0.60***
79-34-5	1,1,2,2-Tetrachloroethane	05/05/2022	08:55	0.36	U	0.36	1.1	***0.55***
79-00-5	1,1,2-Trichloroethane	05/05/2022	08:55	0.27	U	0.27	1.1	***0.55***
75-34-3	1,1-Dichloroethane	05/05/2022	08:55	0.28	U	0.28	1.1	***0.55***
75-35-4	1,1-Dichloroethene	05/05/2022	08:55	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	05/05/2022	08:55	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	05/05/2022	08:55	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	05/05/2022	08:55	0.35	U	0.35	2.0	***1.0***
106-93-4	1,2-Dibromoethane	05/05/2022	08:55	0.33	U	0.33	1.1	***0.55***
95-50-1	1,2-Dichlorobenzene	05/05/2022	08:55	0.35	U	0.35	1.1	***0.55***
107-06-2	1,2-Dichloroethane	05/05/2022	08:55	0.69	U	0.69	2.1	***1.05***
78-87-5	1,2-Dichloropropane	05/05/2022	08:55	0.37	U	0.37	1.2	***0.60***
541-73-1	1,3-Dichlorobenzene	05/05/2022	08:55	0.30	U	0.30	1.1	***0.55***
78-93-3	2-Butanone	05/05/2022	08:55	2.9	U	2.9	11	***5.5***
591-78-6	2-Hexanone	05/05/2022	08:55	3.3	U	3.3	11	***5.5***
108-10-1	4-Methyl-2-pentanone	05/05/2022	08:55	3.7	U	3.7	12	***6.0***
67-64-1	Acetone	05/05/2022	08:55	4.1	U	4.1	20	***10***
71-43-2	Benzene	05/05/2022	08:55	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	05/05/2022	08:55	0.26	U	0.26	1.1	***0.55***
75-27-4	Bromodichloromethane	05/05/2022	08:55	0.080	U	0.080	0.50	***0.25***
75-25-2	Bromoform	05/05/2022	08:55	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	05/05/2022	08:55	0.49	U	0.49	2.0	***1.0***
75-15-0	Carbon disulfide	05/05/2022	08:55	0.83	U	0.83	4.0	***2.0***

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **METHOD BLANK**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1139090
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	211603	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
56-23-5	Carbon tetrachloride	05/05/2022	08:55	0.37	U	0.37	1.2	***0.60***
108-90-7	Chlorobenzene	05/05/2022	08:55	0.37	U	0.37	1.2	***0.60***
75-00-3	Chloroethane	05/05/2022	08:55	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	05/05/2022	08:55	0.46	U	0.46	1.4	***0.70***
74-87-3	Chloromethane	05/05/2022	08:55	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	05/05/2022	08:55	0.41	U	0.41	1.3	***0.65***
10061-01-5	cis-1,3-Dichloropropene	05/05/2022	08:55	0.34	U	0.34	1.1	***0.55***
110-82-7	Cyclohexane	05/05/2022	08:55	0.71	U	0.71	2.2	***1.1***
124-48-1	Dibromochloromethane	05/05/2022	08:55	0.35	U	0.35	1.1	***0.55***
75-71-8	Dichlorodifluoromethane	05/05/2022	08:55	0.63	U	0.63	2.1	***1.05***
100-41-4	Ethylbenzene	05/05/2022	08:55	0.42	U	0.42	1.3	***0.65***
76-13-1	Freon 113	05/05/2022	08:55	1.5	U	1.5	4.5	***2.25***
98-82-8	Isopropylbenzene	05/05/2022	08:55	0.39	U	0.39	1.2	***0.60***
179601-23-1	m & p-Xylene	05/05/2022	08:55	0.74	U	0.74	2.3	***1.15***
79-20-9	Methyl Acetate	05/05/2022	08:55	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	05/05/2022	08:55	0.28	U	0.28	1.1	***0.55***
108-87-2	Methylcyclohexane	05/05/2022	08:55	0.78	U	0.78	2.4	***1.2***
75-09-2	Methylene chloride	05/05/2022	08:55	1.2	U	1.2	4.1	***2.05***
95-47-6	o-Xylene	05/05/2022	08:55	0.72	U	0.72	2.2	***1.1***
100-42-5	Styrene	05/05/2022	08:55	0.33	U	0.33	1.1	***0.55***
127-18-4	Tetrachloroethene	05/05/2022	08:55	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	05/05/2022	08:55	0.27	U	0.27	1.1	***0.55***
156-60-5	trans-1,2-Dichloroethene	05/05/2022	08:55	0.35	U	0.35	1.1	***0.55***

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1139090
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	211603	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
10061-02-6	trans-1,3-Dichloropropene	05/05/2022	08:55	0.56	U	0.56	2.1	***1.05***
79-01-6	Trichloroethene	05/05/2022	08:55	0.39	U	0.39	1.2	***0.60***
75-69-4	Trichlorofluoromethane	05/05/2022	08:55	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	05/05/2022	08:55	0.12	U	0.12	0.50	***0.25***

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1139717
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	211603	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	05/05/2022	13:26	0.38	U	0.38	1.2	***0.60***
79-34-5	1,1,2,2-Tetrachloroethane	05/05/2022	13:26	0.36	U	0.36	1.1	***0.55***
79-00-5	1,1,2-Trichloroethane	05/05/2022	13:26	0.27	U	0.27	1.1	***0.55***
75-34-3	1,1-Dichloroethane	05/05/2022	13:26	0.28	U	0.28	1.1	***0.55***
75-35-4	1,1-Dichloroethene	05/05/2022	13:26	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	05/05/2022	13:26	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	05/05/2022	13:26	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	05/05/2022	13:26	0.35	U	0.35	2.0	***1.0***
106-93-4	1,2-Dibromoethane	05/05/2022	13:26	0.33	U	0.33	1.1	***0.55***
95-50-1	1,2-Dichlorobenzene	05/05/2022	13:26	0.35	U	0.35	1.1	***0.55***
107-06-2	1,2-Dichloroethane	05/05/2022	13:26	0.69	U	0.69	2.1	***1.05***
78-87-5	1,2-Dichloropropane	05/05/2022	13:26	0.37	U	0.37	1.2	***0.60***
541-73-1	1,3-Dichlorobenzene	05/05/2022	13:26	0.30	U	0.30	1.1	***0.55***
78-93-3	2-Butanone	05/05/2022	13:26	2.9	U	2.9	11	***5.5***
591-78-6	2-Hexanone	05/05/2022	13:26	3.3	U	3.3	11	***5.5***
108-10-1	4-Methyl-2-pentanone	05/05/2022	13:26	3.7	U	3.7	12	***6.0***
67-64-1	Acetone	05/05/2022	13:26	4.1	U	4.1	20	***10***
71-43-2	Benzene	05/05/2022	13:26	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	05/05/2022	13:26	0.26	U	0.26	1.1	***0.55***
75-27-4	Bromodichloromethane	05/05/2022	13:26	0.080	U	0.080	0.50	***0.25***
75-25-2	Bromoform	05/05/2022	13:26	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	05/05/2022	13:26	0.49	U	0.49	2.0	***1.0***
75-15-0	Carbon disulfide	05/05/2022	13:26	0.83	U	0.83	4.0	***2.0***

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1139717
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	211603	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
56-23-5	Carbon tetrachloride	05/05/2022	13:26	0.37	U	0.37	1.2	***0.60***
108-90-7	Chlorobenzene	05/05/2022	13:26	0.37	U	0.37	1.2	***0.60***
75-00-3	Chloroethane	05/05/2022	13:26	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	05/05/2022	13:26	0.46	U	0.46	1.4	***0.70***
74-87-3	Chloromethane	05/05/2022	13:26	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	05/05/2022	13:26	0.41	U	0.41	1.3	***0.65***
10061-01-5	cis-1,3-Dichloropropene	05/05/2022	13:26	0.34	U	0.34	1.1	***0.55***
110-82-7	Cyclohexane	05/05/2022	13:26	0.71	U	0.71	2.2	***1.1***
124-48-1	Dibromochloromethane	05/05/2022	13:26	0.35	U	0.35	1.1	***0.55***
75-71-8	Dichlorodifluoromethane	05/05/2022	13:26	0.63	U	0.63	2.1	***1.05***
100-41-4	Ethylbenzene	05/05/2022	13:26	0.42	U	0.42	1.3	***0.65***
76-13-1	Freon 113	05/05/2022	13:26	1.5	U	1.5	4.5	***2.25***
98-82-8	Isopropylbenzene	05/05/2022	13:26	0.39	U	0.39	1.2	***0.60***
179601-23-1	m & p-Xylene	05/05/2022	13:26	0.74	U	0.74	2.3	***1.15***
79-20-9	Methyl Acetate	05/05/2022	13:26	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	05/05/2022	13:26	0.28	U	0.28	1.1	***0.55***
75-09-2	Methylene chloride	05/05/2022	13:26	1.2	U	1.2	4.1	***2.05***
95-47-6	o-Xylene	05/05/2022	13:26	0.72	U	0.72	2.2	***1.1***
100-42-5	Styrene	05/05/2022	13:26	0.33	U	0.33	1.1	***0.55***
127-18-4	Tetrachloroethene	05/05/2022	13:26	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	05/05/2022	13:26	0.27	U	0.27	1.1	***0.55***
156-60-5	trans-1,2-Dichloroethene	05/05/2022	13:26	0.35	U	0.35	1.1	***0.55***
10061-02-6	trans-1,3-Dichloropropene	05/05/2022	13:26	0.56	U	0.56	2.1	***1.05***

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1139717
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	211603	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
79-01-6	Trichloroethene	05/05/2022	13:26	0.39	U	0.39	1.2	***0.60***
75-69-4	Trichlorofluoromethane	05/05/2022	13:26	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	05/05/2022	13:26	0.12	U	0.12	0.50	***0.25***

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1140062
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	211603	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	05/06/2022	08:54	0.38	U	0.38	1.2	***0.60***
79-34-5	1,1,2,2-Tetrachloroethane	05/06/2022	08:54	0.36	U	0.36	1.1	***0.55***
79-00-5	1,1,2-Trichloroethane	05/06/2022	08:54	0.27	U	0.27	1.1	***0.55***
75-34-3	1,1-Dichloroethane	05/06/2022	08:54	0.28	U	0.28	1.1	***0.55***
75-35-4	1,1-Dichloroethene	05/06/2022	08:54	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	05/06/2022	08:54	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	05/06/2022	08:54	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	05/06/2022	08:54	0.35	U	0.35	2.0	***1.0***
106-93-4	1,2-Dibromoethane	05/06/2022	08:54	0.33	U	0.33	1.1	***0.55***
95-50-1	1,2-Dichlorobenzene	05/06/2022	08:54	0.35	U	0.35	1.1	***0.55***
107-06-2	1,2-Dichloroethane	05/06/2022	08:54	0.69	U	0.69	2.1	***1.05***
78-87-5	1,2-Dichloropropane	05/06/2022	08:54	0.37	U	0.37	1.2	***0.60***
541-73-1	1,3-Dichlorobenzene	05/06/2022	08:54	0.30	U	0.30	1.1	***0.55***
78-93-3	2-Butanone	05/06/2022	08:54	2.9	U	2.9	11	***5.5***
591-78-6	2-Hexanone	05/06/2022	08:54	3.3	U	3.3	11	***5.5***
108-10-1	4-Methyl-2-pentanone	05/06/2022	08:54	3.7	U	3.7	12	***6.0***
67-64-1	Acetone	05/06/2022	08:54	4.1	U	4.1	20	***10***
71-43-2	Benzene	05/06/2022	08:54	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	05/06/2022	08:54	0.26	U	0.26	1.1	***0.55***
75-27-4	Bromodichloromethane	05/06/2022	08:54	0.080	U	0.080	0.50	***0.25***
75-25-2	Bromoform	05/06/2022	08:54	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	05/06/2022	08:54	0.49	U	0.49	2.0	***1.0***
75-15-0	Carbon disulfide	05/06/2022	08:54	0.83	U	0.83	4.0	***2.0***

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1140062
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	211603	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
56-23-5	Carbon tetrachloride	05/06/2022	08:54	0.37	U	0.37	1.2	***0.60***
108-90-7	Chlorobenzene	05/06/2022	08:54	0.37	U	0.37	1.2	***0.60***
75-00-3	Chloroethane	05/06/2022	08:54	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	05/06/2022	08:54	0.46	U	0.46	1.4	***0.70***
74-87-3	Chloromethane	05/06/2022	08:54	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	05/06/2022	08:54	0.41	U	0.41	1.3	***0.65***
10061-01-5	cis-1,3-Dichloropropene	05/06/2022	08:54	0.34	U	0.34	1.1	***0.55***
110-82-7	Cyclohexane	05/06/2022	08:54	0.71	U	0.71	2.2	***1.1***
124-48-1	Dibromochloromethane	05/06/2022	08:54	0.35	U	0.35	1.1	***0.55***
75-71-8	Dichlorodifluoromethane	05/06/2022	08:54	0.63	U	0.63	2.1	***1.05***
100-41-4	Ethylbenzene	05/06/2022	08:54	0.42	U	0.42	1.3	***0.65***
76-13-1	Freon 113	05/06/2022	08:54	1.5	U	1.5	4.5	***2.25***
98-82-8	Isopropylbenzene	05/06/2022	08:54	0.39	U	0.39	1.2	***0.60***
179601-23-1	m & p-Xylene	05/06/2022	08:54	0.74	U	0.74	2.3	***1.15***
79-20-9	Methyl Acetate	05/06/2022	08:54	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	05/06/2022	08:54	0.28	U	0.28	1.1	***0.55***
75-09-2	Methylene chloride	05/06/2022	08:54	1.2	U	1.2	4.1	***2.05***
95-47-6	o-Xylene	05/06/2022	08:54	0.72	U	0.72	2.2	***1.1***
100-42-5	Styrene	05/06/2022	08:54	0.33	U	0.33	1.1	***0.55***
127-18-4	Tetrachloroethene	05/06/2022	08:54	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	05/06/2022	08:54	0.27	U	0.27	1.1	***0.55***
156-60-5	trans-1,2-Dichloroethene	05/06/2022	08:54	0.35	U	0.35	1.1	***0.55***
10061-02-6	trans-1,3-Dichloropropene	05/06/2022	08:54	0.56	U	0.56	2.1	***1.05***

CT LABORATORIES
delivering more than data from your environmental analyses

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:		SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1140062
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	211603	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
79-01-6	Trichloroethene	05/06/2022	08:54	0.39	U	0.39	1.2	***0.60***
75-69-4	Trichlorofluoromethane	05/06/2022	08:54	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	05/06/2022	08:54	0.12	U	0.12	0.50	***0.25***

CT LABORATORIES
delivering more than data from your environmental analyses

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49

Analytical Method: EPA 8260C | SDG: 169098

Analytical Run #: 211603 | ICAL Calibration #: W042822.

CTLab #	1136202				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	1136203				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	1136204				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	1136205				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	104	80	119	

CTLab #	1136206				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	1136207				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	103	80	119	

CT LABORATORIES
delivering more than data from your environmental analyses

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49

Analytical Method: EPA 8260C | SDG: 169098

Analytical Run #: 211603 | ICAL Calibration #: W042822.

CTLab #	1136208				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	103	80	119	
CTLab #	**1136213**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	103	80	119	
CTLab #	**1136214**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	103	80	119	
CTLab #	**1136215**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	104	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	102	80	119	
CTLab #	**1136216**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	103	80	119	
CTLab #	**1136217**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	100	80	119	

CT LABORATORIES
delivering more than data from your environmental analyses

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49

Analytical Method: EPA 8260C | SDG: 169098

Analytical Run #: 211603 | ICAL Calibration #: W042822.

CTLab #	1136587				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	104	80	119	
CTLab #	**1136588**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	101	80	119	
CTLab #	**1136671**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	104	80	119	
CTLab #	**1136672**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	96.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	101	80	119	
CTLab #	**1136673**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	105	80	119	
CTLab #	**1136674**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	103	80	119	

CT LABORATORIES
delivering more than data from your environmental analyses

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49

Analytical Method: EPA 8260C | SDG: 169098

Analytical Run #: 211603 | ICAL Calibration #: W042822.

CTLab #	1137437				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	103	80	119	
CTLab #	**1137438**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	101	80	119	
CTLab #	**1138907**	Sample Type:		Lab Control Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	101	80	119	
CTLab #	**1138908**	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	70	120	
Bromofluorobenzene	100	98.0	70	120	
d8-Toluene	100	101	85	120	
Dibromofluoromethane	100	101	85	115	
CTLab #	**1139090**	Sample Type:		Method Blank	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	70	120	
Bromofluorobenzene	100	100	75	120	
d8-Toluene	100	101	85	120	
Dibromofluoromethane	100	101	85	115	
CTLab #	**1139347**	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	50	150	
Bromofluorobenzene	100	99.0	50	150	
d8-Toluene	100	103	50	150	
Dibromofluoromethane	100	103	50	150	

CT LABORATORIES
delivering more than data from your environmental analyses

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49

Analytical Method: EPA 8260C | SDG: 169098

Analytical Run #: 211603 | ICAL Calibration #: W042822.

CTLab #	1139500	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	70	120	
Bromofluorobenzene	100	99.0	70	120	
d8-Toluene	100	102	85	120	
Dibromofluoromethane	100	102	85	115	
CTLab #	**1139717**	Sample Type:		Normal Field Sample	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	70	120	
Bromofluorobenzene	100	100	75	120	
d8-Toluene	100	101	85	120	
Dibromofluoromethane	100	103	85	115	
CTLab #	**1139722**	Sample Type:		Matrix Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	101	80	119	
CTLab #	**1139723**	Sample Type:		Matrix Spike Duplicate	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	81	118	
Bromofluorobenzene	100	97.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	100	80	119	
CTLab #	**1139724**	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	50	150	
Bromofluorobenzene	100	96.0	50	150	
d8-Toluene	100	102	50	150	
Dibromofluoromethane	100	100	50	150	
CTLab #	**1139733**	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	105	70	120	
Bromofluorobenzene	100	99.0	70	120	
d8-Toluene	100	102	85	120	
Dibromofluoromethane	100	101	85	115	

CT LABORATORIES
delivering more than data from your environmental analyses

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49
Analytical Method:	EPA 8260C	SDG:	169098
Analytical Run #:	211603	ICAL Calibration #:	W042822.

CTLab #	1140062	Sample Type:	Normal Field Sample		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	70	120	
Bromofluorobenzene	100	101	75	120	
d8-Toluene	100	100	85	120	
Dibromofluoromethane	100	102	85	115	

CTLab #	1140124	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	50	150	
Bromofluorobenzene	100	98.0	50	150	
d8-Toluene	100	103	50	150	
Dibromofluoromethane	100	101	50	150	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **13MW5**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: GROUND WATER
SDG No.: 169098
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 211603
Sample No.: 1139722
Parent Sample No.: 1136203
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W042822.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	05/05/2022	21:40	74-131	10.5	BDL	10.0	105
1,1,2,2-Tetrachloroethane	05/05/2022	21:40	71-121	9.34	BDL	10.0	93
1,1,2-Trichloroethane	05/05/2022	21:40	80-119	10.1	BDL	10.0	101
1,1-Dichloroethane	05/05/2022	21:40	77-125	10.2	BDL	10.0	102
1,1-Dichloroethene	05/05/2022	21:40	71-131	11.2	BDL	10.0	112
1,2,3-Trichlorobenzene	05/05/2022	21:40	69-129	8.96	BDL	10.0	90
1,2,4-Trichlorobenzene	05/05/2022	21:40	69-130	8.85	BDL	10.0	88
1,2-Dibromo-3-chloropropane	05/05/2022	21:40	62-128	8.16	BDL	10.0	82
1,2-Dibromoethane	05/05/2022	21:40	77-121	9.39	BDL	10.0	94
1,2-Dichlorobenzene	05/05/2022	21:40	80-119	9.03	BDL	10.0	90
1,2-Dichloroethane	05/05/2022	21:40	73-128	10.2	BDL	10.0	102
1,2-Dichloropropane	05/05/2022	21:40	78-122	10.0	BDL	10.0	100
1,3-Dichlorobenzene	05/05/2022	21:40	80-119	9.57	BDL	10.0	96
1,4-Dioxane	05/05/2022	21:40	59-139	452	BDL	500	90
2-Butanone	05/05/2022	21:40	56-143	96.3	BDL	100	96
2-Hexanone	05/05/2022	21:40	57-139	88.1	BDL	100	88
4-Methyl-2-pentanone	05/05/2022	21:40	67-130	99.3	BDL	100	99
Acetone	05/05/2022	21:40	39-160	80.1	BDL	100	80
Benzene	05/05/2022	21:40	79-120	10.7	BDL	10.0	107
Bromochloromethane	05/05/2022	21:40	78-123	10.1	BDL	10.0	101
Bromodichloromethane	05/05/2022	21:40	79-125	9.93	BDL	10.0	99
Bromoform	05/05/2022	21:40	66-130	9.27	BDL	10.0	93
Bromomethane	05/05/2022	21:40	53-141	10.6	BDL	10.0	106
Carbon disulfide	05/05/2022	21:40	64-133	21.8	BDL	20.0	109
Carbon tetrachloride	05/05/2022	21:40	72-136	11.1	BDL	10.0	111
Chlorobenzene	05/05/2022	21:40	82-118	9.76	BDL	10.0	98
Chloroethane	05/05/2022	21:40	60-138	10.2	BDL	10.0	102
Chloroform	05/05/2022	21:40	79-124	10.4	BDL	10.0	104
Chloromethane	05/05/2022	21:40	50-139	10.2	BDL	10.0	102
cis-1,2-Dichloroethene	05/05/2022	21:40	78-123	10.3	BDL	10.0	103
cis-1,3-Dichloropropene	05/05/2022	21:40	75-124	9.68	BDL	10.0	97

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **13MW5**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: GROUND WATER
SDG No.: 169098
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 211603
Sample No.: 1139722
Parent Sample No.: 1136203
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W042822.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Cyclohexane	05/05/2022	21:40	71-130	11.2	BDL	10.0	112
Dibromochloromethane	05/05/2022	21:40	74-126	8.90	BDL	10.0	89
Dichlorodifluoromethane	05/05/2022	21:40	32-152	11.4	BDL	10.0	114
Ethylbenzene	05/05/2022	21:40	79-121	10.2	BDL	10.0	102
Freon 113	05/05/2022	21:40	70-136	21.1	BDL	20.0	106
Isopropylbenzene	05/05/2022	21:40	72-131	10.4	BDL	10.0	104
m & p-Xylene	05/05/2022	21:40	80-121	20.4	BDL	20.0	102
Methyl Acetate	05/05/2022	21:40	56-136	8.77	BDL	10.0	88
Methyl tert-butyl ether	05/05/2022	21:40	71-124	9.67	BDL	10.0	97
Methylcyclohexane	05/05/2022	21:40	72-132	9.43	BDL	10.0	94
Methylene chloride	05/05/2022	21:40	74-124	9.24	BDL	10.0	92
o-Xylene	05/05/2022	21:40	78-122	9.94	BDL	10.0	99
Styrene	05/05/2022	21:40	78-123	9.83	BDL	10.0	98
Tetrachloroethene	05/05/2022	21:40	74-129	10.8	BDL	10.0	108
Toluene	05/05/2022	21:40	80-121	10.6	BDL	10.0	106
trans-1,2-Dichloroethene	05/05/2022	21:40	75-124	10.4	BDL	10.0	104
trans-1,3-Dichloropropene	05/05/2022	21:40	73-127	9.08	BDL	10.0	91
Trichloroethene	05/05/2022	21:40	79-123	10.3	BDL	10.0	103
Trichlorofluoromethane	05/05/2022	21:40	65-141	11.5	BDL	10.0	115
Vinyl chloride	05/05/2022	21:40	58-137	10.9	BDL	10.0	109

Spike Recovery: 0 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description

13MW5

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: GROUND WATER SDG No.: 169098

Analytical Method: RSK 175 Concentration Units: ug/L

Analytical Run #: 211667 Sample No.: 1138358 Parent Sample No.: 1136203

Analytical Prep Batch #: 95280 Analytical Preparation Date/Time: 05/04/2022 08:50

ICAL Calibration #: P4DG070121

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	05/04/2022	09:15	74-131	3.70	BDL	4.76	78
Ethene	05/04/2022	09:15	72-133	5.35	BDL	6.77	79
Methane	05/04/2022	09:15	73-125	1.79	BDL	2.28	79

Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

Sample Description: **13MW5**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&
Matrix: GROUND WATER
SDG No.: 169098
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 211603
Sample No.: 1139723
Parent Sample No.: 1139722
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W042822.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
1,1,1-Trichloroethane	05/05/2022	22:10	11.4	10.0	114	8	74-131	20
1,1,2,2-Tetrachloroethane	05/05/2022	22:10	10.1	10.0	101	8	71-121	20
1,1,2-Trichloroethane	05/05/2022	22:10	10.4	10.0	104	3	80-119	20
1,1-Dichloroethane	05/05/2022	22:10	11.0	10.0	110	7	77-125	20
1,1-Dichloroethene	05/05/2022	22:10	12.1	10.0	121	8	71-131	20
1,2,3-Trichlorobenzene	05/05/2022	22:10	10.1	10.0	101	12	69-129	20
1,2,4-Trichlorobenzene	05/05/2022	22:10	9.80	10.0	98	10	69-130	20
1,2-Dibromo-3-chloropropane	05/05/2022	22:10	9.75	10.0	98	18	62-128	20
1,2-Dibromoethane	05/05/2022	22:10	10.2	10.0	102	9	77-121	20
1,2-Dichlorobenzene	05/05/2022	22:10	9.89	10.0	99	9	80-119	20
1,2-Dichloroethane	05/05/2022	22:10	10.8	10.0	108	6	73-128	20
1,2-Dichloropropane	05/05/2022	22:10	10.6	10.0	106	6	78-122	20
1,3-Dichlorobenzene	05/05/2022	22:10	10.2	10.0	102	7	80-119	20
1,4-Dioxane	05/05/2022	22:10	479	500	96	6	59-139	20
2-Butanone	05/05/2022	22:10	102	100	102	6	56-143	20
2-Hexanone	05/05/2022	22:10	98.2	100	98	11	57-139	20
4-Methyl-2-pentanone	05/05/2022	22:10	107	100	107	8	67-130	20
Acetone	05/05/2022	22:10	84.7	100	85	6	39-160	20
Benzene	05/05/2022	22:10	11.4	10.0	114	6	79-120	20
Bromochloromethane	05/05/2022	22:10	10.9	10.0	109	7	78-123	20
Bromodichloromethane	05/05/2022	22:10	10.6	10.0	106	6	79-125	20
Bromoform	05/05/2022	22:10	9.89	10.0	99	6	66-130	20
Bromomethane	05/05/2022	22:10	11.6	10.0	116	9	53-141	20
Carbon disulfide	05/05/2022	22:10	23.7	20.0	118	8	64-133	20
Carbon tetrachloride	05/05/2022	22:10	12.2	10.0	122	9	72-136	20
Chlorobenzene	05/05/2022	22:10	10.6	10.0	106	8	82-118	20
Chloroethane	05/05/2022	22:10	10.7	10.0	107	5	60-138	20
Chloroform	05/05/2022	22:10	11.1	10.0	111	6	79-124	20
Chloromethane	05/05/2022	22:10	11.2	10.0	112	10	50-139	20
cis-1,2-Dichloroethene	05/05/2022	22:10	11.2	10.0	112	8	78-123	20
cis-1,3-Dichloropropene	05/05/2022	22:10	10.5	10.0	105	8	75-124	20

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

13MW5

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&

Matrix: GROUND WATER SDG No.: 169098

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 211603 Sample No.: 1139723 Parent Sample No.: 1139722

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W042822.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
Cyclohexane	05/05/2022	22:10	12.0	10.0	120	7	71-130	20
Dibromochloromethane	05/05/2022	22:10	10.4	10.0	104	15	74-126	20
Dichlorodifluoromethane	05/05/2022	22:10	12.1	10.0	121	6	32-152	20
Ethylbenzene	05/05/2022	22:10	11.2	10.0	112	10	79-121	20
Freon 113	05/05/2022	22:10	23.0	20.0	115	9	70-136	20
Isopropylbenzene	05/05/2022	22:10	11.5	10.0	115	10	72-131	20
m & p-Xylene	05/05/2022	22:10	22.4	20.0	112	9	80-121	20
Methyl Acetate	05/05/2022	22:10	9.16	10.0	92	4	56-136	20
Methyl tert-butyl ether	05/05/2022	22:10	10.6	10.0	106	9	71-124	20
Methylcyclohexane	05/05/2022	22:10	9.99	10.0	100	6	72-132	20
Methylene chloride	05/05/2022	22:10	10.2	10.0	102	10	74-124	20
o-Xylene	05/05/2022	22:10	10.8	10.0	108	9	78-122	20
Styrene	05/05/2022	22:10	11.0	10.0	110	11	78-123	20
Tetrachloroethene	05/05/2022	22:10	11.7	10.0	117	8	74-129	20
Toluene	05/05/2022	22:10	11.2	10.0	112	6	80-121	20
trans-1,2-Dichloroethene	05/05/2022	22:10	11.3	10.0	113	8	75-124	20
trans-1,3-Dichloropropene	05/05/2022	22:10	10.0	10.0	100	10	73-127	20
Trichloroethene	05/05/2022	22:10	10.9	10.0	109	6	79-123	20
Trichlorofluoromethane	05/05/2022	22:10	12.4	10.0	124	8	65-141	20
Vinyl chloride	05/05/2022	22:10	11.4	10.0	114	5	58-137	20

RPD or Spike Recovery: 0 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Sample No.: 1138361

SDG No.: 169098

Analytical Method: RSK 175

Concentration Units: ug/L

Sample No.: 1138361

Parent Sample No.:

Analytical Prep Batch #: 95280

Analytical Preparation Date/Time: 05/04/2022 08:50

Analytical Run #: 211667

ICAL Calibration #: P4DG070121

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	05/04/2022	08:57	74-131	3.78		4.76	79
Ethene	05/04/2022	08:57	72-133	5.52		6.77	82
Methane	05/04/2022	08:57	73-125	2.50		2.28	110

Spike Recovery: 0 out of 3 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Sample No.: 1138907
SDG No.: 169098
Analytical Method: EPA 8260C
Concentration Units: ug/L

Sample No.: 1138907
Parent Sample No.: 0
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 211603
ICAL Calibration #: W042822.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	05/05/2022	07:54	74-131	10.3		10.0	103
1,1,2,2-Tetrachloroethane	05/05/2022	07:54	71-121	9.19		10.0	92
1,1,2-Trichloroethane	05/05/2022	07:54	80-119	10.0		10.0	100
1,1-Dichloroethane	05/05/2022	07:54	77-125	9.92		10.0	99
1,1-Dichloroethene	05/05/2022	07:54	71-131	10.6		10.0	106
1,2,3-Trichlorobenzene	05/05/2022	07:54	69-129	9.01		10.0	90
1,2,4-Trichlorobenzene	05/05/2022	07:54	69-130	9.06		10.0	91
1,2-Dibromo-3-chloropropane	05/05/2022	07:54	62-128	8.90		10.0	89
1,2-Dibromoethane	05/05/2022	07:54	77-121	9.38		10.0	94
1,2-Dichlorobenzene	05/05/2022	07:54	80-119	9.43		10.0	94
1,2-Dichloroethane	05/05/2022	07:54	73-128	10.1		10.0	101
1,2-Dichloropropane	05/05/2022	07:54	78-122	9.62		10.0	96
1,3-Dichlorobenzene	05/05/2022	07:54	80-119	9.48		10.0	95
2-Butanone	05/05/2022	07:54	56-143	95.1		100	95
2-Hexanone	05/05/2022	07:54	57-139	92.6		100	93
4-Methyl-2-pentanone	05/05/2022	07:54	67-130	99.2		100	99
Acetone	05/05/2022	07:54	39-160	92.1		100	92
Benzene	05/05/2022	07:54	79-120	10.3		10.0	103
Bromochloromethane	05/05/2022	07:54	78-123	9.55		10.0	96
Bromodichloromethane	05/05/2022	07:54	79-125	9.68		10.0	97
Bromoform	05/05/2022	07:54	66-130	9.69		10.0	97
Bromomethane	05/05/2022	07:54	53-141	10.4		10.0	104
Carbon disulfide	05/05/2022	07:54	64-133	20.6		20.0	103
Carbon tetrachloride	05/05/2022	07:54	72-136	10.9		10.0	109
Chlorobenzene	05/05/2022	07:54	82-118	9.65		10.0	96
Chloroethane	05/05/2022	07:54	60-138	9.47		10.0	95
Chloroform	05/05/2022	07:54	79-124	9.82		10.0	98
Chloromethane	05/05/2022	07:54	50-139	9.31		10.0	93

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Sample No.: 1138907

SDG No.: 169098

Analytical Method: EPA 8260C

Concentration Units: ug/L

Sample No.: 1138907

Parent Sample No.: 0

Analytical Prep Batch #: 0

Analytical Preparation Date/Time:

Analytical Run #: 211603

ICAL Calibration #: W042822.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
cis-1,2-Dichloroethene	05/05/2022	07:54	78-123	9.90		10.0	99
cis-1,3-Dichloropropene	05/05/2022	07:54	75-124	9.84		10.0	98
Cyclohexane	05/05/2022	07:54	71-130	10.8		10.0	108
Dibromochloromethane	05/05/2022	07:54	74-126	9.52		10.0	95
Dichlorodifluoromethane	05/05/2022	07:54	32-152	11.0		10.0	110
Ethylbenzene	05/05/2022	07:54	79-121	10.0		10.0	100
Freon 113	05/05/2022	07:54	70-136	21.7		20.0	108
Isopropylbenzene	05/05/2022	07:54	72-131	10.4		10.0	104
m & p-Xylene	05/05/2022	07:54	80-121	20.6		20.0	103
Methyl Acetate	05/05/2022	07:54	56-136	8.49		10.0	85
Methyl tert-butyl ether	05/05/2022	07:54	71-124	9.79		10.0	98
Methylcyclohexane	05/05/2022	07:54	72-132	9.95		10.0	100
Methylene chloride	05/05/2022	07:54	74-124	9.25		10.0	92
o-Xylene	05/05/2022	07:54	78-122	9.73		10.0	97
Styrene	05/05/2022	07:54	78-123	10.0		10.0	100
Tetrachloroethene	05/05/2022	07:54	74-129	10.5		10.0	105
Toluene	05/05/2022	07:54	80-121	10.2		10.0	102
trans-1,2-Dichloroethene	05/05/2022	07:54	75-124	10.1		10.0	101
trans-1,3-Dichloropropene	05/05/2022	07:54	73-127	9.77		10.0	98
Trichloroethene	05/05/2022	07:54	79-123	9.92		10.0	99
Trichlorofluoromethane	05/05/2022	07:54	65-141	10.8		10.0	108
Vinyl chloride	05/05/2022	07:54	58-137	10.1		10.0	101

Spike Recovery: 0 out of 50 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Sample ID:	1138360	SDG No.:	169098
Matrix:	LIQUID	Date Extracted:	05/04/2022
Date Analyzed:	05/04/2022	Time Analyzed:	09:02
Analytical Method:	RSK 175	Extraction Method:	METHOD
Analytical Run #:	211667	Extraction Batch #:	95280
		ICAL Calibration #:	P4DG070121

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	CCV	1138464	05/04/2022 08:47	P4DG070121
2	LCSW	1138361	05/04/2022 08:57	P4DG070121
3	MBW	1138360	05/04/2022 09:02	P4DG070121
4	13MW5	1136203	05/04/2022 09:05	P4DG070121
5	13MW5MSW	1138358	05/04/2022 09:15	P4DG070121
6	13MW5MSDW	1138359	05/04/2022 09:22	P4DG070121
7	13MW4	1136204	05/04/2022 09:26	P4DG070121
8	13MW3	1136205	05/04/2022 09:30	P4DG070121
9	49MW04	1136206	05/04/2022 09:42	P4DG070121
10	49TW04	1136207	05/04/2022 09:46	P4DG070121
11	13MW2	1136208	05/04/2022 09:50	P4DG070121
12	49MW05	1136213	05/04/2022 09:55	P4DG070121
13	49MW02	1136214	05/04/2022 09:58	P4DG070121
14	48MW3	1136215	05/04/2022 10:03	P4DG070121
15	48MW2	1136216	05/04/2022 10:07	P4DG070121
16	CCV	1138465	05/04/2022 10:10	P4DG070121
17	48MW6	1136217	05/04/2022 10:38	
18	50MW2	1136588	05/04/2022 10:42	P4DG070121
19	50TW2	1136671	05/04/2022 10:46	P4DG070121
20	49MW01	1136672	05/04/2022 10:50	P4DG070121
21	49MW03	1136673	05/04/2022 10:55	P4DG070121
22	48MW7	1136674	05/04/2022 10:59	P4DG070121
23	48MW1	1137438	05/04/2022 11:02	P4DG070121
24	CCV	1138466	05/04/2022 11:06	P4DG070121

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Sample ID:	1139090	SDG No.:	169098
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	05/05/2022	Time Analyzed:	08:55
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	211603	Extraction Batch #:	0
		ICAL Calibration #:	W042822.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	1139501	05/05/2022 07:12	
2	LCSW	1138907	05/05/2022 07:54	W042822.
3	CCV	1138908	05/05/2022 07:54	W042822.
4	MBW	1139090	05/05/2022 08:55	W042822.
5	TB1	1136202	05/05/2022 09:23	W042822.
6	TB2	1136587	05/05/2022 09:53	W042822.
7	TB3	1137437	05/05/2022 10:22	W042822.
8	13MW5	1136203	05/05/2022 10:52	W042822.
9	CCVF	1139347	05/05/2022 11:21	W042822.
10	BFB	1139502	05/05/2022 11:45	
11	CCV	1139500	05/05/2022 12:28	W042822.
12	CCB	1139717	05/05/2022 13:26	W042822.
13	13MW4	1136204	05/05/2022 13:55	W042822.
14	13MW3	1136205	05/05/2022 14:24	W042822.
15	49MW04	1136206	05/05/2022 14:53	W042822.
16	49TW04	1136207	05/05/2022 15:22	W042822.
17	13MW2	1136208	05/05/2022 15:51	W042822.
18	49MW05	1136213	05/05/2022 16:20	W042822.
19	49MW02	1136214	05/05/2022 16:49	W042822.
20	48MW2	1136216	05/05/2022 17:47	W042822.
21	48MW6	1136217	05/05/2022 18:15	W042822.
22	50MW2	1136588	05/05/2022 18:45	W042822.
23	50TW2	1136671	05/05/2022 19:14	W042822.
24	49MW01	1136672	05/05/2022 19:43	W042822.
25	49MW03	1136673	05/05/2022 20:13	W042822.
26	48MW7	1136674	05/05/2022 20:42	W042822.
27	48MW1	1137438	05/05/2022 21:11	W042822.
28	13MW5MSW	1139722	05/05/2022 21:40	W042822.
29	13MW5MSDW	1139723	05/05/2022 22:10	W042822.
30	CCVF	1139724	05/05/2022 22:39	W042822.

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Sample ID:	1139090	SDG No.:	169098
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	05/05/2022	Time Analyzed:	08:55
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	211603	Extraction Batch #:	0
		ICAL Calibration #:	W042822.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
31	BFB	1140447	05/06/2022 07:12	
32	CCV	1139733	05/06/2022 07:54	W042822.
33	CCB	1140062	05/06/2022 08:54	W042822.
34	48MW3	1136215	05/06/2022 09:24	W042822.
35	CCVF	1140124	05/06/2022 09:53	W042822.

BFB

Data File : C:\Instarch\Data\APR2822\BFB1.D Vial: 1
Acq On : 28 Apr 2022 13:26 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.669 to 4.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	15244	PASS
75	95	30	60	45.7	41194	PASS
95	95	100	100	100.0	90050	PASS
96	95	5	9	6.2	5584	PASS
173	174	0.00	2	0.8	543	PASS
174	95	50	100	79.3	71393	PASS
175	174	5	9	7.7	5521	PASS
176	174	95	101	95.1	67885	PASS
177	176	5	9	6.7	4548	PASS

W042822.M Mon May 02 08:14:16 2022

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\APR2822\BFB1.D
Injection Date : 28 Apr 2022 Log Time Period (hrs) : ALL
Injection Time : 13:26 Total files within period : 17
Sample Directory : C:\INSTARCH\DATA\APR2822\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.5/5.0 ug/L, 5.0 mL	28 Apr 2022	14:39
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 1.00/10.00 ug/L, 5.0	28 Apr 2022	15:09
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 2.00/20.0 ug/L, 5.0	28 Apr 2022	15:39
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 5.00/50.0 ug/L, 5.0	28 Apr 2022	16:09
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 10.0/100.0 ug/L, 5.0	28 Apr 2022	16:38
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 20.0/200.0 ug/L, 5.0	28 Apr 2022	17:08
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 30.0/300.0 ug/L, 5.0	28 Apr 2022	17:38
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 40.0/400.0 ug/L, 5.0	28 Apr 2022	18:08
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT9 80.0/800.0 ug/L, 5.0	28 Apr 2022	18:37
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	28 Apr 2022	19:37
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.0/300 ug/L, 5.0 m	28 Apr 2022	20:08
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK 5.0 mL DI H20 Purged	28 Apr 2022	21:36

Data File : C:\Instarch\Data\MAY0522\BFB1.D Vial: 1
Acq On : 5 May 2022 7:12 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.663 to 4.675 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	13111	PASS
75	95	30	60	47.7	36938	PASS
95	95	100	100	100.0	77434	PASS
96	95	5	9	6.6	5078	PASS
173	174	0.00	2	0.6	340	PASS
174	95	50	100	77.9	60288	PASS
175	174	5	9	7.1	4301	PASS
176	174	95	101	96.9	58394	PASS
177	176	5	9	6.5	3797	PASS

W042822.M Fri May 06 09:32:54 2022

BFB

Data File : C:\Instarch\Data\MAY0522\BFB2.D Vial: 11
Acq On : 5 May 2022 11:45 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.663 to 4.675 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.2	12354	PASS
75	95	30	60	48.1	34573	PASS
95	95	100	100	100.0	71890	PASS
96	95	5	9	6.7	4848	PASS
173	174	0.00	2	0.8	456	PASS
174	95	50	100	82.5	59322	PASS
175	174	5	9	6.6	3931	PASS
176	174	95	101	100.1	59378	PASS
177	176	5	9	7.4	4381	PASS

W042822.M Fri May 06 09:34:02 2022

Data File : C:\Instarch\Data\MAY0522\BFB3.D Vial: 35
Acq On : 6 May 2022 7:12 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.663 to 4.675 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.7	10205	PASS
75	95	30	60	46.4	30237	PASS
95	95	100	100	100.0	65162	PASS
96	95	5	9	7.5	4913	PASS
173	174	0.00	2	1.2	670	PASS
174	95	50	100	85.6	55786	PASS
175	174	5	9	7.0	3921	PASS
176	174	95	101	95.7	53360	PASS
177	176	5	9	6.1	3278	PASS

W042822.M Fri May 06 09:34:23 2022

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\MAY0522\BFB1.D
Injection Date : 5 May 2022 Log Time Period (hrs) : ALL
Injection Time : 07:12 Total files within period : 40
Sample Directory : C:\INSTARCH\DATA\MAY0522\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	211603,LCSW, 10.0/100 ug/L, 5.0 m	5 May 2022	07:54
MB1	1.00	1.00	1.00	211603,MBW, pH<2,5.0 mL DI H20 P	5 May 2022	08:55
1136202	1.00	1.00	1.00	211603,1136202, pH<2,5.0 mL DI H20 P	5 May 2022	09:23
1136587	1.00	1.00	1.00	211603,1136587, pH<2,5.0 mL DI H20 P	5 May 2022	09:53
1137437	1.00	1.00	1.00	211603,1137437, pH<2,5.0 mL DI H20 P	5 May 2022	10:22
1136203	1.00	1.00	1.00	211603,1136203, pH<2,5.0 mL DI H20 P	5 May 2022	10:52
CCVF1	1.00	1.00	1.00	211603,CCVF, 10.0/100 ug/L, 5.0 m	5 May 2022	11:21
BFB2	1.00	1.00	1.00	BFB DIRECT INJ. 50 ng Inj.	5 May 2022	11:45
CCV2	1.00	1.00	1.00	211603,CCV, 10.0/100 ug/L, 5.0 m	5 May 2022	12:28
CCB1	1.00	1.00	1.00	211603,CCB, pH<2,5.0 mL DI H20 P	5 May 2022	13:26
1136204	1.00	1.00	1.00	211603,1136204, pH<2,5.0 mL DI H20 P	5 May 2022	13:55
1136205	1.00	1.00	1.00	211603,1136205, pH<2,5.0 mL DI H20 P	5 May 2022	14:24
1136206	1.00	1.00	1.00	211603,1136206, pH<2,5.0 mL DI H20 P	5 May 2022	14:53
1136207	1.00	1.00	1.00	211603,1136207, pH<2,5.0 mL DI H20 P	5 May 2022	15:22
1136208	1.00	1.00	1.00	211603,1136208,	5 May 2022	15:51

				pH<2,5.0 mL DI H20 P	
1136213	1.00	1.00	1.00	211603,1136213,	5 May 2022 16:20
				pH<2,5.0 mL DI H20 P	
1136214	1.00	1.00	1.00	211603,1136214,	5 May 2022 16:49
				pH<2,5.0 mL DI H20 P	
1136215	1.00	1.00	1.00	211603,1136215,5	5 May 2022 17:18
				pH<2,5.0 mL DI H20 P	
1136216	1.00	1.00	1.00	211603,1136216,	5 May 2022 17:47
				pH<2,5.0 mL DI H20 P	
1136217	1.00	1.00	1.00	211603,1136217,	5 May 2022 18:15
				pH<2,5.0 mL DI H20 P	
1136588	1.00	1.00	1.00	211603,1136588,	5 May 2022 18:45
				pH<2,5.0 mL DI H20 P	
1136671	1.00	1.00	1.00	211603,1136671,	5 May 2022 19:14
				pH<2,5.0 mL DI H20 P	
1136672	1.00	1.00	1.00	211603,1136672,	5 May 2022 19:43
				pH<2,5.0 mL DI H20 P	
1136673	1.00	1.00	1.00	211603,1136673,	5 May 2022 20:13
				pH<2,5.0 mL DI H20 P	
1136674	1.00	1.00	1.00	211603,1136674,	5 May 2022 20:42
				pH<2,5.0 mL DI H20 P	
1137438	1.00	1.00	1.00	211603,1137438,	5 May 2022 21:11
				pH<2,5.0 mL DI H20 P	
1136203M	1.00	1.00	1.00	211603,MSW1136203,	5 May 2022 21:40
				pH<2,5.0 mL DI H20 P	
1136203S	1.00	1.00	1.00	211603,MSDW1136203,	5 May 2022 22:10
				pH<2,5.0 mL DI H20 P	
CCVF2	1.00	1.00	1.00	211603,CCVF,	5 May 2022 22:39
				10.0/100 ug/L, 5.0 m	
BFB3	1.00	1.00	1.00	BFB DIRECT INJ.	6 May 2022 07:12
				50 ng Inj.	
CCV3	1.00	1.00	1.00	211603,CCV,	6 May 2022 07:54
				10.0/100 ug/L, 5.0 m	
CCB2	1.00	1.00	1.00	211603,CCB,	6 May 2022 08:54
				pH<2,5.0 mL DI H20 P	
1136215R	1.00	1.00	1.00	211603,1136215,	6 May 2022 09:24
				pH<2,5.0 mL DI H20 P	
CCVF3	1.00	1.00	1.00	211603,CCVF,	6 May 2022 09:53
				10.0/100 ug/L, 5.0 m	

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL5.D Date Analyzed : 28 Apr 2022
Instrument ID : VMS3 Time Analyzed : 4:38 pm
GC Column : DB-624 UI ID : VMS3(mm) Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1360561	7.70	1103594	11.61	612993	14.91
UPPER LIMIT	2721122	8.20	2207188	12.11	1225986	15.41
LOWER LIMIT	680281	7.20	551797	11.11	306497	14.41
File ID Sample						
1136202 211603,11	1241708	7.70	1038488	11.62	570196	14.91
1136203 211603,11	1253140	7.70	1046944	11.61	575171	14.91
1136203M 211603,MS	1276393	7.70	1080209	11.61	617675	14.91
1136203S 211603,MS	1301854	7.70	1079764	11.61	624415	14.91
1136204 211603,11	1232860	7.70	1039692	11.61	573520	14.91
1136205 211603,11	1245938	7.70	1060062	11.61	578963	14.91
1136206 211603,11	1234165	7.70	1048729	11.61	564327	14.91
1136207 211603,11	1222315	7.70	1052667	11.61	570603	14.91
1136208 211603,11	1245357	7.70	1059701	11.61	575678	14.91
1136213 211603,11	1228717	7.70	1049133	11.62	570058	14.91
1136214 211603,11	1235756	7.70	1070487	11.61	579684	14.91
1136215 211603,11	1231706	7.70	1049594	11.61	575670	14.91
1136215R 211603,11	1266562	7.70	1092903	11.61	606269	14.91
1136216 211603,11	1221702	7.70	1060089	11.61	579493	14.91
1136217 211603,11	1245475	7.70	1075295	11.61	591155	14.91
1136587 211603,11	1235410	7.70	1043837	11.61	577565	14.91
1136588 211603,11	1262698	7.70	1072817	11.61	596963	14.91
1136671 211603,11	1257693	7.70	1078615	11.61	598934	14.91
1136672 211603,11	1208000	7.70	1054940	11.61	588139	14.91
1136673 211603,11	1220349	7.70	1046257	11.62	576709	14.91
1136674 211603,11	1219084	7.70	1046002	11.62	573842	14.91
1137437 211603,11	1239122	7.70	1043249	11.62	571669	14.91
1137438 211603,11	1211102	7.70	1021786	11.61	566726	14.91
CCB1 211603,CC	1255693	7.70	1060285	11.61	572748	14.91
CCB2 211603,CC	1250976	7.70	1054853	11.61	580325	14.91

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL5.D Date Analyzed : 28 Apr 2022
Instrument ID : VMS3 Time Analyzed : 4:38 pm
GC Column : DB-624 UI ID : VMS3(mm) Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1360561	7.70	1103594	11.61	612993	14.91
UPPER LIMIT	2721122	8.20	2207188	12.11	1225986	15.41
LOWER LIMIT	680281	7.20	551797	11.11	306497	14.41
File ID Sample						
CCV2 211603,CC	1304377	7.70	1100048	11.61	622966	14.91
CCV3 211603,CC	1303393	7.70	1087796	11.61	624527	14.91
CCVF1 211603,CC	1286028	7.70	1083020	11.62	619399	14.91
CCVF2 211603,CC	1303077	7.70	1071450	11.61	637939	14.91
CCVF3 211603,CC	1270595	7.70	1074033	11.62	626930	14.91
CCV-LCS1 211603,LC	1304103	7.70	1082679	11.61	620213	14.91
MB1 211603,MB	1260344	7.70	1051959	11.61	583749	14.91

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

VOLATILE ORGANIC ANALYSIS
SAMPLE DATA
DOCUMENTS

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136202.D Vial: 6
Acq On : 5 May 2022 9:23 Operator: DGS-RLD
Sample : 211603,1136202, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 09:44:33 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1241708	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1038488	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	570196	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	336857	20.409 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%	
45) SURR12DCAd4	7.27	102	87521	19.876 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%	
61) SURRd8Tolule	9.71	98	1310840	20.183 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%	
83) SURR4BrFBenz	13.25	95	553494	19.618 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%	

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	15780	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	3011	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.63	84	5856	N.D.	
21) tbutylalcohol	4.84	59	2627	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136202.D Vial: 6
Acq On : 5 May 2022 9:23 Operator: DGS-RLD
Sample : 211603,1136202, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 09:44:33 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.63	43	3031	Below Cal # 29	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3025	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.90	119	2878	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136202.D Vial: 6
Acq On : 5 May 2022 9:23 Operator: DGS-RLD
Sample : 211603,1136202, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 09:44:33 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

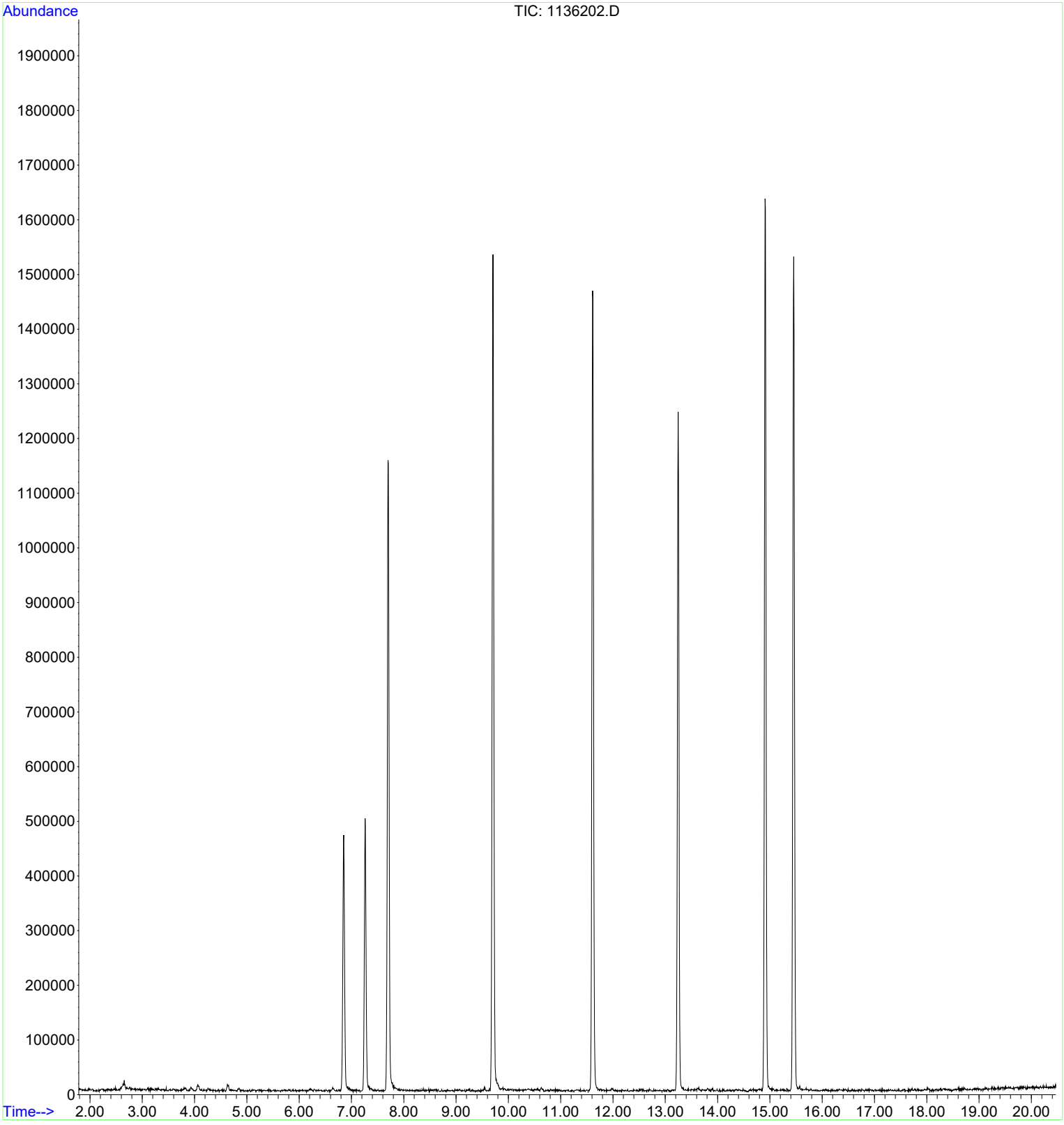
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	18.02	128	3406	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\MAY0522\1136202.D Vial: 6
Acq On : 5 May 2022 9:23 Operator: DGS-RLD
Sample : 211603,1136202, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 09:44:33 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136587.D Vial: 7
Acq On : 5 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,1136587, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 10:14:25 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1235410	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1043837	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	577565	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	341349	20.786 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %		
45) SURR12DCAd4	7.27	102	89882	20.516 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %		
61) SURRd8Tolule	9.71	98	1311539	20.297 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	565701	19.795 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	16704	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	2615	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.63	84	5581	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.65	42	2725	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136587.D Vial: 7
Acq On : 5 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,1136587, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 10:14:25 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	2586	Below Cal #	29
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.61	91	2647	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136587.D Vial: 7
Acq On : 5 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,1136587, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 10:14:25 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.02	128	2739	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

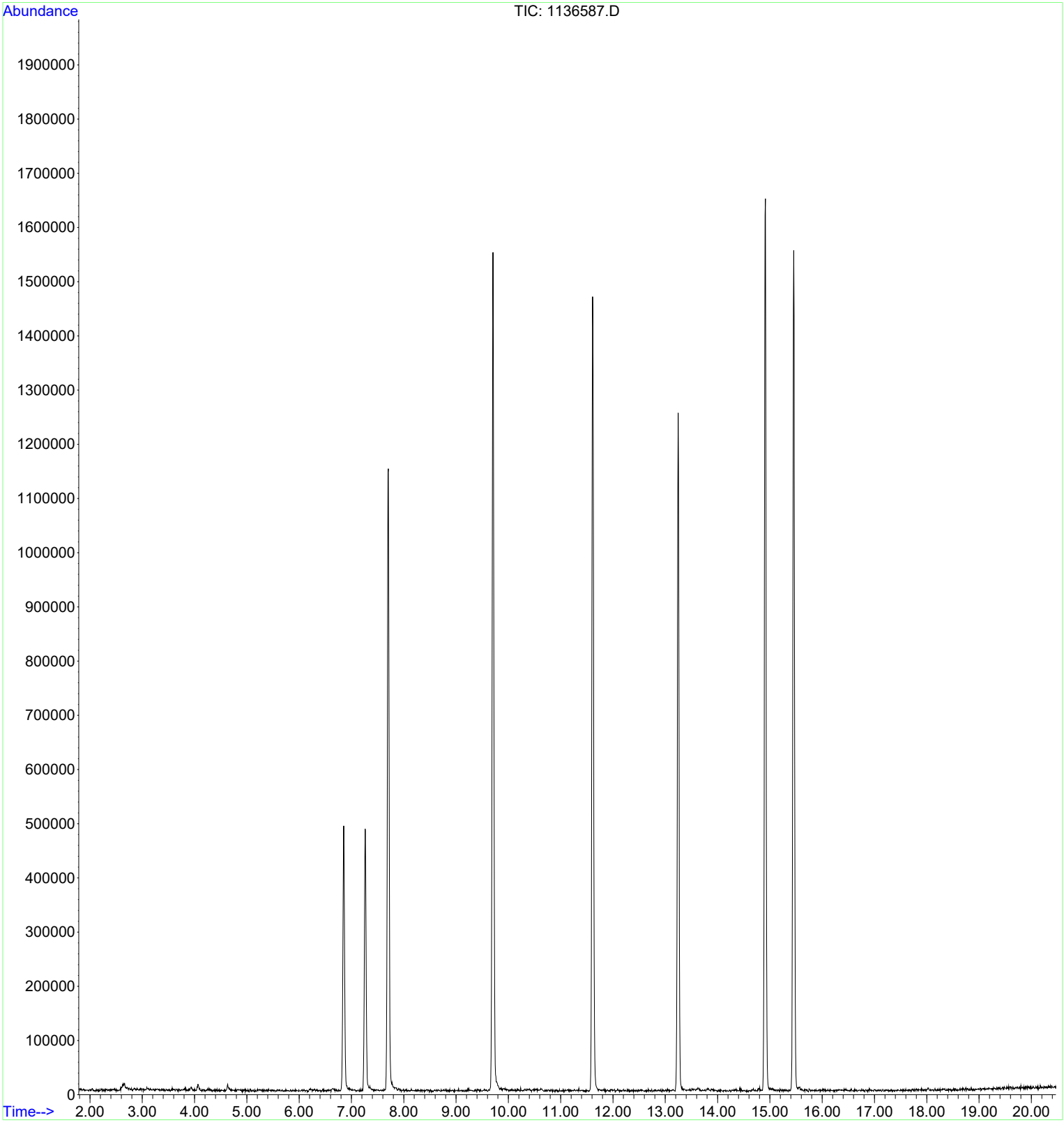
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136587.D Vial: 7
Acq On : 5 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,1136587, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 10:14:25 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1137437.D Vial: 8
Acq On : 5 May 2022 10:22 Operator: DGS-RLD
Sample : 211603,1137437, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 10:43:22 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1239122	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1043249	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	571669	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	339423	20.607 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %		
45) SURR12DCAd4	7.26	102	88426	20.124 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %		
61) SURRd8Tolule	9.71	98	1300993	20.074 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %		
83) SURR4BrFBenz	13.25	95	562201	19.875 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	18615	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	2774	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.64	84	4800	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.65	42	2556	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1137437.D Vial: 8
Acq On : 5 May 2022 10:22 Operator: DGS-RLD
Sample : 211603,1137437, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 10:43:22 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3171	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1137437.D Vial: 8
Acq On : 5 May 2022 10:22 Operator: DGS-RLD
Sample : 211603,1137437, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 10:43:22 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

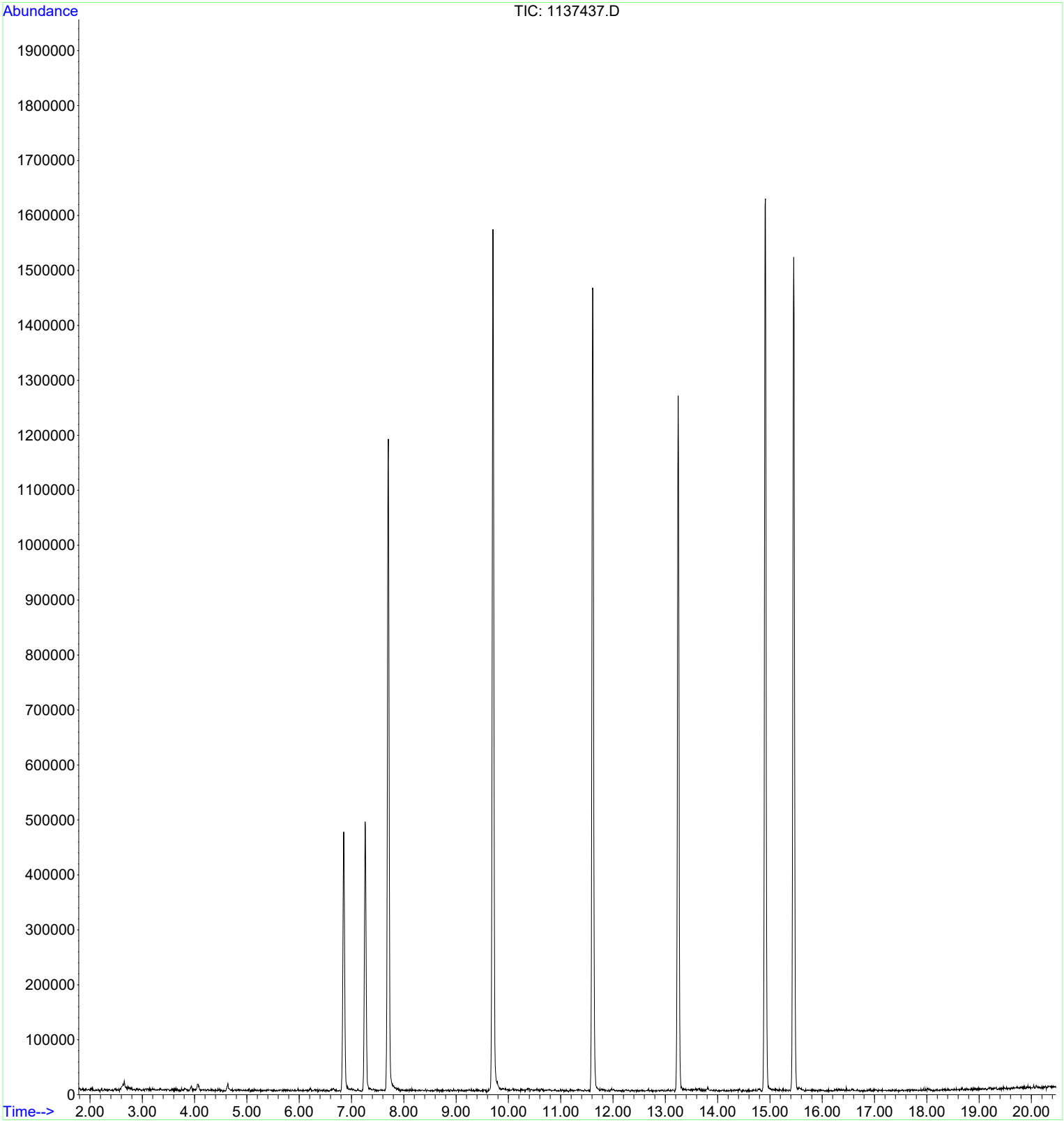
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1137437.D Vial: 8
Acq On : 5 May 2022 10:22 Operator: DGS-RLD
Sample : 211603,1137437, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 10:43:22 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203.D Vial: 9
Acq On : 5 May 2022 10:52 Operator: DGS-RLD
Sample : 211603,1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 11:12:53 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1253140	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1046944	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	575171	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	336185	20.182 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
45) SURR12DCAd4	7.26	102	89194	20.071 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %		
61) SURRd8Tolule	9.71	98	1317696	20.104 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	562257	19.756 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	6443	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.85	59	8653	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	6.21	77	2977	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203.D Vial: 9
Acq On : 5 May 2022 10:52 Operator: DGS-RLD
Sample : 211603,1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 11:12:53 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203.D Vial: 9
Acq On : 5 May 2022 10:52 Operator: DGS-RLD
Sample : 211603,1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 11:12:53 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

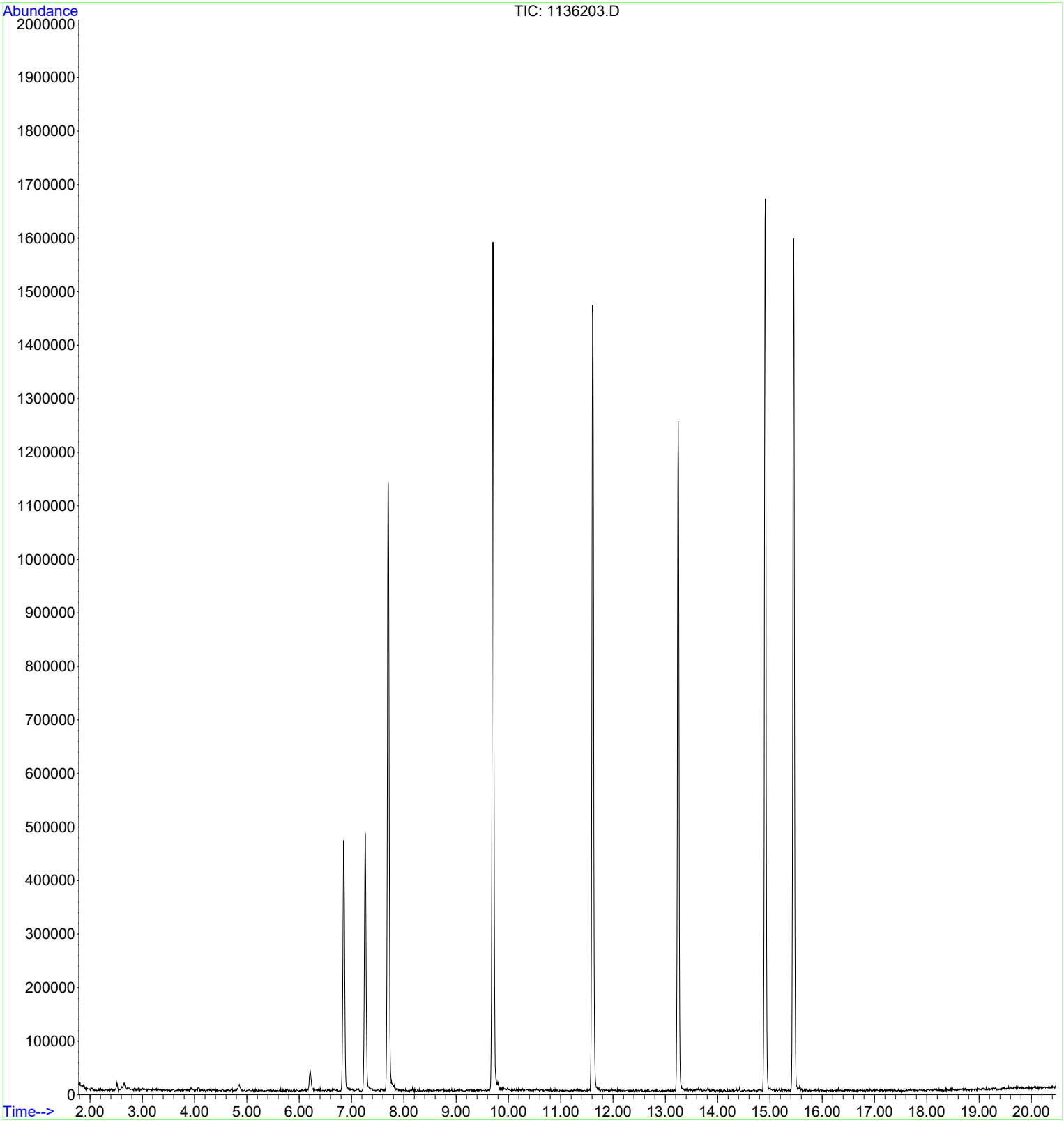
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203.D Vial: 9
Acq On : 5 May 2022 10:52 Operator: DGS-RLD
Sample : 211603,1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 11:12:53 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136204.D Vial: 16
Acq On : 5 May 2022 13:55 Operator: DGS-RLD
Sample : 211603,1136204, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 14:16:18 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1232860	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1039692	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	573520	20.00 ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma		6.85	113	332469	20.287 ug/L	0.00
Spiked Amount	20.000	Range 90 - 110		Recovery = 101	%	
45) SURR12DCAd4		7.26	102	88395	20.219 ug/L	0.00
Spiked Amount	20.000	Range 89 - 111		Recovery = 101	%	
61) SURRd8Tolule		9.71	98	1305924	20.252 ug/L	0.00
Spiked Amount	20.000	Range 93 - 107		Recovery = 101	%	
83) SURR4BrFBenz		13.25	95	557693	19.652 ug/L	0.00
Spiked Amount	20.000	Range 83 - 111		Recovery = 98	%	

Target Compounds				Qvalue
2) Dichlorodi	0.00	85	0	N.D.
3) Chloromethan	0.00	50	0	N.D.
4) VinylChlorid	0.00	62	0	N.D.
5) Bromomethane	0.00	94	0	N.D.
6) Chloroethane	0.00	64	0	N.D.
7) Dichloroflmethane	0.00	67	0	N.D.
8) Trichlorofma	0.00	101	0	N.D.
9) Ethylether	0.00	59	0	N.D.
10) dichlorotfluoroethan	0.00	67	0	N.D.
11) propyleneoxide	0.00	58	0	N.D.
12) Acrolein	0.00	56	0	N.D.
13) 11dichlorthe	0.00	96	0	N.D.
14) Trichlorotfluoroeth	0.00	101	0	N.D.
15) Acetone	4.07	43	6352	N.D.
16) Iodomethane	0.00	142	0	N.D.
17) Carbon Dislf	4.25	76	2586	N.D.
18) allylchloride	0.00	41	0	N.D.
19) methylacetate	0.00	74	0	N.D.
20) Methylchlorid	0.00	84	0	N.D.
21) tbutylalcohol	4.84	59	3544	N.D.
22) Acrylonitrile	0.00	53	0	N.D.
23) t12dichlorte	0.00	96	0	N.D.
24) MtBE	0.00	73	0	N.D.
25) Hexane	0.00	57	0	N.D.
26) 11dichlorota	0.00	63	0	N.D.
27) Vinylacetate	0.00	43	0	N.D.
28) chloroprene	0.00	53	0	N.D.
29) Diisopether	0.00	45	0	N.D.
30) ETBE	0.00	59	0	N.D.
31) 22dichloropr	0.00	77	0	N.D.
32) c12dichlorte	0.00	96	0	N.D.
33) 2Butanone	0.00	72	0	N.D.
34) propionitrile	0.00	54	0	N.D.
35) Ethylacetate	0.00	88	0	N.D.
36) methacrylonitrile	0.00	67	0	N.D.
37) Bromochlorma	0.00	128	0	N.D.
38) Tetrahydofur	0.00	42	0	N.D.

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136204.D Vial: 16
Acq On : 5 May 2022 13:55 Operator: DGS-RLD
Sample : 211603,1136204, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 14:16:18 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	12410	0.6848	ug/L	96
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	10.63	43	3126	Below	Cal #	29
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	14.68	105	2504	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.45	91	3837	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136204.D Vial: 16
Acq On : 5 May 2022 13:55 Operator: DGS-RLD
Sample : 211603,1136204, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 14:16:18 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.01	128	3392	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

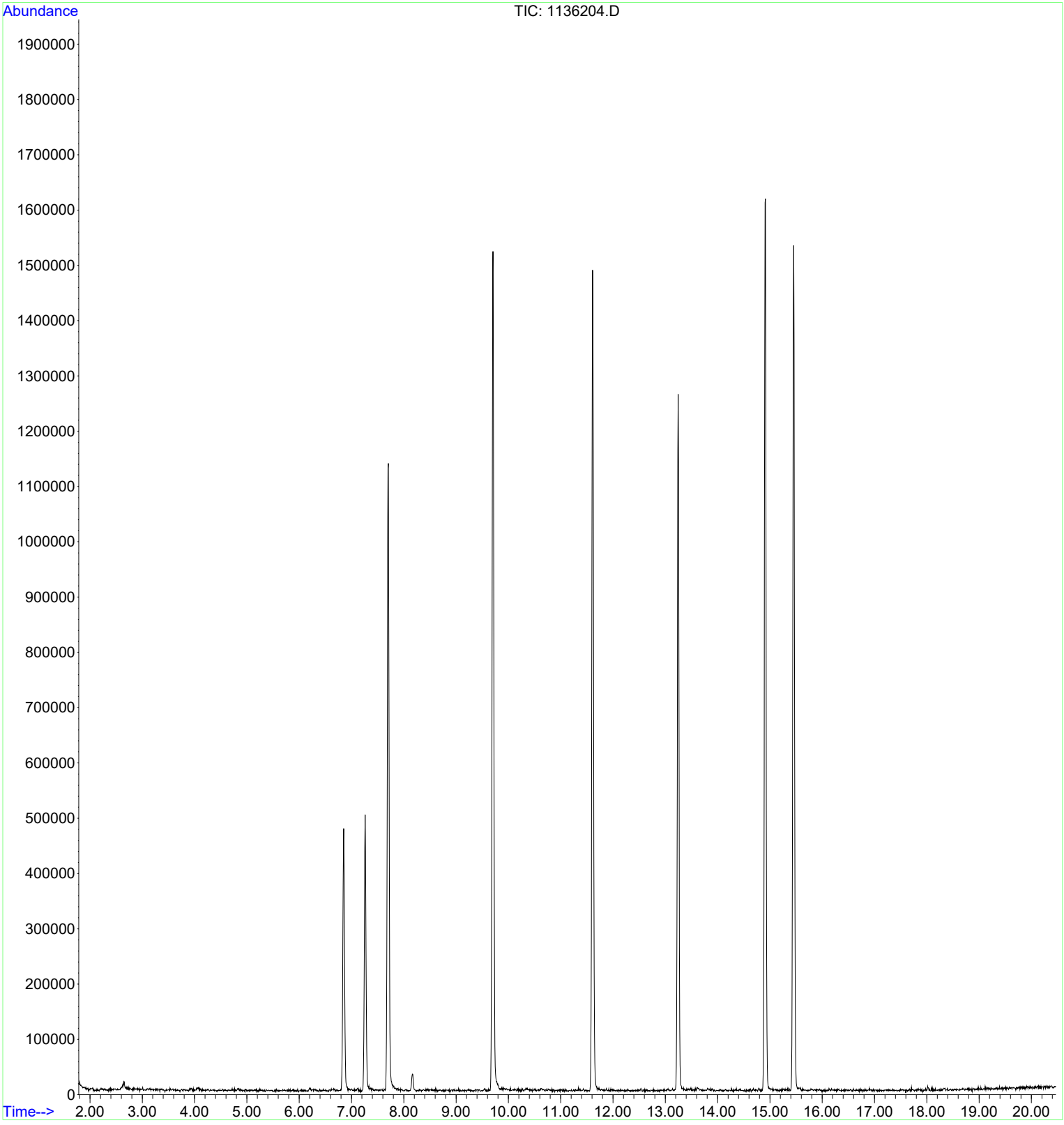
(#) = qualifier out of range (m) = manual integration

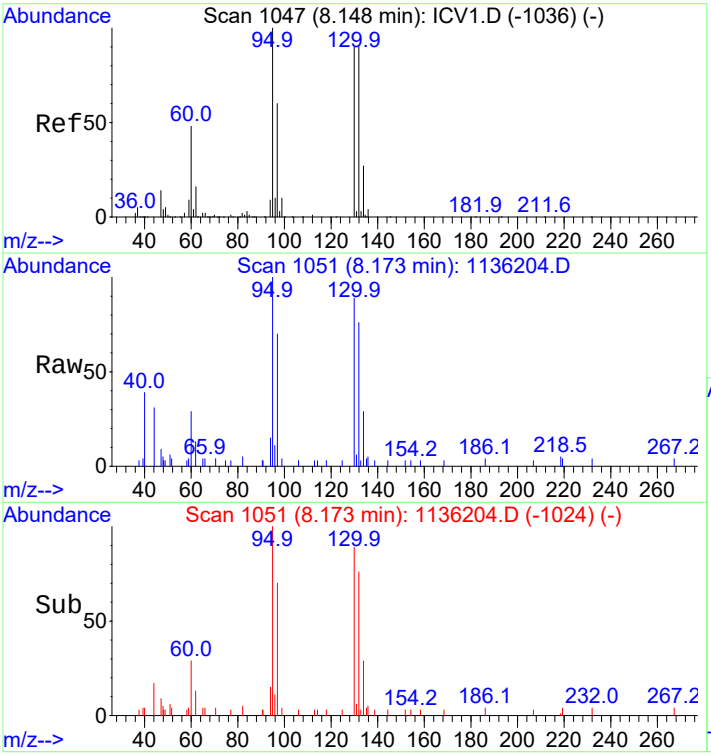
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136204.D Vial: 16
Acq On : 5 May 2022 13:55 Operator: DGS-RLD
Sample : 211603,1136204, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 14:16:18 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

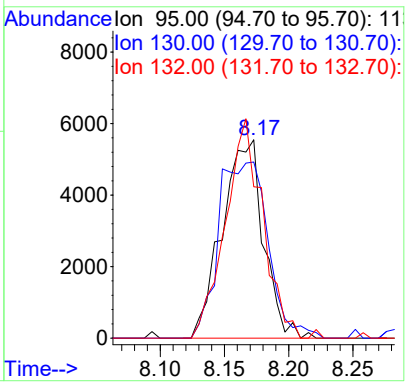




#49
trichloroete
Concen: 0.68 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. 0.01 min
Lab File: 1136204.D
Acq: 5 May 2022 13:55

Tgt Ion: 95 Resp: 12410

Ion	Ratio	Lower	Upper
95	100		
130	106.5	83.7	123.7
132	99.8	74.4	114.4



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136205.D Vial: 17
Acq On : 5 May 2022 14:24 Operator: DGS-RLD
Sample : 211603,1136205, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 14:45:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1245938	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1060062	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	578963	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	344057	20.774 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %		
45) SURR12DCAd4	7.27	102	89621	20.284 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %		
61) SURRd8Tolule	9.71	98	1318142	20.227 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	570606	19.918 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	3.26	101	7097	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	6043	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	2831	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.84	59	3184	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136205.D Vial: 17
Acq On : 5 May 2022 14:24 Operator: DGS-RLD
Sample : 211603,1136205, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 14:45:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	18697	0.6110 ug/L	99
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.12	119	116611	6.0326 ug/L	100
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.16	95	17431	0.9518 ug/L	95
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3000	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136205.D Vial: 17
Acq On : 5 May 2022 14:24 Operator: DGS-RLD
Sample : 211603,1136205, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 14:45:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

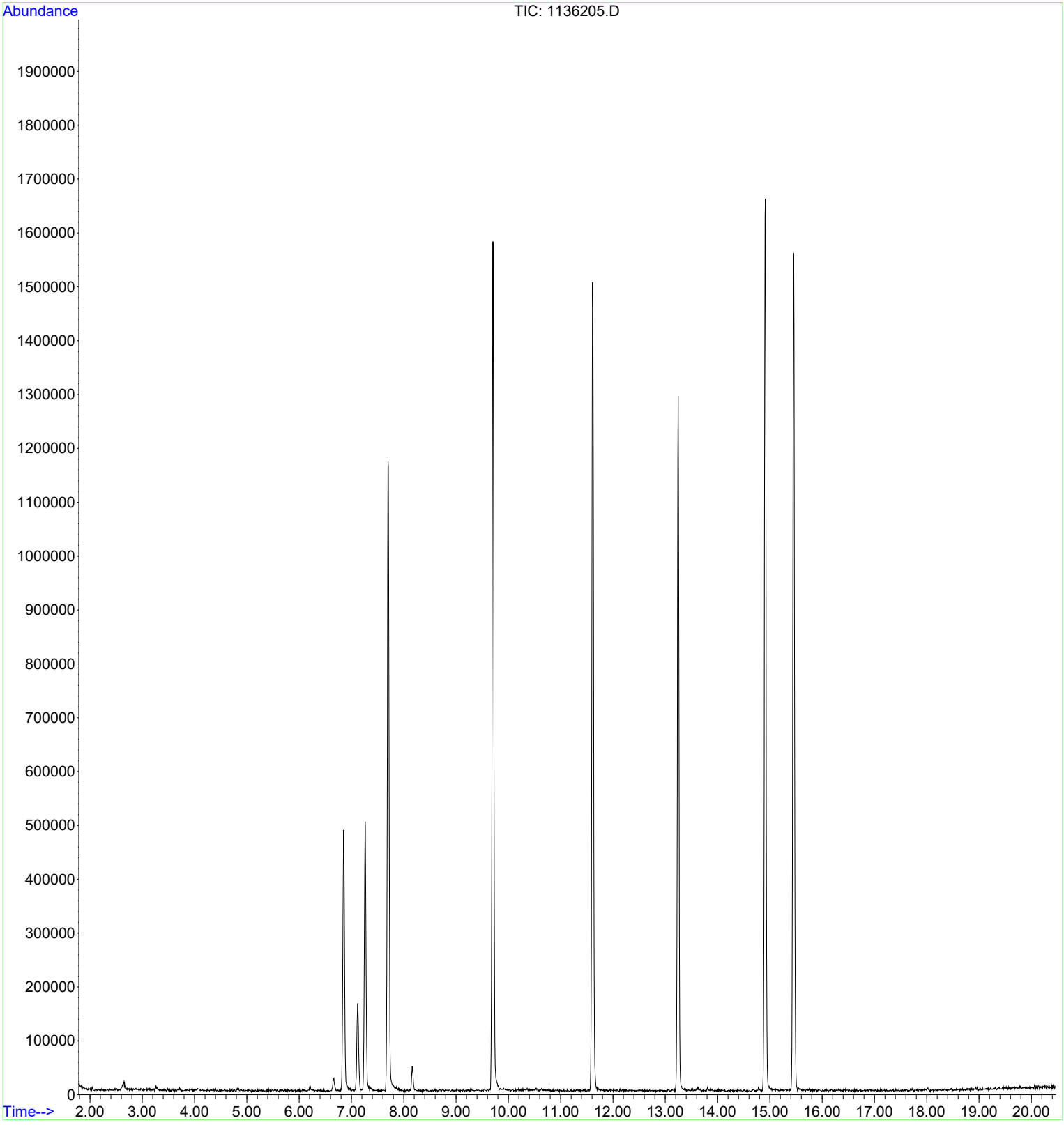
(#) = qualifier out of range (m) = manual integration

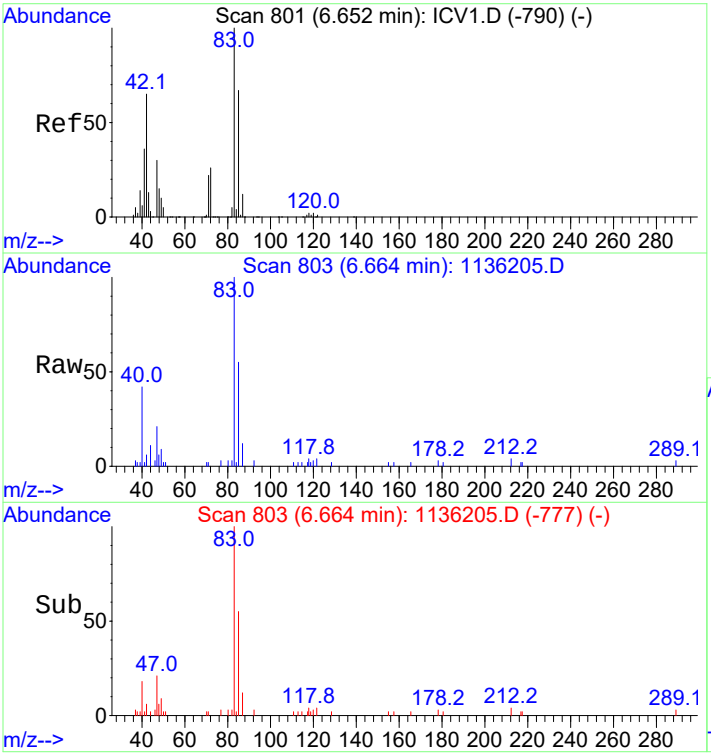
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136205.D Vial: 17
Acq On : 5 May 2022 14:24 Operator: DGS-RLD
Sample : 211603,1136205, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 14:45:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

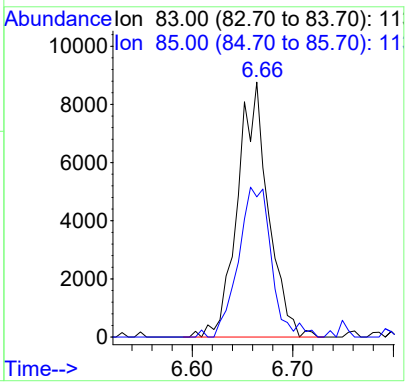


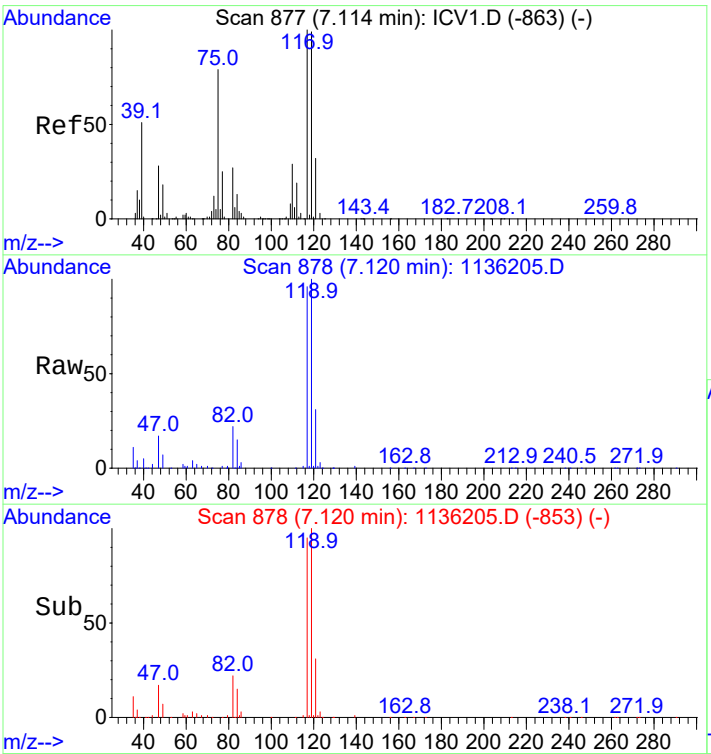


#39
Chloroform
Concen: 0.61 ug/L
RT: 6.66 min Scan# 803
Delta R.T. 0.01 min
Lab File: 1136205.D
Acq: 5 May 2022 14:24

Tgt Ion: 83 Resp: 18697

Ion	Ratio	Lower	Upper
83	100		
85	62.9	44.0	84.0

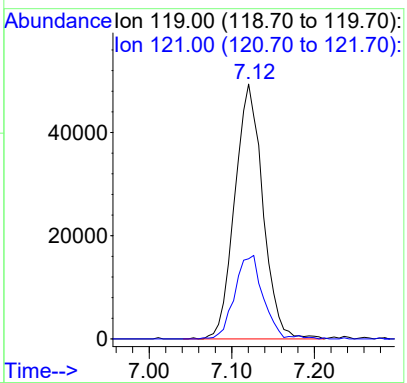


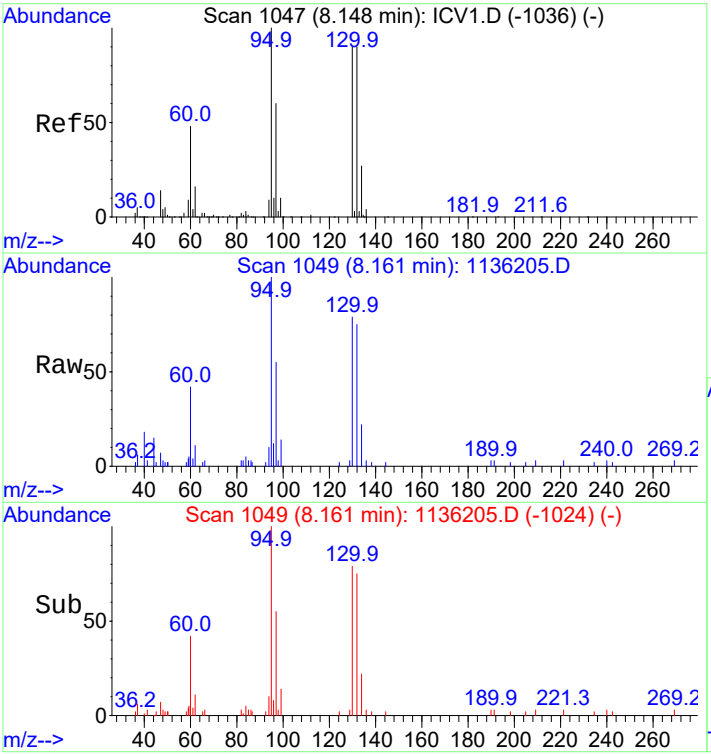


#43
Carbtetraclo
Concen: 6.03 ug/L
RT: 7.12 min Scan# 878
Delta R.T. -0.00 min
Lab File: 1136205.D
Acq: 5 May 2022 14:24

Tgt Ion:119 Resp: 116611

Ion	Ratio	Lower	Upper
119	100		
121	33.6	13.5	53.5

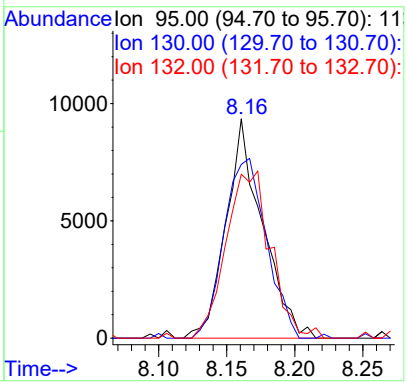




#49
trichloroete
Concen: 0.95 ug/L
RT: 8.16 min Scan# 1049
Delta R.T. -0.00 min
Lab File: 1136205.D
Acq: 5 May 2022 14:24

Tgt Ion: 95 Resp: 17431

Ion	Ratio	Lower	Upper
95	100		
130	95.1	83.7	123.7
132	92.8	74.4	114.4



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136206.D Vial: 18
Acq On : 5 May 2022 14:53 Operator: DGS-RLD
Sample : 211603,1136206, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 15:14:17 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1234165	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1048729	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	564327	20.00 ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.85	113	335400	20.445 ug/L	0.00	
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	85528	19.542 ug/L	0.00	
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %			
61) SURRd8Tolule	9.71	98	1298401	20.114 ug/L	0.00	
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.25	95	570341	20.425 ug/L	0.00	
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.05	43	4669	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	2763	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136206.D Vial: 18
Acq On : 5 May 2022 14:53 Operator: DGS-RLD
Sample : 211603,1136206, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 15:14:17 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.12	119	14097	0.7362 ug/L	99
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3098	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.49	91	3634	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136206.D Vial: 18
Acq On : 5 May 2022 14:53 Operator: DGS-RLD
Sample : 211603,1136206, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 15:14:17 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

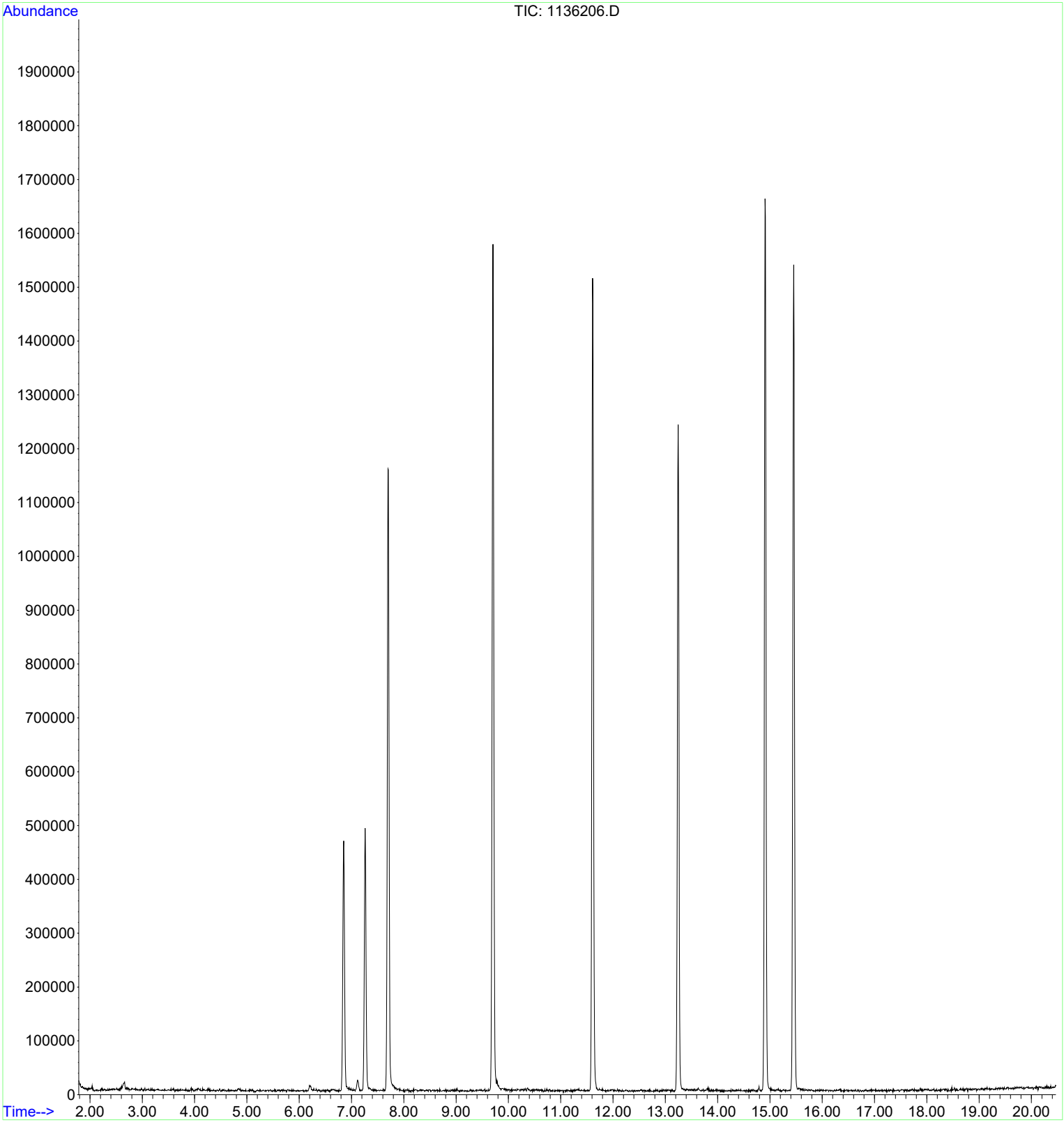
(#) = qualifier out of range (m) = manual integration

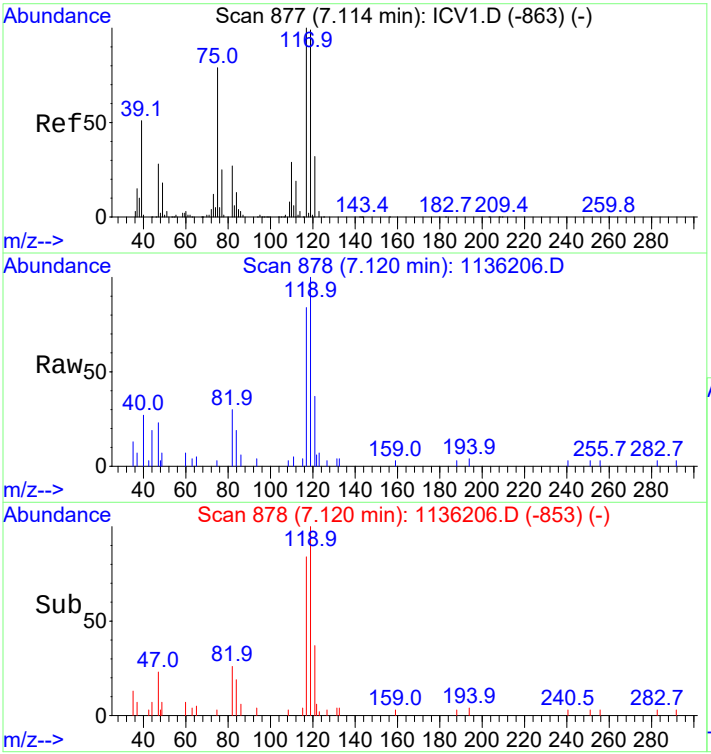
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136206.D Vial: 18
Acq On : 5 May 2022 14:53 Operator: DGS-RLD
Sample : 211603,1136206, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 15:14:17 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

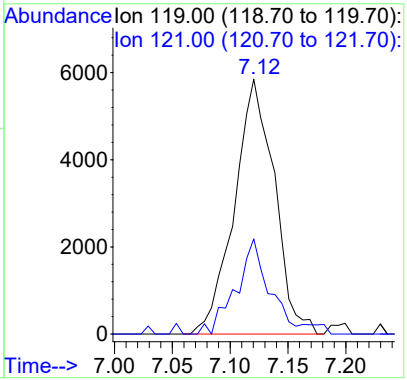




#43
Carbtetraclo
Concen: 0.74 ug/L
RT: 7.12 min Scan# 878
Delta R.T. -0.00 min
Lab File: 1136206.D
Acq: 5 May 2022 14:53

Tgt Ion:119 Resp: 14097

Ion	Ratio	Lower	Upper
119	100		
121	32.9	13.5	53.5



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136207.D Vial: 19
Acq On : 5 May 2022 15:22 Operator: DGS-RLD
Sample : 211603,1136207, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 15:43:15 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1222315	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1052667	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	570603	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	334660	20.597	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.26	102	85880	19.813	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1302520	20.374	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.25	95	558568	19.783	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	5072	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136207.D Vial: 19
Acq On : 5 May 2022 15:22 Operator: DGS-RLD
Sample : 211603,1136207, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 15:43:15 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.11	119	13186	0.6953 ug/L	98
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.61	91	2871	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136207.D Vial: 19
Acq On : 5 May 2022 15:22 Operator: DGS-RLD
Sample : 211603,1136207, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 15:43:15 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

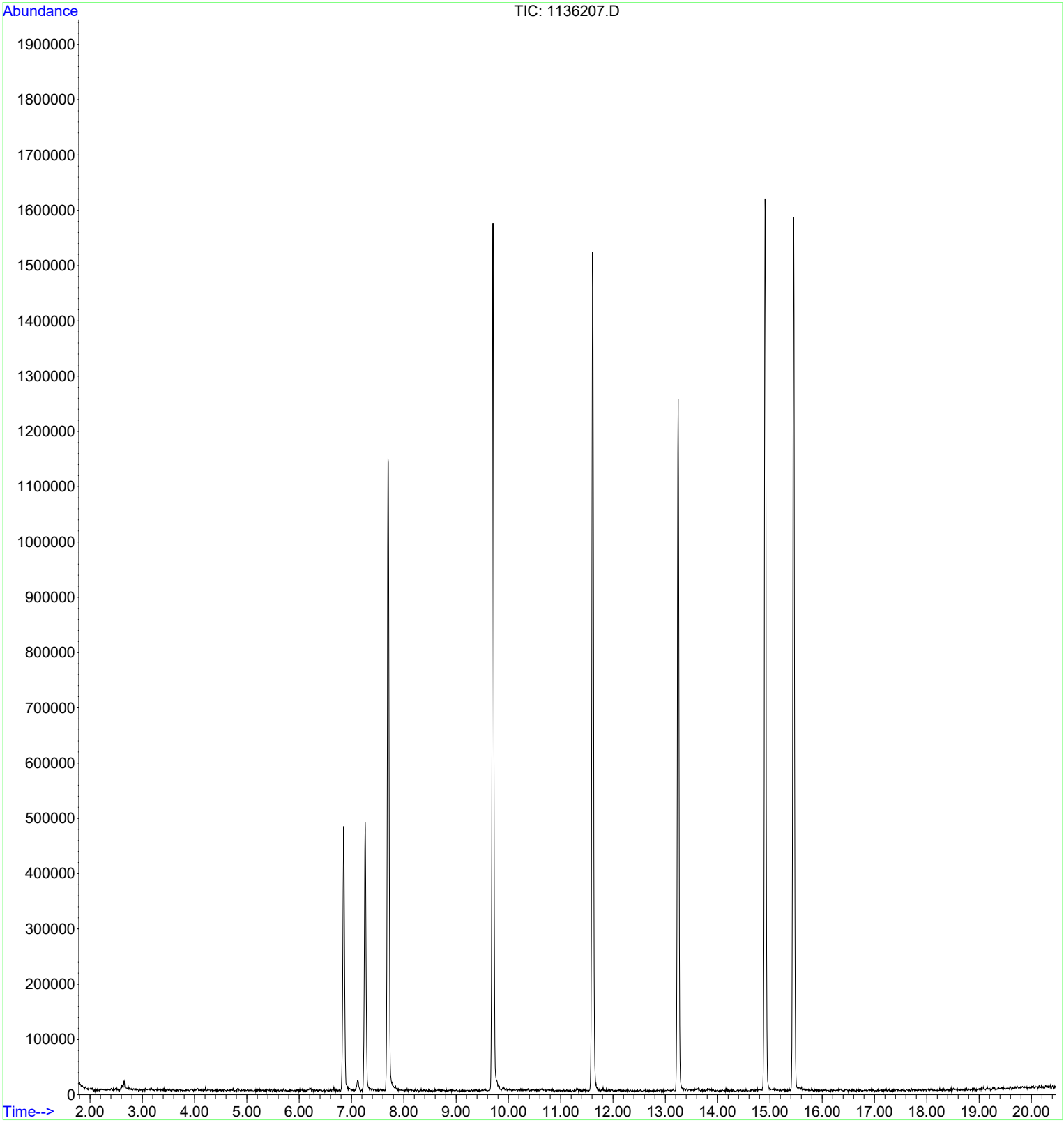
(#) = qualifier out of range (m) = manual integration

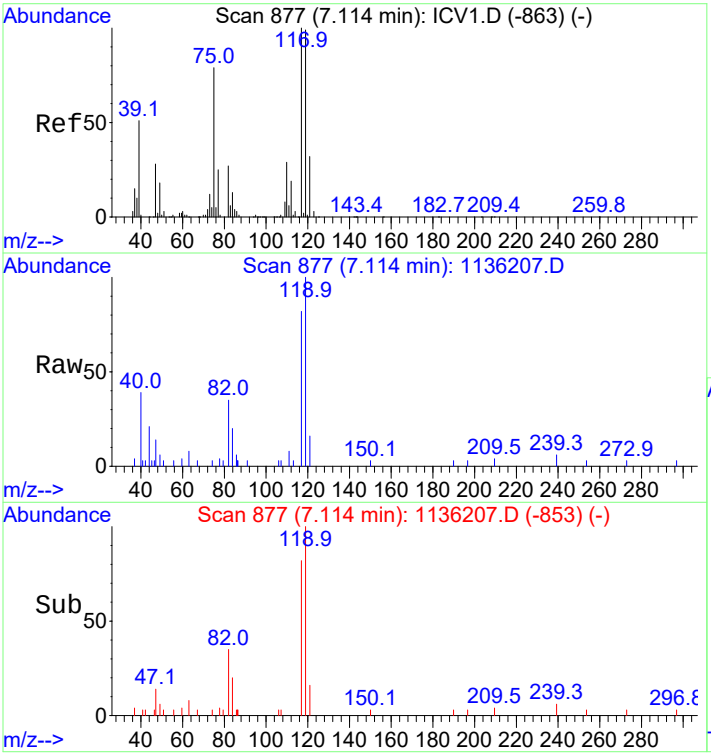
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136207.D Vial: 19
Acq On : 5 May 2022 15:22 Operator: DGS-RLD
Sample : 211603,1136207, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 15:43:15 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

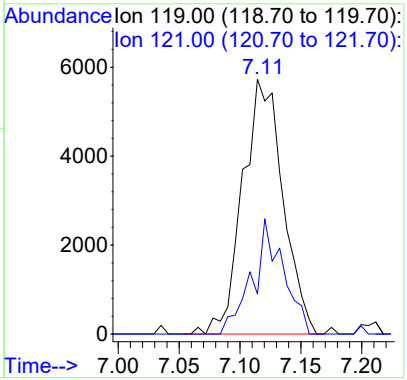




#43
Carbtetraclo
Concen: 0.70 ug/L
RT: 7.11 min Scan# 877
Delta R.T. -0.01 min
Lab File: 1136207.D
Acq: 5 May 2022 15:22

Tgt Ion:119 Resp: 13186

Ion	Ratio	Lower	Upper
119	100		
121	34.7	13.5	53.5



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136208.D Vial: 20
Acq On : 5 May 2022 15:51 Operator: DGS-RLD
Sample : 211603,1136208, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 16:12:23 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1245357	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1059701	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	575678	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	339419	20.504 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %		
45) SURR12DCAd4	7.26	102	89578	20.284 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %		
61) SURRd8Tolule	9.71	98	1315912	20.202 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	567036	19.906 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	5325	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.24	76	2722	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.86	59	3574	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136208.D Vial: 20
Acq On : 5 May 2022 15:51 Operator: DGS-RLD
Sample : 211603,1136208, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 16:12:23 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.45	91	2804	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136208.D Vial: 20
Acq On : 5 May 2022 15:51 Operator: DGS-RLD
Sample : 211603,1136208, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 16:12:23 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

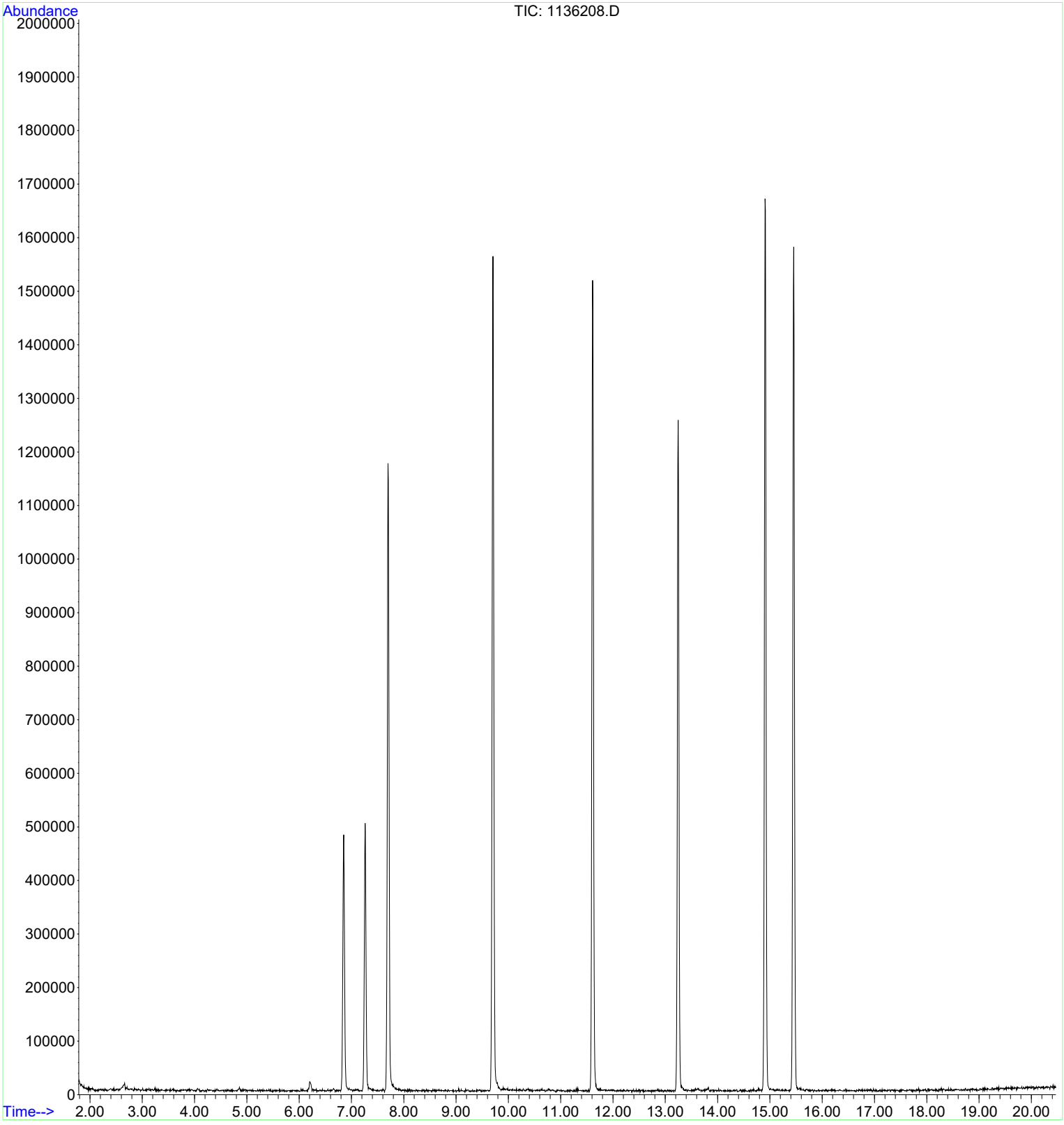
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136208.D Vial: 20
Acq On : 5 May 2022 15:51 Operator: DGS-RLD
Sample : 211603,1136208, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 16:12:23 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136213.D Vial: 21
Acq On : 5 May 2022 16:20 Operator: DGS-RLD
Sample : 211603,1136213, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 16:41:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1228717	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1049133	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	570058	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	335273	20.527 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %		
45) SURR12DCAd4	7.27	102	87090	19.987 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %		
61) SURRd8Tolule	9.71	98	1298761	20.209 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	551368	19.547 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	4876	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136213.D Vial: 21
Acq On : 5 May 2022 16:20 Operator: DGS-RLD
Sample : 211603,1136213, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 16:41:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.60	91	2673	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136213.D Vial: 21
Acq On : 5 May 2022 16:20 Operator: DGS-RLD
Sample : 211603,1136213, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 16:41:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

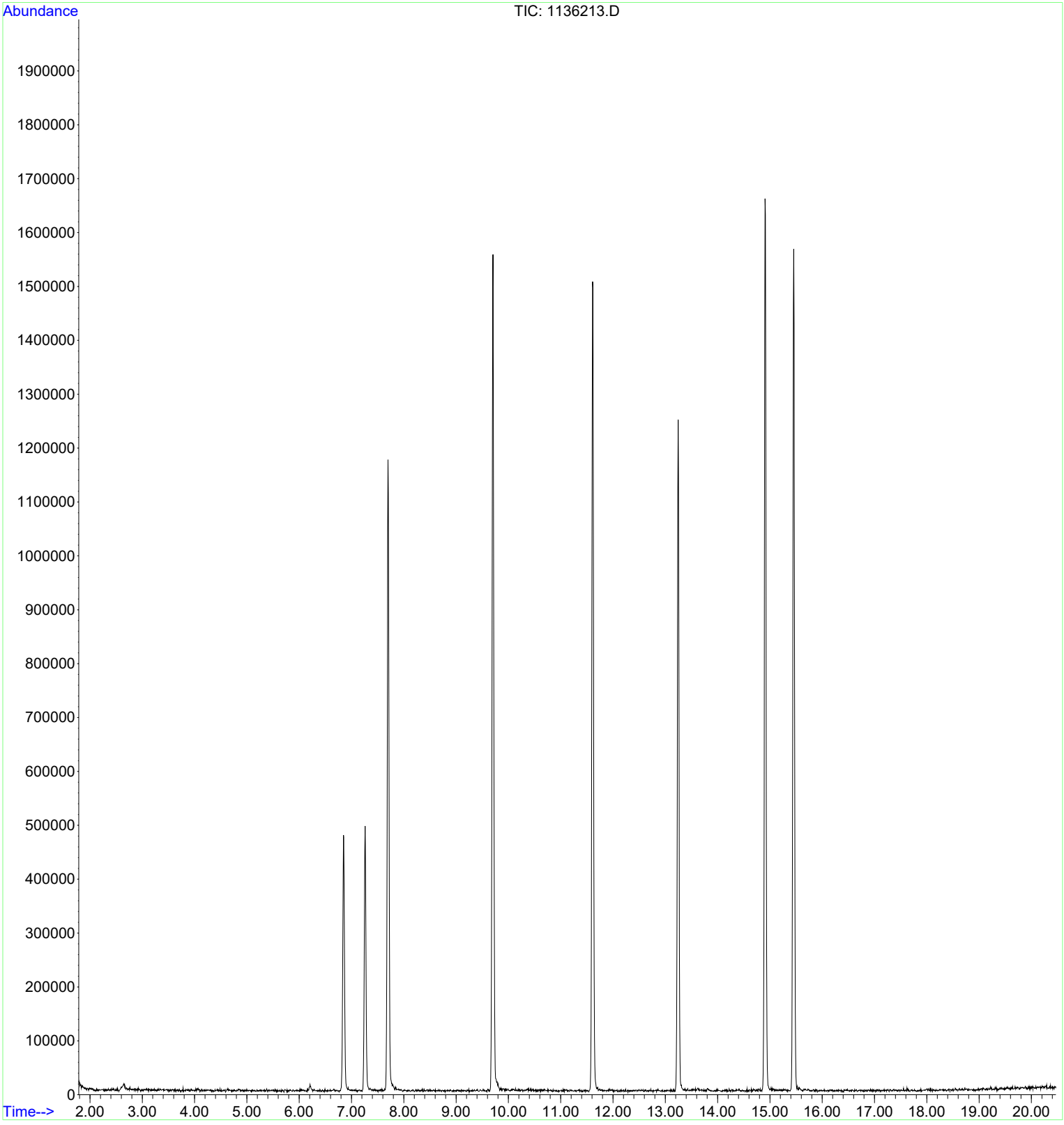
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136213.D Vial: 21
Acq On : 5 May 2022 16:20 Operator: DGS-RLD
Sample : 211603,1136213, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 16:41:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136214.D Vial: 22
Acq On : 5 May 2022 16:49 Operator: DGS-RLD
Sample : 211603,1136214, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 17:09:57 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1235756	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1070487	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	579684	20.00 ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.85	113	339591	20.673 ug/L	0.00	
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %			
45) SURR12DCAd4	7.26	102	89036	20.318 ug/L	0.00	
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %			
61) SURRd8Tolule	9.71	98	1316476	20.368 ug/L	0.00	
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.25	95	562830	19.622 ug/L	0.00	
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	4548	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	3097	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136214.D Vial: 22
Acq On : 5 May 2022 16:49 Operator: DGS-RLD
Sample : 211603,1136214, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 17:09:57 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.79	92	4257	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2884	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.46	91	2557	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136214.D Vial: 22
Acq On : 5 May 2022 16:49 Operator: DGS-RLD
Sample : 211603,1136214, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 17:09:57 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

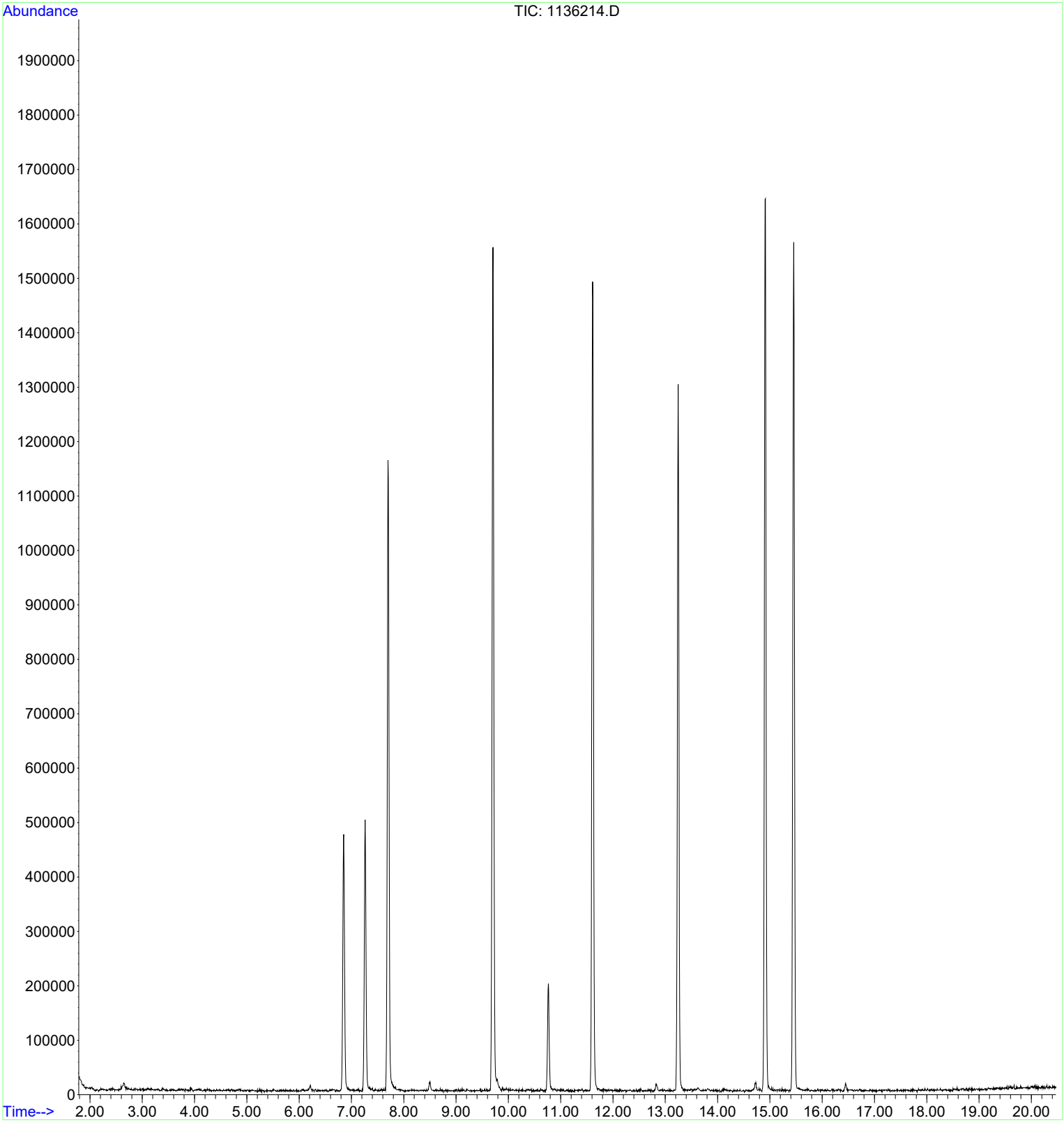
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136214.D Vial: 22
Acq On : 5 May 2022 16:49 Operator: DGS-RLD
Sample : 211603,1136214, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 17:09:57 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136215.D Vial: 23
Acq On : 5 May 2022 17:18 Operator: DGS-RLD
Sample : 211603,1136215,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

NOT USED

Quant Time: May 05 17:38:47 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1231706	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1049594	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	575670	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	338375	20.667 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %		
45) SURR12DCAd4	7.26	102	89360	20.459 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %		
61) SURRd8Tolule	9.71	98	1305262	20.261 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	566700	19.895 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.05	43	8030	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	2951	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.64	84	3493	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136215.D Vial: 23
Acq On : 5 May 2022 17:18 Operator: DGS-RLD
Sample : 211603,1136215,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 17:38:47 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	51766	1.7111	ug/L	99
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.11	119	227539	11.9073	ug/L	99
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	7.36	62	2635	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.16	95	39246	2.1677	ug/L	97
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	2981	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.45	91	3196	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136215.D Vial: 23
Acq On : 5 May 2022 17:18 Operator: DGS-RLD
Sample : 211603,1136215,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 17:38:47 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

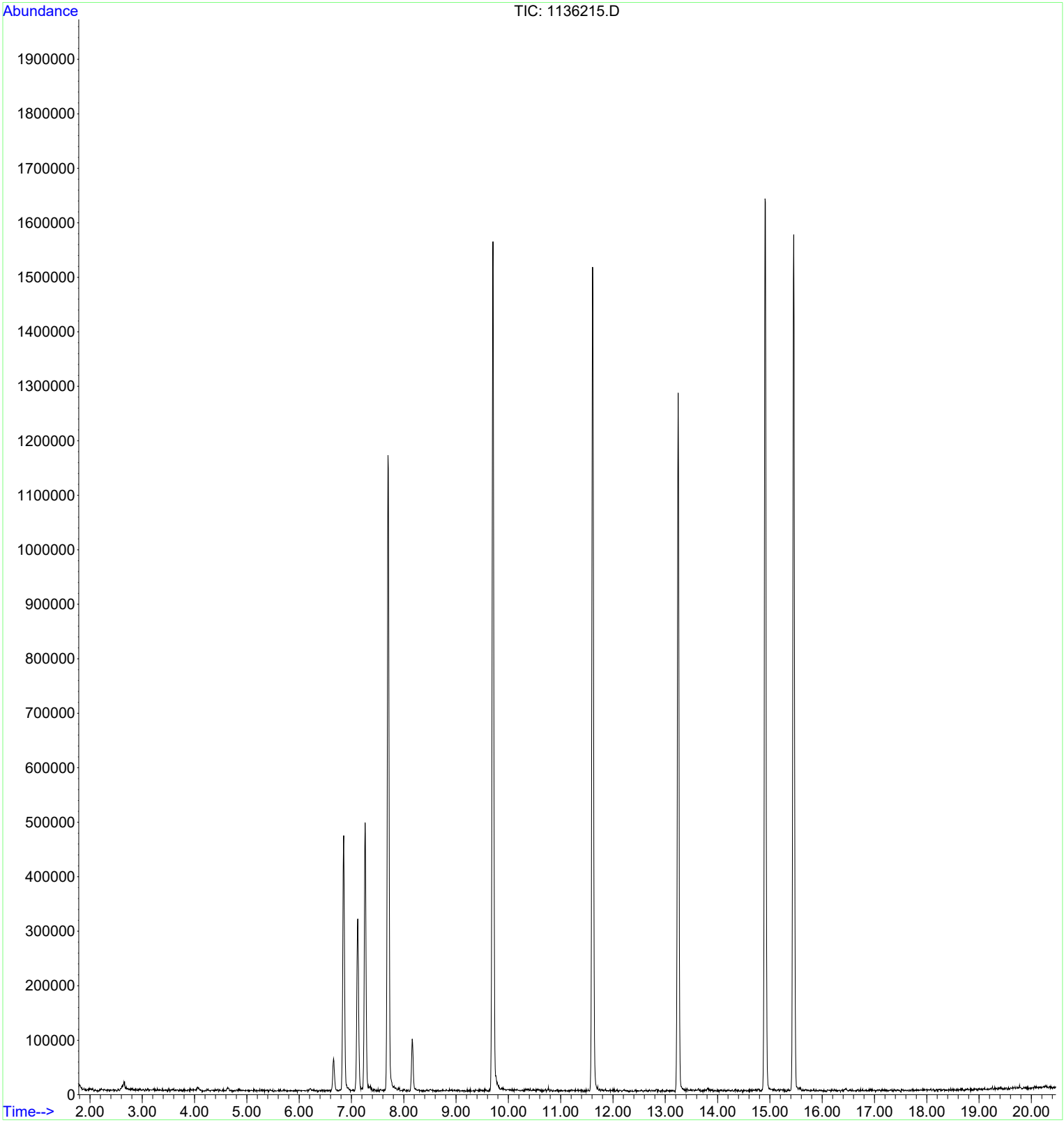
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136215.D Vial: 23
Acq On : 5 May 2022 17:18 Operator: DGS-RLD
Sample : 211603,1136215,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 17:38:47 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136216.D Vial: 24
Acq On : 5 May 2022 17:47 Operator: DGS-RLD
Sample : 211603,1136216, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 18:07:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1221702	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1060089	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	579493	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	334733	20.612 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %		
45) SURR12DCAd4	7.27	102	87354	20.163 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %		
61) SURRd8Tolule	9.71	98	1298541	20.322 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %		
83) SURR4BrFBenz	13.25	95	571240	19.922 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	5236	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	3258	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136216.D Vial: 24
Acq On : 5 May 2022 17:47 Operator: DGS-RLD
Sample : 211603,1136216, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 18:07:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	100545	3.3506	ug/L	97
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.12	119	542943	28.6453	ug/L	99
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	31340	1.7452	ug/L	97
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.80	92	3494	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.61	91	2980	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136216.D Vial: 24
Acq On : 5 May 2022 17:47 Operator: DGS-RLD
Sample : 211603,1136216, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 18:07:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

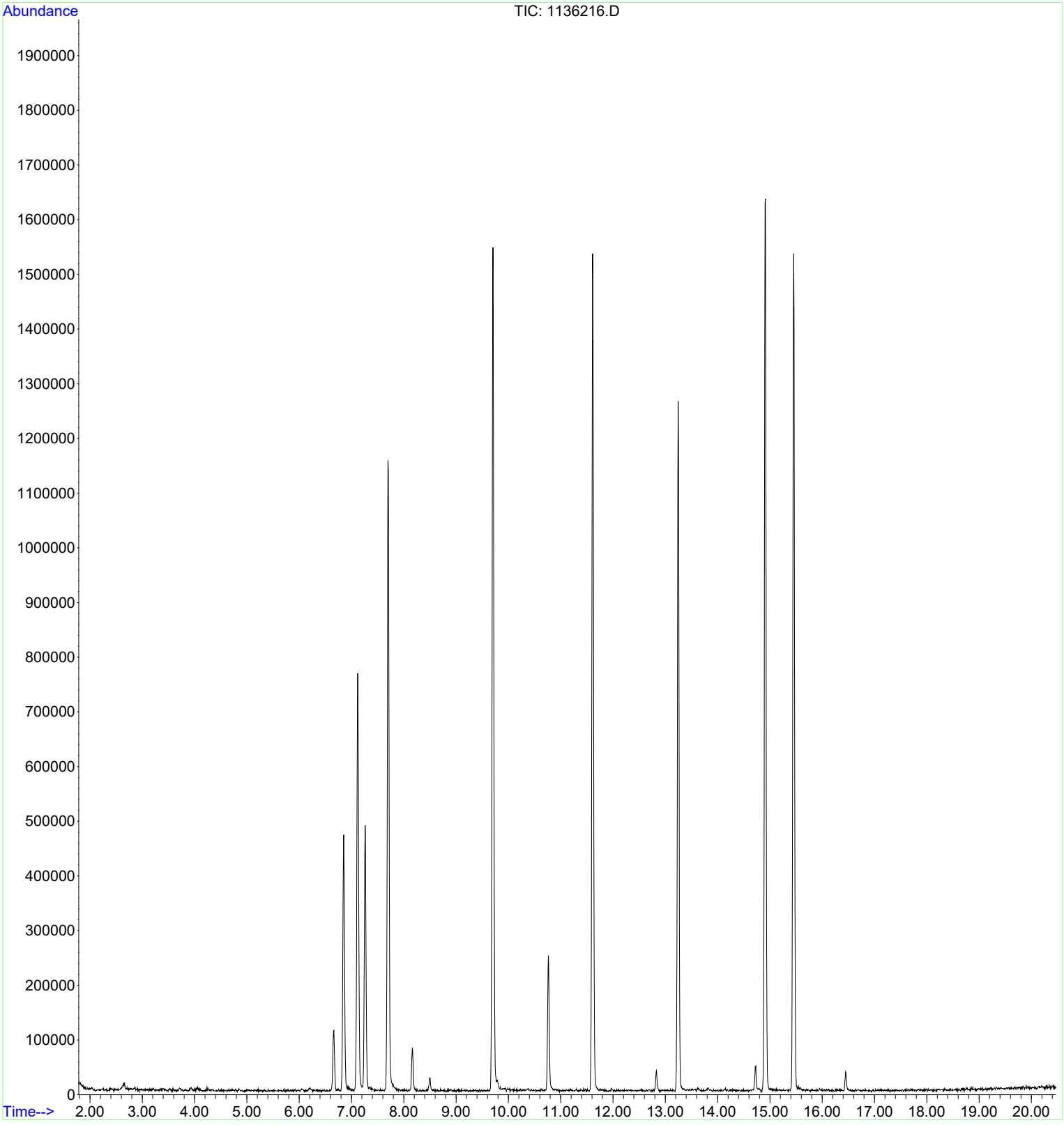
(#) = qualifier out of range (m) = manual integration

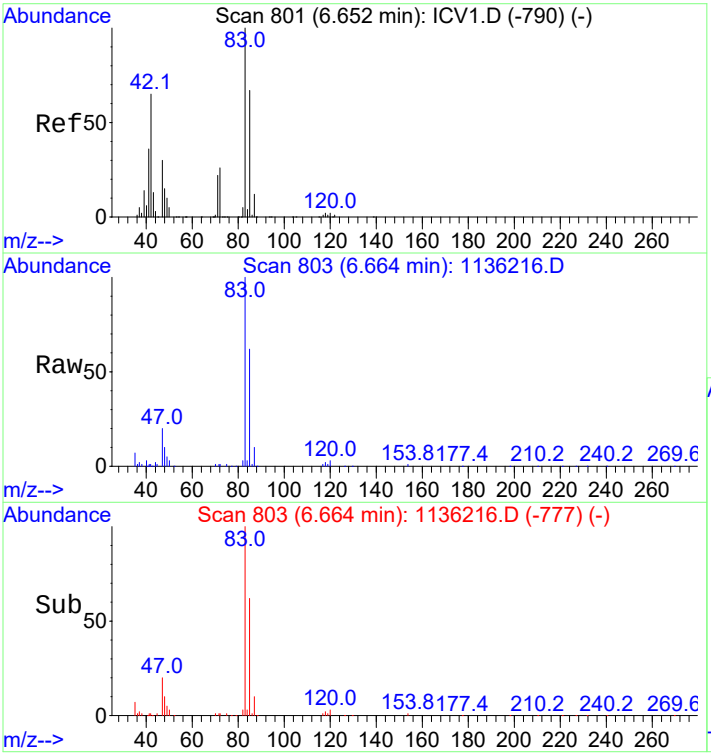
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136216.D Vial: 24
Acq On : 5 May 2022 17:47 Operator: DGS-RLD
Sample : 211603,1136216, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 18:07:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

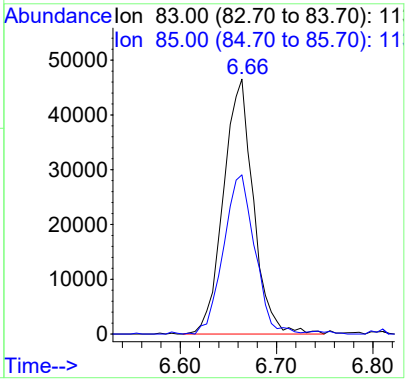


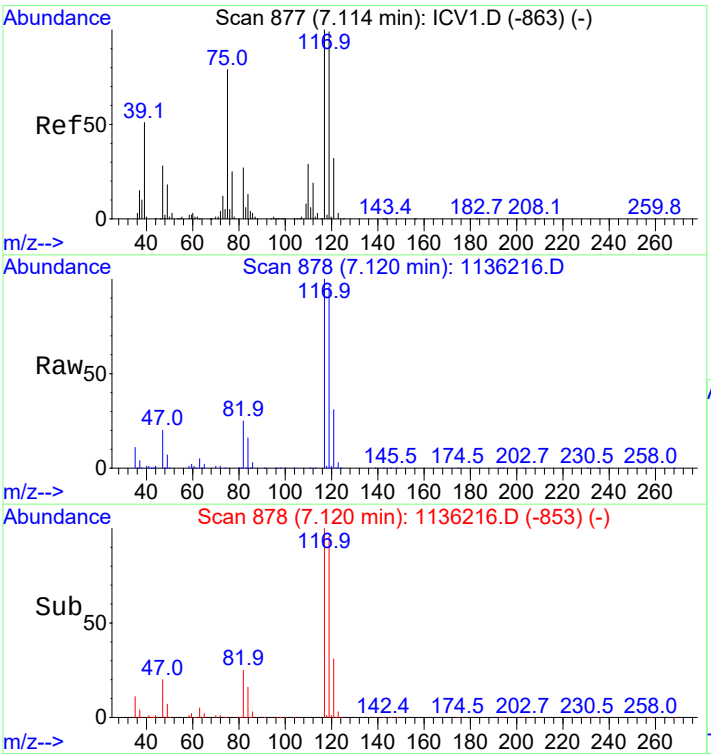


#39
Chloroform
Concen: 3.35 ug/L
RT: 6.66 min Scan# 803
Delta R.T. 0.01 min
Lab File: 1136216.D
Acq: 5 May 2022 17:47

Tgt Ion: 83 Resp: 100545

Ion	Ratio	Lower	Upper
83	100		
85	66.0	44.0	84.0

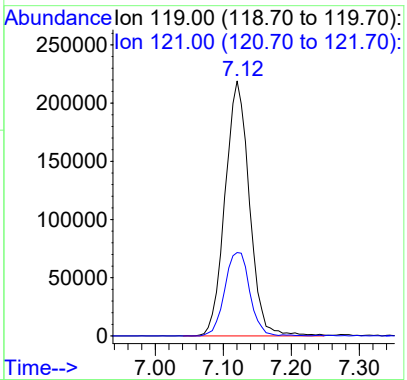


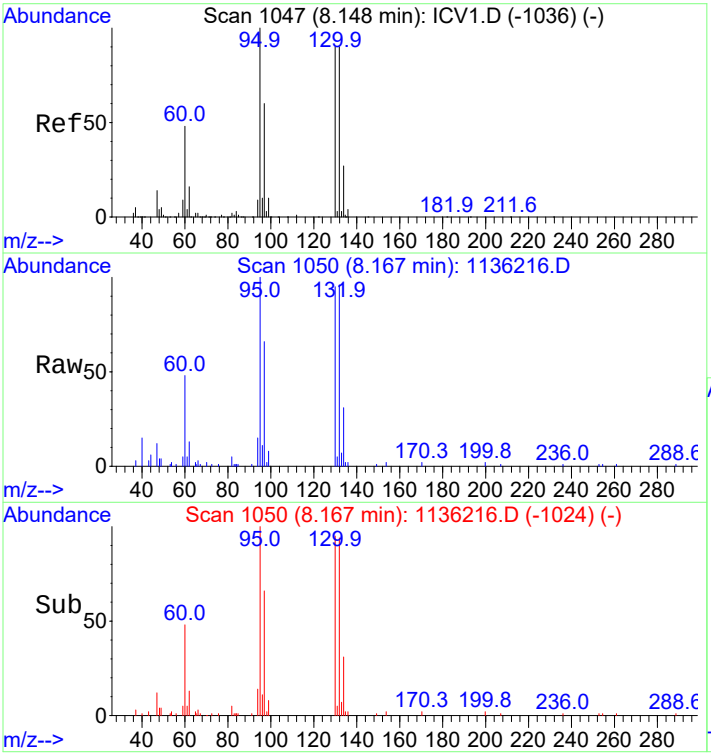


#43
Carbtetraclo
Concen: 28.65 ug/L
RT: 7.12 min Scan# 878
Delta R.T. -0.00 min
Lab File: 1136216.D
Acq: 5 May 2022 17:47

Tgt Ion:119 Resp: 542943

Ion	Ratio	Lower	Upper
119	100		
121	33.9	13.5	53.5

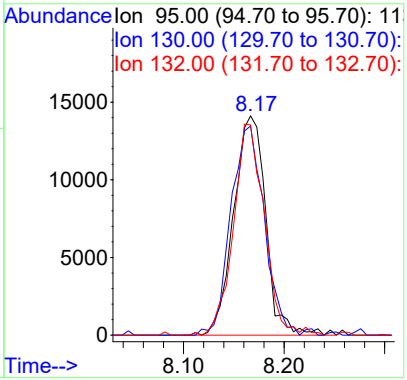




#49
trichloroete
Concen: 1.75 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. 0.01 min
Lab File: 1136216.D
Acq: 5 May 2022 17:47

Tgt Ion: 95 Resp: 31340

Ion	Ratio	Lower	Upper
95	100		
130	98.8	83.7	123.7
132	93.0	74.4	114.4



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136217.D Vial: 25
Acq On : 5 May 2022 18:15 Operator: DGS-RLD
Sample : 211603,1136217, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 18:36:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1245475	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1075295	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	591155	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	332124	20.061 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
45) SURR12DCAd4	7.27	102	91199	20.649 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %		
61) SURRd8Tolule	9.71	98	1320036	20.264 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	580929	19.860 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	4938	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	3052	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.53	63	32147	1.0280 ug/L	94
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	6.26	96	38110	1.9948 ug/L	90
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136217.D Vial: 25
Acq On : 5 May 2022 18:15 Operator: DGS-RLD
Sample : 211603,1136217, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 18:36:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	6.90	97	3029	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	26531	1.4492	ug/L	94
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.53	166	5090	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.60	91	2708	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136217.D Vial: 25
Acq On : 5 May 2022 18:15 Operator: DGS-RLD
Sample : 211603,1136217, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 18:36:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

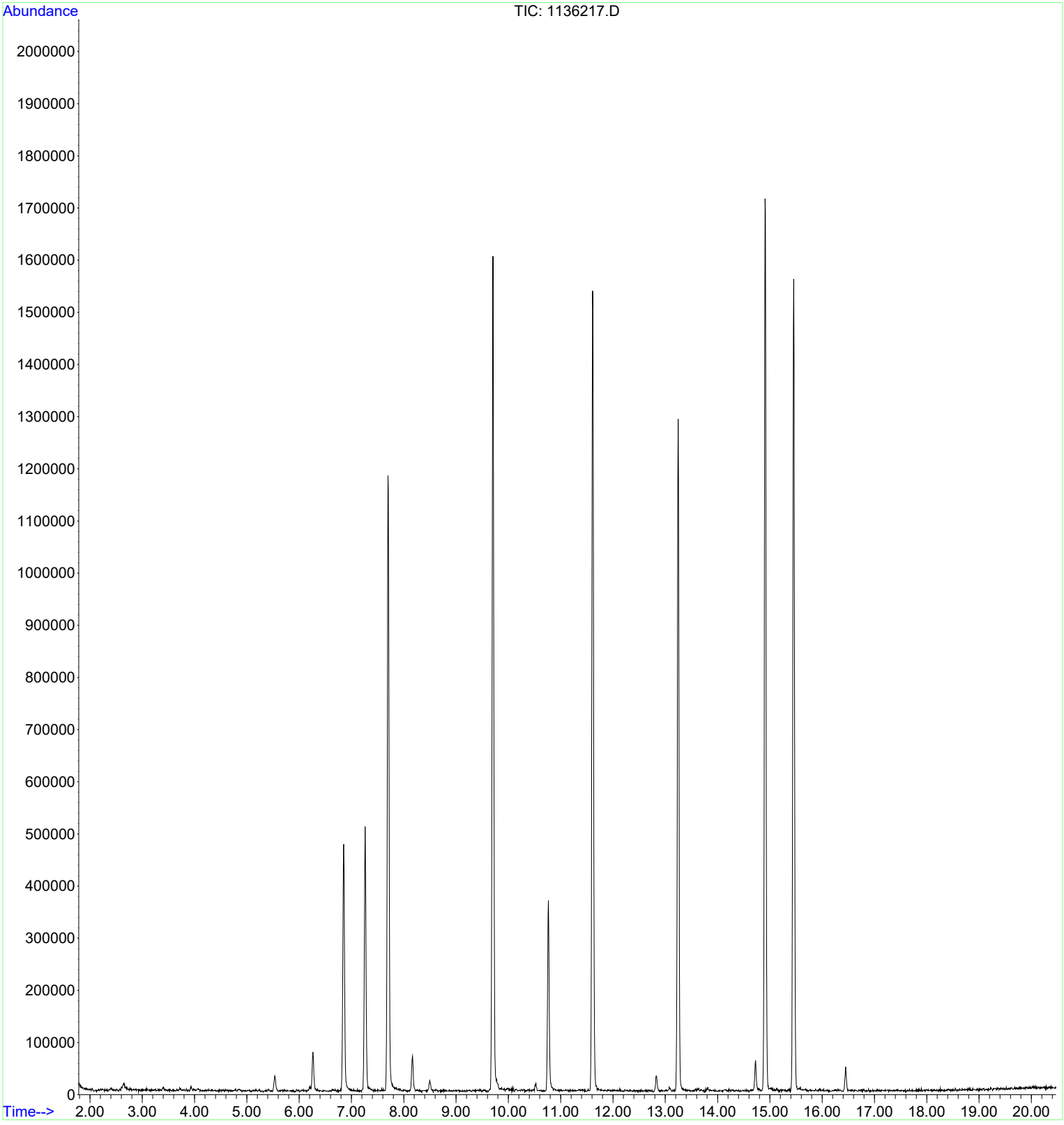
(#) = qualifier out of range (m) = manual integration

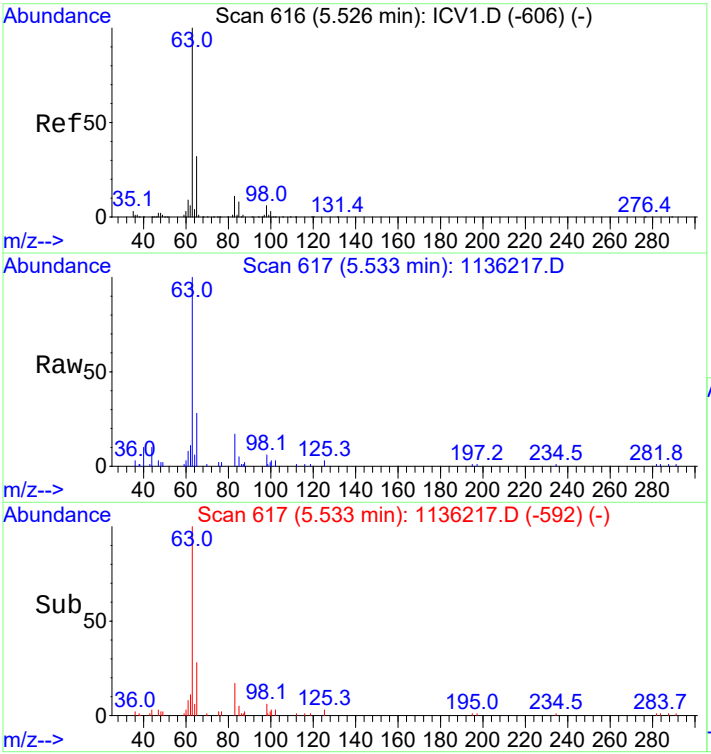
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136217.D Vial: 25
Acq On : 5 May 2022 18:15 Operator: DGS-RLD
Sample : 211603,1136217, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 18:36:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

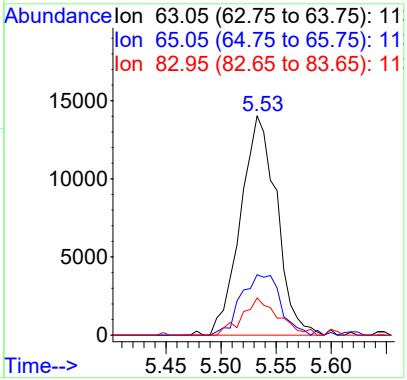


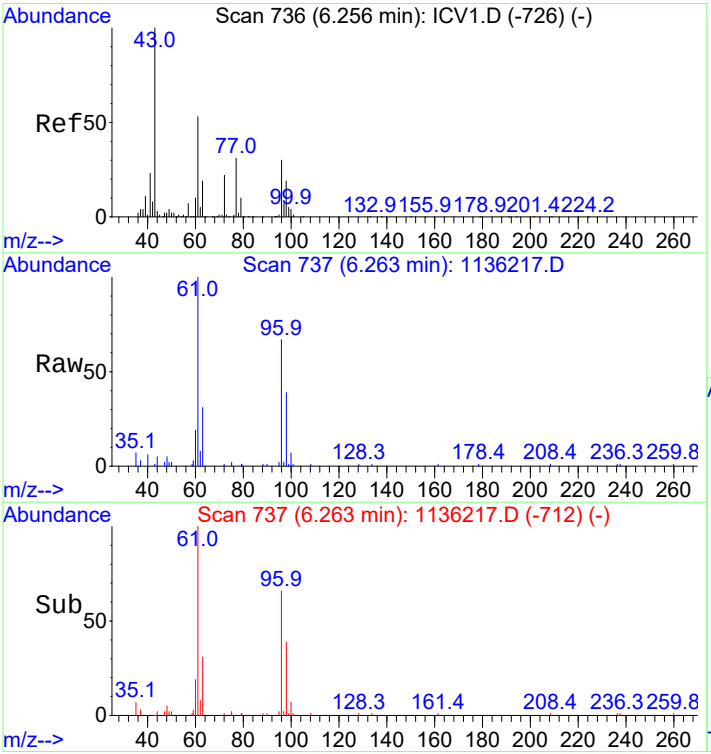


#26
11dichlorota
Concen: 1.03 ug/L
RT: 5.53 min Scan# 617
Delta R.T. 0.00 min
Lab File: 1136217.D
Acq: 5 May 2022 18:15

Tgt Ion: 63 Resp: 32147

Ion	Ratio	Lower	Upper
63	100		
65	30.0	12.9	52.9
83	16.8	0.0	33.6

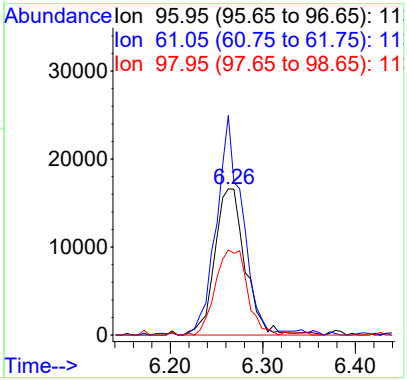


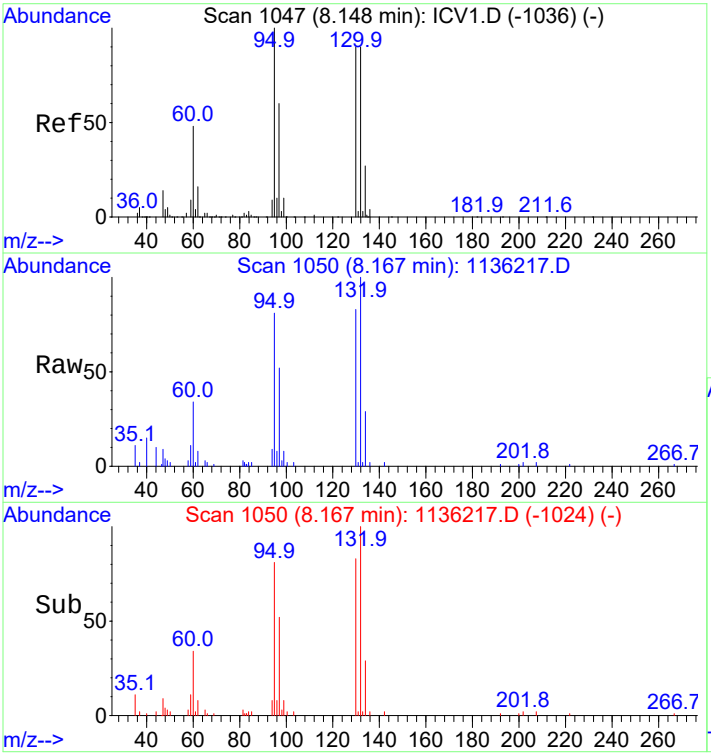


#32
c12dichlorte
Concen: 1.99 ug/L
RT: 6.26 min Scan# 737
Delta R.T. 0.00 min
Lab File: 1136217.D
Acq: 5 May 2022 18:15

Tgt Ion: 96 Resp: 38110

Ion	Ratio	Lower	Upper
96	100		
61	128.9	122.9	162.9
98	60.6	45.6	85.6

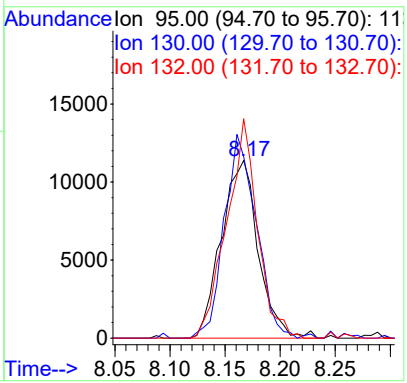




#49
trichloroete
Concen: 1.45 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. 0.01 min
Lab File: 1136217.D
Acq: 5 May 2022 18:15

Tgt Ion: 95 Resp: 26531

Ion	Ratio	Lower	Upper
95	100		
130	99.6	83.7	123.7
132	103.2	74.4	114.4



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136588.D Vial: 26
Acq On : 5 May 2022 18:45 Operator: DGS-RLD
Sample : 211603,1136588, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 19:05:55 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1262698	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1072817	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	596963	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	340354	20.278 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
45) SURR12DCAd4	7.26	102	90022	20.104 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %		
61) SURRd8Tolule	9.71	98	1328289	20.112 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	589535	19.958 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	5353	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.53	63	5066	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	6.26	96	3644	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136588.D Vial: 26
Acq On : 5 May 2022 18:45 Operator: DGS-RLD
Sample : 211603,1136588, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 19:05:55 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	6083	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.11	119	13854	0.7072	ug/L	92
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	13291	0.7161	ug/L	98
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.79	92	10708	0.2351	ug/L	98
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.61	91	3184	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136588.D Vial: 26
Acq On : 5 May 2022 18:45 Operator: DGS-RLD
Sample : 211603,1136588, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 19:05:55 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

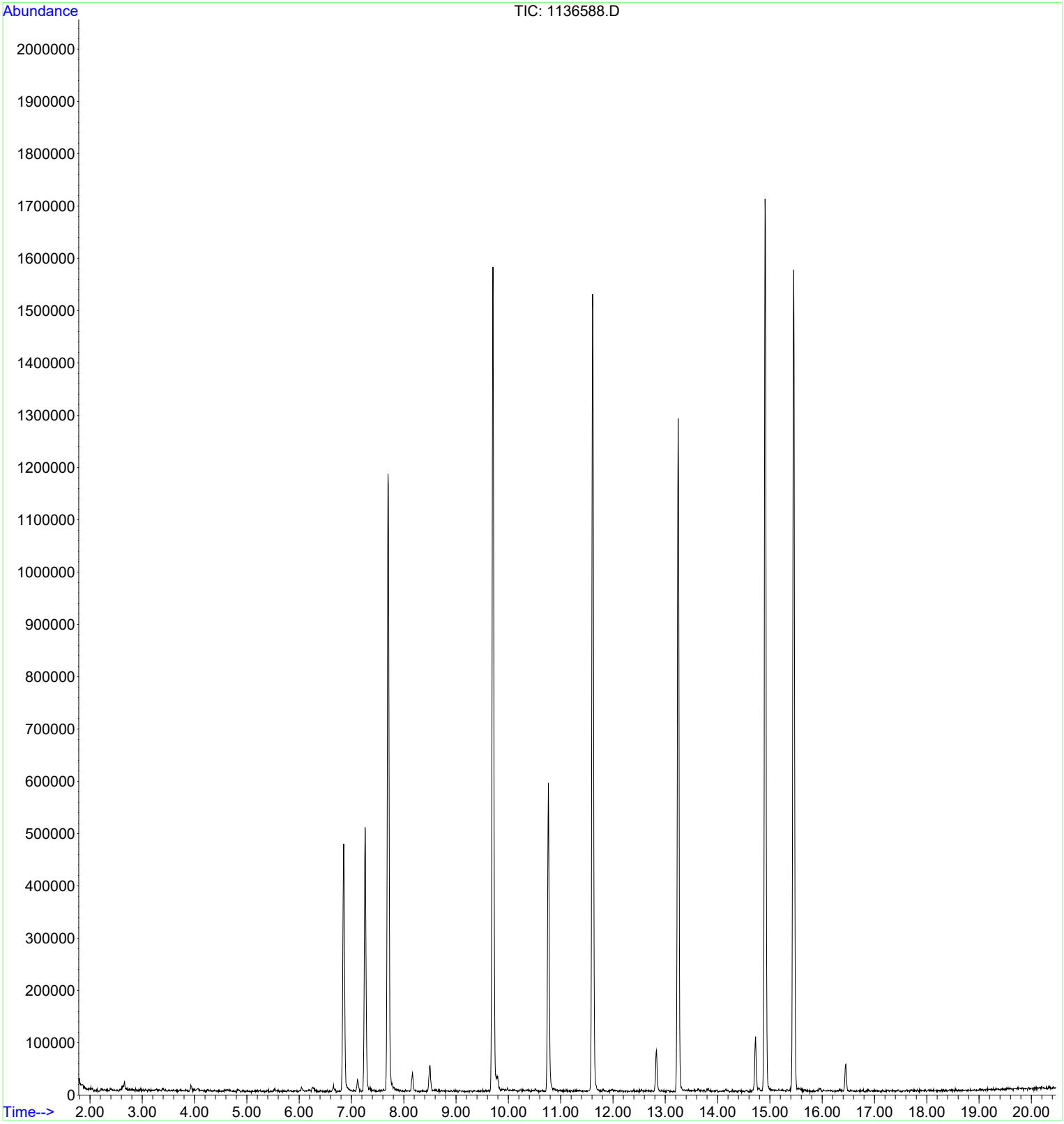
(#) = qualifier out of range (m) = manual integration

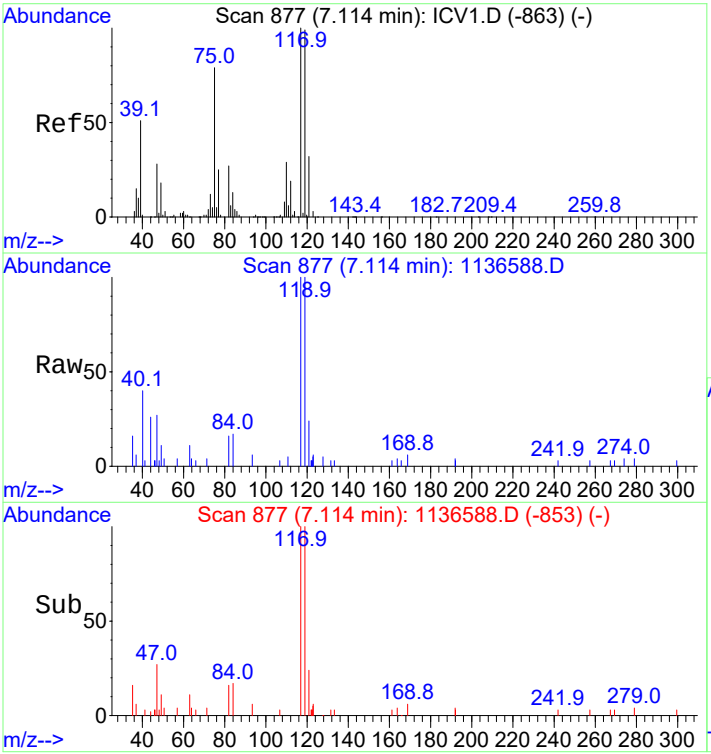
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136588.D Vial: 26
Acq On : 5 May 2022 18:45 Operator: DGS-RLD
Sample : 211603,1136588, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 19:05:55 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

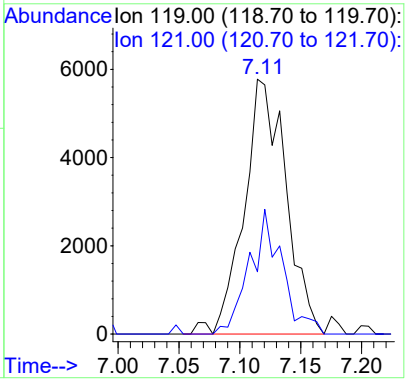


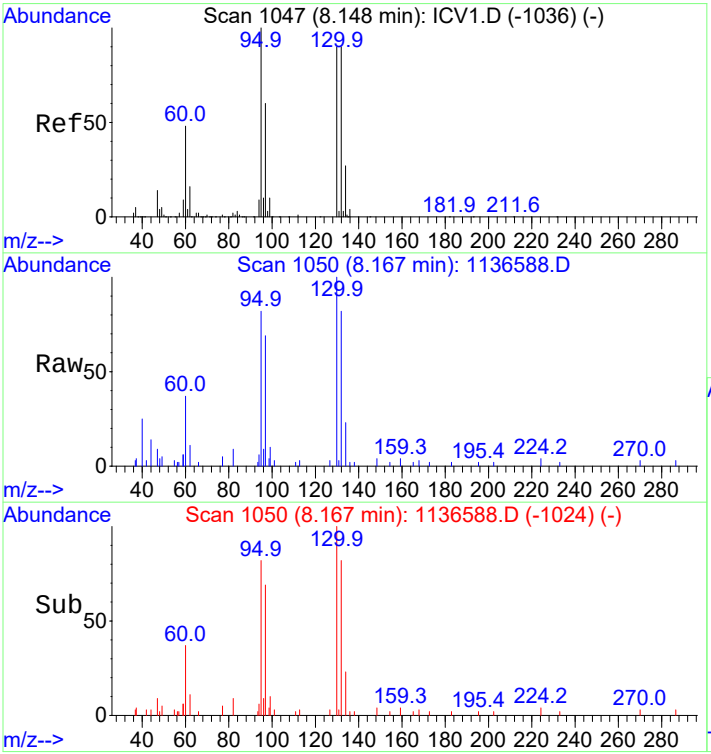


#43
Carbtetraclo
Concen: 0.71 ug/L
RT: 7.11 min Scan# 877
Delta R.T. -0.01 min
Lab File: 1136588.D
Acq: 5 May 2022 18:45

Tgt Ion:119 Resp: 13854

Ion	Ratio	Lower	Upper
119	100		
121	37.8	13.5	53.5

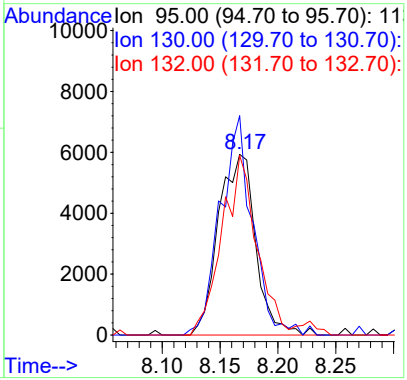


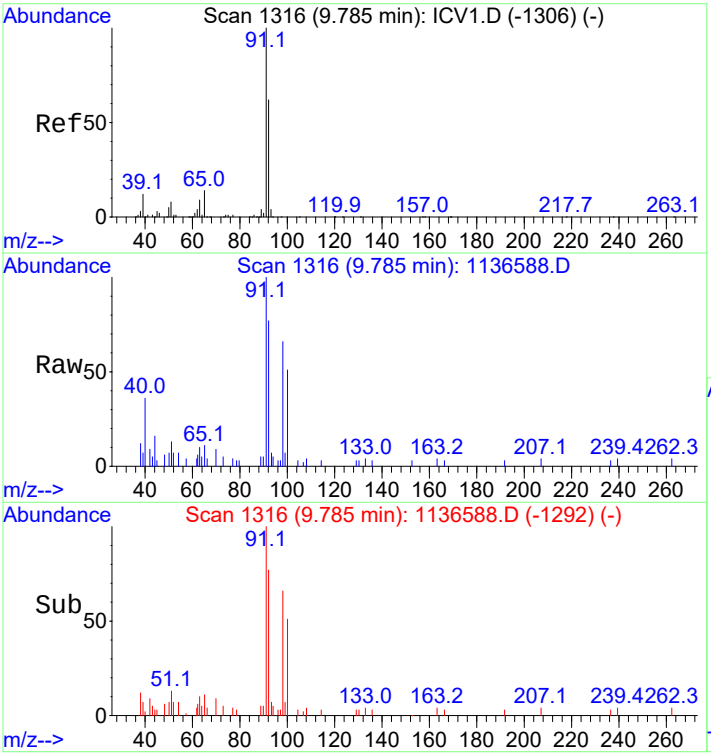


#49
trichloroete
Concen: 0.72 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. 0.01 min
Lab File: 1136588.D
Acq: 5 May 2022 18:45

Tgt Ion: 95 Resp: 13291

Ion	Ratio	Lower	Upper
95	100		
130	105.0	83.7	123.7
132	96.3	74.4	114.4

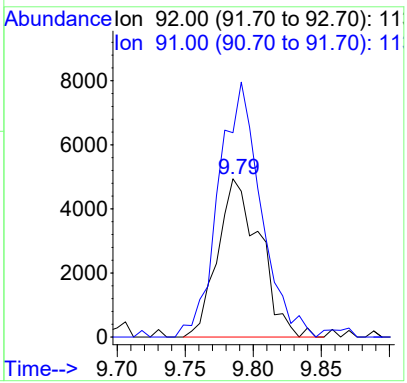




#62
Toluene
Concen: 0.24 ug/L
RT: 9.79 min Scan# 1316
Delta R.T. -0.01 min
Lab File: 1136588.D
Acq: 5 May 2022 18:45

Tgt Ion: 92 Resp: 10708

Ion	Ratio	Lower	Upper
92	100		
91	161.4	143.7	183.7



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136671.D Vial: 27
Acq On : 5 May 2022 19:14 Operator: DGS-RLD
Sample : 211603,1136671, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 19:34:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1257693	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1078615	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	598934	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	348731	20.860 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %		
45) SURR12DCAd4	7.26	102	90235	20.232 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %		
61) SURRd8Tolule	9.71	98	1327534	20.181 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	587585	19.827 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	5338	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.53	63	4383	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	6.27	96	2997	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136671.D Vial: 27
Acq On : 5 May 2022 19:14 Operator: DGS-RLD
Sample : 211603,1136671, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 19:34:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	5925	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.12	119	15273	0.7827 ug/L	93
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.16	95	12910	0.6983 ug/L	94
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.79	92	9884	0.2178 ug/L	95
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2570	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.46	91	2631	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136671.D Vial: 27
Acq On : 5 May 2022 19:14 Operator: DGS-RLD
Sample : 211603,1136671, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 19:34:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

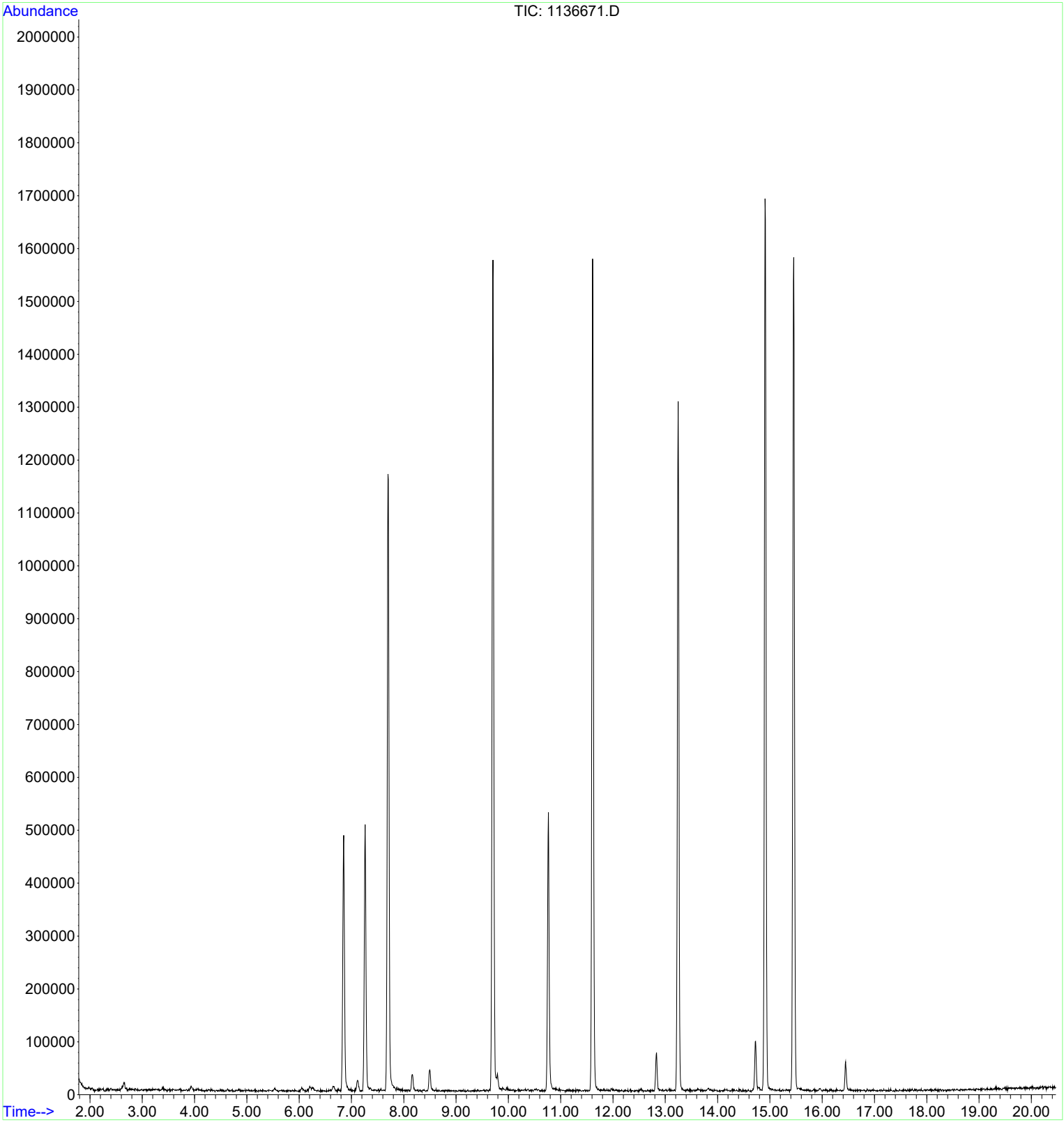
(#) = qualifier out of range (m) = manual integration

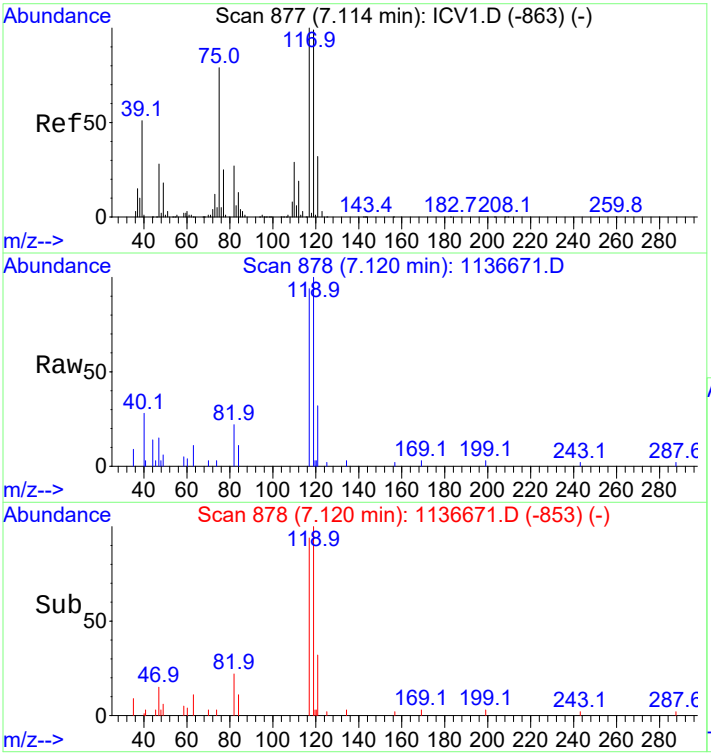
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136671.D Vial: 27
Acq On : 5 May 2022 19:14 Operator: DGS-RLD
Sample : 211603,1136671, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 19:34:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

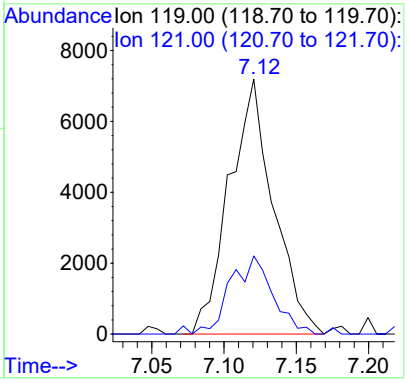


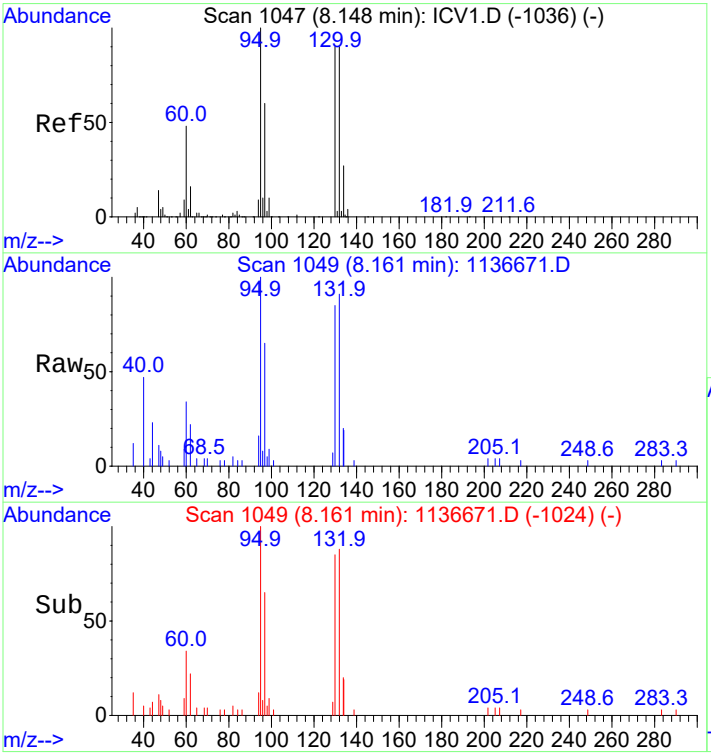


#43
Carbtetraclo
Concen: 0.78 ug/L
RT: 7.12 min Scan# 878
Delta R.T. 0.00 min
Lab File: 1136671.D
Acq: 5 May 2022 19:14

Tgt Ion:119 Resp: 15273

Ion	Ratio	Lower	Upper
119	100		
121	29.2	13.5	53.5

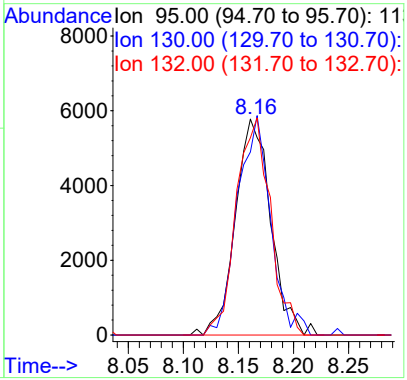


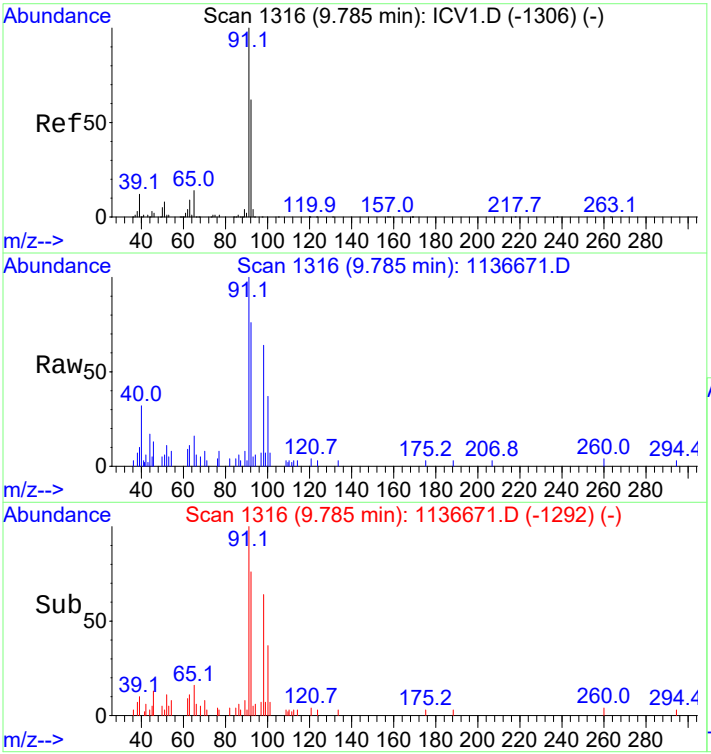


#49
trichloroete
Concen: 0.70 ug/L
RT: 8.16 min Scan# 1049
Delta R.T. 0.00 min
Lab File: 1136671.D
Acq: 5 May 2022 19:14

Tgt Ion: 95 Resp: 12910

Ion	Ratio	Lower	Upper
95	100		
130	95.4	83.7	123.7
132	97.2	74.4	114.4

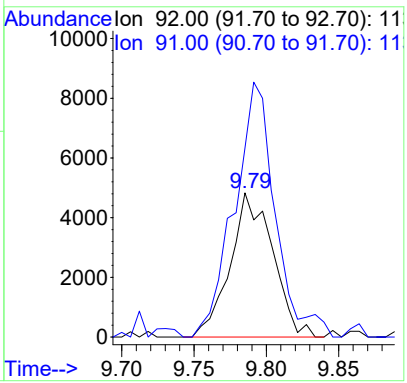




#62
Toluene
Concen: 0.22 ug/L
RT: 9.79 min Scan# 1316
Delta R.T. -0.01 min
Lab File: 1136671.D
Acq: 5 May 2022 19:14

Tgt Ion: 92 Resp: 9884

Ion	Ratio	Lower	Upper
92	100		
91	170.6	143.7	183.7



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136672.D Vial: 28
Acq On : 5 May 2022 19:43 Operator: DGS-RLD
Sample : 211603,1136672, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 20:04:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1208000	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1054940	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	588139	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	325927	20.297 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%	
45) SURR12DCAd4	7.26	102	87764	20.487 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102	%	
61) SURRd8Tolule	9.71	98	1286231	20.357 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%	
83) SURR4BrFBenz	13.25	95	558527	19.192 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 96	%	
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	3.72	67	19829	0.6635 ug/L	93
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	4.04	101	9362	0.7271 ug/L	95
15) Acetone	4.06	43	5585	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	2695	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136672.D Vial: 28
Acq On : 5 May 2022 19:43 Operator: DGS-RLD
Sample : 211603,1136672, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 20:04:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	12409	0.4182 ug/L	97
40)	111trichlota	6.90	97	3449	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.12	119	56451	3.0121 ug/L	97
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.80	92	3584	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136672.D Vial: 28
Acq On : 5 May 2022 19:43 Operator: DGS-RLD
Sample : 211603,1136672, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 20:04:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

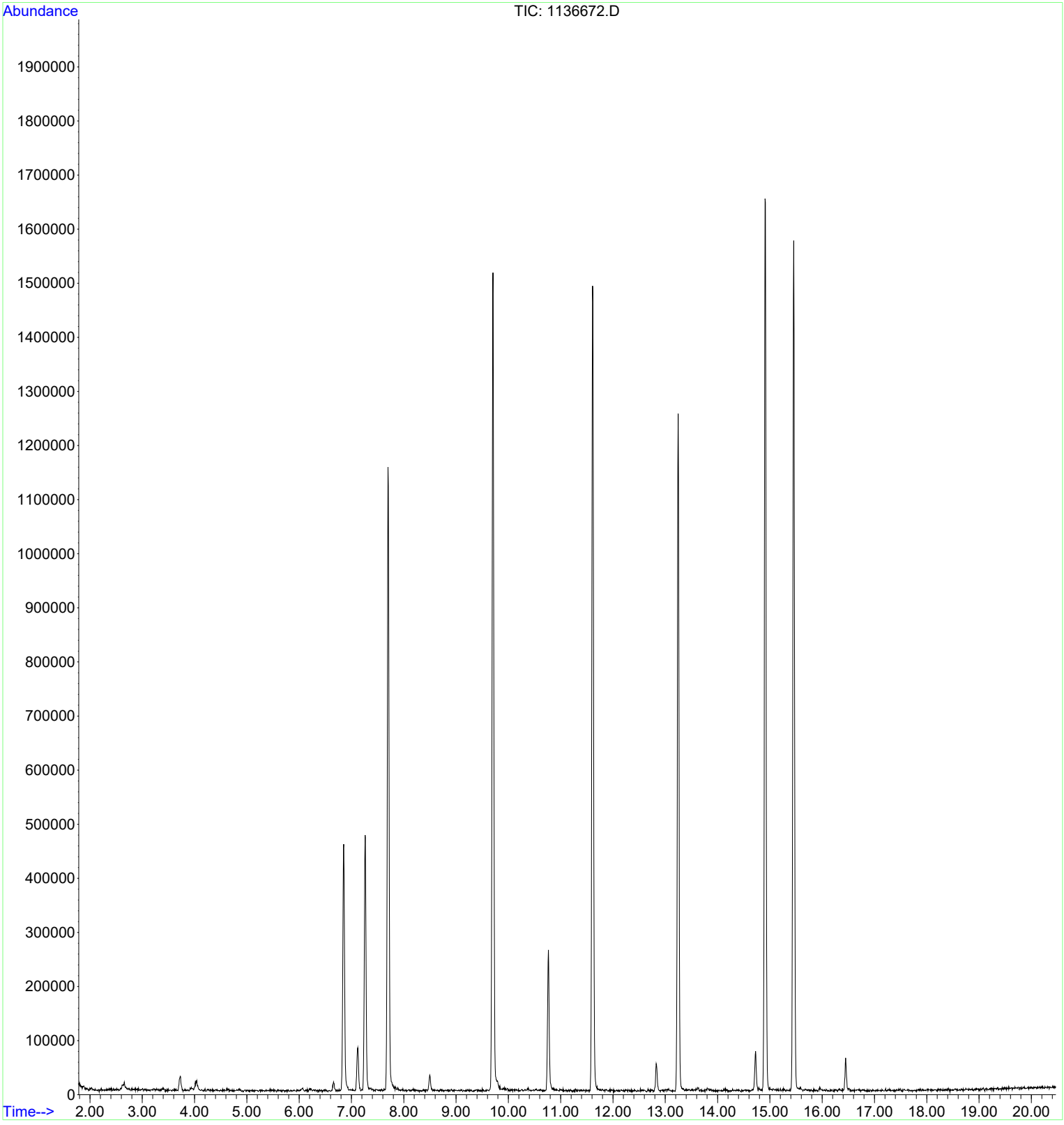
(#) = qualifier out of range (m) = manual integration

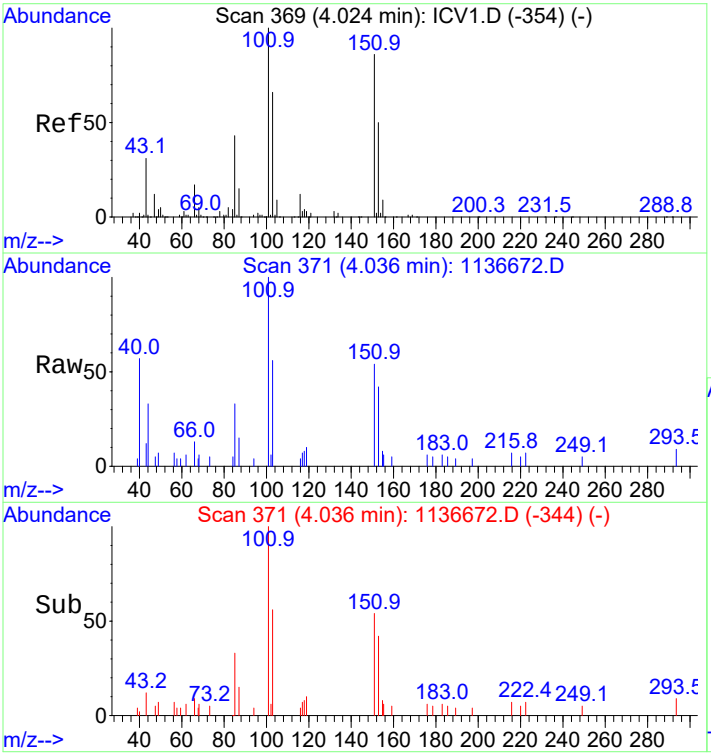
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136672.D Vial: 28
Acq On : 5 May 2022 19:43 Operator: DGS-RLD
Sample : 211603,1136672, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 20:04:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

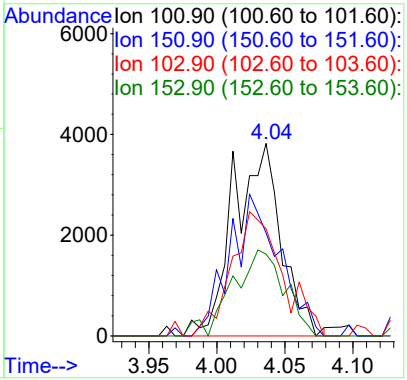


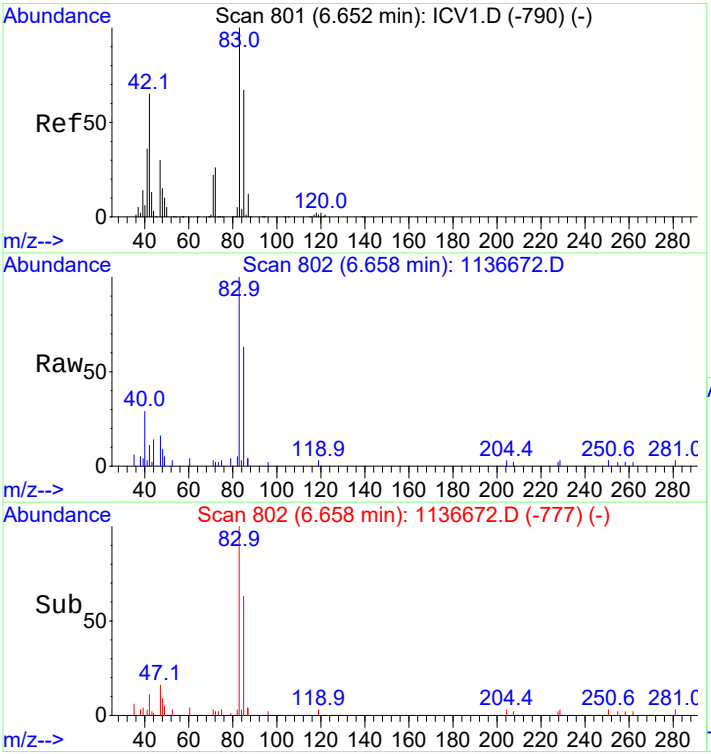


#14
Trichlorotfluoroeth
Concen: 0.73 ug/L
RT: 4.04 min Scan# 371
Delta R.T. 0.01 min
Lab File: 1136672.D
Acq: 5 May 2022 19:43

Tgt Ion:101 Resp: 9362

Ion	Ratio	Lower	Upper
101	100		
151	75.5	60.4	100.4
103	68.2	45.0	85.0
153	49.0	31.7	71.7

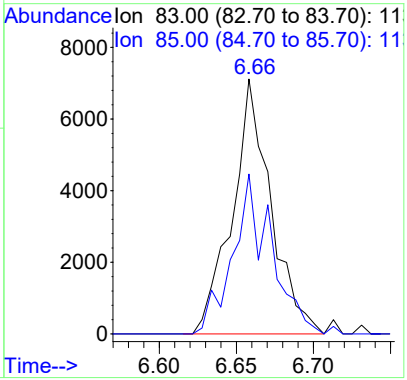


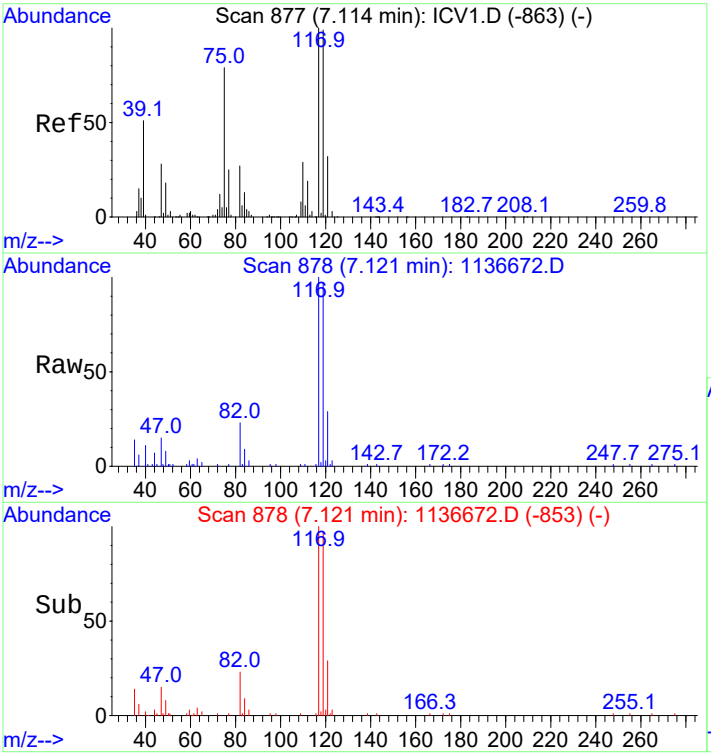


#39
Chloroform
Concen: 0.42 ug/L
RT: 6.66 min Scan# 802
Delta R.T. 0.00 min
Lab File: 1136672.D
Acq: 5 May 2022 19:43

Tgt Ion: 83 Resp: 12409

Ion	Ratio	Lower	Upper
83	100		
85	62.0	44.0	84.0

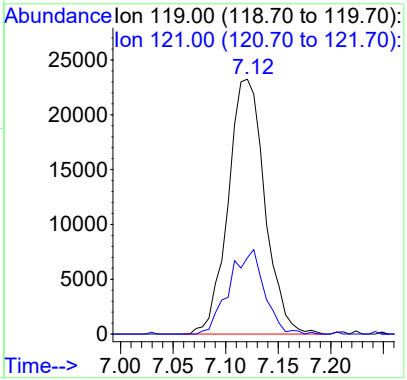




#43
Carbtetraclo
Concen: 3.01 ug/L
RT: 7.12 min Scan# 878
Delta R.T. 0.00 min
Lab File: 1136672.D
Acq: 5 May 2022 19:43

Tgt Ion:119 Resp: 56451

Ion	Ratio	Lower	Upper
119	100		
121	31.7	13.5	53.5



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136673.D Vial: 29
Acq On : 5 May 2022 20:13 Operator: DGS-RLD
Sample : 211603,1136673, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 20:33:55 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1220349	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1046257	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	576709	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	339517	20.930 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 105 %		
45) SURR12DCAd4	7.26	102	85767	19.819 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %		
61) SURRd8Tolule	9.71	98	1292157	20.244 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	557779	19.546 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %		

Target Compounds					Qvalue
2) Dichlorodi	1.84	85	2678	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	3.19	67	3323	N.D.	
8) Trichlorofma	3.27	101	5595	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.05	43	5179	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.86	59	5046	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136673.D Vial: 29
Acq On : 5 May 2022 20:13 Operator: DGS-RLD
Sample : 211603,1136673, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 20:33:55 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.78	92	2730	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2906	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136673.D Vial: 29
Acq On : 5 May 2022 20:13 Operator: DGS-RLD
Sample : 211603,1136673, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 20:33:55 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

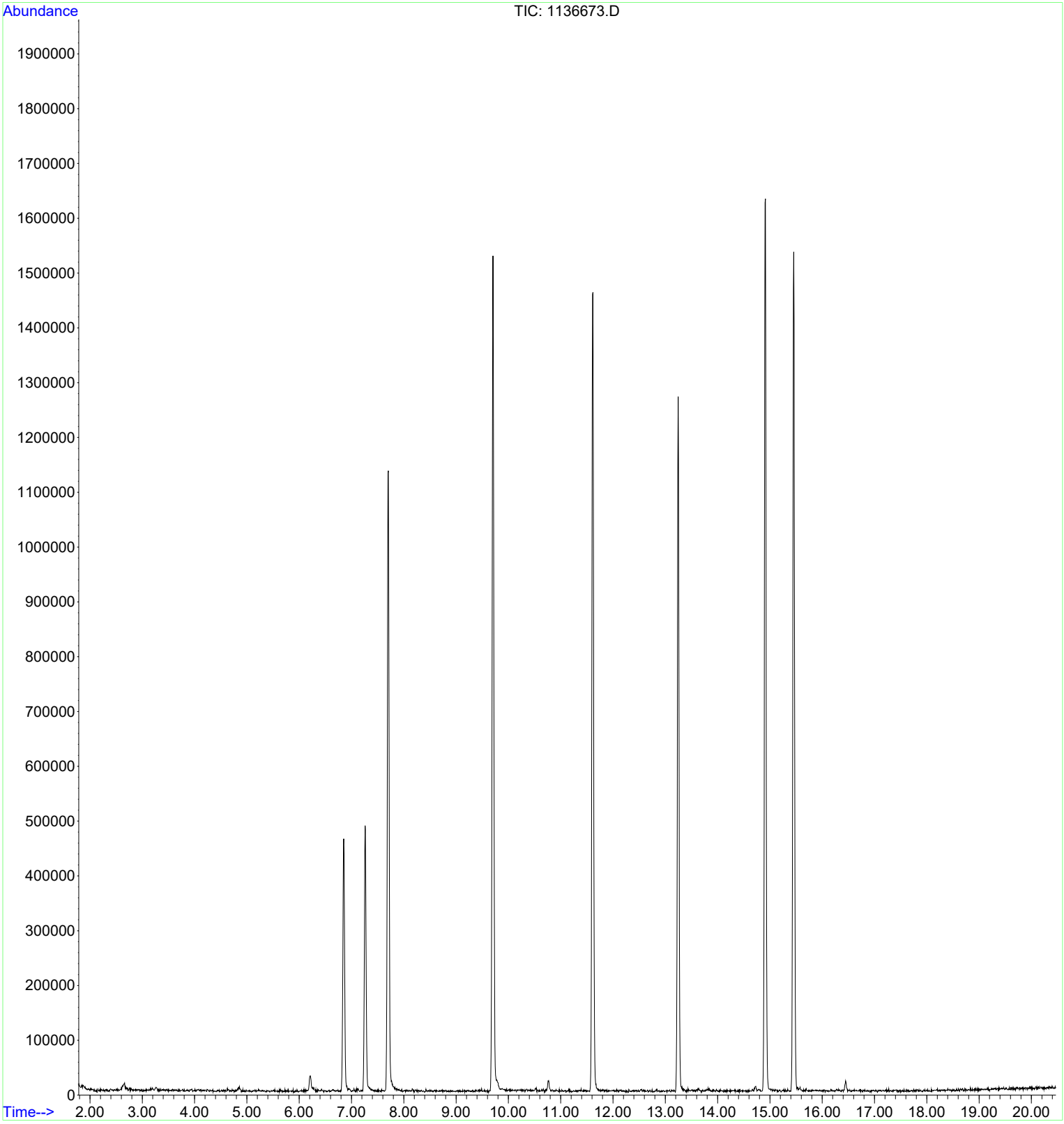
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136673.D Vial: 29
Acq On : 5 May 2022 20:13 Operator: DGS-RLD
Sample : 211603,1136673, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 20:33:55 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136674.D Vial: 30
Acq On : 5 May 2022 20:42 Operator: DGS-RLD
Sample : 211603,1136674, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 21:02:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1219084	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1046002	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	573842	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	333418	20.575 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %		
45) SURR12DCAd4	7.26	102	89327	20.663 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %		
61) SURRd8Tolule	9.71	98	1298638	20.367 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %		
83) SURR4BrFBenz	13.25	95	561362	19.770 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	4939	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136674.D Vial: 30
Acq On : 5 May 2022 20:42 Operator: DGS-RLD
Sample : 211603,1136674, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 21:02:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136674.D Vial: 30
Acq On : 5 May 2022 20:42 Operator: DGS-RLD
Sample : 211603,1136674, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 21:02:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

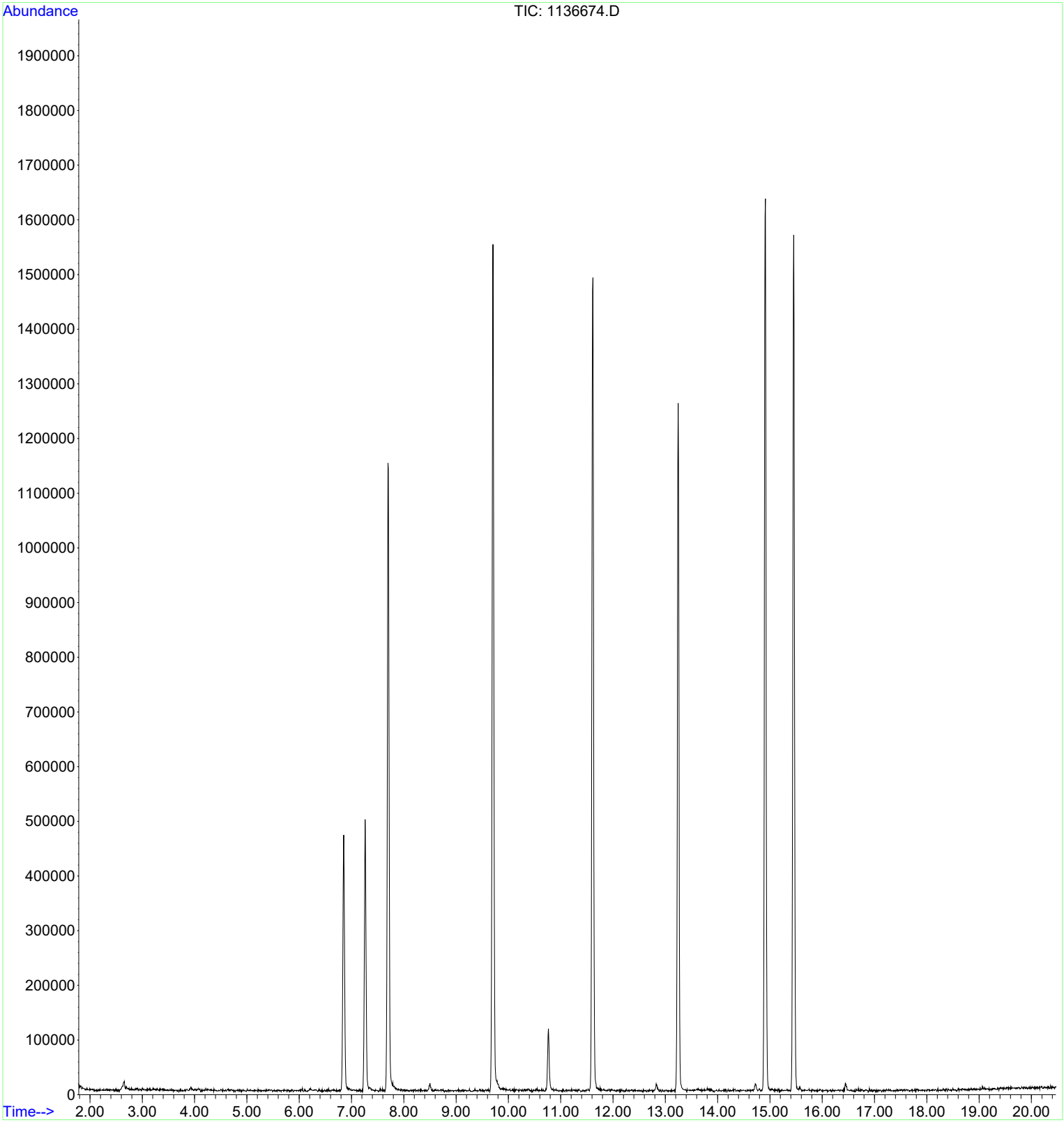
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136674.D Vial: 30
Acq On : 5 May 2022 20:42 Operator: DGS-RLD
Sample : 211603,1136674, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 21:02:37 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1137438.D Vial: 31
Acq On : 5 May 2022 21:11 Operator: DGS-RLD
Sample : 211603,1137438, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 21:31:35 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1211102	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1021786	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	566726	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	324858	20.179 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%	
45) SURR12DCAd4	7.26	102	85940	20.010 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%	
61) SURRd8Tolule	9.71	98	1282112	20.240 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%	
83) SURR4BrFBenz	13.25	95	551411	19.663 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%	

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	3.99	96	2565	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	5207	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.84	59	2847	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.53	63	18646	0.6132 ug/L #	90
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	6.26	96	13497	0.7265 ug/L	95
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1137438.D Vial: 31
Acq On : 5 May 2022 21:11 Operator: DGS-RLD
Sample : 211603,1137438, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 21:31:35 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	6.90	97	6850	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	43441	2.4402	ug/L	99
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.79	92	5412	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.53	166	4571	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1137438.D Vial: 31
Acq On : 5 May 2022 21:11 Operator: DGS-RLD
Sample : 211603,1137438, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 21:31:35 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

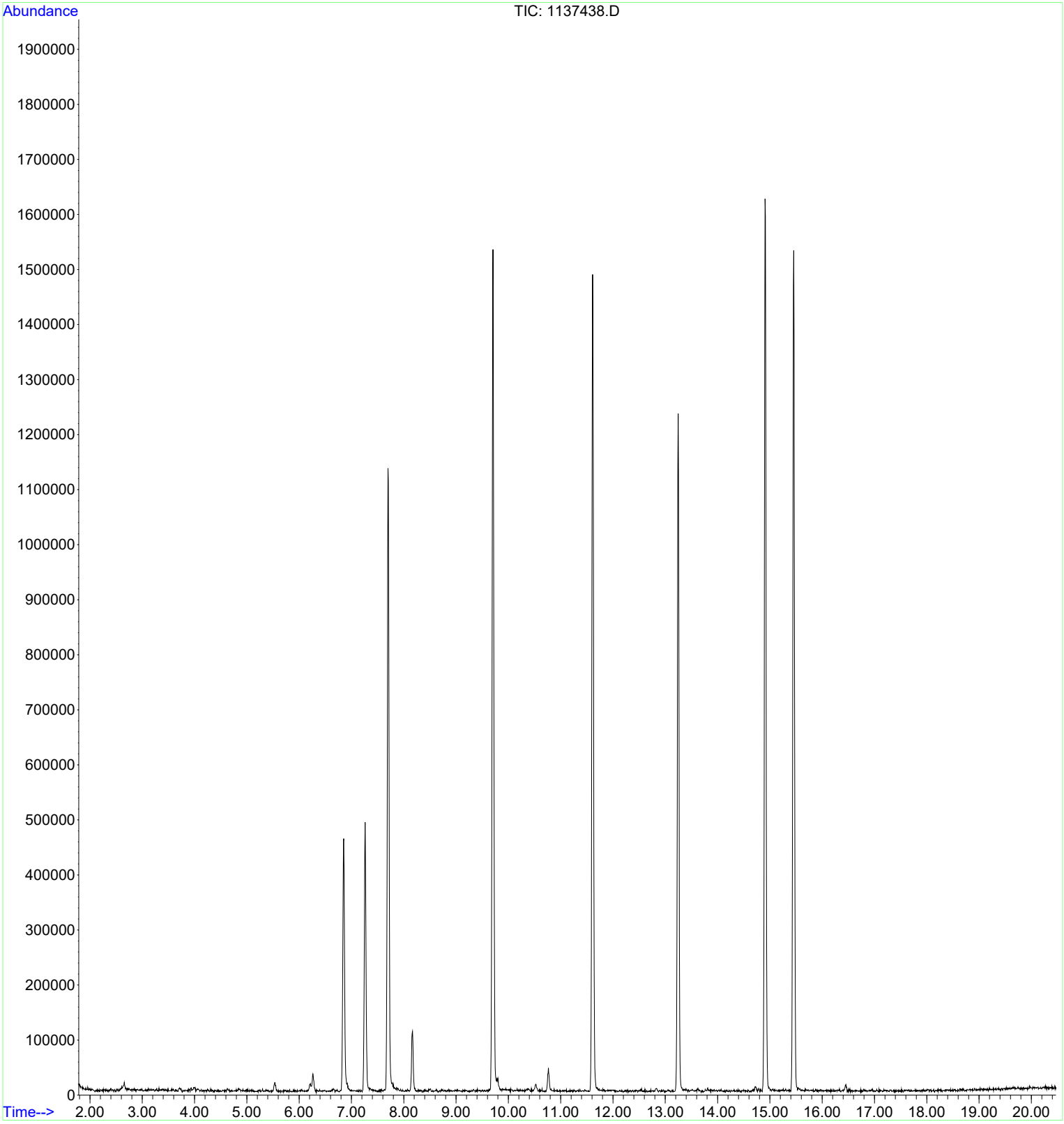
(#) = qualifier out of range (m) = manual integration

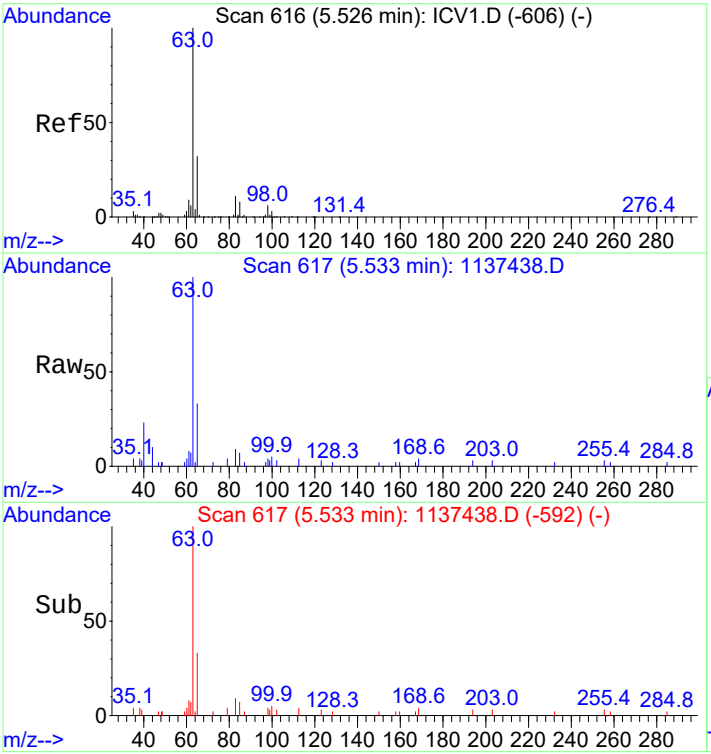
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1137438.D Vial: 31
Acq On : 5 May 2022 21:11 Operator: DGS-RLD
Sample : 211603,1137438, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 21:31:35 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

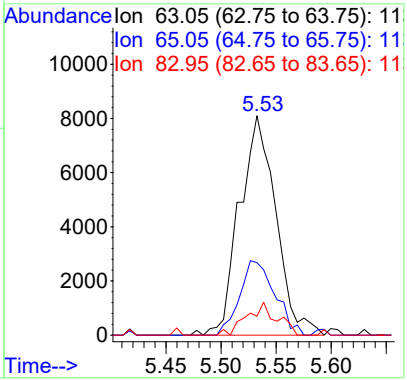


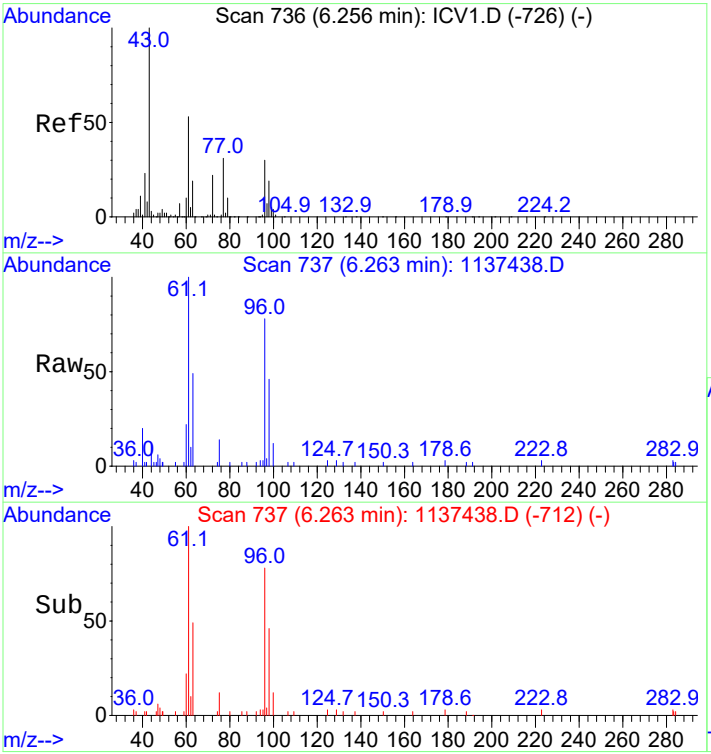


#26
11dichlorota
Concen: 0.61 ug/L
RT: 5.53 min Scan# 617
Delta R.T. 0.00 min
Lab File: 1137438.D
Acq: 5 May 2022 21:11

Tgt Ion: 63 Resp: 18646

Ion	Ratio	Lower	Upper
63	100		
65	32.8	12.9	52.9
83	0.0	0.0	33.6

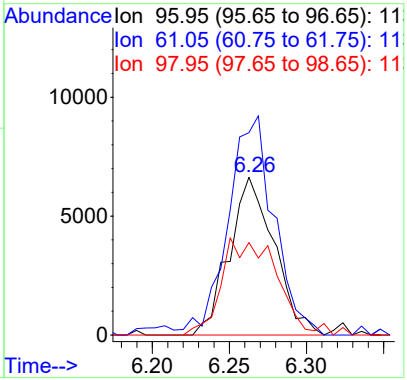


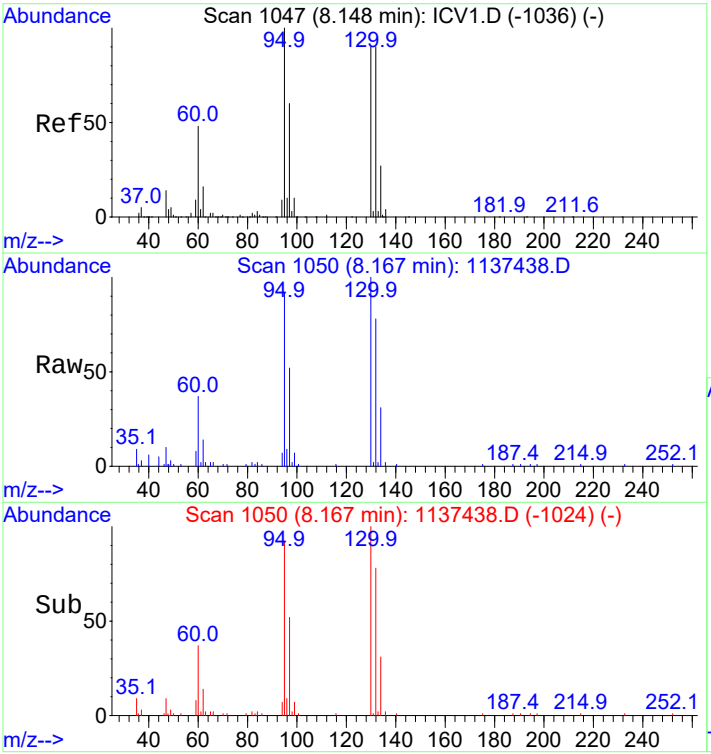


#32
c12dichlorte
Concen: 0.73 ug/L
RT: 6.26 min Scan# 737
Delta R.T. 0.00 min
Lab File: 1137438.D
Acq: 5 May 2022 21:11

Tgt Ion: 96 Resp: 13497

Ion	Ratio	Lower	Upper
96	100		
61	141.0	122.9	162.9
98	75.5	45.6	85.6

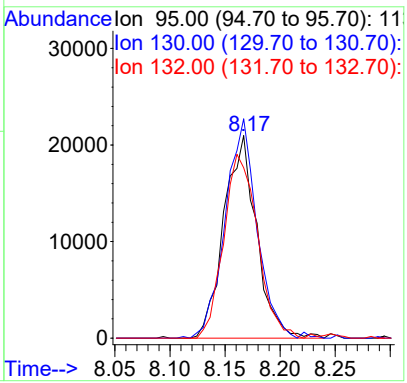




#49
trichloroete
Concen: 2.44 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. 0.01 min
Lab File: 1137438.D
Acq: 5 May 2022 21:11

Tgt Ion: 95 Resp: 43441

Ion	Ratio	Lower	Upper
95	100		
130	104.8	83.7	123.7
132	93.8	74.4	114.4



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136215R.D Vial: 40
Acq On : 6 May 2022 9:24 Operator: DGS-RLD
Sample : 211603,1136215, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 09:45:06 2022 Results File: W042822.RES

Report

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1266562	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1092903	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	606269	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	344046	20.435 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %		
45) SURR12DCAd4	7.26	102	93042	20.715 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 104 %		
61) SURRd8Tolule	9.71	98	1358681	20.510 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %		
83) SURR4BrFBenz	13.25	95	593812	19.794 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	4523	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	4299	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.83	59	2834	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.64	42	2897	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136215R.D Vial: 40
Acq On : 6 May 2022 9:24 Operator: DGS-RLD
Sample : 211603,1136215, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 09:45:06 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	317515	10.2063	ug/L		100
40)	111trichlota	0.00	97	0	N.D.			
42)	Cyclohexane	0.00	56	0	N.D.			
43)	Carbtetraclo	7.12	119	1464440	74.5262	ug/L		98
44)	11dicloprope	0.00	110	0	N.D.			
46)	Benzene	0.00	78	0	N.D.			
47)	12dichlorota	7.36	62	12913	0.5545	ug/L	#	94
48)	TAME	0.00	73	0	N.D.			
49)	trichloroete	8.17	95	235808	12.6662	ug/L		98
50)	methylcyclohexane	0.00	83	0	N.D.			
51)	12dicloropra	0.00	63	0	N.D.			
52)	23Dicl1propene	0.00	75	0	N.D.			
53)	Dibromometha	0.00	93	0	N.D.			
54)	methylmethacrylate	0.00	69	0	N.D.			
55)	14dioxane	0.00	88	0	N.D.			
56)	Bromodiclrma	0.00	83	0	N.D.			
57)	2Nitropropane	0.00	43	0	N.D.			
58)	2CLEVE	0.00	63	0	N.D.			
59)	c13dicloproe	0.00	75	0	N.D.			
60)	4Meth2Pentan	9.55	43	2605	Below	Cal	#	37
62)	Toluene	9.79	92	3397	N.D.			
63)	t13Dicloprop	0.00	75	0	N.D.			
64)	ethylmethacrylate	0.00	69	0	N.D.			
65)	112Triclotha	0.00	83	0	N.D.			
66)	Tetrachlorte	0.00	166	0	N.D.			
67)	13Diclorpropa	0.00	76	0	N.D.			
69)	2Hexanone	10.64	43	3752	Below	Cal	#	29
70)	Clorodibrmta	0.00	129	0	N.D.			
71)	12Dibrometha	0.00	107	0	N.D.			
72)	Chlorobenzen	0.00	112	0	N.D.			
73)	1Clhexane	11.62	91	2918	N.D.			
74)	1112Tetclota	0.00	131	0	N.D.			
75)	Ethylbenzene	0.00	91	0	N.D.			
76)	m p-Xylene	0.00	106	0	N.D.			
77)	o-Xylene	0.00	106	0	N.D.			
78)	Styrene	0.00	104	0	N.D.			
79)	Bromoform	0.00	173	0	N.D.			
80)	Isopropylben	0.00	105	0	N.D.			
81)	cyclohexanone	0.00	55	0	N.D.			
84)	Bromobenzene	0.00	156	0	N.D.			
85)	1122Tetrclta	0.00	83	0	N.D.			
86)	123Triclproa	0.00	75	0	N.D.			
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	0.00	91	0	N.D.			
89)	2chlorotolue	0.00	91	0	N.D.			
90)	4chlorotolue	0.00	91	0	N.D.			
91)	135Trimebenz	0.00	105	0	N.D.			
92)	tbutylbenzen	0.00	119	0	N.D.			
93)	124Trimetben	0.00	105	0	N.D.			
94)	sbutylbenzen	0.00	105	0	N.D.			
95)	13Diclorbenz	0.00	146	0	N.D.			
96)	pIsopropylto	14.90	119	2845	N.D.			
97)	14dichlorobe	0.00	146	0	N.D.			
98)	12dichlorobe	0.00	146	0	N.D.			
99)	nButylbenzen	15.49	91	2551	N.D.			
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136215R.D Vial: 40
Acq On : 6 May 2022 9:24 Operator: DGS-RLD
Sample : 211603,1136215, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 09:45:06 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.03	128	3873	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

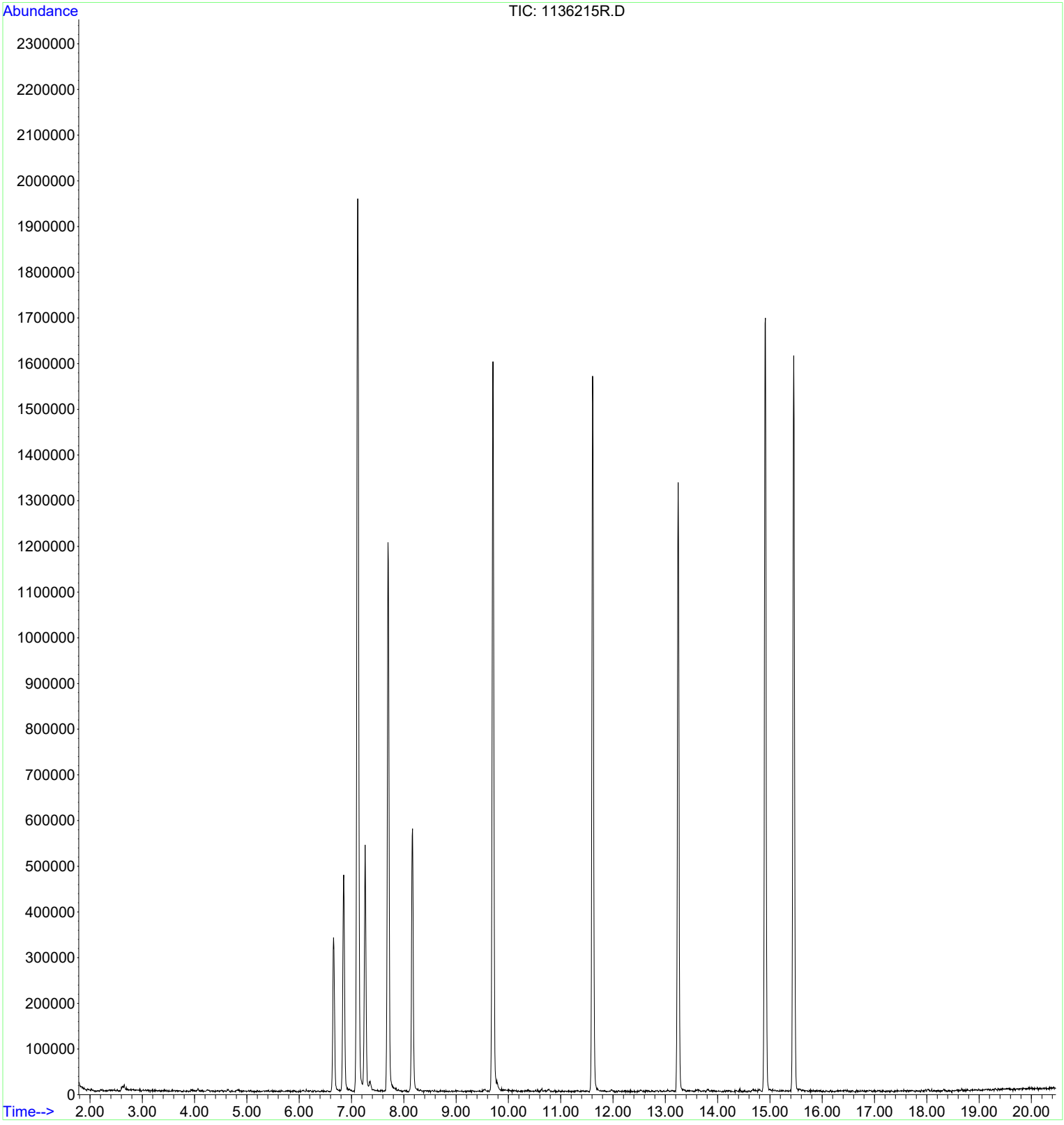
(#) = qualifier out of range (m) = manual integration

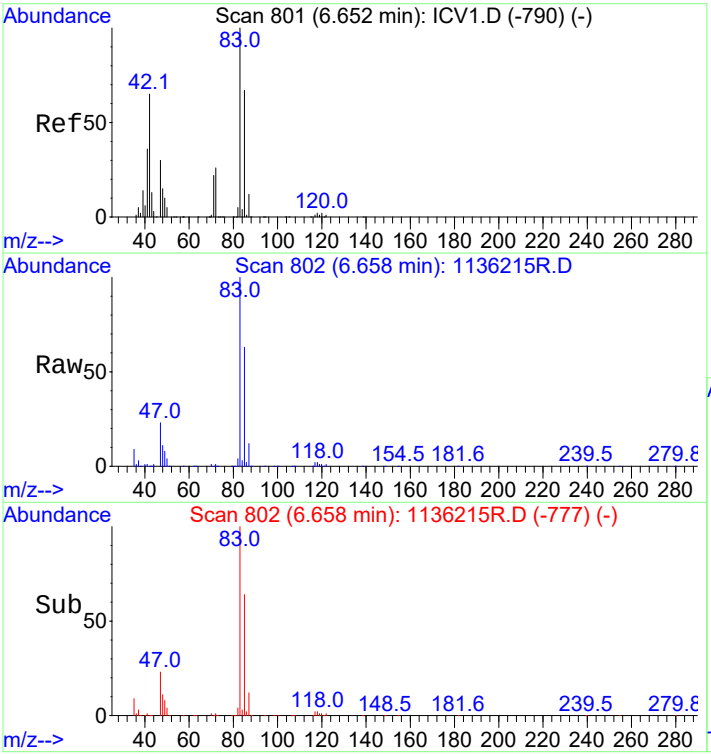
Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136215R.D Vial: 40
Acq On : 6 May 2022 9:24 Operator: DGS-RLD
Sample : 211603,1136215, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 09:45:06 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

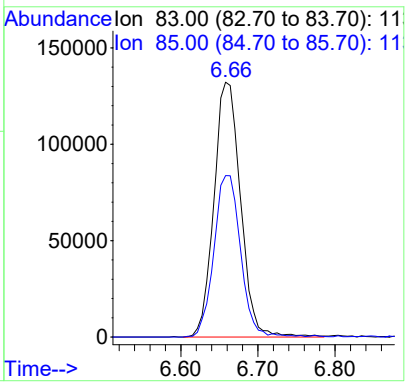


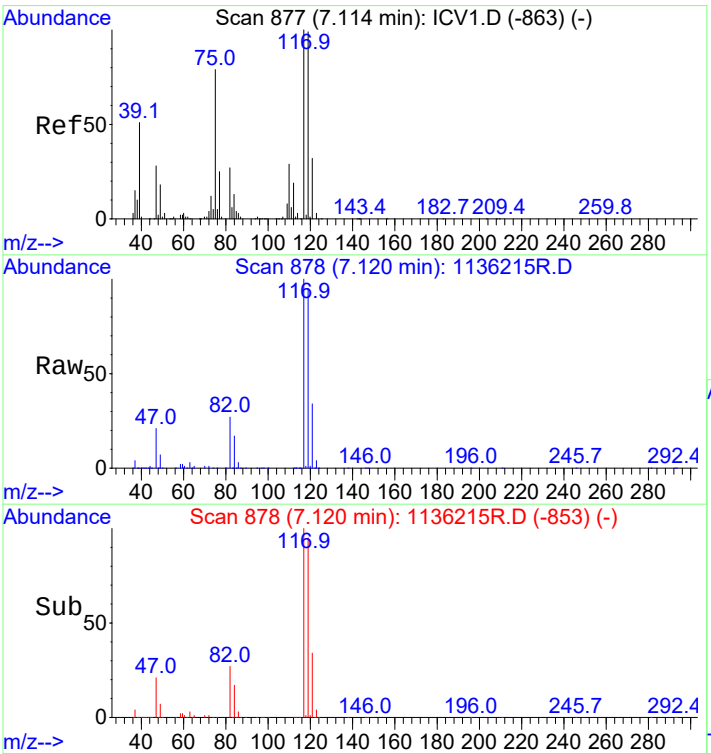


#39
Chloroform
Concen: 10.21 ug/L
RT: 6.66 min Scan# 802
Delta R.T. -0.00 min
Lab File: 1136215R.D
Acq: 6 May 2022 9:24

Tgt Ion: 83 Resp: 317515

Ion	Ratio	Lower	Upper
83	100		
85	63.6	44.0	84.0

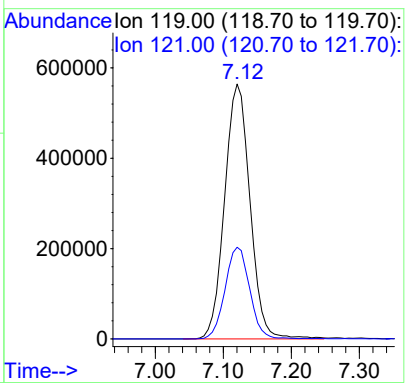


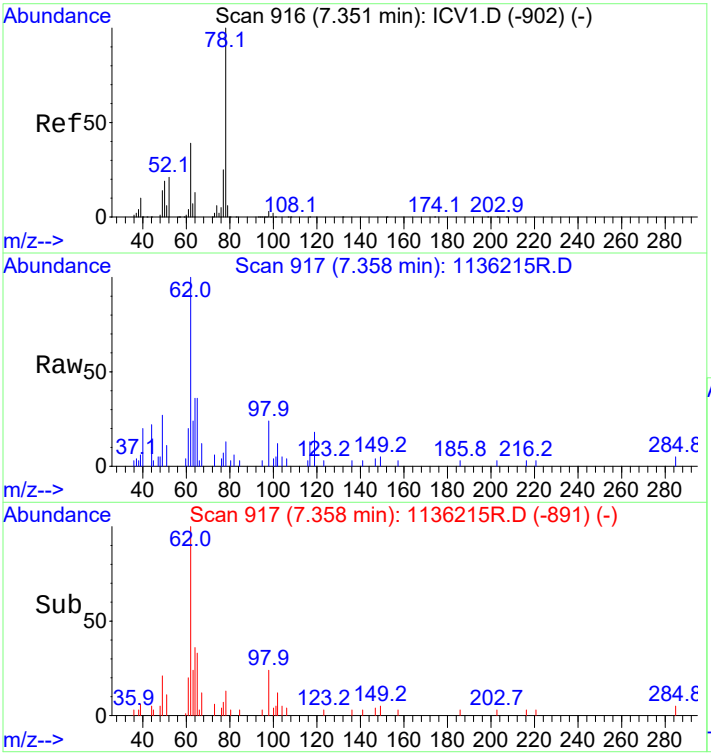


#43
Carbtetraclo
Concen: 74.53 ug/L
RT: 7.12 min Scan# 878
Delta R.T. -0.00 min
Lab File: 1136215R.D
Acq: 6 May 2022 9:24

Tgt Ion:119 Resp: 1464440

Ion	Ratio	Lower	Upper
119	100		
121	34.9	13.5	53.5

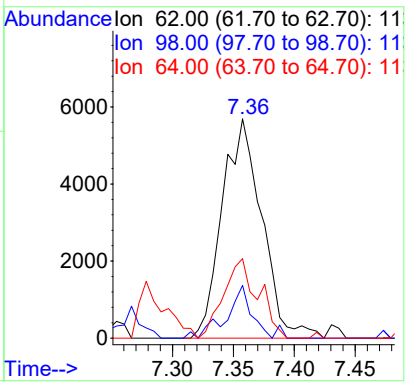


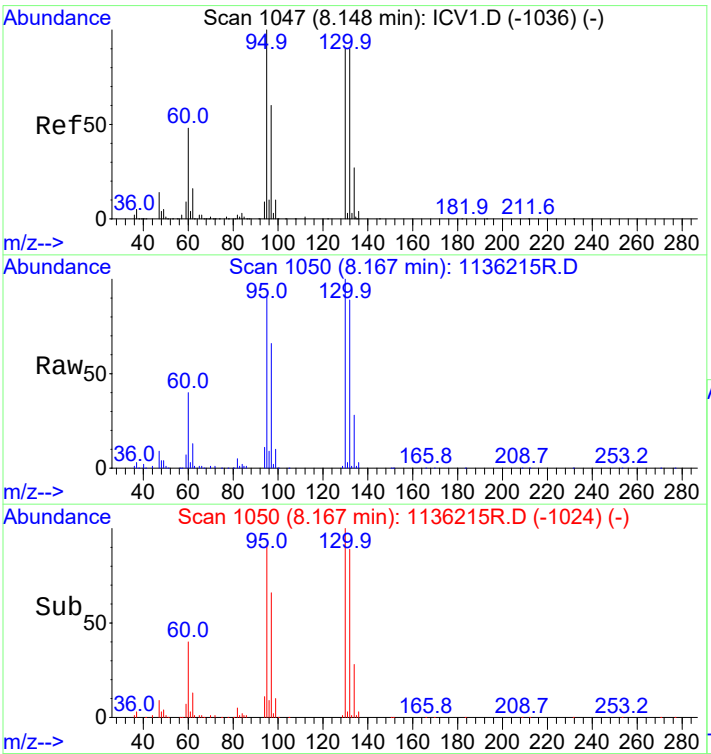


#47
12dichlorota
Concen: 0.55 ug/L
RT: 7.36 min Scan# 917
Delta R.T. 0.01 min
Lab File: 1136215R.D
Acq: 6 May 2022 9:24

Tgt Ion: 62 Resp: 12913

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	29.9
64	31.8	11.7	51.7

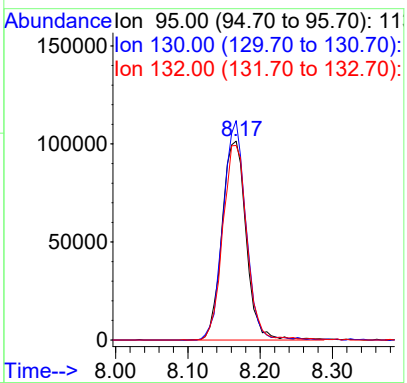




#49
trichloroete
Concen: 12.67 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. 0.01 min
Lab File: 1136215R.D
Acq: 6 May 2022 9:24

Tgt Ion: 95 Resp: 235808

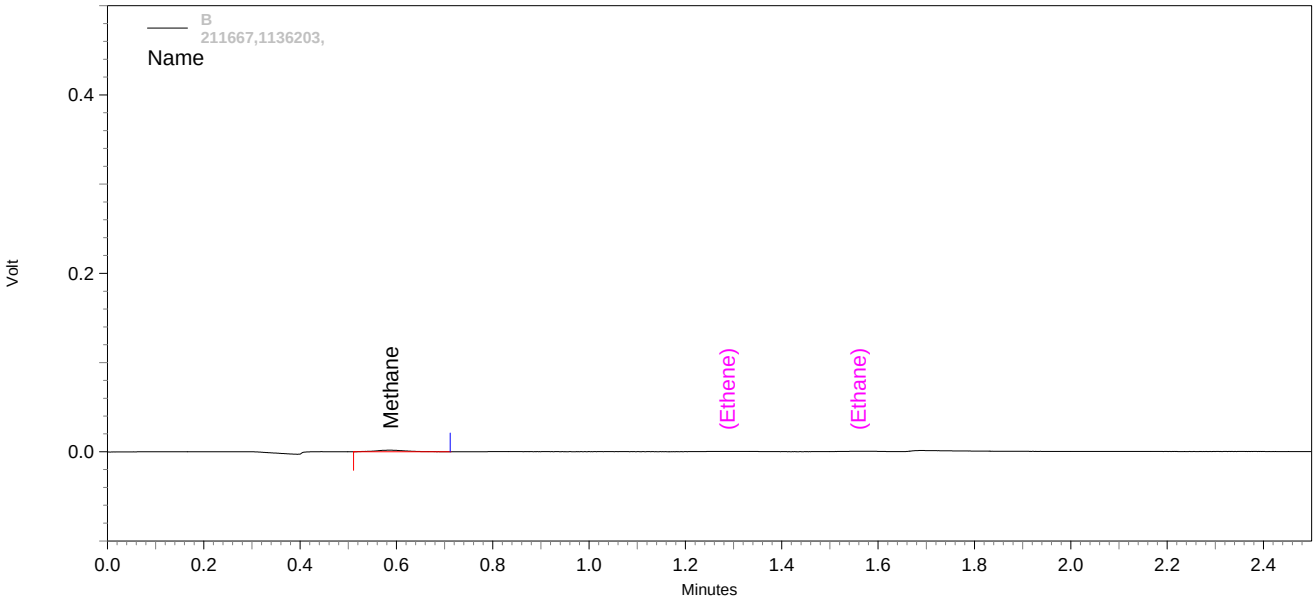
Ion	Ratio	Lower	Upper
95	100		
130	104.3	83.7	123.7
132	98.0	74.4	114.4



Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\005.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136203,
Acquired: May 04, 2022 09:05:58
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



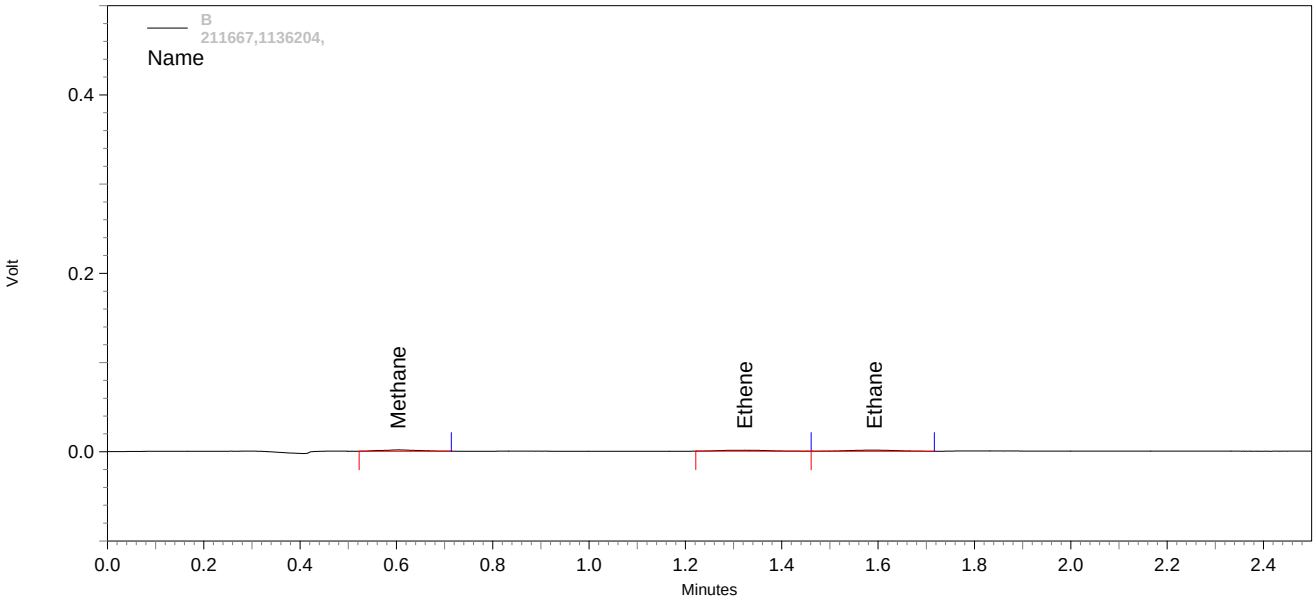
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.588**	**0.574**	**7400**	**1.759**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\009.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136204,
Acquired: May 04, 2022 09:26:30
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



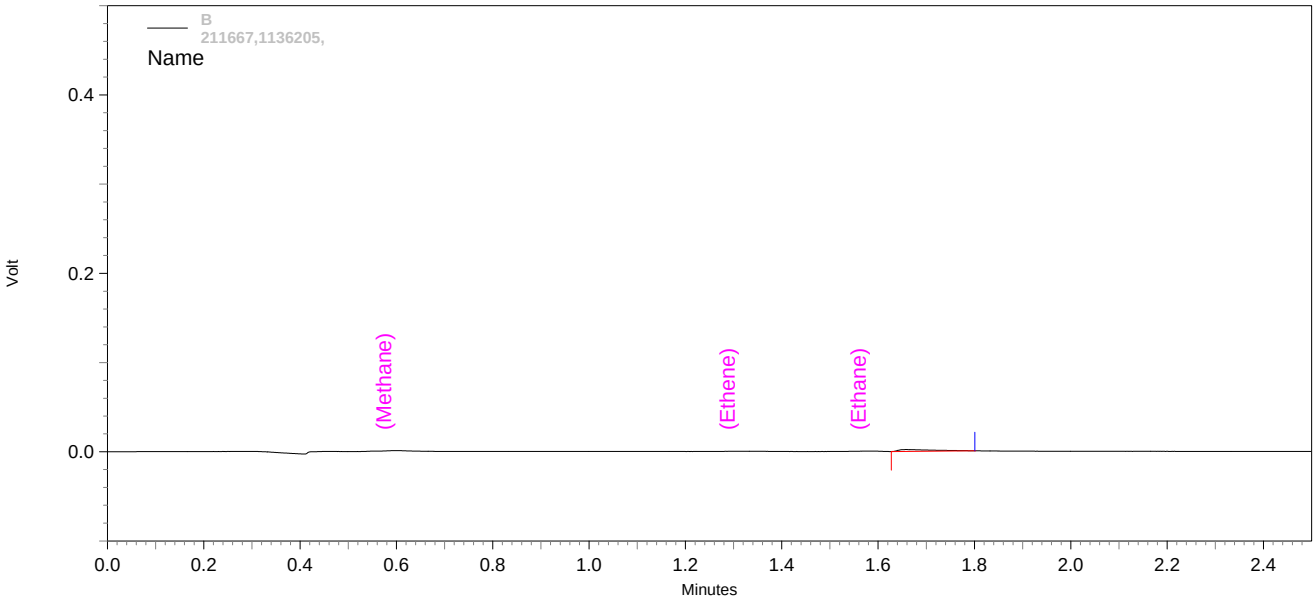
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.603	0.574	7509	1.787	ppmV
2	Ethene	1.323	1.287	7200	0.922	ppmV
3	Ethane	1.593	1.559	8001	0.811	ppmV

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\010.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136205,
Acquired: May 04, 2022 09:30:19
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



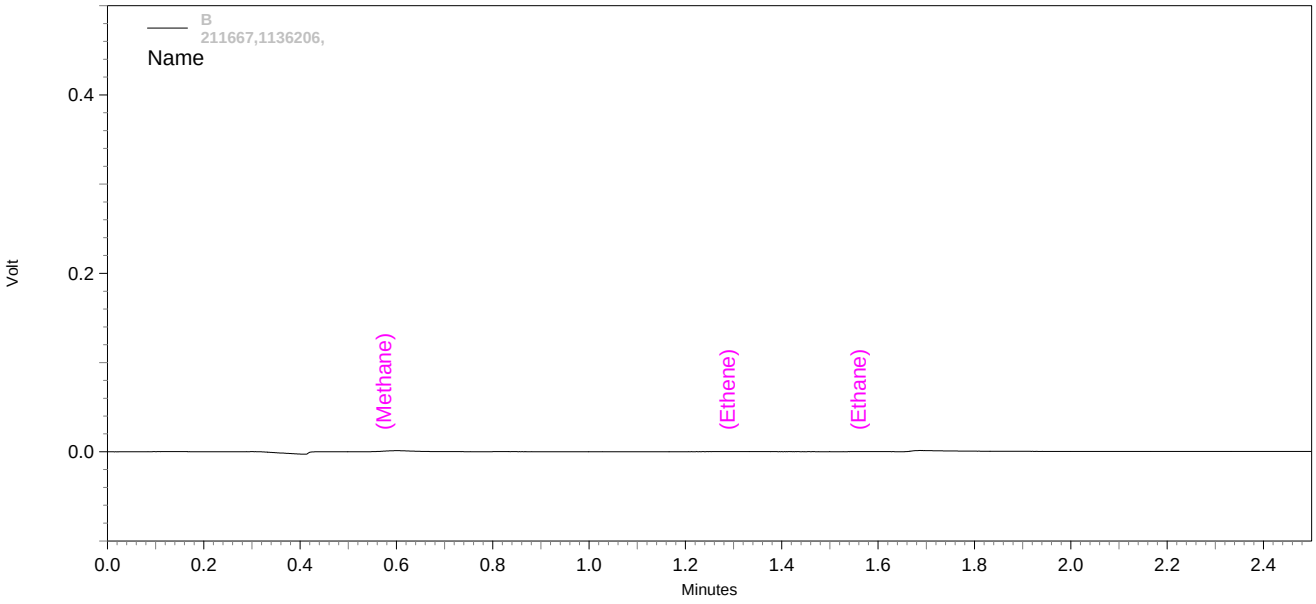
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**
1		**1.656**	**0.000**	**10224**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\011.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136206,
Acquired: May 04, 2022 09:42:02
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



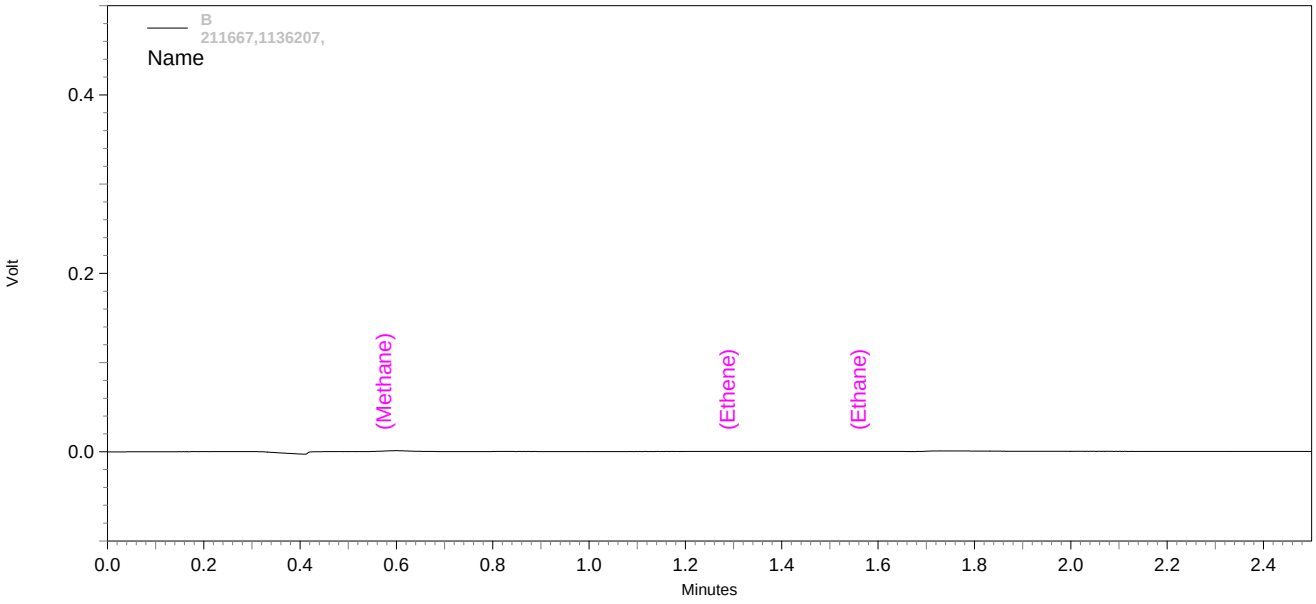
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\012.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136207,
Acquired: May 04, 2022 09:46:01
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



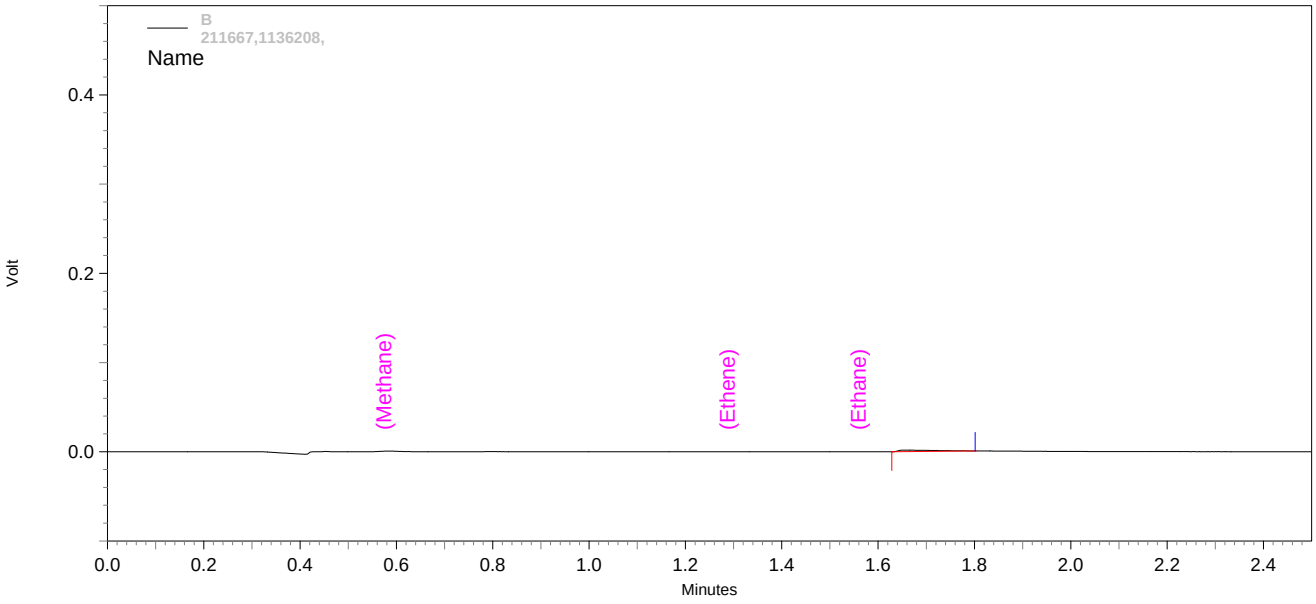
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\013.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136208,
Acquired: May 04, 2022 09:50:55
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



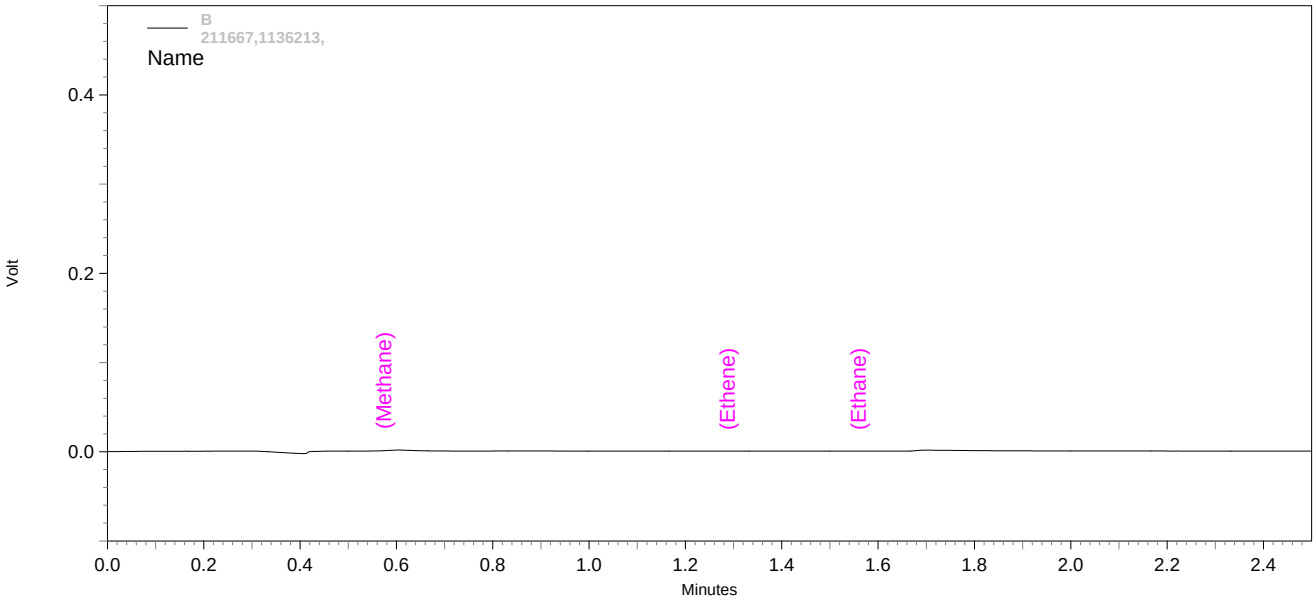
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**
1		**1.657**	**0.000**	**8893**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\014.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136213,
Acquired: May 04, 2022 09:55:20
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



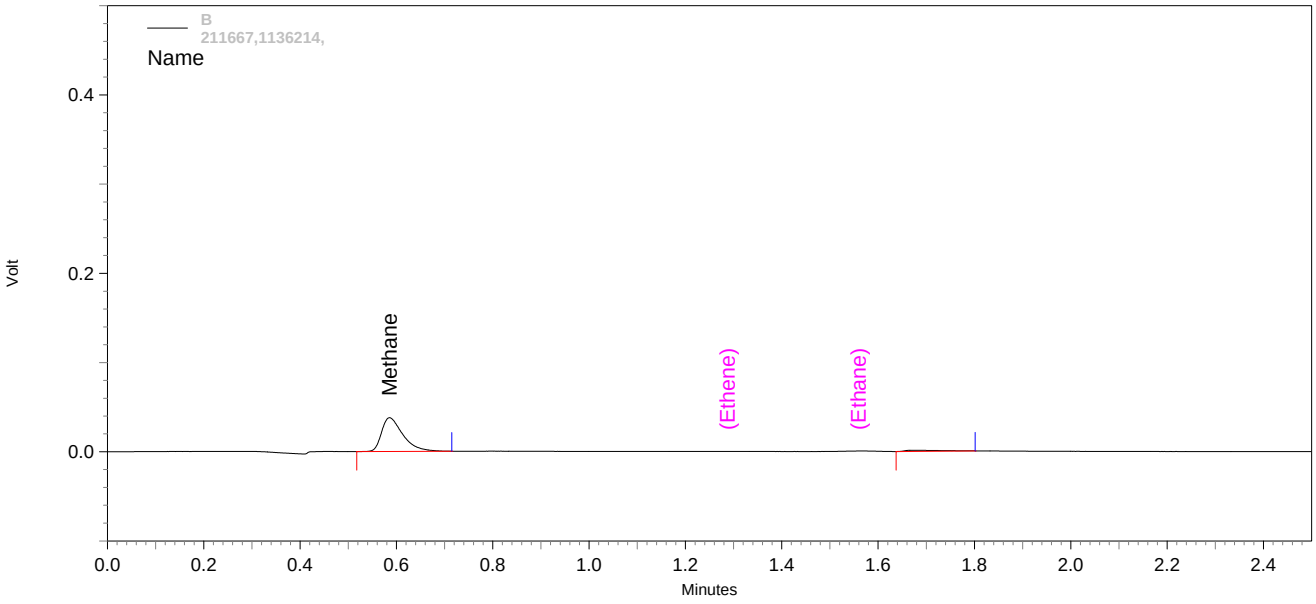
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\015.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136214,
Acquired: May 04, 2022 09:58:57
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



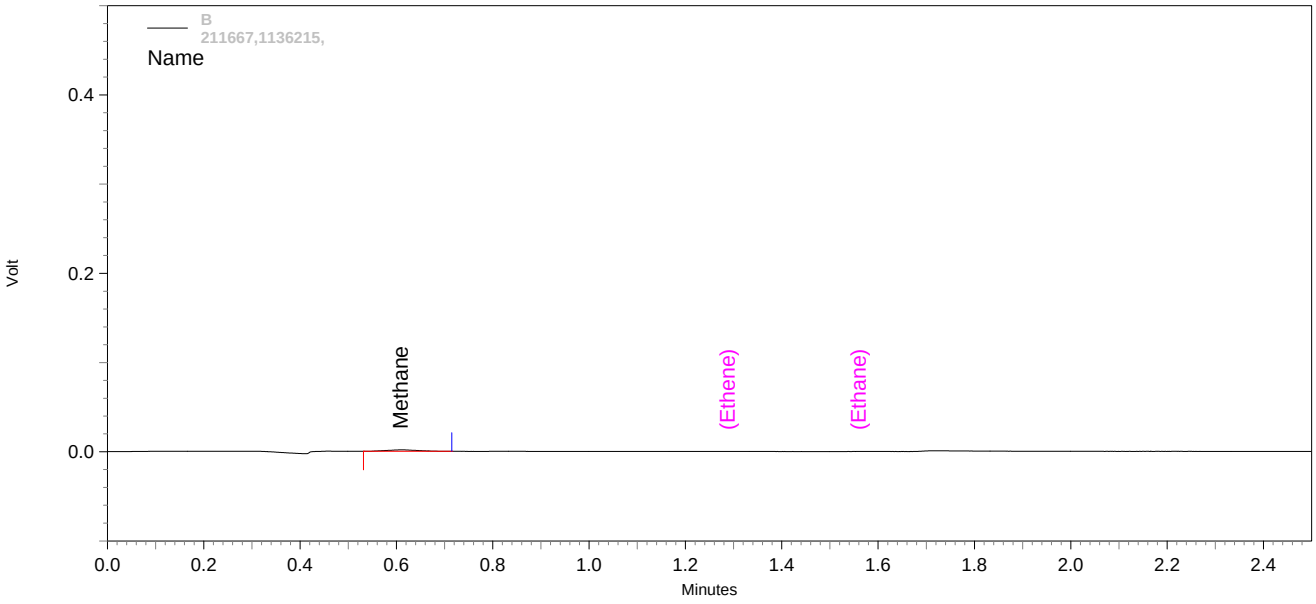
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.586	0.574	115610	29.758	ppmV
	Ethene		1.287		0.000 BDL	ppmV
	Ethane		1.559		0.000 BDL	ppmV
2		1.676	0.000	5946	0.000	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\016.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136215,
Acquired: May 04, 2022 10:03:20
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



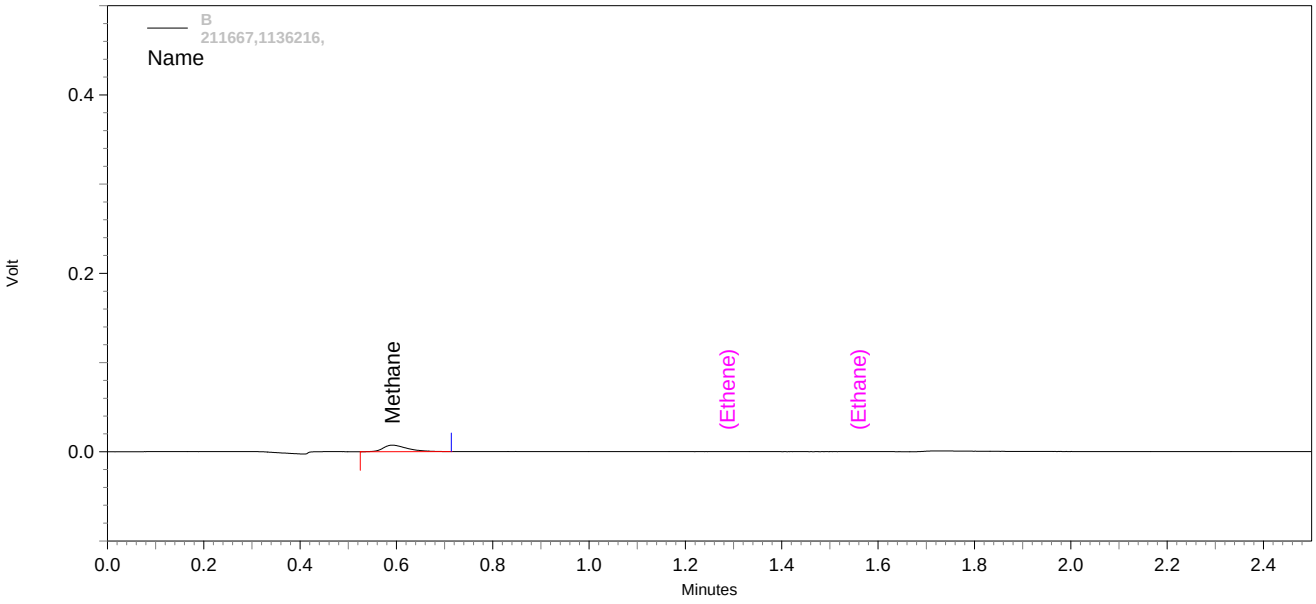
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.608**	**0.574**	**7507**	**1.786**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\017.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136216,
Acquired: May 04, 2022 10:07:14
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



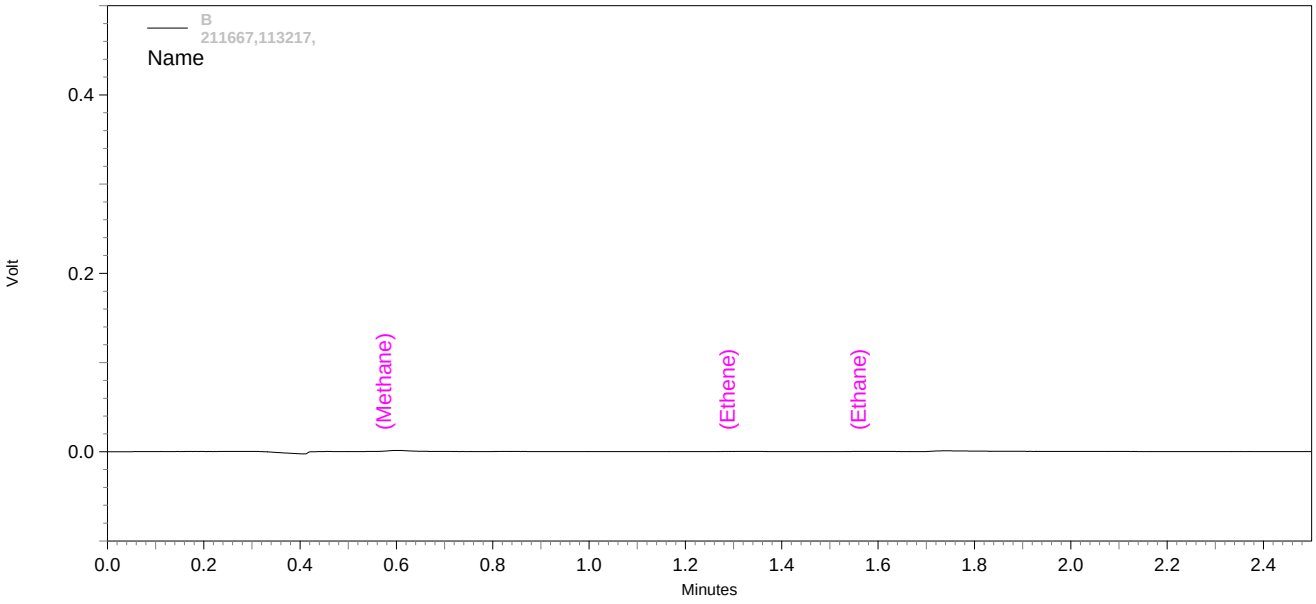
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.592**	**0.574**	**25219**	**6.369**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\020.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136217,
Acquired: May 04, 2022 10:38:20
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



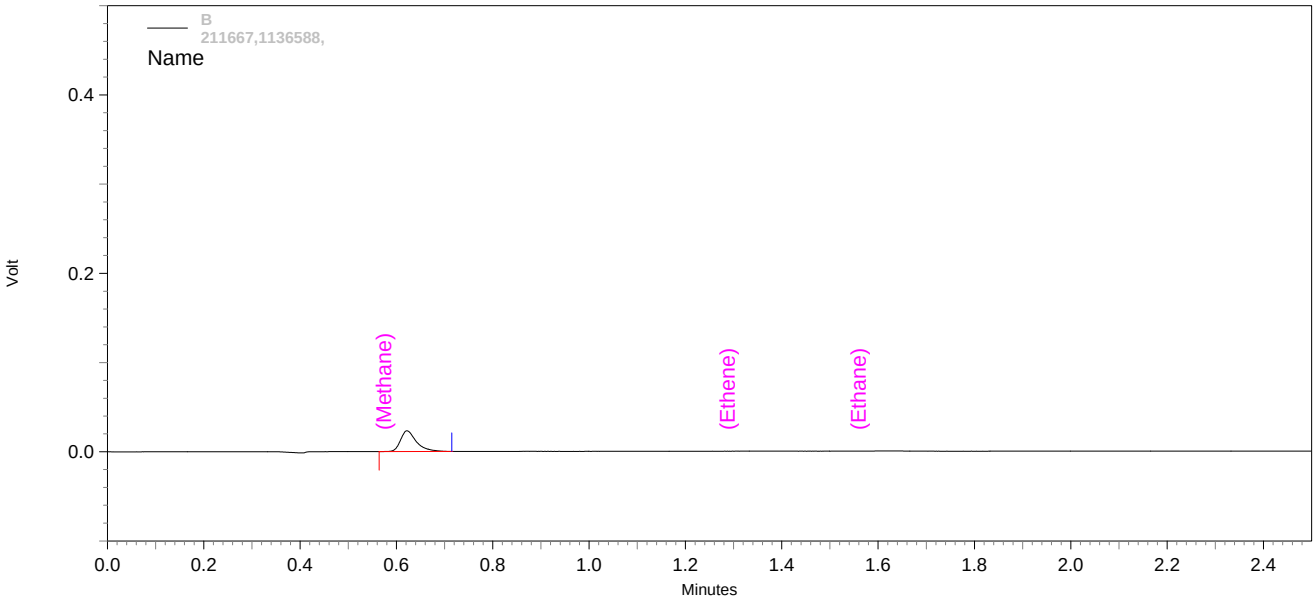
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\021.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136588,
Acquired: May 04, 2022 10:42:14
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



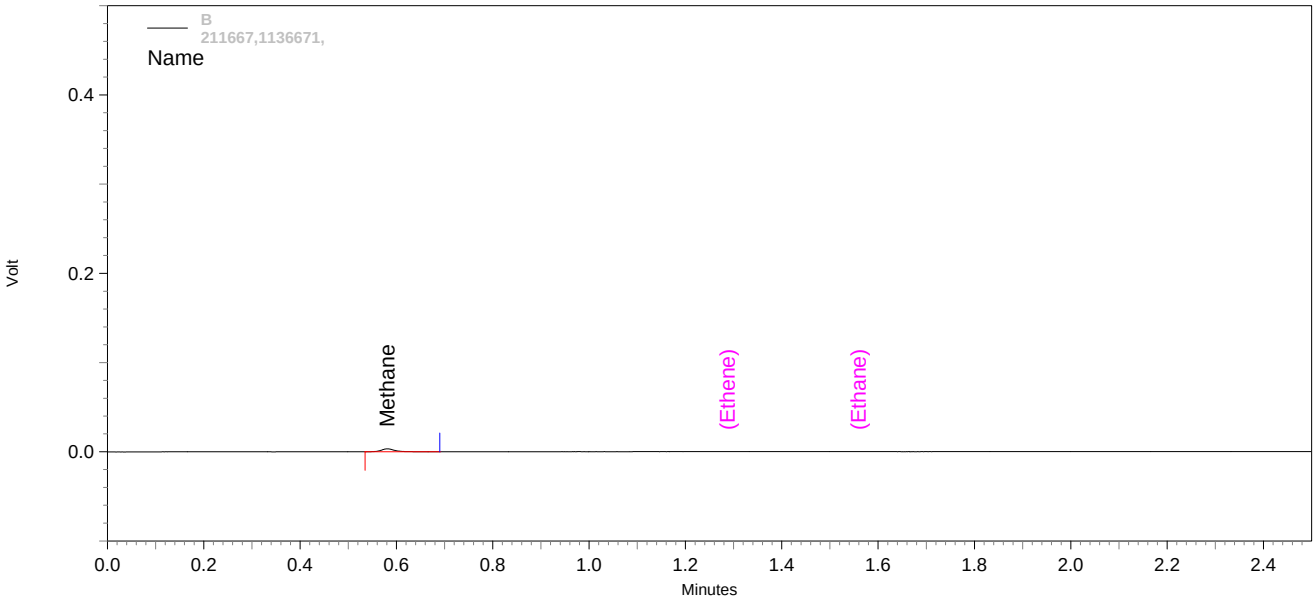
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
1		**0.622**	**0.000**	**53112**	**0.000**	
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\022.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136671,
Acquired: May 04, 2022 10:46:26
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



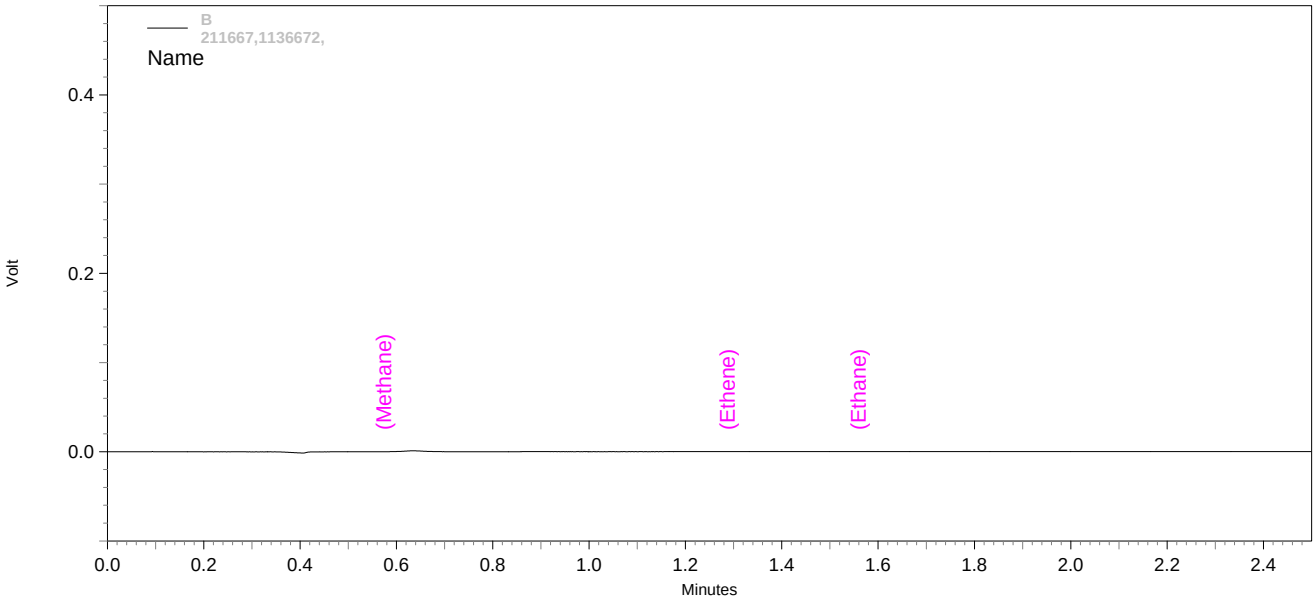
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.581**	**0.574**	**6136**	**1.432**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\023.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136672,
Acquired: May 04, 2022 10:50:59
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



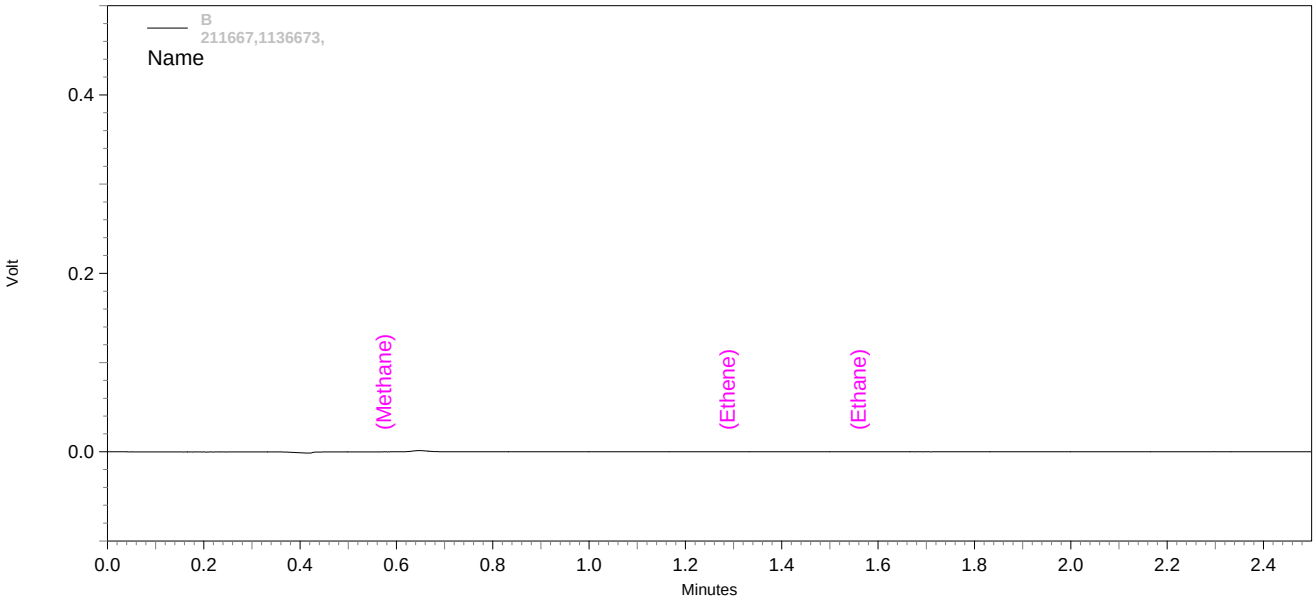
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\024.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136673,
Acquired: May 04, 2022 10:55:11
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



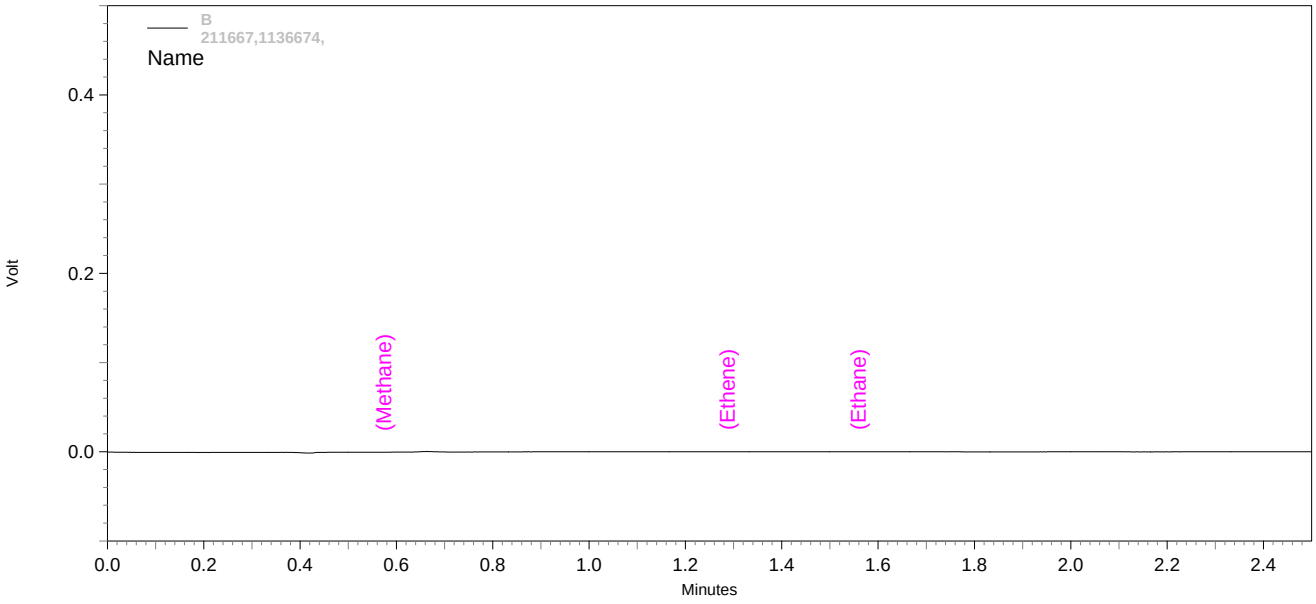
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\025.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1136674,
Acquired: May 04, 2022 10:59:00
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



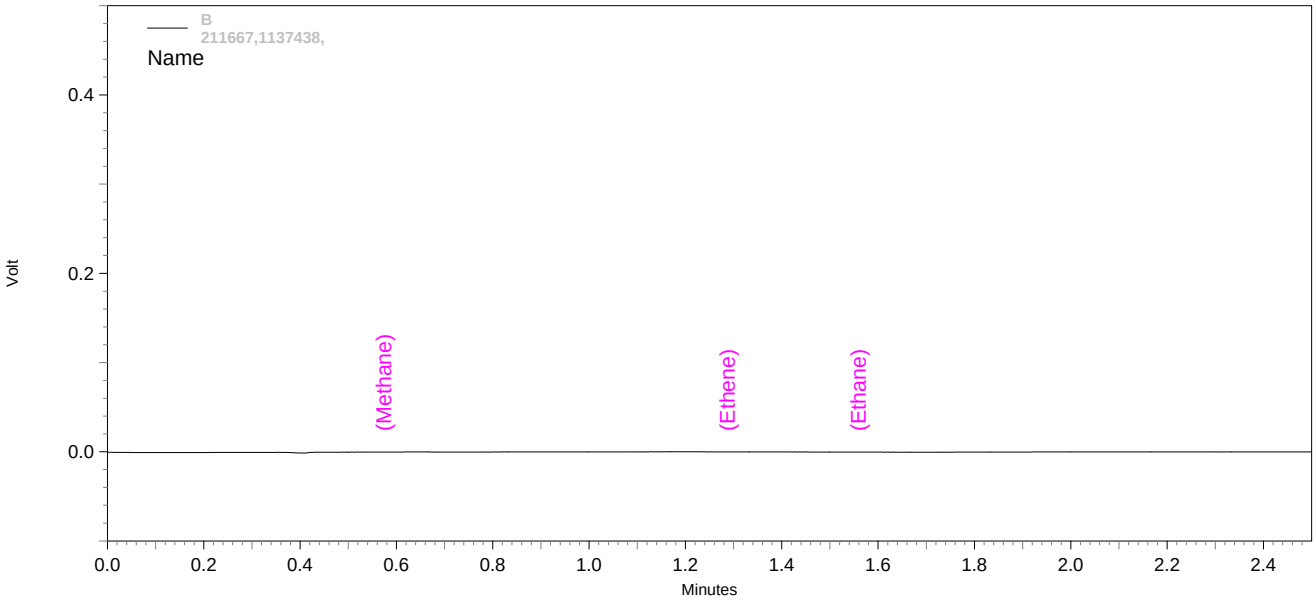
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\026.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,1137438,
Acquired: May 04, 2022 11:02:32
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.574**		**0.000 BDL**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
INITIAL CALIBRATION
DOCUMENTS

Method Path : C:\INSTARCH\METHODS\
Method File : W042822.M
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response Via : Initial Calibration

RJ 05/04/2022

Calibration Files ug/L
1 0.5/5.0 =WCAL1.D 2 1.0/10.0 =WCAL2.D 3 2.0/20.0 =WCAL3.D
4 5.0/50.0 =WCAL4.D 5 10.0/100.0 =WCAL5.D 6 20.0/200.0 =WCAL6.D
7 30.0/300.0 =WCAL7.D 8 40.0/400.0 =WCAL8.D 9 80.0/800.0 =WCAL9.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD
			8	9							
1)	I	FLUOROBENZENE**ISTD**	----------ISTD----------								
2)	PT	Dichlorodi	0.196	0.266	0.279	0.261	0.272	0.279	0.264	0.258	9.95
			0.261	0.245							
3)	PT	Chloromethan	0.255	0.233	0.252	0.261	0.245	0.239	0.228	0.238	7.34
			0.226	0.205							
4)	PT	VinylChlorid	0.219	0.269	0.256	0.250	0.253	0.247	0.238	0.243	6.83
			0.236	0.220							
5)	PT	Bromomethane		0.173	0.150	0.144	0.137	0.134	0.132	0.140	11.39
			0.134	0.119							
6)	PT	Chloroethane		0.198	0.170	0.160	0.149	0.152	0.145	0.157	12.46
			0.145	0.135							
7)	T	Dichloroflmetha	0.530	0.575	0.547	0.563	0.534	0.534	0.512	0.529	6.37
			0.509	0.460							
8)	PT	Trichlorofma	0.321	0.407	0.413	0.401	0.420	0.416	0.385	0.388	8.50
			0.379	0.352							
9)	T	Ethylether	0.200	0.163	0.201	0.206	0.188	0.202	0.201	0.195	6.86
			0.202	0.191							
10)	T	dichlorotfluoro	0.403	0.516	0.552	0.518	0.525	0.522	0.496	0.495	9.52
			0.483	0.438							
11)	T	propyleneoxide		0.074	0.071	0.074	0.067	0.073	0.068	0.069	7.48
			0.068	0.058							
12)	T	Acrolein		0.062	0.062	0.060	0.056	0.056	0.056	0.057	8.75
			0.054	0.047							
13)	PT	11dichlorthe	0.228	0.252	0.261	0.261	0.263	0.272	0.263	0.256	5.15
			0.262	0.244							
14)	PT	Trichlorotfluor	0.161	0.223	0.220	0.218	0.228	0.230	0.219	0.213	9.84
			0.217	0.202							
15)	PT	Acetone	0.120	0.121	0.112	0.108	0.096	0.098	0.091	0.104	12.53
			0.086								
16)	T	Iodomethane		0.216	0.248	0.271	0.276	0.288	0.285	0.265	9.20
			0.282	0.257							
17)	PT	Carbon Dislf	0.502	0.545	0.534	0.505	0.501	0.492	0.464	0.488	9.16
			0.452	0.398							
18)	T	allylchloride	0.435	0.458	0.438	0.441	0.435	0.435	0.412	0.420	8.81
			0.396	0.333							
19)	PT	methylacetate		0.080	0.074	0.078	0.067	0.082	0.079	0.077#	6.32
			0.082	0.078							
20)	PT	Methylchlorid	0.400	0.357	0.332	0.320	0.302	0.299	0.293	0.317	12.77
			0.289	0.266							
21)	T	tbutylalcohol	0.026	0.029	0.032	0.030	0.028	0.030	0.029	0.028#	9.66
			0.028	0.022							
22)	T	Acrylonitrile		0.136	0.137	0.138	0.124	0.129	0.122	0.126	9.55
			0.118	0.102							
23)	PT	t12dichlorte	0.306	0.294	0.302	0.295	0.293	0.292	0.287	0.290	4.55
			0.284	0.260							
24)	PT	MtBE	0.659	0.684	0.675	0.657	0.645	0.669	0.656	0.653	4.88
			0.654	0.574							
25)	T	Hexane	0.300	0.420	0.458	0.454	0.497	0.493	0.460	0.432	14.47
			0.438	0.370							
26)	PT	11dichlorota	0.523	0.541	0.528	0.523	0.504	0.508	0.490	0.502	7.05
			0.479	0.423							
27)	T	Vinylacetate	0.469	0.468	0.462	0.456	0.406	0.296	0.305	-----	

			0.273	0.183							
									Q	A= -0.004	R=0.997
										B= 0.355	
										C= 0.131	
28)	T	chloroprene	0.369	0.418	0.459	0.461	0.461	0.458	0.429	0.424	9.93
			0.410	0.348							
29)	T	Diisopether	0.742	0.820	0.780	0.859	0.817	0.804	0.772	0.776	8.03
			0.754	0.641							
30)	T	ETBE	0.627	0.631	0.656	0.671	0.639	0.669	0.650	0.642	4.65
			0.658	0.574							
31)	T	22dichloropr	0.273	0.282	0.291	0.292	0.292	0.307	0.310	0.295	4.38
			0.312	0.295							
32)	PT	c12dichlorte	0.281	0.320	0.310	0.327	0.309	0.318	0.310	0.307	5.55
			0.310	0.276							
33)	PT	2Butanone		0.044	0.042	0.043	0.040	0.043	0.041	0.041#	6.46
			0.040	0.036							
34)	T	propionitrile		0.058	0.060	0.058	0.053	0.056	0.052	0.054	8.84
			0.051	0.045							
35)	T	Ethylacetate		0.012	0.012	0.013	0.012	0.014	0.014	0.013#	5.27
			0.014	0.013							
36)	T	methacrylonitri		0.157	0.161	0.159	0.150	0.159	0.151	0.153	5.14
			0.151	0.136							
37)	T	Bromochlorma	0.153	0.161	0.147	0.144	0.140	0.144	0.141	0.145	5.81
			0.141	0.132							
38)	T	Tetrahydofur	0.094	0.098	0.098	0.096	0.089	0.091	0.085	0.089	11.40
			0.081	0.067							
39)	PT	Chloroform	0.492	0.562	0.517	0.525	0.483	0.492	0.473	0.491	8.55
			0.466	0.412							
40)	PT	111trichlota	0.363	0.414	0.409	0.390	0.404	0.416	0.402	0.396	4.69
			0.400	0.371							
41)	S	SURRDibrflma	0.271	0.267	0.262	0.270	0.264	0.265	0.265	0.266	1.19
			0.267	0.263							
42)	PT	Cyclohexane	0.271	0.352	0.383	0.376	0.407	0.413	0.401	0.374	11.54
			0.394	0.367							
43)	PT	Carbtetraclo	0.243	0.296	0.311	0.311	0.319	0.337	0.333	0.310	9.05
			0.328	0.315							
44)	T	11dicloprope		0.139	0.133	0.144	0.143	0.143	0.147	0.142	3.08
			0.145	0.140							
45)	S	SURR12DCAd4	0.071	0.071	0.073	0.072	0.073	0.070	0.070	0.071	2.17
			0.069	0.070							
46)	PT	Benzene	1.189	1.235	1.225	1.220	1.174	1.127	1.061	1.120	11.69
			1.016	0.835							
47)	PT	12dichlorota	0.375	0.417	0.392	0.374	0.370	0.366	0.351	0.368	7.92
			0.351	0.312							
48)	T	TAME	0.558	0.579	0.579	0.610	0.599	0.635	0.623	0.598	5.05
			0.640	0.564							
49)	PT	trichloroete	0.298	0.297	0.297	0.302	0.291	0.310	0.292	0.294	3.74
			0.288	0.270							
50)	PT	methylcyclohexa	0.352	0.545	0.573	0.569	0.635	0.649	0.622	-----	
			0.612	0.546							
									Q	A= -0.034	R=1.000
										B= 0.685	
										C= -0.013	
51)	PT	12dicloropra	0.292	0.346	0.316	0.330	0.312	0.309	0.303	0.310	6.47
			0.305	0.277							
52)	T	23Dicl1propene		0.456	0.449	0.461	0.441	0.456	0.441	0.442	4.98
			0.439	0.391							
53)	T	Dibromometha		0.184	0.183	0.180	0.168	0.175	0.170	0.174	4.79
			0.173	0.160							
54)	T	methylmethacryl		0.188	0.212	0.222	0.209	0.235	0.225	0.218	6.99
			0.233	0.216							
55)	T	14dioxane		0.005	0.005	0.005	0.004	0.004	0.004	0.004#	6.82
			0.004	0.004							
56)	PT	Bromodiclrma	0.381	0.388	0.385	0.380	0.365	0.374	0.362	0.369	5.32
			0.359	0.324							
57)	T	2Nitropropane	0.072	0.078	0.079	0.083	0.080	0.084	0.082	0.078	7.18
			0.079	0.066							
58)	T	2CLEVE		0.081	0.088	0.096	0.092	0.105	0.104	0.096	9.36
			0.106	0.096							
59)	PT	c13dicloproe	0.413	0.402	0.403	0.437	0.414	0.431	0.431	0.416	4.23

```
                    0.430 0.385
60) PT  4Meth2Pentan    0.258 0.281 0.284 0.282 0.251 0.239 0.210 -----
                    0.190 0.134
                                                        Q  A= -0.003 R=0.999
                                                           B=  0.253
                                                           C=  0.049
61) S   SURRd8Tolule    1.046 1.050 1.053 1.054 1.059 1.042 1.036 1.046   1.02
                    1.051 1.024
62) PT  Toluene         0.727 0.785 0.793 0.760 0.738 0.732 0.704 0.722   9.11
                    0.679 0.575
63) PT  t13Dicloprop    0.345 0.311 0.323 0.338 0.334 0.361 0.354 0.340   5.12
                    0.362 0.329
64) T   ethylmethacryla       0.370 0.381 0.397 0.391 0.415 0.401 0.385   6.91
                    0.395 0.328
65) PT  112Triclotha          0.224 0.228 0.230 0.218 0.225 0.221 0.221   4.23
                    0.223 0.200
66) PT  Tetrachlorte    0.259 0.323 0.293 0.319 0.320 0.321 0.306 0.304   7.04
                    0.308 0.285
67) T   13Diclorpropa   0.468 0.509 0.481 0.497 0.445 0.458 0.441 0.457   8.29
                    0.435 0.382

68) I   d5-CHLOROBENZENE**IST ----------------ISTD--------------------
69) PT  2Hexanone             0.248 0.259 0.257 0.230 0.233 0.208 -----
                    0.190 0.139
                                                        Q  A= -0.003 R=0.999
                                                           B=  0.246
                                                           C=  0.025
70) PT  Clorodibrmta    0.362 0.333 0.339 0.344 0.334 0.345 0.342 0.341   3.18
                    0.343 0.323
71) PT  12Dibrometha    0.307 0.329 0.304 0.323 0.305 0.328 0.320 0.315   3.77
                    0.321 0.297
72) PT  Chlorobenzen    1.099 1.049 1.042 1.045 0.975 0.979 0.931 0.974  10.77
                    0.893 0.754
73) T   1Clhexane      0.489 0.476 0.458 0.478 0.492 0.517 0.508 0.484   4.55
                    0.492 0.448
74) T   1112Tetclota           0.290 0.318 0.319 0.307 0.319 0.319 0.310   3.80
                    0.316 0.295
75) PT  Ethylbenzene    1.551 1.765 1.682 1.702 1.634 1.600 1.491 1.551  12.43
                    1.402 1.131
76) PT  m p-Xylene      0.597 0.626 0.629 0.659 0.633 0.635 0.597 0.602   9.12
                    0.568 0.474
77) PT  o-Xylene        0.582 0.600 0.593 0.629 0.627 0.642 0.618 0.603   5.52
                    0.603 0.530
78) PT  Styrene         0.945 0.933 1.000 1.053 1.017 1.039 1.000 0.971   7.85
                    0.952 0.801
79) PT  Bromoform             0.219 0.211 0.225 0.216 0.239 0.242 0.228   5.07
                    0.238 0.231
80) PT  Isopropylben    1.427 1.491 1.511 1.583 1.540 1.530 1.443 1.443   9.98
                    1.358 1.104
81) T   cyclohexanone         0.017 0.018 0.018 0.017 0.020 0.019 ----- #
                    0.019 0.017
                                                        Q  A= -0.000 R=0.999
                                                           B=  0.022
                                                           C= -0.014

82) I   d4-1,4-DICHLOROBENZEN ----------------ISTD--------------------
83) S   SURR4BrFBenz    0.989 0.999 0.996 0.992 0.985 0.978 0.984 0.990   0.70
                    0.996 0.988
84) T   Bromobenzene    0.670 0.701 0.766 0.706 0.703 0.707 0.689 0.698   4.78
                    0.700 0.641
85) PT  1122Tetrclta    0.858 0.956 0.873 0.875 0.810 0.790 0.797 0.830   8.35
                    0.794 0.714
86) T   123Triclproa          1.040 1.021 1.013 0.986 1.028 1.026 1.013   2.52
                    1.027 0.964
87) T   14dichloro2bute       0.210 0.220 0.226 0.222 0.243 0.252 0.234   6.83
                    0.248 0.249
88) T   n-Propylbenz    3.107 3.390 3.380 3.283 3.318 3.148 2.937 3.065  12.12
                    2.785 2.238
89) T   2chlorotolue    2.081 2.188 2.004 2.074 1.967 1.932 1.857 1.940   9.72
                    1.812 1.544
```

90)	T	4chlorotolue	2.229	2.472	2.378	2.421	2.294	2.204	2.127	2.210	10.37
			2.043	1.723							
91)	T	135Trimebenz	2.107	2.276	2.364	2.369	2.353	2.291	2.162	2.197	8.94
			2.088	1.760							
92)	T	tbutylbenzen	1.711	1.875	1.935	1.942	1.980	1.955	1.886	1.857	6.95
			1.838	1.588							
93)	T	124Trimetben	2.103	2.255	2.224	2.291	2.265	2.217	2.119	2.138	8.25
			2.044	1.724							
94)	T	sbutylbenzen	2.395	2.703	2.789	2.877	2.879	2.790	2.653	2.631	10.15
			2.533	2.059							
95)	PT	13Diclorbenz	1.314	1.358	1.286	1.325	1.276	1.275	1.218	1.260	6.60
			1.211	1.078							
96)	T	pIsopropylto	2.097	2.309	2.440	2.416	2.420	2.363	2.244	2.254	8.98
			2.183	1.813							
97)	PT	14dichlorobe	1.353	1.385	1.380	1.385	1.300	1.298	1.250	1.297	7.40
			1.225	1.095							
98)	PT	12dichlorobe	1.356	1.355	1.284	1.266	1.205	1.198	1.163	1.221	8.86
			1.144	1.017							
99)	T	nButylbenzen	2.054	2.211	2.211	2.211	2.240	2.160	2.077	2.096	8.22
			2.011	1.691							
100)	PT	12dibromo3cl		0.152	0.139	0.155	0.145	0.162	0.164	0.157	7.20
			0.171	0.169							
101)	T	135Trichloroben	1.030	1.033	0.999	0.987	0.981	0.980	0.967	0.980	4.75
			0.969	0.873							
102)	PT	124Trichlobe	0.729	0.795	0.768	0.783	0.764	0.803	0.790	0.775	3.59
			0.805	0.737							
103)	T	Hexachlorobu	0.297	0.332	0.324	0.336	0.358	0.367	0.369	0.346	7.40
			0.368	0.367							
104)	T	Naphthalene	1.446	1.705	1.682	1.701	1.701	1.861	1.783	1.709	7.19
			1.791								
105)	T	123Trichlben	0.750	0.755	0.736	0.748	0.722	0.755	0.736	0.737	2.94
			0.746	0.687							

Total Average %RSD 7.22

L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
(#) = Out of Range

W042822.M Mon May 02 08:17:35 2022

Data File : C:\Instarch\Data\APR2822\BFB1.D Vial: 1
Acq On : 28 Apr 2022 13:26 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.669 to 4.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	15244	PASS
75	95	30	60	45.7	41194	PASS
95	95	100	100	100.0	90050	PASS
96	95	5	9	6.2	5584	PASS
173	174	0.00	2	0.8	543	PASS
174	95	50	100	79.3	71393	PASS
175	174	5	9	7.7	5521	PASS
176	174	95	101	95.1	67885	PASS
177	176	5	9	6.7	4548	PASS

W042822.M Mon May 02 08:14:16 2022

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL1.D Vial: 4
Acq On : 28 Apr 2022 14:39 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 14:59:43 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1303049	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1053630	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	571697	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	353661	20.660	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.26	102	92678	20.027	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.71	98	1362861	20.406	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.25	95	565447	20.024	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	6377	0.4145	ug/L #	41
3) Chloromethan	2.10	50	8305	0.5191	ug/L	89
4) VinylChlorid	2.24	62	7136	0.4615	ug/L	95
5) Bromomethane	2.70	94	5696	0.6548	ug/L	94
6) Chloroethane	2.87	64	4659	0.4779	ug/L #	42
7) Dichloroflmethane	3.20	67	17277	0.5181	ug/L #	92
8) Trichlorofma	3.27	101	10468	0.4558	ug/L #	95
9) Ethylether	3.71	59	6513	0.5148	ug/L	92
10) dichlorotfluoroethan	3.72	67	13129	0.4310	ug/L	96
11) propyleneoxide	3.76	58	20432	4.7796	ug/L	94
12) Acrolein	3.84	56	9080	2.5410	ug/L	96
13) 11dichlorthe	3.98	96	7416	0.4778	ug/L	96
14) Trichlorotfluoroeth	4.02	101	10521	0.7813	ug/L	93
15) Acetone	4.06	43	38979	6.2872	ug/L	96
16) Iodomethane	4.16	142	14157	0.8247	ug/L #	82
17) Carbon Dislf	4.25	76	32696	1.0472	ug/L	100
18) allylchloride	4.47	41	28363	1.0749	ug/L	99
19) methylacetate	4.53	74	3446	0.7029	ug/L #	37
20) Methylchlorid	4.63	84	13017	0.6824	ug/L	93
21) tbutylalcohol	4.84	59	43056	24.5116	ug/L	95
22) Acrylonitrile	4.94	53	20767	2.6116	ug/L	98
23) t12dichlorte	5.01	96	9976	0.5597	ug/L	87
24) MtBE	5.04	73	21454	0.5191	ug/L	96
25) Hexane	5.40	57	19555	0.7485	ug/L	98
26) 11dichlorota	5.54	63	17052	0.5632	ug/L #	90
27) Vinylacetate	5.62	43	152686	3.3202	ug/L	96
28) chloroprene	5.66	53	24051	0.9025	ug/L	95
29) Diisopether	5.68	45	24158	0.4854	ug/L	100
30) ETBE	6.13	59	20414	0.4977	ug/L	96
31) 22dichloropr	6.27	77	8887	0.4929	ug/L #	76
32) c12dichlorte	6.26	96	9160	0.4740	ug/L	91
33) 2Butanone	6.29	72	11404	4.3647	ug/L	85
34) propionitrile	6.32	54	16648	4.9231	ug/L	94
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	6.53	67	9186	0.9613	ug/L	94
37) Bromochlorma	6.55	128	4989	0.5755	ug/L	94
38) Tetrahydofur	6.64	42	30467	5.4889	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL1.D Vial: 4
Acq On : 28 Apr 2022 14:39 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 14:59:43 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	16021	0.5378	ug/L		92
40)	111trichlota	6.91	97	11835	0.4885	ug/L		93
42)	Cyclohexane	6.99	56	8844	0.3856	ug/L	#	82
43)	Carbtetraclo	7.13	119	7925	0.4320	ug/L		89
44)	11dicloprope	7.11	110	3915	0.4644	ug/L		93
46)	Benzene	7.36	78	38721	0.5588	ug/L		96
47)	12dichlorota	7.35	62	12217	0.5385	ug/L	#	91
48)	TAME	7.52	73	18193	0.4851	ug/L		87
49)	trichloroete	8.16	95	9693	0.5328	ug/L		94
50)	methylcyclohexane	8.43	83	11475	0.5992	ug/L		94
51)	12dicloropra	8.42	63	9517	0.5078	ug/L	#	95
52)	23Dicl1propene	8.48	75	14273	0.5050	ug/L		94
53)	Dibromometha	8.56	93	5586	0.5240	ug/L		95
54)	methylmethacrylate	8.58	69	7018	0.5012	ug/L	#	43
55)	14dioxane	8.60	88	6790	25.4399	ug/L	#	86
56)	Bromodiclrma	8.76	83	12419	0.5559	ug/L	#	93
57)	2Nitropropane	9.02	43	23604	4.8997	ug/L		93
58)	2CLEVE	9.16	63	10910	1.7266	ug/L		97
59)	c13dicloproe	9.34	75	13456	0.5232	ug/L		93
60)	4Meth2Pentan	9.54	43	84051	2.0006	ug/L		96
62)	Toluene	9.78	92	23692	0.5326	ug/L		88
63)	t13Dicloprop	10.05	75	11241	0.5545	ug/L		96
64)	ethylmethacrylate	10.20	69	22773	0.9322	ug/L		97
65)	112Triclotha	10.28	83	6628	0.4859	ug/L		90
66)	Tetrachlorte	10.52	166	8437	0.4429	ug/L		91
67)	13Diclorpropa	10.51	76	15238	0.5471	ug/L		94
69)	2Hexanone	10.63	43	58046	4.7237	ug/L		97
70)	Clorodibrmta	10.81	129	9545	0.5531	ug/L	#	85
71)	12Dibrometha	10.97	107	8077	0.4958	ug/L		96
72)	Chlorobenzen	11.65	112	28957	0.5675	ug/L	#	70
73)	1Clhexane	11.63	91	12893	0.4839	ug/L	#	41
74)	1112Tetclota	11.76	131	7616	0.4883	ug/L		94
75)	Ethylbenzene	11.82	91	40864	0.5056	ug/L		97
76)	m p-Xylene	11.98	106	31475	0.9897	ug/L		93
77)	o-Xylene	12.52	106	15320	0.4911	ug/L	#	85
78)	Styrene	12.54	104	24889	0.4875	ug/L		97
79)	Bromoform	12.76	173	5370	0.4536	ug/L		89
80)	Isopropylben	13.05	105	37577	0.4934	ug/L		93
81)	cyclohexanone	13.13	55	8165	23.8751	ug/L	#	89
84)	Bromobenzene	13.45	156	9581	0.4659	ug/L	#	84
85)	1122Tetrclta	13.42	83	12263	0.5131	ug/L		96
86)	123Triclproa	13.49	75	14863	0.5194	ug/L		94
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	13.64	91	44405	0.5001	ug/L		98
89)	2chlorotolue	13.74	91	29744	0.5253	ug/L		100
90)	4chlorotolue	13.90	91	31854	0.5049	ug/L		98
91)	135Trimebenz	13.89	105	30108	0.4744	ug/L		93
92)	tbutylbenzen	14.36	119	24448	0.4482	ug/L		97
93)	124Trimetben	14.43	105	30060	0.4842	ug/L		97
94)	sbutylbenzen	14.68	105	34231	0.4454	ug/L		96
95)	13Diclorbenz	14.82	146	18777	0.5152	ug/L		97
96)	pIsopropylto	14.89	119	29967	0.4592	ug/L	#	98
97)	14dichlorobe	14.94	146	19331	0.5171	ug/L	#	62
98)	12dichlorobe	15.47	146	19384	0.5665	ug/L	#	70
99)	nButylbenzen	15.49	91	29355	0.4824	ug/L		96
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	16.91	180	14717	0.5166	ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL1.D Vial: 4
Acq On : 28 Apr 2022 14:39 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 14:59:43 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
102) 124Trichlobe	17.72	180	10413	0.4698	ug/L		98
103) Hexachlorobu	17.96	225	4241	0.4206	ug/L		81
104) Naphthalene	18.02	128	20660	0.4124	ug/L	#	90
105) 123Trichlben	18.33	180	10716	0.5076	ug/L		89

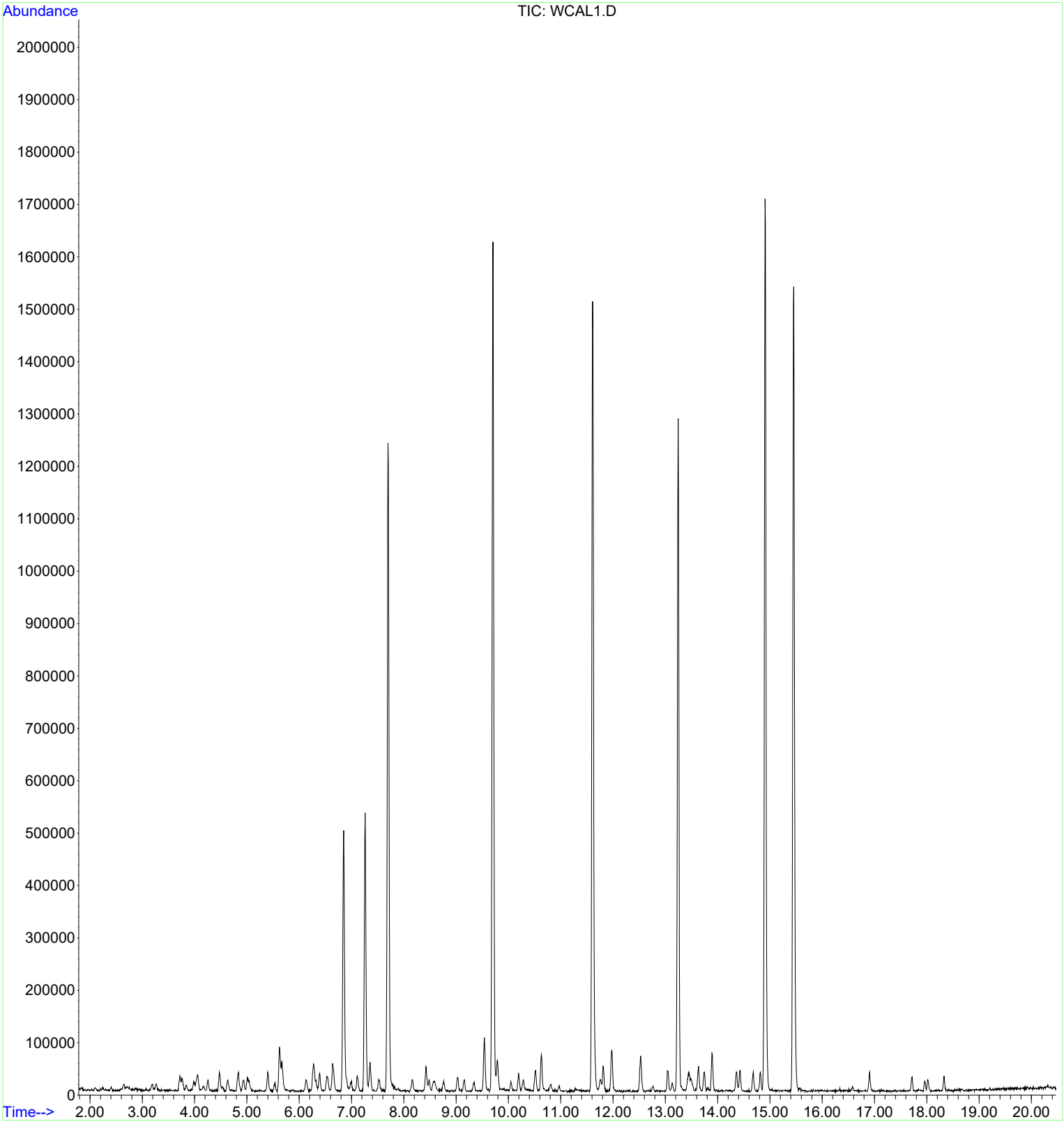
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL1.D Vial: 4
Acq On : 28 Apr 2022 14:39 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 14:59:43 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL2.D Vial: 5
Acq On : 28 Apr 2022 15:09 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 15:29:52 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1321574	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1070635	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	579343	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	352423	20.299	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.26	102	93704	19.965	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.71	98	1387509	20.484	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.25	95	578866	20.228	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	17589	1.1272	ug/L	92
3) Chloromethan	2.11	50	15429	0.9508	ug/L	98
4) VinylChlorid	2.24	62	17800	1.1351	ug/L	98
5) Bromomethane	2.70	94	11459	1.2987	ug/L	96
6) Chloroethane	2.87	64	13066	1.3216	ug/L	85
7) Dichloroflmethane	3.18	67	38016	1.1241	ug/L	98
8) Trichlorofma	3.26	101	26905	1.1551	ug/L	96
9) Ethylether	3.71	59	10765	0.8390	ug/L #	82
10) dichlorotfluoroethan	3.73	67	34106	1.1040	ug/L	95
11) propyleneoxide	3.76	58	48695	11.2315	ug/L	98
12) Acrolein	3.84	56	20352	5.6155	ug/L	89
13) 11dichlorthe	3.98	96	16659	1.0584	ug/L	94
14) Trichlorotfluoroeth	4.03	101	29527	2.1620	ug/L	96
15) Acetone	4.06	43	80206	12.7556	ug/L	99
16) Iodomethane	4.16	142	28498	1.6369	ug/L	95
17) Carbon Dislf	4.26	76	71969	2.2726	ug/L	98
18) allylchloride	4.47	41	60463	2.2593	ug/L	98
19) methylacetate	4.53	74	5255	1.0569	ug/L #	37
20) Methylchlorid	4.63	84	23604	1.2200	ug/L	97
21) tbutylalcohol	4.83	59	96045	53.9115	ug/L	95
22) Acrylonitrile	4.93	53	45005	5.5804	ug/L	95
23) t12dichlorte	5.01	96	19396	1.0730	ug/L	92
24) MtBE	5.04	73	45192	1.0781	ug/L	97
25) Hexane	5.40	57	55523	2.0955	ug/L	97
26) 11dichlorota	5.53	63	35749	1.1642	ug/L	95
27) Vinylacetate	5.62	43	309287	9.4939	ug/L	96
28) chloroprene	5.66	53	55224	2.0431	ug/L	94
29) Diisopether	5.68	45	54173	1.0733	ug/L	94
30) ETBE	6.13	59	41689	1.0021	ug/L	98
31) 22dichloropr	6.27	77	18647	1.0198	ug/L	91
32) c12dichlorte	6.27	96	21143	1.0788	ug/L	93
33) 2Butanone	6.29	72	28873	10.8958	ug/L	100
34) propionitrile	6.32	54	38013	11.0836	ug/L	99
35) Ethylacetate	6.40	88	4012	4.8095	ug/L #	92
36) methacrylonitrile	6.53	67	20729	2.1389	ug/L	97
37) Bromochlorma	6.55	128	10651	1.2114	ug/L	90
38) Tetrahydofur	6.64	42	64756	11.5028	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL2.D Vial: 5
Acq On : 28 Apr 2022 15:09 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 15:29:52 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	37160	1.2299	ug/L		90
40)	111trichlota	6.91	97	27374	1.1141	ug/L		97
42)	Cyclohexane	6.99	56	23248	0.9995	ug/L		95
43)	Carbtetraclo	7.12	119	19549	1.0508	ug/L		96
44)	11dicloprope	7.11	110	9181	1.0738	ug/L		97
46)	Benzene	7.36	78	81609	1.1612	ug/L		99
47)	12dichlorota	7.35	62	27573	1.1984	ug/L	#	90
48)	TAME	7.53	73	38232	1.0051	ug/L		97
49)	trichloroete	8.17	95	19637	1.0643	ug/L		99
50)	methylcyclohexane	8.43	83	36014	1.1901	ug/L		97
51)	12dicloropra	8.42	63	22867	1.2031	ug/L		84
52)	23Dicl1propene	8.48	75	30151	1.0519	ug/L		93
53)	Dibromometha	8.56	93	12191	1.1276	ug/L		99
54)	methylmethacrylate	8.59	69	12410	0.8739	ug/L		96
55)	14dioxane	8.60	88	15946	58.9069	ug/L		99
56)	Bromodiclrma	8.76	83	25633	1.1314	ug/L	#	92
57)	2Nitropropane	9.02	43	51727	10.5868	ug/L		99
58)	2CLEVE	9.15	63	26631	4.1556	ug/L		96
59)	c13dicloproe	9.34	75	26544	1.0177	ug/L		98
60)	4Meth2Pentan	9.54	43	185801	8.2276	ug/L		94
62)	Toluene	9.79	92	51890	1.1502	ug/L		97
63)	t13Dicloprop	10.05	75	20550	0.9994	ug/L		97
64)	ethylmethacrylate	10.20	69	48931	1.9749	ug/L		99
65)	112Triclotha	10.28	83	14781	1.0683	ug/L		93
66)	Tetrachlorte	10.52	166	21348	1.1050	ug/L		97
67)	13Diclorpropa	10.52	76	33619	1.1901	ug/L		91
69)	2Hexanone	10.63	43	132504	10.6116	ug/L		95
70)	Clorodibrmta	10.81	129	17817	1.0160	ug/L		94
71)	12Dibrometha	10.97	107	17637	1.0654	ug/L		99
72)	Chlorobenzen	11.65	112	56141	1.0827	ug/L		88
73)	1Clhexane	11.63	91	25455	0.9403	ug/L	#	68
74)	1112Tetclota	11.76	131	15532	0.9801	ug/L		86
75)	Ethylbenzene	11.82	91	94476	1.1503	ug/L		96
76)	m p-Xylene	11.98	106	66983	2.0727	ug/L		91
77)	o-Xylene	12.53	106	32113	1.0132	ug/L		98
78)	Styrene	12.53	104	49948	0.9629	ug/L		99
79)	Bromoform	12.77	173	11707	0.9731	ug/L		94
80)	Isopropylben	13.05	105	79823	1.0316	ug/L		98
81)	cyclohexanone	13.12	55	18200	32.3432	ug/L	#	94
84)	Bromobenzene	13.45	156	20303	0.9742	ug/L	#	81
85)	1122Tetrclta	13.42	83	27702	1.1437	ug/L		99
86)	123Triclproa	13.49	75	30132	1.0391	ug/L		98
87)	14dichloro2butene	13.51	53	6087	0.9396	ug/L		97
88)	n-Propylbenz	13.64	91	98202	1.0914	ug/L		95
89)	2chlorotolue	13.74	91	63386	1.1047	ug/L		96
90)	4chlorotolue	13.90	91	71599	1.1198	ug/L		97
91)	135Trimebenz	13.89	105	65938	1.0252	ug/L		98
92)	tbutylbenzen	14.35	119	54325	0.9828	ug/L		96
93)	124Trimetben	14.43	105	65332	1.0384	ug/L		97
94)	sbutylbenzen	14.68	105	78309	1.0055	ug/L		98
95)	13Diclorbenz	14.82	146	39343	1.0653	ug/L		96
96)	pIsopropylto	14.90	119	66890	1.0114	ug/L	#	99
97)	14dichlorobe	14.94	146	40114	1.0590	ug/L		85
98)	12dichlorobe	15.49	146	39238	1.1317	ug/L		85
99)	nButylbenzen	15.49	91	64044	1.0385	ug/L		98
100)	12dibromo3cl	16.57	157	4412	0.9821	ug/L		99
101)	135Trichlorobenzene	16.90	180	29916	1.0363	ug/L		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL2.D Vial: 5
Acq On : 28 Apr 2022 15:09 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 15:29:52 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.71	180	23038	1.0257	ug/L	97
103) Hexachlorobu	17.96	225	9613	0.9408	ug/L	94
104) Naphthalene	18.02	128	49388	0.9729	ug/L	97
105) 123Trichlben	18.33	180	21878	1.0226	ug/L	98

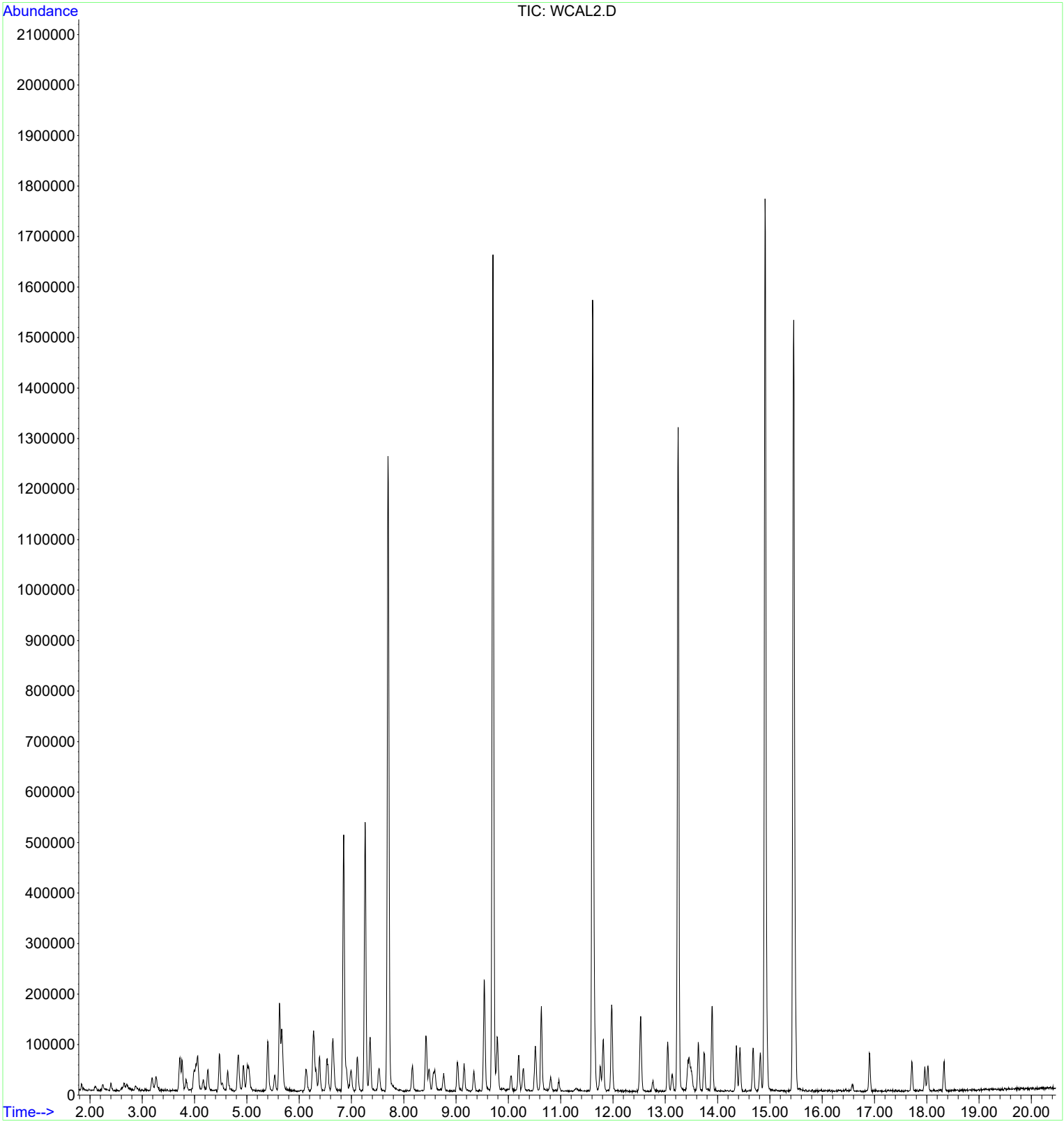
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL2.D Vial: 5
Acq On : 28 Apr 2022 15:09 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 15:29:52 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL3.D Vial: 6
Acq On : 28 Apr 2022 15:39 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:00:12 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1325013	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1082132	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	589362	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	347142	19.943 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
45) SURR12DCAd4	7.26	102	96664	20.542 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %		
61) SURRd8Tolule	9.70	98	1395213	20.544 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %		
83) SURR4BrFBenz	13.25	95	586903	20.161 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %		
Target Compounds					Qvalue
2) Dichlorodi	1.84	85	37006	2.3655 ug/L	100
3) Chloromethan	2.10	50	33406	2.0533 ug/L	99
4) VinylChlorid	2.24	62	33918	2.1574 ug/L	90
5) Bromomethane	2.70	94	19813	2.2398 ug/L	99
6) Chloroethane	2.88	64	22461	2.2659 ug/L	98
7) Dichloroflmethane	3.19	67	72426	2.1359 ug/L	98
8) Trichlorofma	3.27	101	54724	2.3434 ug/L	94
9) Ethylether	3.71	59	26688	2.0746 ug/L	94
10) dichlorotfluoroethan	3.72	67	73080	2.3594 ug/L	93
11) propyleneoxide	3.76	58	93975	21.6191 ug/L	99
12) Acrolein	3.84	56	41275	11.3591 ug/L	97
13) 11dichlorthe	3.98	96	34551	2.1893 ug/L	96
14) Trichlorotfluoroeth	4.02	101	58341	4.2608 ug/L	98
15) Acetone	4.06	43	148778	23.5996 ug/L	96
16) Iodomethane	4.17	142	65638	3.7603 ug/L	99
17) Carbon Dislf	4.26	76	141423	4.4543 ug/L	97
18) allylchloride	4.48	41	116133	4.3282 ug/L	98
19) methylacetate	4.53	74	9869	1.9796 ug/L	91
20) Methylchlorid	4.63	84	43960	2.2662 ug/L	98
21) tbutylalcohol	4.83	59	211084	118.1772 ug/L	98
22) Acrylonitrile	4.94	53	90570	11.2010 ug/L	97
23) t12dichlorte	5.00	96	39959	2.2048 ug/L	98
24) MtBE	5.04	73	89388	2.1270 ug/L	97
25) Hexane	5.40	57	121315	4.5667 ug/L	99
26) 11dichlorota	5.54	63	69953	2.2721 ug/L	97
27) Vinylacetate	5.62	43	612715	21.7612 ug/L	96
28) chloroprene	5.67	53	121519	4.4841 ug/L	99
29) Diisopether	5.68	45	103385	2.0430 ug/L	97
30) ETBE	6.13	59	86889	2.0832 ug/L	98
31) 22dichloropr	6.27	77	38535	2.1020 ug/L	100
32) c12dichlorte	6.26	96	41133	2.0933 ug/L	89
33) 2Butanone	6.29	72	56291	21.1873 ug/L	98
34) propionitrile	6.32	54	78912	22.9490 ug/L	100
35) Ethylacetate	6.40	88	8231	9.8416 ug/L #	84
36) methacrylonitrile	6.52	67	42572	4.3814 ug/L	98
37) Bromochlorma	6.55	128	19466	2.2083 ug/L	95
38) Tetrahydofur	6.63	42	130119	23.0534 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL3.D Vial: 6
Acq On : 28 Apr 2022 15:39 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:00:12 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.65	83	68453	2.2597	ug/L	100
40)	111trichlota	6.90	97	54238	2.2018	ug/L	99
42)	Cyclohexane	6.99	56	50691	2.1737	ug/L	97
43)	Carbtetraclo	7.11	119	41255	2.2118	ug/L	97
44)	11dicloprope	7.11	110	17594	2.0525	ug/L	99
46)	Benzene	7.35	78	162299	2.3033	ug/L	97
47)	12dichlorota	7.36	62	51922	2.2509	ug/L	99
48)	TAME	7.52	73	76705	2.0113	ug/L	95
49)	trichloroete	8.17	95	39349	2.1271	ug/L	98
50)	methylcyclohexane	8.43	83	75880	2.1537	ug/L	97
51)	12dicloropra	8.42	63	41815	2.1943	ug/L	95
52)	23Dicl1propene	8.48	75	59525	2.0713	ug/L	98
53)	Dibromometha	8.56	93	24209	2.2333	ug/L	98
54)	methylmethacrylate	8.59	69	28084	1.9726	ug/L	99
55)	14dioxane	8.60	88	30181	111.2038	ug/L	96
56)	Bromodiclrma	8.76	83	50974	2.2440	ug/L	99
57)	2Nitropropane	9.04	43	104319	21.2953	ug/L	98
58)	2CLEVE	9.15	63	58222	9.0616	ug/L	96
59)	c13dicloproe	9.34	75	53344	2.0398	ug/L	98
60)	4Meth2Pentan	9.54	43	376031	20.0692	ug/L	95
62)	Toluene	9.79	92	105102	2.3237	ug/L	99
63)	t13Dicloprop	10.05	75	42806	2.0764	ug/L	99
64)	ethylmethacrylate	10.20	69	100944	4.0637	ug/L	96
65)	112Triclotha	10.28	83	30246	2.1804	ug/L	95
66)	Tetrachlorte	10.52	166	38857	2.0061	ug/L	95
67)	13Diclorpropa	10.51	76	63717	2.2498	ug/L	98
69)	2Hexanone	10.63	43	280414	22.2184	ug/L	97
70)	Clorodibrmta	10.81	129	36723	2.0718	ug/L	97
71)	12Dibrometha	10.97	107	32921	1.9675	ug/L	98
72)	Chlorobenzen	11.65	112	112724	2.1508	ug/L	94
73)	1Clhexane	11.63	91	49595	1.8125	ug/L	84
74)	1112Tetclota	11.76	131	34438	2.1499	ug/L	98
75)	Ethylbenzene	11.81	91	182019	2.1926	ug/L	98
76)	m p-Xylene	11.98	106	136149	4.1681	ug/L	92
77)	o-Xylene	12.52	106	64170	2.0031	ug/L	98
78)	Styrene	12.53	104	108255	2.0647	ug/L	95
79)	Bromoform	12.76	173	22872	1.8810	ug/L	96
80)	Isopropylben	13.05	105	163481	2.0902	ug/L	100
81)	cyclohexanone	13.13	55	39878	50.5591	ug/L	98
84)	Bromobenzene	13.45	156	45131	2.1286	ug/L	97
85)	1122Tetrclta	13.42	83	51444	2.0879	ug/L	97
86)	123Triclproa	13.48	75	60148	2.0390	ug/L	97
87)	14dichloro2butene	13.52	53	12986	1.9705	ug/L	91
88)	n-Propylbenz	13.63	91	199215	2.1765	ug/L	96
89)	2chlorotolue	13.75	91	118086	2.0230	ug/L	99
90)	4chlorotolue	13.90	91	140129	2.1544	ug/L	97
91)	135Trimebenz	13.89	105	139297	2.1290	ug/L	95
92)	tbutylbenzen	14.37	119	114033	2.0280	ug/L	95
93)	124Trimetben	14.43	105	131070	2.0478	ug/L	98
94)	sbutylbenzen	14.68	105	164366	2.0745	ug/L	99
95)	13Diclorbenz	14.82	146	75767	2.0166	ug/L	99
96)	pIsopropylto	14.90	119	143801	2.1374	ug/L	98
97)	14dichlorobe	14.94	146	81342	2.1108	ug/L	93
98)	12dichlorobe	15.48	146	75672	2.1454	ug/L	95
99)	nButylbenzen	15.49	91	130290	2.0768	ug/L	99
100)	12dibromo3cl	16.57	157	8203	1.7949	ug/L	95
101)	135Trichlorobenzene	16.90	180	58873	2.0048	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL3.D Vial: 6
Acq On : 28 Apr 2022 15:39 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:00:12 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	45285	1.9819	ug/L	96
103) Hexachlorobu	17.97	225	19088	1.8364	ug/L	94
104) Naphthalene	18.02	128	99132	1.9197	ug/L	99
105) 123Trichlben	18.33	180	43357	1.9920	ug/L	97

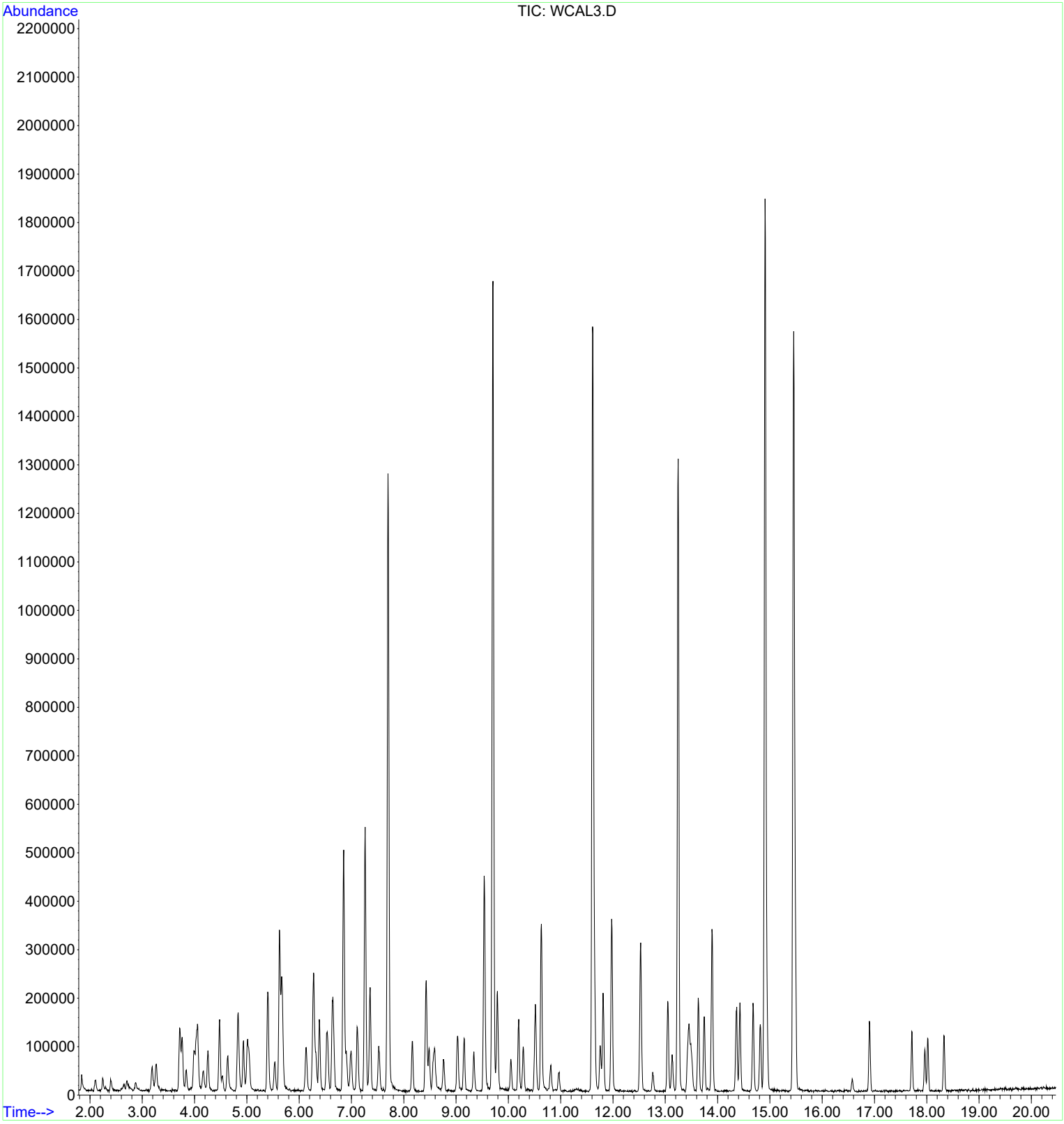
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL3.D Vial: 6
Acq On : 28 Apr 2022 15:39 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:00:12 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL4.D Vial: 7
Acq On : 28 Apr 2022 16:09 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:30:03 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1330321	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1072248	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	603467	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	359053	20.545	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.26	102	96020	20.324	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102	%		
61) SURRd8Tolule	9.70	98	1402623	20.571	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103	%		
83) SURR4BrFBenz	13.25	95	598672	20.084	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	86765	5.5240	ug/L	95
3) Chloromethan	2.10	50	86957	5.3234	ug/L	96
4) VinylChlorid	2.24	62	83047	5.2611	ug/L	99
5) Bromomethane	2.70	94	47994	5.4038	ug/L	99
6) Chloroethane	2.87	64	53097	5.3351	ug/L	100
7) Dichloroflmethane	3.18	67	187107	5.4960	ug/L	99
8) Trichlorofma	3.27	101	133296	5.6853	ug/L	95
9) Ethylether	3.71	59	68582	5.3099	ug/L	98
10) dichlorotfluoroethan	3.72	67	172437	5.5449	ug/L	98
11) propyleneoxide	3.76	58	245214	56.1867	ug/L	95
12) Acrolein	3.84	56	100011	27.4136	ug/L	99
13) 11dichlorthe	3.98	96	86665	5.4697	ug/L	97
14) Trichlorotfluoroeth	4.02	101	145134	10.5571	ug/L	98
15) Acetone	4.05	43	359017	56.7210	ug/L	98
16) Iodomethane	4.16	142	179944	10.2677	ug/L	99
17) Carbon Dislf	4.26	76	335874	10.5365	ug/L	100
18) allylchloride	4.47	41	293110	10.8804	ug/L	99
19) methylacetate	4.53	74	25858	5.1662	ug/L	96
20) Methylchlorid	4.63	84	106268	5.4565	ug/L	100
21) tbutylalcohol	4.83	59	500230	278.9405	ug/L	98
22) Acrylonitrile	4.93	53	229181	28.2303	ug/L	99
23) t12dichlorte	5.00	96	98099	5.3912	ug/L	98
24) MtBE	5.04	73	218557	5.1798	ug/L	100
25) Hexane	5.40	57	301765	11.3140	ug/L	99
26) 11dichlorota	5.53	63	173918	5.6264	ug/L	98
27) Vinylacetate	5.62	43	1515549	59.8422	ug/L	98
28) chloroprene	5.66	53	306387	11.2608	ug/L	98
29) Diisopether	5.68	45	285523	5.6198	ug/L	100
30) ETBE	6.13	59	223288	5.3320	ug/L	99
31) 22dichloropr	6.27	77	97122	5.2767	ug/L	98
32) c12dichlorte	6.26	96	108680	5.5087	ug/L	99
33) 2Butanone	6.28	72	142430	53.3952	ug/L	97
34) propionitrile	6.32	54	193397	56.0188	ug/L	99
35) Ethylacetate	6.39	88	21122	25.1543	ug/L #	85
36) methacrylonitrile	6.53	67	105461	10.8105	ug/L	96
37) Bromochlorma	6.55	128	47928	5.4154	ug/L	96
38) Tetrahydofur	6.63	42	319936	56.4573	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL4.D Vial: 7
Acq On : 28 Apr 2022 16:09 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:30:03 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	174521	5.7382 ug/L	96
40)	111trichlota	6.90	97	129568	5.2387 ug/L	99
42)	Cyclohexane	6.99	56	125128	5.3443 ug/L	100
43)	Carbtetraclo	7.12	119	103305	5.5164 ug/L	96
44)	11dicloprope	7.11	110	47880	5.5634 ug/L	96
46)	Benzene	7.36	78	405845	5.7367 ug/L	99
47)	12dichlorota	7.36	62	124470	5.3744 ug/L	97
48)	TAME	7.52	73	202782	5.2960 ug/L	97
49)	trichloroete	8.16	95	100474	5.4097 ug/L	98
50)	methylcyclohexane	8.43	83	189170	4.8947 ug/L	100
51)	12dicloropra	8.42	63	109695	5.7334 ug/L	96
52)	23Dicl1propene	8.48	75	153347	5.3147 ug/L	96
53)	Dibromometha	8.56	93	59840	5.4984 ug/L	99
54)	methylmethacrylate	8.59	69	73737	5.1585 ug/L	96
55)	14dioxane	8.60	88	76082	279.2105 ug/L	97
56)	Bromodiclrma	8.76	83	126235	5.5351 ug/L	98
57)	2Nitropropane	9.02	43	276669	56.2529 ug/L	98
58)	2CLEVE	9.15	63	158865	24.6268 ug/L	96
59)	c13dicloproe	9.34	75	145446	5.5396 ug/L	97
60)	4Meth2Pentan	9.54	43	938651	55.9312 ug/L	97
62)	Toluene	9.79	92	252719	5.5651 ug/L	98
63)	t13Dicloprop	10.05	75	112410	5.4309 ug/L	99
64)	ethylmethacrylate	10.20	69	264011	10.5859 ug/L	98
65)	112Triclotha	10.28	83	76593	5.4996 ug/L	97
66)	Tetrachlorte	10.52	166	106154	5.4585 ug/L	98
67)	13Diclorpropa	10.51	76	165223	5.8105 ug/L	100
69)	2Hexanone	10.63	43	688678	55.0699 ug/L	99
70)	Clorodibrmta	10.81	129	92284	5.2543 ug/L	98
71)	12Dibrometha	10.96	107	86516	5.2181 ug/L	100
72)	Chlorobenzen	11.65	112	280129	5.3943 ug/L	100
73)	1Clhexane	11.63	91	128014	4.7215 ug/L	97
74)	1112Tetclota	11.76	131	85617	5.3943 ug/L	95
75)	Ethylbenzene	11.81	91	456354	5.5480 ug/L	98
76)	m p-Xylene	11.98	106	353321	10.9164 ug/L	96
77)	o-Xylene	12.52	106	168535	5.3093 ug/L	99
78)	Styrene	12.53	104	282286	5.4335 ug/L	99
79)	Bromoform	12.77	173	60325	5.0068 ug/L	95
80)	Isopropylben	13.05	105	424318	5.4753 ug/L	96
81)	cyclohexanone	13.13	55	99083	101.8421 ug/L	99
84)	Bromobenzene	13.45	156	106519	4.9065 ug/L	92
85)	1122Tetrclta	13.42	83	132007	5.2323 ug/L	98
86)	123Triclproa	13.49	75	152866	5.0610 ug/L	99
87)	14dichloro2butene	13.51	53	34067	5.0485 ug/L	95
88)	n-Propylbenz	13.64	91	495282	5.2847 ug/L	100
89)	2chlorotolue	13.75	91	312890	5.2351 ug/L	100
90)	4chlorotolue	13.90	91	365228	5.4838 ug/L	97
91)	135Trimebenz	13.89	105	357445	5.3354 ug/L	97
92)	tbutylbenzen	14.36	119	292964	5.0883 ug/L	99
93)	124Trimetben	14.43	105	345583	5.2732 ug/L	98
94)	sbutylbenzen	14.68	105	434096	5.3508 ug/L	98
95)	13Diclorbenz	14.82	146	199831	5.1944 ug/L	99
96)	pIsopropylto	14.90	119	364421	5.2899 ug/L	99
97)	14dichlorobe	14.94	146	208903	5.2943 ug/L	99
98)	12dichlorobe	15.49	146	191040	5.2896 ug/L	98
99)	nButylbenzen	15.49	91	333558	5.1925 ug/L	100
100)	12dibromo3cl	16.57	157	23442	5.0095 ug/L	84
101)	135Trichlorobenzene	16.90	180	148869	4.9508 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL4.D Vial: 7
Acq On : 28 Apr 2022 16:09 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:30:03 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	118191	5.0516	ug/L	99
103) Hexachlorobu	17.96	225	50659	4.7599	ug/L	98
104) Naphthalene	18.02	128	256591	4.8526	ug/L	99
105) 123Trichlben	18.33	180	112808	5.0618	ug/L	97

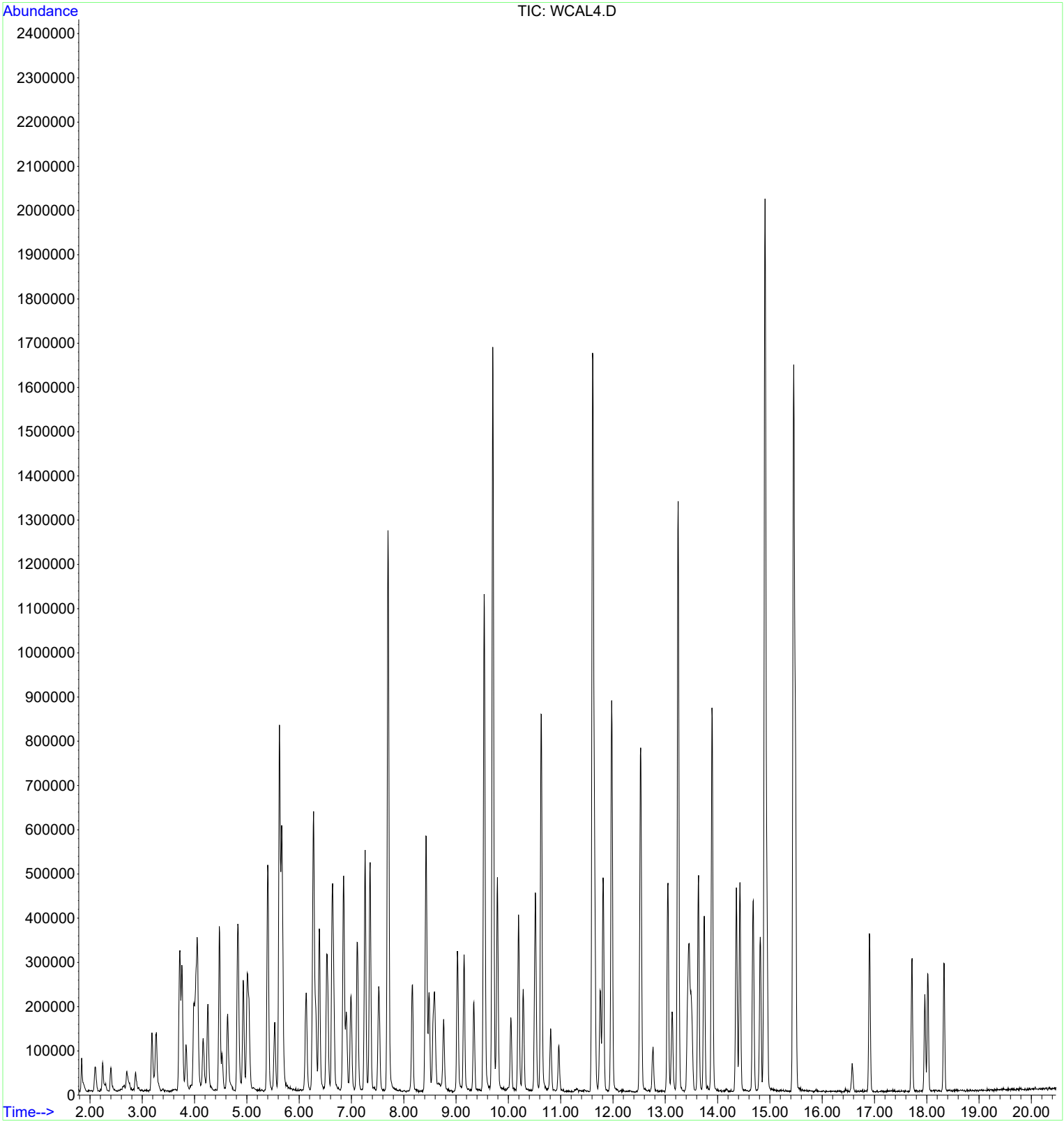
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL4.D Vial: 7
Acq On : 28 Apr 2022 16:09 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:30:03 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL5.D Vial: 8
Acq On : 28 Apr 2022 16:38 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:59:06 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1360561	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1103594	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	612993	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	359213	20.098	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.26	102	99281	20.547	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103	%		
61) SURRd8Tolule	9.71	98	1440717	20.660	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103	%		
83) SURR4BrFBenz	13.25	95	603746	19.940	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	185274	11.5334	ug/L	100
3) Chloromethan	2.10	50	166422	9.9617	ug/L	95
4) VinylChlorid	2.24	62	172011	10.6549	ug/L	98
5) Bromomethane	2.71	94	92938	10.2316	ug/L	95
6) Chloroethane	2.87	64	101504	9.9724	ug/L	96
7) Dichloroflmethane	3.18	67	363585	10.4424	ug/L	99
8) Trichlorofma	3.26	101	285402	11.9022	ug/L	97
9) Ethylether	3.71	59	127654	9.6637	ug/L	97
10) dichlorotfluoroethan	3.72	67	357226	11.2317	ug/L	98
11) propyleneoxide	3.76	58	457894	102.5868	ug/L	99
12) Acrolein	3.84	56	190175	50.9695	ug/L	97
13) 11dichlorthe	3.99	96	178803	11.0340	ug/L	99
14) Trichlorotfluoroeth	4.02	101	310589	22.0903	ug/L	98
15) Acetone	4.05	43	655693	101.2903	ug/L	97
16) Iodomethane	4.16	142	375245	20.9358	ug/L	100
17) Carbon Dislf	4.26	76	681714	20.9103	ug/L	100
18) allylchloride	4.48	41	591462	21.4673	ug/L	99
19) methylacetate	4.53	74	45340	8.8572	ug/L	94
20) Methylchlorid	4.63	84	205444	10.3143	ug/L	98
21) tbutylalcohol	4.83	59	941327	513.2404	ug/L	99
22) Acrylonitrile	4.93	53	420945	50.6991	ug/L	97
23) t12dichlorte	5.00	96	199249	10.7067	ug/L	98
24) MtBE	5.04	73	438964	10.1722	ug/L	99
25) Hexane	5.40	57	675827	24.7755	ug/L	99
26) 11dichlorota	5.53	63	342788	10.8431	ug/L	100
27) Vinylacetate	5.62	43	2758550	114.6261	ug/L	100
28) chloroprene	5.67	53	627891	22.5643	ug/L	100
29) Diisopether	5.68	45	555790	10.6961	ug/L	95
30) ETBE	6.13	59	434666	10.1488	ug/L	99
31) 22dichloropr	6.27	77	198938	10.5682	ug/L	98
32) c12dichlorte	6.26	96	210117	10.4136	ug/L	98
33) 2Butanone	6.28	72	269115	98.6454	ug/L	98
34) propionitrile	6.32	54	359593	101.8436	ug/L	99
35) Ethylacetate	6.38	88	42039	48.9518	ug/L	96
36) methacrylonitrile	6.53	67	204100	20.4568	ug/L	100
37) Bromochlorma	6.55	128	95155	10.5126	ug/L	99
38) Tetrahydofur	6.63	42	607819	104.8745	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL5.D Vial: 8
Acq On : 28 Apr 2022 16:38 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:59:06 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	328406	10.5579	ug/L	99
40)	111trichlota	6.90	97	274562	10.8544	ug/L	97
42)	Cyclohexane	6.99	56	277111	11.5726	ug/L	98
43)	Carbtetraclo	7.12	119	216984	11.3292	ug/L	100
44)	11dicloprope	7.11	110	97066	11.0278	ug/L	98
46)	Benzene	7.35	78	798479	11.0358	ug/L	99
47)	12dichlorota	7.35	62	251727	10.6275	ug/L	100
48)	TAME	7.52	73	407470	10.4053	ug/L	99
49)	trichloroete	8.16	95	198215	10.4351	ug/L	99
50)	methylcyclohexane	8.43	83	432112	10.6241	ug/L	98
51)	12dicloropra	8.42	63	212147	10.8418	ug/L	94
52)	23Dicl1propene	8.48	75	300044	10.1678	ug/L	98
53)	Dibromometha	8.56	93	114183	10.2584	ug/L	97
54)	methylmethacrylate	8.59	69	142116	9.7211	ug/L	98
55)	14dioxane	8.60	88	136049	488.1840	ug/L	99
56)	Bromodiclrma	8.76	83	248303	10.6454	ug/L	98
57)	2Nitropropane	9.02	43	545117	108.3708	ug/L	98
58)	2CLEVE	9.15	63	311952	47.2831	ug/L	99
59)	c13dicloproe	9.34	75	281964	10.5004	ug/L	100
60)	4Meth2Pentan	9.54	43	1710260	105.3062	ug/L	100
62)	Toluene	9.79	92	501885	10.8063	ug/L	100
63)	t13Dicloprop	10.05	75	227060	10.7262	ug/L	98
64)	ethylmethacrylate	10.19	69	531365	20.8322	ug/L	99
65)	112Triclotha	10.28	83	148119	10.3989	ug/L	99
66)	Tetrachlorte	10.52	166	217914	10.9563	ug/L	97
67)	13Diclorpropa	10.51	76	302781	10.4115	ug/L	99
69)	2Hexanone	10.63	43	1268727	98.5718	ug/L	99
70)	Clorodibrmta	10.81	129	184430	10.2024	ug/L	99
71)	12Dibrometha	10.96	107	168248	9.8594	ug/L	98
72)	Chlorobenzen	11.65	112	537779	10.0616	ug/L	99
73)	1Clhexane	11.63	91	271333	9.7233	ug/L	98
74)	1112Tetclota	11.76	131	169180	10.3564	ug/L	97
75)	Ethylbenzene	11.81	91	901555	10.6491	ug/L	99
76)	m p-Xylene	11.98	106	698797	20.9773	ug/L	100
77)	o-Xylene	12.52	106	346150	10.5949	ug/L	92
78)	Styrene	12.53	104	561036	10.4922	ug/L	100
79)	Bromoform	12.76	173	119257	9.6169	ug/L	98
80)	Isopropylben	13.05	105	849527	10.6506	ug/L	98
81)	cyclohexanone	13.13	55	189205	175.5990	ug/L	99
84)	Bromobenzene	13.46	156	215472	9.7710	ug/L	97
85)	1122Tetrclta	13.42	83	248213	9.6855	ug/L	97
86)	123Triclproa	13.49	75	302155	9.8481	ug/L	97
87)	14dichloro2butene	13.51	53	68181	9.9469	ug/L	98
88)	n-Propylbenz	13.64	91	1017090	10.6837	ug/L	100
89)	2chlorotolue	13.75	91	602845	9.9297	ug/L	99
90)	4chlorotolue	13.90	91	702981	10.3911	ug/L	99
91)	135Trimebenz	13.89	105	721171	10.5972	ug/L	98
92)	tbutylbenzen	14.36	119	606959	10.3780	ug/L	98
93)	124Trimetben	14.43	105	694362	10.4305	ug/L	99
94)	sbutylbenzen	14.68	105	882536	10.7094	ug/L	100
95)	13Diclorbenz	14.82	146	391158	10.0098	ug/L	98
96)	pIsopropylto	14.90	119	741774	10.6003	ug/L	99
97)	14dichlorobe	14.94	146	398331	9.9382	ug/L	98
98)	12dichlorobe	15.48	146	369362	10.0682	ug/L	97
99)	nButylbenzen	15.49	91	686632	10.5228	ug/L	99
100)	12dibromo3cl	16.57	157	44427	9.3465	ug/L	89
101)	135Trichlorobenzene	16.91	180	300577	9.8407	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL5.D Vial: 8
Acq On : 28 Apr 2022 16:38 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:59:06 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	234054	9.8483	ug/L	99
103) Hexachlorobu	17.96	225	109736	10.1505	ug/L	98
104) Naphthalene	18.02	128	521206	9.7039	ug/L	99
105) 123Trichlben	18.33	180	221277	9.7747	ug/L	99

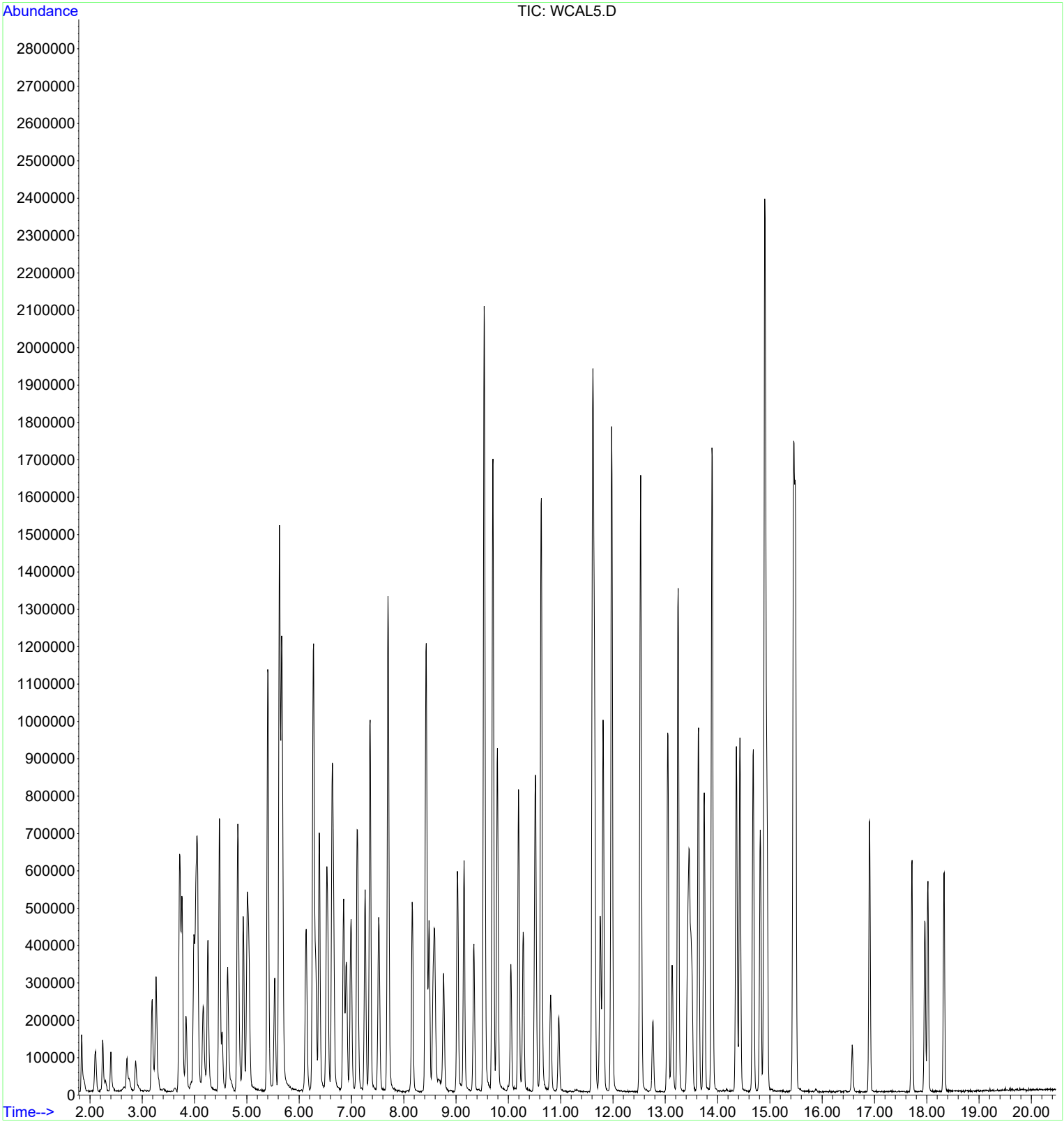
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL5.D Vial: 8
Acq On : 28 Apr 2022 16:38 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 16:59:06 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL6.D Vial: 9
Acq On : 28 Apr 2022 17:08 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 17:28:48 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1377834	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1099408	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	626982	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	364866	20.158	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.26	102	96480	19.717	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.70	98	1435775	20.331	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.25	95	612915	19.791	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	384591	23.6409	ug/L	100
3) Chloromethan	2.10	50	328900	19.4406	ug/L	97
4) VinylChlorid	2.25	62	340626	20.8349	ug/L	100
5) Bromomethane	2.70	94	184641	20.0725	ug/L	94
6) Chloroethane	2.87	64	209595	20.3337	ug/L	99
7) Dichloroflmethane	3.19	67	735208	20.8509	ug/L	99
8) Trichlorofma	3.26	101	572839	23.5898	ug/L	98
9) Ethylether	3.71	59	278737	20.8366	ug/L	100
10) dichlorotfluoroethan	3.72	67	719202	22.3293	ug/L	98
11) propyleneoxide	3.76	58	1007116	222.8062	ug/L	100
12) Acrolein	3.84	56	386622	102.3210	ug/L	94
13) 11dichlorthe	3.99	96	374912	22.8458	ug/L	99
14) Trichlorotfluoroeth	4.03	101	632891	44.4493	ug/L	98
15) Acetone	4.06	43	1349629	205.8746	ug/L	99
16) Iodomethane	4.16	142	792516	43.6620	ug/L	98
17) Carbon Dislf	4.26	76	1355427	41.0540	ug/L	99
18) allylchloride	4.47	41	1199892	43.0046	ug/L	99
19) methylacetate	4.53	74	112727	21.7453	ug/L	95
20) Methylchlorid	4.63	84	412000	20.4252	ug/L	98
21) tbutylalcohol	4.83	59	2061354	1109.8238	ug/L	99
22) Acrylonitrile	4.93	53	887361	105.5350	ug/L	98
23) t12dichlorte	5.01	96	402631	21.3643	ug/L	100
24) MtBE	5.03	73	921962	21.0970	ug/L	97
25) Hexane	5.40	57	1358504	49.1778	ug/L	99
26) 11dichlorota	5.53	63	699964	21.8637	ug/L	100
27) Vinylacetate	5.62	43	4074096	180.0952	ug/L	98
28) chloroprene	5.66	53	1261771	44.7754	ug/L	100
29) Diisopether	5.68	45	1107837	21.0529	ug/L	99
30) ETBE	6.13	59	921964	21.2567	ug/L	99
31) 22dichloropr	6.27	77	423551	22.2183	ug/L	99
32) c12dichlorte	6.26	96	438035	21.4374	ug/L	99
33) 2Butanone	6.28	72	596631	215.9564	ug/L	98
34) propionitrile	6.32	54	770995	215.6230	ug/L	99
35) Ethylacetate	6.38	88	93662	107.6964	ug/L	99
36) methacrylonitrile	6.52	67	437357	43.2864	ug/L	100
37) Bromochlorma	6.55	128	198745	21.6819	ug/L	97
38) Tetrahydofur	6.63	42	1253315	213.5390	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL6.D Vial: 9
Acq On : 28 Apr 2022 17:08 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 17:28:48 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	677679	21.5136	ug/L	98
40)	111trichlota	6.90	97	572706	22.3573	ug/L	98
42)	Cyclohexane	6.99	56	569203	23.4728	ug/L	100
43)	Carbtetraclo	7.12	119	463776	23.9112	ug/L	99
44)	11dicloprope	7.11	110	196681	22.0651	ug/L	98
46)	Benzene	7.36	78	1552938	21.1941	ug/L	99
47)	12dichlorota	7.35	62	504408	21.0284	ug/L	98
48)	TAME	7.53	73	875117	22.0672	ug/L	97
49)	trichloroete	8.16	95	427598	22.2288	ug/L	99
50)	methylcyclohexane	8.43	83	894319	21.7199	ug/L	98
51)	12dicloropra	8.42	63	425590	21.4772	ug/L	92
52)	23Dicl1propene	8.48	75	627663	21.0033	ug/L	99
53)	Dibromometha	8.56	93	241480	21.4231	ug/L	97
54)	methylmethacrylate	8.59	69	323506	21.8513	ug/L	99
55)	14dioxane	8.60	88	301953	1069.9135	ug/L	97
56)	Bromodiclrma	8.76	83	515008	21.8030	ug/L	99
57)	2Nitropropane	9.02	43	1160521	227.8225	ug/L	99
58)	2CLEVE	9.15	63	723367	108.2675	ug/L	100
59)	c13dicloproe	9.34	75	593613	21.8291	ug/L	100
60)	4Meth2Pentan	9.54	43	3290507	217.9553	ug/L	95
62)	Toluene	9.79	92	1008497	21.4422	ug/L	97
63)	t13Dicloprop	10.05	75	496889	23.1784	ug/L	99
64)	ethylmethacrylate	10.19	69	1143706	44.2770	ug/L	99
65)	112Triclotha	10.28	83	310401	21.5190	ug/L	98
66)	Tetrachlorte	10.53	166	442207	21.9546	ug/L	99
67)	13Diclorpropa	10.51	76	631263	21.4346	ug/L	100
69)	2Hexanone	10.62	43	2558305	199.5203	ug/L	96
70)	Clorodibrmta	10.81	129	379638	21.0810	ug/L	96
71)	12Dibrometha	10.97	107	360477	21.2046	ug/L	99
72)	Chlorobenzen	11.65	112	1076694	20.2211	ug/L	99
73)	1Clhexane	11.63	91	568036	20.4332	ug/L	96
74)	1112Tetclota	11.76	131	350627	21.5455	ug/L	93
75)	Ethylbenzene	11.81	91	1759560	20.8628	ug/L	98
76)	m p-Xylene	11.98	106	1396596	42.0842	ug/L	94
77)	o-Xylene	12.52	106	705395	21.6728	ug/L	89
78)	Styrene	12.53	104	1141961	21.4376	ug/L	99
79)	Bromoform	12.77	173	262391	21.2399	ug/L	98
80)	Isopropylben	13.05	105	1682321	21.1718	ug/L	97
81)	cyclohexanone	13.13	55	443826	398.0960	ug/L	99
84)	Bromobenzene	13.45	156	443188	19.6487	ug/L	96
85)	1122Tetrclta	13.43	83	495315	18.8964	ug/L	98
86)	123Triclproa	13.49	75	644458	20.5361	ug/L	100
87)	14dichloro2butene	13.51	53	152419	21.7402	ug/L	99
88)	n-Propylbenz	13.64	91	1973950	20.2721	ug/L	97
89)	2chlorotolue	13.75	91	1211170	19.5045	ug/L	98
90)	4chlorotolue	13.90	91	1381817	19.9696	ug/L	98
91)	135Trimebenz	13.89	105	1436139	20.6325	ug/L	99
92)	tbutylbenzen	14.36	119	1225617	20.4886	ug/L	98
93)	124Trimetben	14.43	105	1390077	20.4153	ug/L	98
94)	sbutylbenzen	14.68	105	1749493	20.7561	ug/L	98
95)	13Diclorbenz	14.82	146	799208	19.9955	ug/L	98
96)	pIsopropylto	14.90	119	1481632	20.7008	ug/L	98
97)	14dichlorobe	14.94	146	813789	19.8507	ug/L	99
98)	12dichlorobe	15.48	146	751373	20.0242	ug/L	98
99)	nButylbenzen	15.49	91	1354531	20.2953	ug/L	95
100)	12dibromo3cl	16.58	157	101533	20.8837	ug/L	93
101)	135Trichlorobenzene	16.91	180	614172	19.6590	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL6.D Vial: 9
Acq On : 28 Apr 2022 17:08 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 17:28:48 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	503671	20.7201	ug/L	100
103) Hexachlorobu	17.96	225	229938	20.7946	ug/L	97
104) Naphthalene	18.02	128	1166761	21.2382	ug/L	99
105) 123Trichlben	18.33	180	473069	20.4311	ug/L	99

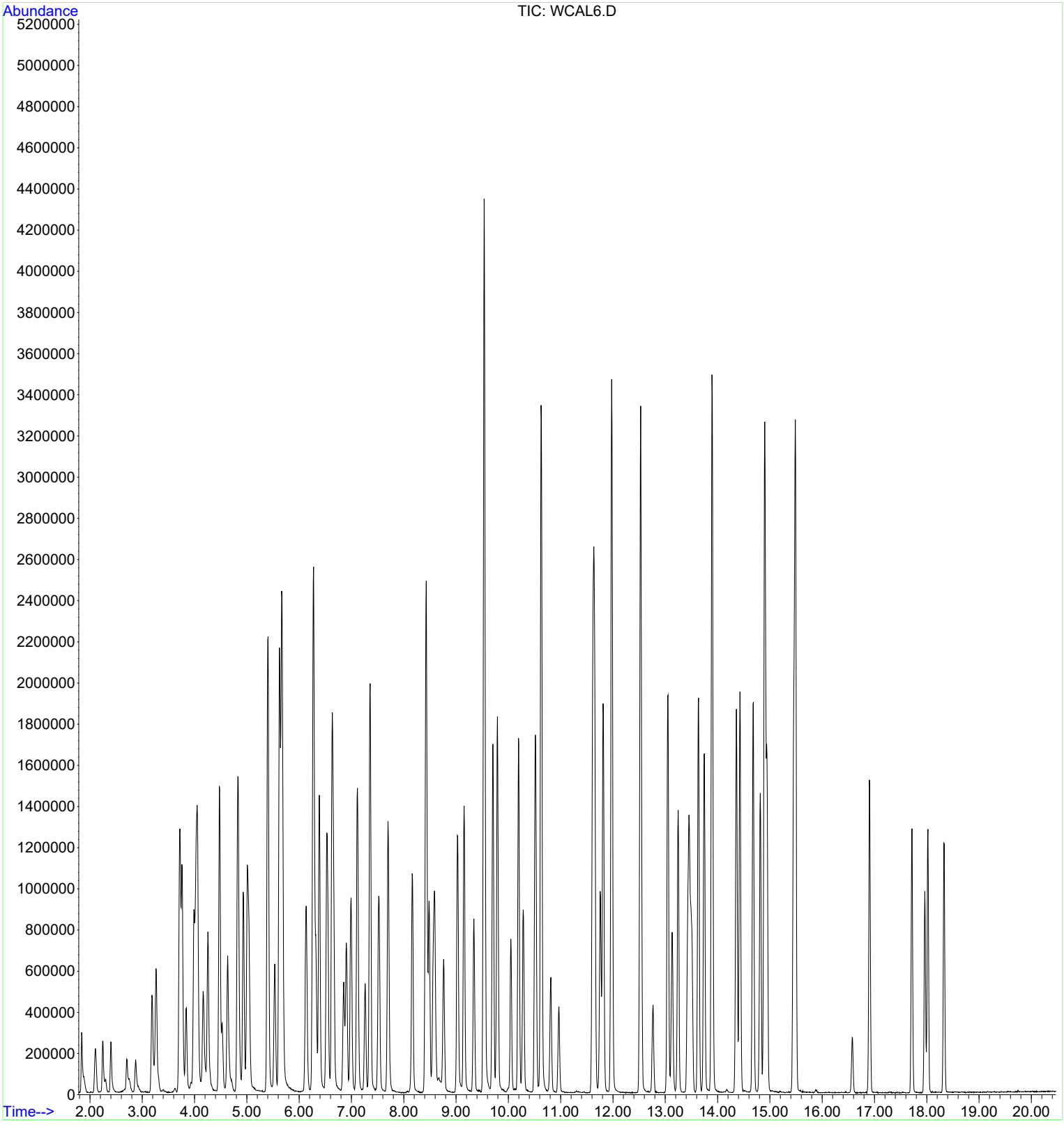
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL6.D Vial: 9
Acq On : 28 Apr 2022 17:08 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 17:28:48 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL7.D Vial: 10
Acq On : 28 Apr 2022 17:38 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 17:59:29 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1430492	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1137372	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	641098	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	378604	20.147	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.26	102	100268	19.737	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1481284	20.203	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.25	95	630685	19.916	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	565421	33.4772	ug/L	100
3) Chloromethan	2.10	50	489287	27.8561	ug/L	99
4) VinylChlorid	2.24	62	509685	30.0281	ug/L	100
5) Bromomethane	2.70	94	284231	29.7616	ug/L	96
6) Chloroethane	2.87	64	311282	29.0871	ug/L	97
7) Dichloroflmethane	3.18	67	1099644	30.0385	ug/L	97
8) Trichlorofma	3.26	101	825561	32.7456	ug/L	99
9) Ethylether	3.71	59	431095	31.0396	ug/L	98
10) dichlorotfluoroethan	3.72	67	1064234	31.8253	ug/L	99
11) propyleneoxide	3.76	58	1469002	313.0268	ug/L	97
12) Acrolein	3.84	56	603950	153.9539	ug/L	99
13) 11dichlorthe	3.99	96	563387	33.0671	ug/L	100
14) Trichlorotfluoroeth	4.03	101	937904	63.4462	ug/L	96
15) Acetone	4.05	43	1959766	287.9414	ug/L	98
16) Iodomethane	4.16	142	1224759	64.9917	ug/L	98
17) Carbon Dislf	4.25	76	1990941	58.0830	ug/L	96
18) allylchloride	4.47	41	1766181	60.9704	ug/L	97
19) methylacetate	4.52	74	168600	31.3261	ug/L	93
20) Methylchlorid	4.63	84	628183	29.9962	ug/L	97
21) tbutylalcohol	4.83	59	3063249	1588.5292	ug/L	99
22) Acrylonitrile	4.93	53	1313519	150.4679	ug/L	98
23) t12dichlorte	5.01	96	615020	31.4327	ug/L	98
24) MtBE	5.03	73	1407256	31.0165	ug/L	97
25) Hexane	5.40	57	1974336	68.8400	ug/L	98
26) 11dichlorota	5.53	63	1051887	31.6466	ug/L	99
27) Vinylacetate	5.62	43	6547307	334.2565	ug/L	91
28) chloroprene	5.67	53	1842132	62.9638	ug/L	98
29) Diisopether	5.68	45	1657189	30.3333	ug/L	96
30) ETBE	6.13	59	1394443	30.9666	ug/L	96
31) 22dichloropr	6.27	77	664666	33.5831	ug/L	98
32) c12dichlorte	6.26	96	665085	31.3510	ug/L	100
33) 2Butanone	6.28	72	886864	309.1923	ug/L	97
34) propionitrile	6.32	54	1124835	303.0008	ug/L	99
35) Ethylacetate	6.39	88	146808	162.5918	ug/L	95
36) methacrylonitrile	6.52	67	647577	61.7331	ug/L	99
37) Bromochlorma	6.55	128	303176	31.8572	ug/L	97
38) Tetrahydofur	6.63	42	1822087	299.0181	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL7.D Vial: 10
Acq On : 28 Apr 2022 17:38 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 17:59:29 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	1014234	31.0126	ug/L	96
40)	111trichlota	6.90	97	862400	32.4271	ug/L	98
42)	Cyclohexane	6.99	56	860235	34.1686	ug/L	99
43)	Carbtetraclo	7.12	119	714430	35.4784	ug/L	99
44)	11dicloprope	7.11	110	315136	34.0529	ug/L	95
46)	Benzene	7.36	78	2277692	29.9410	ug/L	97
47)	12dichlorota	7.36	62	754119	30.2813	ug/L	98
48)	TAME	7.52	73	1336678	32.4652	ug/L	96
49)	trichloroete	8.17	95	625753	31.3325	ug/L	99
50)	methylcyclohexane	8.43	83	1334397	31.5192	ug/L	98
51)	12dicloropra	8.42	63	650930	31.6397	ug/L	92
52)	23Dicl1propene	8.48	75	945823	30.4848	ug/L	99
53)	Dibromometha	8.56	93	364622	31.1570	ug/L	96
54)	methylmethacrylate	8.59	69	483834	31.4777	ug/L	98
55)	14dioxane	8.60	88	463997	1583.5652	ug/L	99
56)	Bromodiclrma	8.76	83	776937	31.6811	ug/L	98
57)	2Nitropropane	9.02	43	1750148	330.9252	ug/L	99
58)	2CLEVE	9.15	63	1113094	160.4659	ug/L	98
59)	c13dicloproe	9.34	75	925271	32.7727	ug/L	98
60)	4Meth2Pentan	9.54	43	4511634	306.5685	ug/L	91
62)	Toluene	9.79	92	1510313	30.9295	ug/L	93
63)	t13Dicloprop	10.05	75	759544	34.1263	ug/L	96
64)	ethylmethacrylate	10.19	69	1722703	64.2370	ug/L	99
65)	112Triclotha	10.28	83	473747	31.6343	ug/L	99
66)	Tetrachlorte	10.52	166	656008	31.3704	ug/L	98
67)	13Diclorpropa	10.51	76	946109	30.9427	ug/L	98
69)	2Hexanone	10.63	43	3551484	267.7324	ug/L	93
70)	Clorodibrmta	10.81	129	584089	31.3515	ug/L	96
71)	12Dibrometha	10.97	107	546134	31.0533	ug/L	99
72)	Chlorobenzen	11.65	112	1587910	28.8267	ug/L	98
73)	1Clhexane	11.63	91	866817	30.1401	ug/L	95
74)	1112Tetclota	11.76	131	543942	32.3088	ug/L	95
75)	Ethylbenzene	11.81	91	2543020	29.1458	ug/L	94
76)	m p-Xylene	11.98	106	2036206	59.3098	ug/L	91
77)	o-Xylene	12.52	106	1055073	31.3344	ug/L	88
78)	Styrene	12.53	104	1705805	30.9535	ug/L	98
79)	Bromoform	12.77	173	412684	32.2907	ug/L	98
80)	Isopropylben	13.05	105	2461494	29.9436	ug/L	95
81)	cyclohexanone	13.13	55	663962	577.0549	ug/L	98
84)	Bromobenzene	13.45	156	662824	28.7393	ug/L	97
85)	1122Tetrclta	13.43	83	766363	28.5932	ug/L	97
86)	123Triclproa	13.49	75	986646	30.7480	ug/L	99
87)	14dichloro2butene	13.51	53	242301	33.7995	ug/L	94
88)	n-Propylbenz	13.64	91	2824597	28.3694	ug/L	94
89)	2chlorotolue	13.75	91	1786236	28.1320	ug/L	95
90)	4chlorotolue	13.90	91	2045810	28.9144	ug/L	96
91)	135Trimebenz	13.89	105	2078929	29.2095	ug/L	96
92)	tbutylbenzen	14.36	119	1813684	29.6517	ug/L	95
93)	124Trimetben	14.43	105	2037830	29.2696	ug/L	95
94)	sbutylbenzen	14.68	105	2551111	29.6001	ug/L	96
95)	13Diclorbenz	14.82	146	1170876	28.6493	ug/L	96
96)	pIsopropylto	14.90	119	2157459	29.4795	ug/L	95
97)	14dichlorobe	14.94	146	1201957	28.6737	ug/L	98
98)	12dichlorobe	15.48	146	1118340	29.1477	ug/L	98
99)	nButylbenzen	15.49	91	1997402	29.2687	ug/L	94
100)	12dibromo3cl	16.58	157	157921	31.7666	ug/L	92
101)	135Trichlorobenzene	16.90	180	930219	29.1197	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL7.D Vial: 10
Acq On : 28 Apr 2022 17:38 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 17:59:29 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	760044	30.5784	ug/L	99
103) Hexachlorobu	17.96	225	354596	31.3621	ug/L	97
104) Naphthalene	18.02	128	1714277	30.5174	ug/L	97
105) 123Trichlben	18.33	180	707326	29.8756	ug/L	100

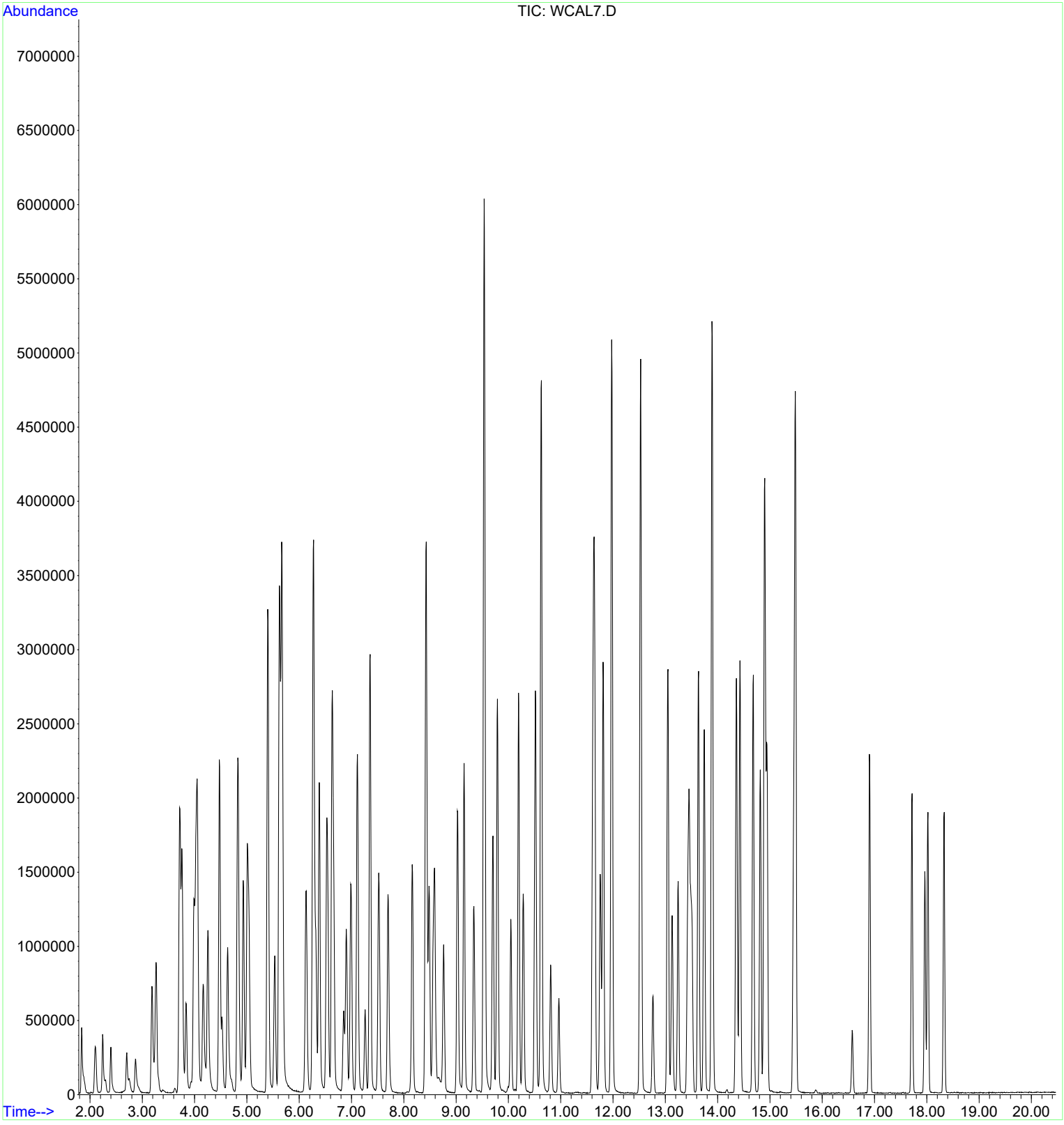
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL7.D Vial: 10
Acq On : 28 Apr 2022 17:38 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 17:59:29 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL8.D Vial: 11
Acq On : 28 Apr 2022 18:08 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 18:29:21 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1428511	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1150757	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	635406	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	380845	20.294 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
45) SURR12DCAd4	7.26	102	97929	19.303 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %		
61) SURRd8Tolule	9.70	98	1500976	20.500 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %		
83) SURR4BrFBenz	13.25	95	633130	20.172 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %		
Target Compounds					Qvalue
2) Dichlorodi	1.84	85	745651	44.2094 ug/L	99
3) Chloromethan	2.10	50	644998	36.7719 ug/L	99
4) VinylChlorid	2.24	62	674617	39.8002 ug/L	100
5) Bromomethane	2.70	94	383076	40.1672 ug/L	96
6) Chloroethane	2.87	64	414680	38.8027 ug/L	99
7) Dichloroflmethane	3.18	67	1455248	39.8075 ug/L	98
8) Trichlorofma	3.26	101	1083863	43.0507 ug/L	98
9) Ethylether	3.71	59	577035	41.6052 ug/L	100
10) dichlorotfluoroethan	3.72	67	1380659	41.3451 ug/L	99
11) propyleneoxide	3.76	58	1930758	411.9921 ug/L	97
12) Acrolein	3.84	56	767971	196.0363 ug/L	95
13) 11dichlorthe	3.99	96	747984	43.9626 ug/L	98
14) Trichlorotfluoroeth	4.03	101	1238786	83.9161 ug/L	96
15) Acetone	4.05	43	2470282	363.4530 ug/L	95
16) Iodomethane	4.17	142	1609592	85.5312 ug/L	97
17) Carbon Dislf	4.25	76	2582040	75.4320 ug/L	97
18) allylchloride	4.47	41	2265586	78.3189 ug/L	96
19) methylacetate	4.53	74	232913	43.3355 ug/L	93
20) Methylchlorid	4.63	84	826687	39.5296 ug/L	98
21) tbutylalcohol	4.83	59	3928728	2040.1717 ug/L	100
22) Acrylonitrile	4.93	53	1688509	193.6925 ug/L	98
23) t12dichlorte	5.01	96	810363	41.4738 ug/L	98
24) MtBE	5.03	73	1869822	41.2688 ug/L	97
25) Hexane	5.40	57	2503371	87.4071 ug/L	95
26) 11dichlorota	5.53	63	1368183	41.2197 ug/L	97
27) Vinylacetate	5.62	43	7786047	509.9164 ug/L	87
28) chloroprene	5.67	53	2341614	80.1470 ug/L	96
29) Diisopether	5.68	45	2153583	39.4740 ug/L	94
30) ETBE	6.13	59	1879229	41.7903 ug/L	96
31) 22dichloropr	6.27	77	890136	45.0376 ug/L	99
32) c12dichlorte	6.27	96	884583	41.7556 ug/L	97
33) 2Butanone	6.28	72	1152351	402.3076 ug/L	95
34) propionitrile	6.32	54	1467576	395.8744 ug/L	99
35) Ethylacetate	6.39	88	199194	220.9160 ug/L #	92
36) methacrylonitrile	6.53	67	860162	82.1124 ug/L	98
37) Bromochlorma	6.55	128	401539	42.2515 ug/L	97
38) Tetrahydofur	6.63	42	2310762	379.7392 ug/L	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL8.D Vial: 11
Acq On : 28 Apr 2022 18:08 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 18:29:21 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	1331519	40.7708	ug/L		97
40)	111trichlota	6.90	97	1142834	43.0313	ug/L		99
42)	Cyclohexane	6.99	56	1124450	44.7251	ug/L		98
43)	Carbtetraclo	7.12	119	936355	46.5636	ug/L		97
44)	11dicloprope	7.11	110	414071	44.8056	ug/L		96
46)	Benzene	7.36	78	2902656	38.2093	ug/L		95
47)	12dichlorota	7.35	62	1004046	40.3729	ug/L		97
48)	TAME	7.53	73	1827162	44.4396	ug/L		95
49)	trichloroete	8.16	95	823704	41.3014	ug/L		98
50)	methylcyclohexane	8.43	83	1748284	41.8875	ug/L		97
51)	12dicloropra	8.42	63	870276	42.3601	ug/L		98
52)	23Dicl1propene	8.48	75	1253565	40.4597	ug/L		99
53)	Dibromometha	8.56	93	493859	42.2588	ug/L		97
54)	methylmethacrylate	8.59	69	666605	43.4287	ug/L		98
55)	14dioxane	8.60	88	606048	2071.2362	ug/L		97
56)	Bromodiclrma	8.76	83	1024319	41.8264	ug/L		97
57)	2Nitropropane	9.03	43	2266441	429.1423	ug/L		99
58)	2CLEVE	9.15	63	1514971	218.7041	ug/L		96
59)	c13dicloproe	9.34	75	1227194	43.5270	ug/L		97
60)	4Meth2Pentan	9.54	43	5425352	393.3481	ug/L		86
62)	Toluene	9.79	92	1940939	39.8033	ug/L		92
63)	t13Dicloprop	10.05	75	1033966	46.5205	ug/L		95
64)	ethylmethacrylate	10.19	69	2259143	84.3569	ug/L		97
65)	112Triclotha	10.28	83	637898	42.6544	ug/L		99
66)	Tetrachlorte	10.52	166	878974	42.0909	ug/L		98
67)	13Diclorpropa	10.51	76	1242954	40.7075	ug/L		98
69)	2Hexanone	10.62	43	4367275	325.4023	ug/L		91
70)	Clorodibrmta	10.81	129	789899	41.9053	ug/L		97
71)	12Dibrometha	10.97	107	739356	41.5510	ug/L		100
72)	Chlorobenzen	11.65	112	2054904	36.8705	ug/L		97
73)	1Clhexane	11.63	91	1131630	38.8902	ug/L		95
74)	1112Tetclota	11.76	131	727606	42.7153	ug/L		93
75)	Ethylbenzene	11.81	91	3227626	36.5618	ug/L		91
76)	m p-Xylene	11.97	106	2616080	75.3138	ug/L		87
77)	o-Xylene	12.52	106	1386864	40.7091	ug/L	#	85
78)	Styrene	12.53	104	2191265	39.3002	ug/L		96
79)	Bromoform	12.77	173	548293	42.4025	ug/L		97
80)	Isopropylben	13.05	105	3126581	37.5919	ug/L		93
81)	cyclohexanone	13.13	55	895399	777.2472	ug/L		98
84)	Bromobenzene	13.46	156	889162	38.8984	ug/L		97
85)	1122Tetrclta	13.43	83	1008478	37.9637	ug/L		95
86)	123Triclproa	13.49	75	1305551	41.0508	ug/L		99
87)	14dichloro2butene	13.51	53	314922	44.3233	ug/L		90
88)	n-Propylbenz	13.64	91	3539175	35.8648	ug/L		91
89)	2chlorotolue	13.75	91	2302757	36.5917	ug/L		95
90)	4chlorotolue	13.90	91	2596878	37.0317	ug/L		94
91)	135Trimebenz	13.89	105	2653988	37.6233	ug/L		95
92)	tbutylbenzen	14.36	119	2335417	38.5234	ug/L		95
93)	124Trimetben	14.43	105	2597692	37.6452	ug/L		95
94)	sbutylbenzen	14.68	105	3219472	37.6896	ug/L		93
95)	13Diclorbenz	14.82	146	1538541	37.9827	ug/L		96
96)	pIsopropylto	14.90	119	2774666	38.2526	ug/L		94
97)	14dichlorobe	14.94	146	1557285	37.4831	ug/L		98
98)	12dichlorobe	15.48	146	1453718	38.2283	ug/L		98
99)	nButylbenzen	15.49	91	2555435	37.7812	ug/L		93
100)	12dibromo3cl	16.58	157	216823	44.0057	ug/L		92
101)	135Trichlorobenzene	16.91	180	1231993	38.9120	ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL8.D Vial: 11
Acq On : 28 Apr 2022 18:08 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 18:29:21 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	1022604	41.5104	ug/L	98
103) Hexachlorobu	17.97	225	467942	41.7576	ug/L	100
104) Naphthalene	18.02	128	2276585	40.8905	ug/L	96
105) 123Trichlben	18.33	180	948048	40.4018	ug/L	99

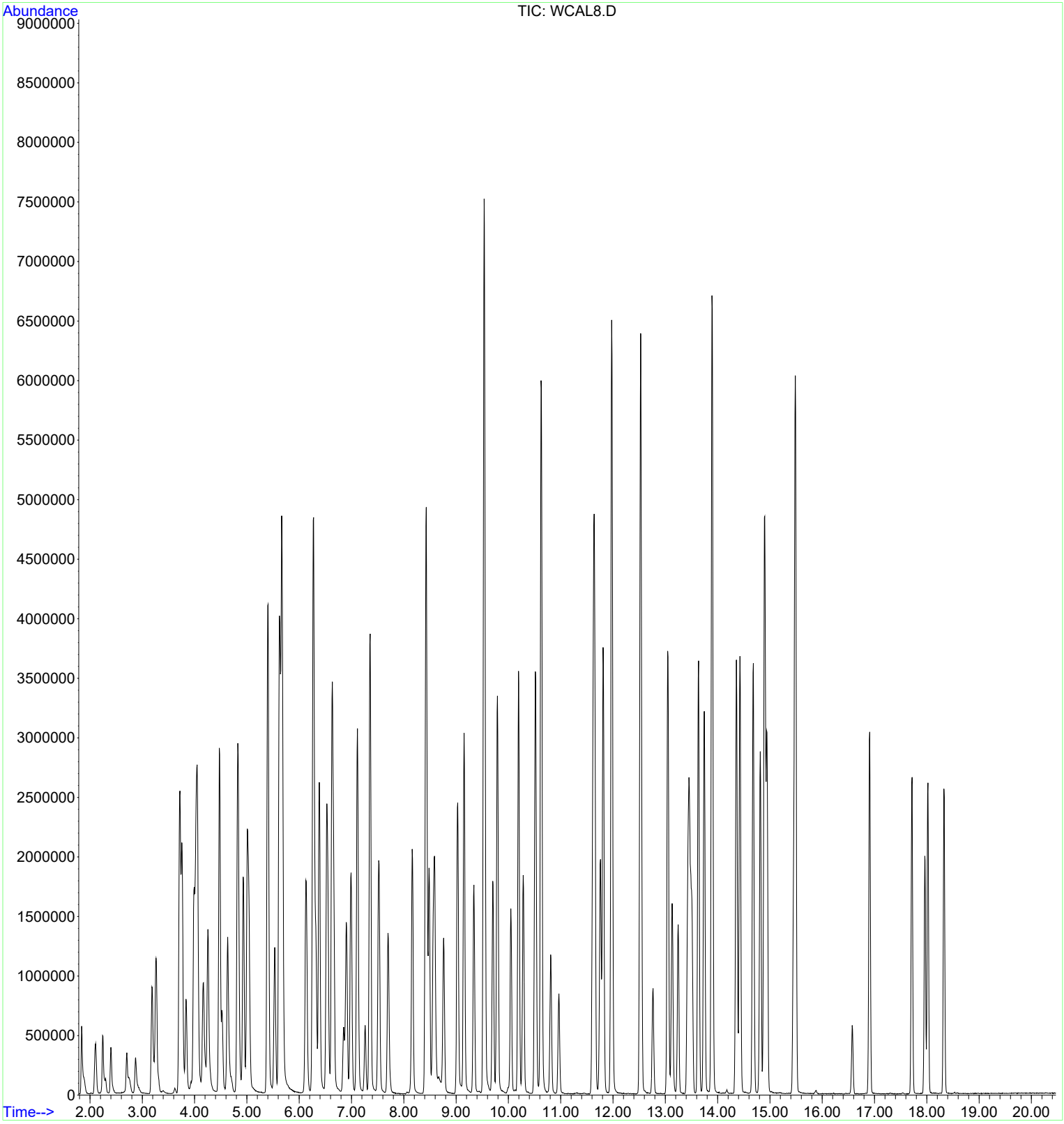
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL8.D Vial: 11
Acq On : 28 Apr 2022 18:08 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 18:29:21 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL9.D Vial: 12
Acq On : 28 Apr 2022 18:37 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 18:58:27 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1467335	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1165902	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	631593	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	385329	19.990	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.26	102	102000	19.573	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98	%		
61) SURRd8Tolule	9.71	98	1503109	19.986	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.25	95	623926	19.999	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	1436101	82.8930	ug/L	99
3) Chloromethan	2.10	50	1202752	66.7557	ug/L	98
4) VinylChlorid	2.25	62	1290995	74.1492	ug/L	100
5) Bromomethane	2.70	94	700295	71.4861	ug/L	97
6) Chloroethane	2.87	64	793083	72.2474	ug/L	99
7) Dichloroflmethane	3.18	67	2698579	71.8651	ug/L	96
8) Trichlorofma	3.27	101	2068176	79.9738	ug/L	98
9) Ethylether	3.71	59	1120054	78.6210	ug/L	98
10) dichlorotfluoroethan	3.72	67	2567991	74.8661	ug/L	97
11) propyleneoxide	3.76	58	3414347	709.2886	ug/L	93
12) Acrolein	3.84	56	1378185	342.4944	ug/L	94
13) 11dichlorthe	3.99	96	1431827	81.9287	ug/L	95
14) Trichlorotfluoroeth	4.03	101	2370685	156.3425	ug/L	95
15) Acetone	4.05	43	4232202	606.2090	ug/L	91
16) Iodomethane	4.16	142	3011715	155.8034	ug/L	95
17) Carbon Dislf	4.26	76	4669509	132.8062	ug/L	93
18) allylchloride	4.47	41	3913811	131.7165	ug/L	91
19) methylacetate	4.53	74	457340	82.8407	ug/L	95
20) Methylchlorid	4.63	84	1562044	72.7158	ug/L	96
21) tbutylalcohol	4.83	59	6552203	3312.5040	ug/L	98
22) Acrylonitrile	4.93	53	3000638	335.1022	ug/L	95
23) t12dichlorte	5.01	96	1526317	76.0489	ug/L	95
24) MtBE	5.03	73	3366444	72.3348	ug/L	93
25) Hexane	5.40	57	4339327	147.5021	ug/L #	91
26) 11dichlorota	5.53	63	2483077	72.8291	ug/L	94
27) Vinylacetate	5.62	43	10730269	Below	Cal	77
28) chloroprene	5.67	53	4084372	136.0979	ug/L	91
29) Diisopether	5.68	45	3762603	67.1417	ug/L	89
30) ETBE	6.13	59	3367688	72.9090	ug/L	92
31) 22dichloropr	6.27	77	1732171	85.3226	ug/L	96
32) c12dichlorte	6.26	96	1621811	74.5299	ug/L	96
33) 2Butanone	6.28	72	2091013	710.6971	ug/L	92
34) propionitrile	6.32	54	2628258	690.2066	ug/L	97
35) Ethylacetate	6.38	88	380411	410.7317	ug/L #	87
36) methacrylonitrile	6.52	67	1600813	148.7727	ug/L	94
37) Bromochlorma	6.55	128	773770	79.2648	ug/L	92
38) Tetrahydofur	6.63	42	3918180	626.8576	ug/L	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL9.D Vial: 12
Acq On : 28 Apr 2022 18:37 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 18:58:27 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.66	83	2420285	72.1477 ug/L		94
40)	111trichlota	6.90	97	2174775	79.7204 ug/L		99
42)	Cyclohexane	6.99	56	2151829	83.3247 ug/L		96
43)	Carbtetraclo	7.12	119	1850337	89.5801 ug/L		97
44)	11dicloprope	7.11	110	823813	86.7842 ug/L	#	89
46)	Benzene	7.36	78	4903323	62.8374 ug/L		90
47)	12dichlorota	7.36	62	1831185	71.6841 ug/L		94
48)	TAME	7.52	73	3310896	78.3959 ug/L		94
49)	trichloroete	8.16	95	1586851	77.4612 ug/L		100
50)	methylcyclohexane	8.43	83	3206163	78.8735 ug/L		97
51)	12dicloropra	8.42	63	1625210	77.0129 ug/L		90
52)	23Dicl1propene	8.48	75	2297005	72.1758 ug/L		95
53)	Dibromometha	8.56	93	936379	78.0045 ug/L		97
54)	methylmethacrylate	8.59	69	1269178	80.4981 ug/L		97
55)	14dioxane	8.60	88	1158483	3854.4871 ug/L		99
56)	Bromodiclrma	8.76	83	1902662	75.6365 ug/L		95
57)	2Nitropropane	9.03	43	3891708	717.3836 ug/L		98
58)	2CLEVE	9.15	63	2825736	397.1354 ug/L		92
59)	c13dicloproe	9.34	75	2256774	77.9270 ug/L		95
60)	4Meth2Pentan	9.54	43	7842075	749.9658 ug/L		75
62)	Toluene	9.79	92	3375871	67.3981 ug/L		87
63)	t13Dicloprop	10.05	75	1930014	84.5382 ug/L		92
64)	ethylmethacrylate	10.19	69	3849391	139.9340 ug/L		94
65)	112Triclotha	10.28	83	1175128	76.4984 ug/L		99
66)	Tetrachlorte	10.52	166	1673582	78.0214 ug/L		98
67)	13Diclorpropa	10.51	76	2240693	71.4424 ug/L		93
69)	2Hexanone	10.62	43	6503702	478.2911 ug/L		82
70)	Clorodibrmta	10.81	129	1504938	78.8021 ug/L		96
71)	12Dibrometha	10.97	107	1383306	76.7304 ug/L		98
72)	Chlorobenzen	11.65	112	3514260	62.2362 ug/L		93
73)	1Clhexane	11.63	91	2088425	70.8396 ug/L		93
74)	1112Tetclota	11.76	131	1376741	79.7739 ug/L		93
75)	Ethylbenzene	11.81	91	5275103	58.9789 ug/L		84
76)	m p-Xylene	11.98	106	4423216	125.6849 ug/L	#	76
77)	o-Xylene	12.52	106	2472648	71.6377 ug/L	#	78
78)	Styrene	12.53	104	3735922	66.1331 ug/L		91
79)	Bromoform	12.77	173	1078401	82.3152 ug/L		97
80)	Isopropylben	13.05	105	5147026	61.0805 ug/L		87
81)	cyclohexanone	13.13	55	1602460	1447.9694 ug/L		95
84)	Bromobenzene	13.46	156	1618165	71.2176 ug/L		98
85)	1122Tetrclta	13.43	83	1804801	68.3511 ug/L		94
86)	123Triclproa	13.49	75	2434774	77.0195 ug/L		99
87)	14dichloro2butene	13.51	53	629710	89.1627 ug/L		85
88)	n-Propylbenz	13.64	91	5654510	57.6468 ug/L		82
89)	2chlorotolue	13.75	91	3900657	62.3571 ug/L		88
90)	4chlorotolue	13.90	91	4352472	62.4413 ug/L		89
91)	135Trimebenz	13.89	105	4447408	63.4277 ug/L		91
92)	tbutylbenzen	14.36	119	4012531	66.5875 ug/L		90
93)	124Trimetben	14.43	105	4355077	63.4938 ug/L		89
94)	sbutylbenzen	14.68	105	5202912	61.2769 ug/L		85
95)	13Diclorbenz	14.82	146	2722945	67.6285 ug/L		94
96)	pIsopropylto	14.90	119	4579372	63.5141 ug/L		87
97)	14dichlorobe	14.94	146	2765688	66.9707 ug/L		96
98)	12dichlorobe	15.49	146	2570432	68.0024 ug/L		98
99)	nButylbenzen	15.49	91	4272753	63.5526 ug/L		87
100)	12dibromo3cl	16.58	157	427339	87.2550 ug/L		92
101)	135Trichlorobenzene	16.91	180	2205921	70.0938 ug/L		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL9.D Vial: 12
Acq On : 28 Apr 2022 18:37 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 18:58:27 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	1861075	76.0024	ug/L	98
103) Hexachlorobu	17.97	225	927772	83.2912	ug/L	100
104) Naphthalene	18.02	128	3903145	70.5290	ug/L	92
105) 123Trichlben	18.33	180	1734692	74.3715	ug/L	98

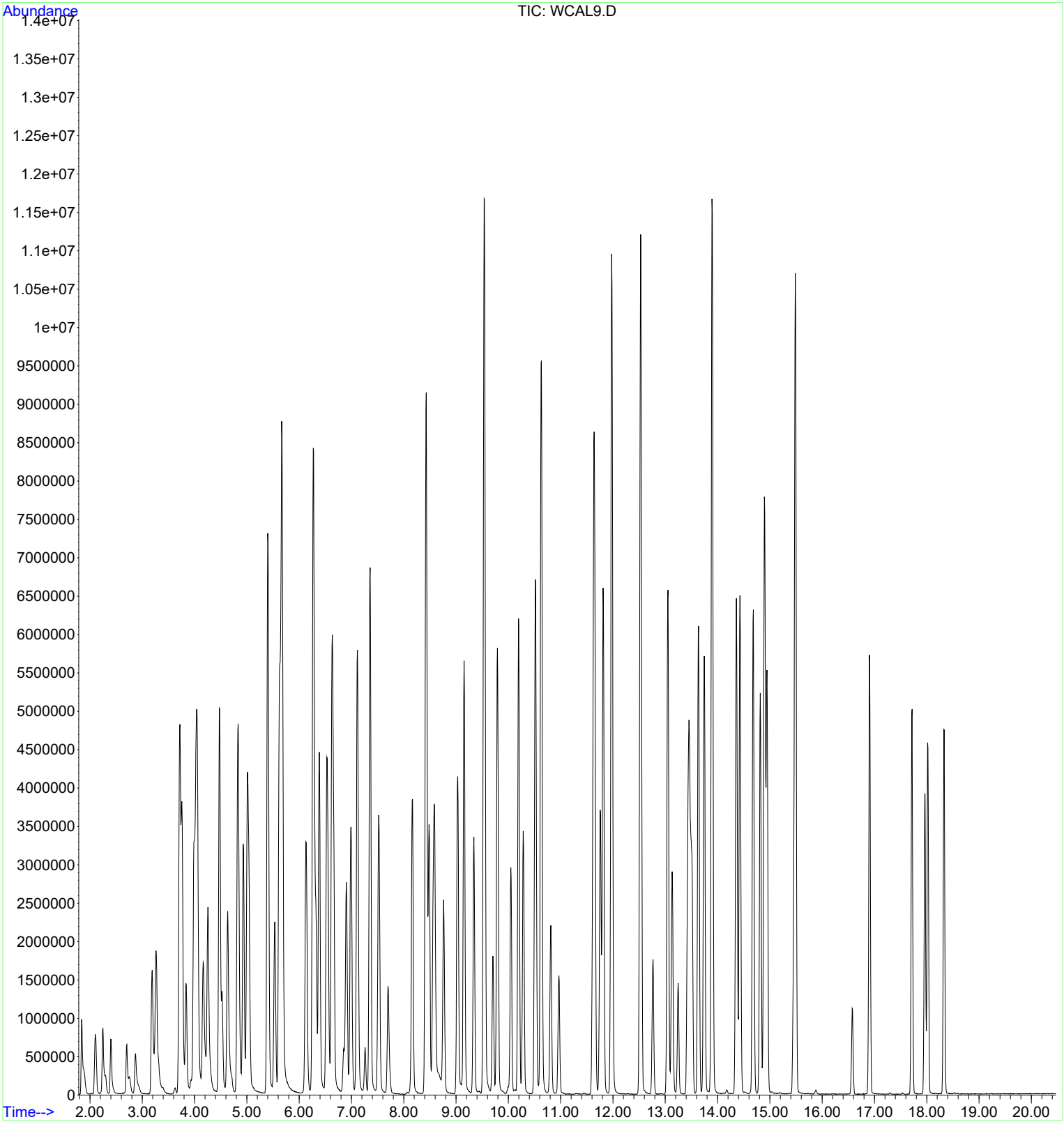
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\WCAL9.D Vial: 12
Acq On : 28 Apr 2022 18:37 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 18:58:27 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 29 09:21:20 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	106	0.00
2	PT	Dichlorodi	0.2581	0.2910	-12.75	113	0.00
3	PT	Chloromethan	0.2382	0.2351	1.30	102	0.00
4	PT	VinylChlorid	0.2431	0.2502	-2.92	105	0.00
5	PT	Bromomethane	0.1405	0.1557	-10.82	121	0.00
6	PT	Chloroethane	0.1567	0.1546	1.34	110	0.00
7	T	Dichloroflmethane	0.5294	0.5144	2.83	102	0.00
8	PT	Trichlorofma	0.3882	0.4207	-8.37	106	0.00
9	T	Ethylether	0.1949	0.2039	-4.62	115	0.00
10	T	dichlorotfluoroethan	0.4948	0.5196	-5.01	105	0.00
11	T	propyleneoxide	0.0691	0.0691	0.00	109	0.00
12	T	Acrolein	0.0566	0.0560	1.06	106	0.00
13	PT	11dichlorthe	0.2560	0.2754	-7.58	111	0.00
14	PT	Trichlorotfluoroeth	0.2132	0.2285	-7.18	106	0.00
15	PT	Acetone	0.1042	0.0990#	4.99	109	0.00
16	T	Iodomethane	0.2651	0.2449	7.62	94	0.00
17	PT	Carbon Dislf	0.4879	0.5112	-4.78	108	0.00
18	T	allylchloride	0.4204	0.4210	-0.14	102	0.00
19	PT	methylacetate	0.0773	0.0749#	3.10	119	0.00
20	PT	Methylchlorid	0.3175	0.3043	4.16	107	0.00
21	T	tbutylalcohol	0.0282	0.0312	-10.64	119	0.00
22	T	Acrylonitrile	0.1258	0.1304	-3.66	111	0.00
23	PT	t12dichlorte	0.2902	0.2971	-2.38	107	0.00
24	PT	MtBE	0.6525	0.6828	-4.64	112	0.00
25	T	Hexane	0.4321	0.4744	-9.79	101	0.00
26	PT	11dichlorota	0.5022	0.5110	-1.75	107	0.00
27	T	Vinylacetate	0.3685	0.3475	5.70	91	0.00
28	T	chloroprene	0.4236	0.4522	-6.75	104	0.00
29	T	Diisopether	0.7765	0.8368	-7.77	108	0.00
30	T	ETBE	0.6416	0.6906	-7.64	114	0.00
31	T	22dichloropr	0.2949	0.2878	2.41	104	0.00
32	PT	c12dichlorte	0.3068	0.3192	-4.04	109	0.00
33	PT	2Butanone	0.0411	0.0433#	-5.35	116	0.00
34	T	propionitrile	0.0541	0.0539	0.37	108	0.00
35	T	Ethylacetate	0.0130	0.0136#	-4.62	117	0.00
36	T	methacrylonitrile	0.1528	0.1536	-0.52	108	0.00
37	T	Bromochlorma	0.1448	0.1421	1.86	107	0.00
38	T	Tetrahydofur	0.0888	0.0925	-4.17	110	0.00
39	PT	Chloroform	0.4912	0.5031	-2.42	110	0.00
40	PT	111trichlota	0.3965	0.4137	-4.34	108	0.00
41	S	SURRDibrflma	0.2659	0.2613	1.73	105	0.00
42	PT	Cyclohexane	0.3737	0.4206	-12.55	109	0.00
43	PT	Carbtetraclo	0.3103	0.3269	-5.35	108	0.00
44	T	11dicloprope	0.1417	0.1469	-3.67	109	0.00
45	S	SURR12DCAd4	0.0709	0.0672	5.22	97	0.00
46	PT	Benzene	1.1203	1.1686	-4.31	105	0.00
47	PT	12dichlorota	0.3677	0.3691	-0.38	106	0.00
48	T	TAME	0.5985	0.6497	-8.55	115	0.00

49	PT	trichloroete	0.2940	0.3091	-5.14	112	0.00
50	PT	methylcyclohexane	0.5670	0.6139	-8.27	102	0.00
51	PT	12dicloropra	0.3099	0.3122	-0.74	106	0.00
52	T	23Dicl1propene	0.4418	0.4552	-3.03	109	0.00
53	T	Dibromometha	0.1741	0.1787	-2.64	113	0.00
54	T	methylmethacrylate	0.2175	0.2335	-7.36	118	0.00
55	T	14dioxane	0.0044	0.0043#	2.27	115	0.00
56	PT	Bromodiclrma	0.3686	0.3708	-0.60	107	0.00
57	T	2Nitropropane	0.0782	0.0807	-3.20	107	0.00
58	T	2CLEVE	0.0959	0.1059	-10.43	122	0.00
59	PT	c13dicloproe	0.4161	0.4355	-4.66	111	0.00
60	PT	4Meth2Pentan	0.2366	0.2655	-12.21	112	0.00
61	S	SURRd8Tolule	1.0461	1.0304	1.50	103	0.00
62	PT	Toluene	0.7215	0.7591	-5.21	109	0.00
63	PT	t13Dicloprop	0.3396	0.3571	-5.15	113	0.00
64	T	ethylmethacrylate	0.3848	0.4110	-6.81	111	0.00
65	PT	112Triclotha	0.2212	0.2240	-1.27	109	0.00
66	PT	Tetrachlorte	0.3038	0.3135	-3.19	104	0.00
67	T	13Diclorpropa	0.4572	0.4641	-1.51	110	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	103	0.00
69	PT	2Hexanone	0.2204	0.2578	-16.97	115	0.00
70	PT	Clorodibrmta	0.3407	0.3543	-3.99	109	0.00
71	PT	12Dibrometha	0.3149	0.3392	-7.72	115	0.00
72	PT	Chlorobenzen	0.9740	1.0176	-4.48	108	0.00
73	T	1Clhexane	0.4841	0.5422	-12.00	114	0.00
74	T	1112Tetclota	0.3104	0.3210	-3.41	108	0.00
75	PT	Ethylbenzene	1.5510	1.7074	-10.08	108	0.00
76	PT	m p-Xylene	0.6021	0.6709	-11.43	109	0.00
77	PT	o-Xylene	0.6026	0.6562	-8.89	108	0.00
78	PT	Styrene	0.9711	1.0820	-11.42	110	0.00
79	PT	Bromoform	0.2277	0.2413	-5.97	115	0.00
80	PT	Isopropylben	1.4429	1.6641	-15.33	111	0.00
81	T	cyclohexanone	0.0184	0.0221#	-20.11#	133	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	103	0.00
83	S	SURR4BrFBenz	0.9896	1.0035	-1.40	105	0.00
84	T	Bromobenzene	0.6980	0.7333	-5.06	108	0.00
85	PT	1122Tetrclta	0.8297	0.8516	-2.64	109	0.00
86	T	123Triclproa	1.0131	1.0322	-1.89	108	0.00
87	T	14dichloro2butene	0.2339	0.2357	-0.77	109	0.00
88	T	n-Propylbenz	3.0653	3.4971	-14.09	109	0.00
89	T	2chlorotolue	1.9399	2.1132	-8.93	111	0.00
90	T	4chlorotolue	2.2100	2.4384	-10.33	110	0.00
91	T	135Trimebenz	2.1966	2.4487	-11.48	107	0.00
92	T	tbutylbenzen	1.8566	2.1226	-14.33	111	0.00
93	T	124Trimetben	2.1381	2.4036	-12.42	110	0.00
94	T	sbutylbenzen	2.6311	3.1057	-18.04	111	0.00
95	PT	13Diclorbenz	1.2599	1.3275	-5.37	107	0.00
96	T	pIsopropylto	2.2538	2.6180	-16.16	112	0.00
97	PT	14dichlorobe	1.2966	1.3627	-5.10	108	0.00
98	PT	12dichlorobe	1.2210	1.2836	-5.13	110	0.00
99	T	nButylbenzen	2.0963	2.3982	-14.40	111	0.00
100	PT	12dibromo3cl	0.1572	0.1610	-2.42	115	0.00
101	T	135Trichlorobenzene	0.9798	1.0200	-4.10	107	0.00
102	PT	124Trichlobe	0.7749	0.8374	-8.07	113	0.00
103	T	Hexachlorobu	0.3464	0.3822	-10.33	110	0.00
104	T	Naphthalene	1.7086	2.0297	-18.79	123	0.00
105	T	123Trichlben	0.7370	0.7957	-7.96	114	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W042822.M Mon May 02 08:15:47 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 29 09:21:20 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	106	0.00
2	PT	Dichlorodi	10.0000	11.2739	-12.74	113	0.00
3	PT	Chloromethan	10.0000	9.8670	1.33	102	0.00
4	PT	VinylChlorid	10.0000	10.2931	-2.93	105	0.00
5	PT	Bromomethane	10.0000	11.0876	-10.88	121	0.00
6	PT	Chloroethane	10.0000	9.8665	1.33	110	0.00
7	T	Dichloroflmethane	10.0000	9.7168	2.83	102	0.00
8	PT	Trichlorofma	10.0000	10.8364	-8.36	106	0.00
9	T	Ethylether	10.0000	10.4600	-4.60	115	0.00
10	T	dichlorotfluoroethan	10.0000	10.5020	-5.02	105	0.00
11	T	propyleneoxide	100.0000	99.9346	0.07	109	0.00
12	T	Acrolein	50.0000	49.4490	1.10	106	0.00
13	PT	11dichlorthe	10.0000	10.7543	-7.54	111	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.4367	-7.18	106	0.00
15	PT	Acetone	100.0000	95.0403	4.96	109	0.00
16	T	Iodomethane	20.0000	18.4787	7.61	94	0.00
17	PT	Carbon Dislf	20.0000	20.9543	-4.77	108	0.00
18	T	allylchloride	20.0000	20.0321	-0.16	102	0.00
19	PT	methylacetate	10.0000	9.6943	3.06	119	0.00
20	PT	Methylchlorid	10.0000	9.5861	4.14	107	0.00
21	T	tbutylalcohol	500.0000	553.3846	-10.68	119	0.00
22	T	Acrylonitrile	50.0000	51.8264	-3.65	111	0.00
23	PT	t12dichlorte	10.0000	10.2391	-2.39	107	0.00
24	PT	MtBE	10.0000	10.4639	-4.64	112	0.00
25	T	Hexane	20.0000	21.9541	-9.77	101	0.00
26	PT	11dichlorota	10.0000	10.1752	-1.75	107	0.00
27	T	Vinylacetate	100.0000	96.3568	3.64	91	0.00
28	T	chloroprene	20.0000	21.3479	-6.74	104	0.00
29	T	Diisopether	10.0000	10.7764	-7.76	108	0.00
30	T	ETBE	10.0000	10.7634	-7.63	114	0.00
31	T	22dichloropr	10.0000	9.7580	2.42	104	0.00
32	PT	c12dichlorte	10.0000	10.4039	-4.04	109	0.00
33	PT	2Butanone	100.0000	105.1965	-5.20	116	0.00
34	T	propionitrile	100.0000	99.5900	0.41	108	0.00
35	T	Ethylacetate	50.0000	52.4562	-4.91	117	0.00
36	T	methacrylonitrile	20.0000	20.0968	-0.48	108	0.00
37	T	Bromochlorma	10.0000	9.8134	1.87	107	0.00
38	T	Tetrahydofur	100.0000	104.1942	-4.19	110	0.00
39	PT	Chloroform	10.0000	10.2406	-2.41	110	0.00
40	PT	111trichlota	10.0000	10.4356	-4.36	108	0.00
41	S	SURRDibrflma	20.0000	19.6610	1.69	105	0.00
42	PT	Cyclohexane	10.0000	11.2534	-12.53	109	0.00
43	PT	Carbtetraclo	10.0000	10.5358	-5.36	108	0.00
44	T	11dicloprope	10.0000	10.3700	-3.70	109	0.00
45	S	SURR12DCAd4	20.0000	18.9397	5.30	97	0.00
46	PT	Benzene	10.0000	10.4312	-4.31	105	0.00
47	PT	12dichlorota	10.0000	10.0390	-0.39	106	0.00
48	T	TAME	10.0000	10.8561	-8.56	115	0.00

49	PT	trichloroete	10.0000	10.5127	-5.13	112	0.00
50	PT	methylcyclohexane	10.0000	9.5555	4.44	102	0.00
51	PT	12dicloropra	10.0000	10.0726	-0.73	106	0.00
52	T	23Dicl1propene	10.0000	10.3040	-3.04	109	0.00
53	T	Dibromometha	10.0000	10.2644	-2.64	113	0.00
54	T	methylmethacrylate	10.0000	10.7362	-7.36	118	0.00
55	T	14dioxane	500.0000	497.8570	0.43	115	0.00
56	PT	Bromodiclrma	10.0000	10.0613	-0.61	107	0.00
57	T	2Nitropropane	100.0000	103.1676	-3.17	107	0.00
58	T	2CLEVE	50.0000	55.2626	-10.53	122	0.00
59	PT	c13dicloproe	10.0000	10.4658	-4.66	111	0.00
60	PT	4Meth2Pentan	100.0000	108.2315	-8.23	112	0.00
61	S	SURRd8Tolule	20.0000	19.7007	1.50	103	0.00
62	PT	Toluene	10.0000	10.5204	-5.20	109	0.00
63	PT	t13Dicloprop	10.0000	10.5149	-5.15	113	0.00
64	T	ethylmethacrylate	20.0000	21.3637	-6.82	111	0.00
65	PT	112Triclotha	10.0000	10.1282	-1.28	109	0.00
66	PT	Tetrachlorte	10.0000	10.3196	-3.20	104	0.00
67	T	13Diclorpropa	10.0000	10.1490	-1.49	110	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	103	0.00
69	PT	2Hexanone	100.0000	109.1787	-9.18	115	0.00
70	PT	Clorodibrmta	10.0000	10.3988	-3.99	109	0.00
71	PT	12Dibrometha	10.0000	10.7723	-7.72	115	0.00
72	PT	Chlorobenzen	10.0000	10.4478	-4.48	108	0.00
73	T	1Clhexane	10.0000	11.2005	-12.00	114	0.00
74	T	1112Tetclota	10.0000	10.3399	-3.40	108	0.00
75	PT	Ethylbenzene	10.0000	11.0083	-10.08	108	0.00
76	PT	m p-Xylene	20.0000	22.2865	-11.43	109	0.00
77	PT	o-Xylene	10.0000	10.8902	-8.90	108	0.00
78	PT	Styrene	10.0000	11.1420	-11.42	110	0.00
79	PT	Bromoform	10.0000	10.5992	-5.99	115	0.00
80	PT	Isopropylben	10.0000	11.5328	-15.33	111	0.00
81	T	cyclohexanone	200.0000	222.6149	-11.31	133	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	103	0.00
83	S	SURR4BrFBenz	20.0000	20.2799	-1.40	105	0.00
84	T	Bromobenzene	10.0000	10.5051	-5.05	108	0.00
85	PT	1122Tetrclta	10.0000	10.2648	-2.65	109	0.00
86	T	123Triclproa	10.0000	10.1886	-1.89	108	0.00
87	T	14dichloro2butene	10.0000	10.0794	-0.79	109	0.00
88	T	n-Propylbenz	10.0000	11.4090	-14.09	109	0.00
89	T	2chlorotolue	10.0000	10.8932	-8.93	111	0.00
90	T	4chlorotolue	10.0000	11.0336	-10.34	110	0.00
91	T	135Trimebenz	10.0000	11.1473	-11.47	107	0.00
92	T	tbutylbenzen	10.0000	11.4323	-14.32	111	0.00
93	T	124Trimetben	10.0000	11.2416	-12.42	110	0.00
94	T	sbutylbenzen	10.0000	11.8035	-18.03	111	0.00
95	PT	13Diclorbenz	10.0000	10.5368	-5.37	107	0.00
96	T	pIsopropylto	10.0000	11.6160	-16.16	112	0.00
97	PT	14dichlorobe	10.0000	10.5093	-5.09	108	0.00
98	PT	12dichlorobe	10.0000	10.5125	-5.12	110	0.00
99	T	nButylbenzen	10.0000	11.4406	-14.41	111	0.00
100	PT	12dibromo3cl	10.0000	10.2413	-2.41	115	0.00
101	T	135Trichlorobenzene	10.0000	10.4099	-4.10	107	0.00
102	PT	124Trichlobe	10.0000	10.8059	-8.06	113	0.00
103	T	Hexachlorobu	10.0000	11.0336	-10.34	110	0.00
104	T	Naphthalene	10.0000	11.8796	-18.80	123	0.00
105	T	123Trichlben	10.0000	10.7961	-7.96	114	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Mon May 02 08:16:13 2022

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 29 09:21:20 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1439577	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1137009	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	633016	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	376228	19.661	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
45) SURR12DCAd4	7.26	102	96687	18.940	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 95 %			
61) SURRd8Tolule	9.71	98	1483371	19.701	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	635218	20.280	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	209431	11.2739	ug/L	99
3) Chloromethan	2.10	50	169194	9.8670	ug/L	96
4) VinylChlorid	2.24	62	180101	10.2931	ug/L	99
5) Bromomethane	2.70	94	112103	11.0876	ug/L	98
6) Chloroethane	2.87	64	111282	9.8665	ug/L	92
7) Dichloroflmethane	3.18	67	370261	9.7168	ug/L	100
8) Trichlorofma	3.26	101	302816	10.8364	ug/L	98
9) Ethylether	3.71	59	146743	10.4600	ug/L	97
10) dichlorotfluoroethan	3.72	67	374018	10.5020	ug/L	99
11) propyleneoxide	3.76	58	497196	99.9346	ug/L	97
12) Acrolein	3.84	56	201584	49.4490	ug/L	99
13) 11dichlorthe	3.99	96	198196	10.7543	ug/L	99
14) Trichlorotfluoroeth	4.03	101	328915	21.4367	ug/L	99
15) Acetone	4.05	43	712652	95.0403	ug/L	97
16) Iodomethane	4.16	142	352619	18.4787	ug/L	98
17) Carbon Dislf	4.25	76	735957	20.9543	ug/L	99
18) allylchloride	4.47	41	606127	20.0321	ug/L	97
19) methylacetate	4.53	74	53925	9.6943	ug/L	91
20) Methylchlorid	4.63	84	219062	9.5861	ug/L	99
21) tbutylalcohol	4.83	59	1121600	553.3846	ug/L	97
22) Acrylonitrile	4.93	53	469185	51.8264	ug/L	99
23) t12dichlorte	5.01	96	213872	10.2391	ug/L	99
24) MtBE	5.03	73	491454	10.4639	ug/L	99
25) Hexane	5.40	57	682883	21.9541	ug/L	99
26) 11dichlorota	5.53	63	367779	10.1752	ug/L	99
27) Vinylacetate	5.62	43	2501564	96.3568	ug/L	100
28) chloroprene	5.67	53	650932	21.3479	ug/L	99
29) Diisopether	5.68	45	602302	10.7764	ug/L	93
30) ETBE	6.13	59	497053	10.7634	ug/L	99
31) 22dichloropr	6.27	77	207131	9.7580	ug/L	97
32) c12dichlorte	6.26	96	229737	10.4039	ug/L	100
33) 2Butanone	6.28	72	311544	105.1965	ug/L	98
34) propionitrile	6.32	54	387646	99.5900	ug/L	100
35) Ethylacetate	6.39	88	48997	52.4562	ug/L #	92
36) methacrylonitrile	6.52	67	221064	20.0968	ug/L	98
37) Bromochlorma	6.55	128	102276	9.8134	ug/L	99
38) Tetrahydofur	6.63	42	665637	104.1942	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 29 09:21:20 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	362100	10.2406	ug/L	98
40)	111trichlota	6.91	97	297803	10.4356	ug/L	98
42)	Cyclohexane	6.99	56	302733	11.2534	ug/L	98
43)	Carbtetraclo	7.12	119	235310	10.5358	ug/L	98
44)	11dicloprope	7.11	110	105738	10.3700	ug/L	96
46)	Benzene	7.36	78	841139	10.4312	ug/L	99
47)	12dichlorota	7.36	62	265707	10.0390	ug/L	99
48)	TAME	7.53	73	467664	10.8561	ug/L	97
49)	trichloroete	8.16	95	222452	10.5127	ug/L	98
50)	methylcyclohexane	8.43	83	441867	9.5555	ug/L	98
51)	12dicloropra	8.43	63	224691	10.0726	ug/L	100
52)	23Dicl1propene	8.48	75	327645	10.3040	ug/L	99
53)	Dibromometha	8.56	93	128606	10.2644	ug/L	98
54)	methylmethacrylate	8.59	69	168100	10.7362	ug/L	97
55)	14dioxane	8.60	88	156129	497.8570	ug/L	98
56)	Bromodiclrma	8.76	83	266906	10.0613	ug/L	98
57)	2Nitropropane	9.03	43	581047	103.1676	ug/L	99
58)	2CLEVE	9.15	63	381278	55.2626	ug/L	100
59)	c13dicloproe	9.34	75	313483	10.4658	ug/L	99
60)	4Meth2Pentan	9.54	43	1910863	108.2315	ug/L	99
62)	Toluene	9.79	92	546375	10.5204	ug/L	99
63)	t13Dicloprop	10.05	75	257013	10.5149	ug/L	99
64)	ethylmethacrylate	10.20	69	591716	21.3637	ug/L	98
65)	112Triclotha	10.28	83	161253	10.1282	ug/L	97
66)	Tetrachlorte	10.52	166	225668	10.3196	ug/L	97
67)	13Diclorpropa	10.51	76	334021	10.1490	ug/L	99
69)	2Hexanone	10.62	43	1465379	109.1787	ug/L	98
70)	Clorodibrmta	10.81	129	201435	10.3988	ug/L	99
71)	12Dibrometha	10.97	107	192831	10.7723	ug/L	98
72)	Chlorobenzen	11.65	112	578510	10.4478	ug/L	99
73)	1Clhexane	11.63	91	308246	11.2005	ug/L	94
74)	1112Tetclota	11.76	131	182483	10.3399	ug/L	98
75)	Ethylbenzene	11.81	91	970667	11.0083	ug/L	98
76)	m p-Xylene	11.98	106	762857	22.2865	ug/L	99
77)	o-Xylene	12.53	106	373073	10.8902	ug/L	99
78)	Styrene	12.53	104	615119	11.1420	ug/L	100
79)	Bromoform	12.77	173	137179	10.5992	ug/L	98
80)	Isopropylben	13.05	105	946029	11.5328	ug/L	98
81)	cyclohexanone	13.14	55	250994	222.6149	ug/L	98
84)	Bromobenzene	13.46	156	232096	10.5051	ug/L	98
85)	1122Tetrclta	13.43	83	269548	10.2648	ug/L	99
86)	123Triclproa	13.49	75	326703	10.1886	ug/L	96
87)	14dichloro2butene	13.51	53	74606	10.0794	ug/L	95
88)	n-Propylbenz	13.64	91	1106873	11.4090	ug/L	99
89)	2chlorotolue	13.75	91	668833	10.8932	ug/L	98
90)	4chlorotolue	13.90	91	771785	11.0336	ug/L	99
91)	135Trimebenz	13.89	105	775026	11.1473	ug/L	98
92)	tbutylbenzen	14.36	119	671810	11.4323	ug/L	99
93)	124Trimetben	14.43	105	760745	11.2416	ug/L	100
94)	sbutylbenzen	14.68	105	982966	11.8035	ug/L	98
95)	13Diclorbenz	14.82	146	420172	10.5368	ug/L	98
96)	pIsopropylto	14.90	119	828620	11.6160	ug/L	98
97)	14dichlorobe	14.94	146	431302	10.5093	ug/L	99
98)	12dichlorobe	15.48	146	406259	10.5125	ug/L	99
99)	nButylbenzen	15.49	91	759061	11.4406	ug/L	99
100)	12dibromo3cl	16.58	157	50962	10.2413	ug/L	93
101)	135Trichlorobenzene	16.90	180	322832	10.4099	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 29 09:21:20 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	265036	10.8059	ug/L	99
103) Hexachlorobu	17.96	225	120956	11.0336	ug/L	98
104) Naphthalene	18.02	128	642431	11.8796	ug/L	99
105) 123Trichlben	18.33	180	251841	10.7961	ug/L	98

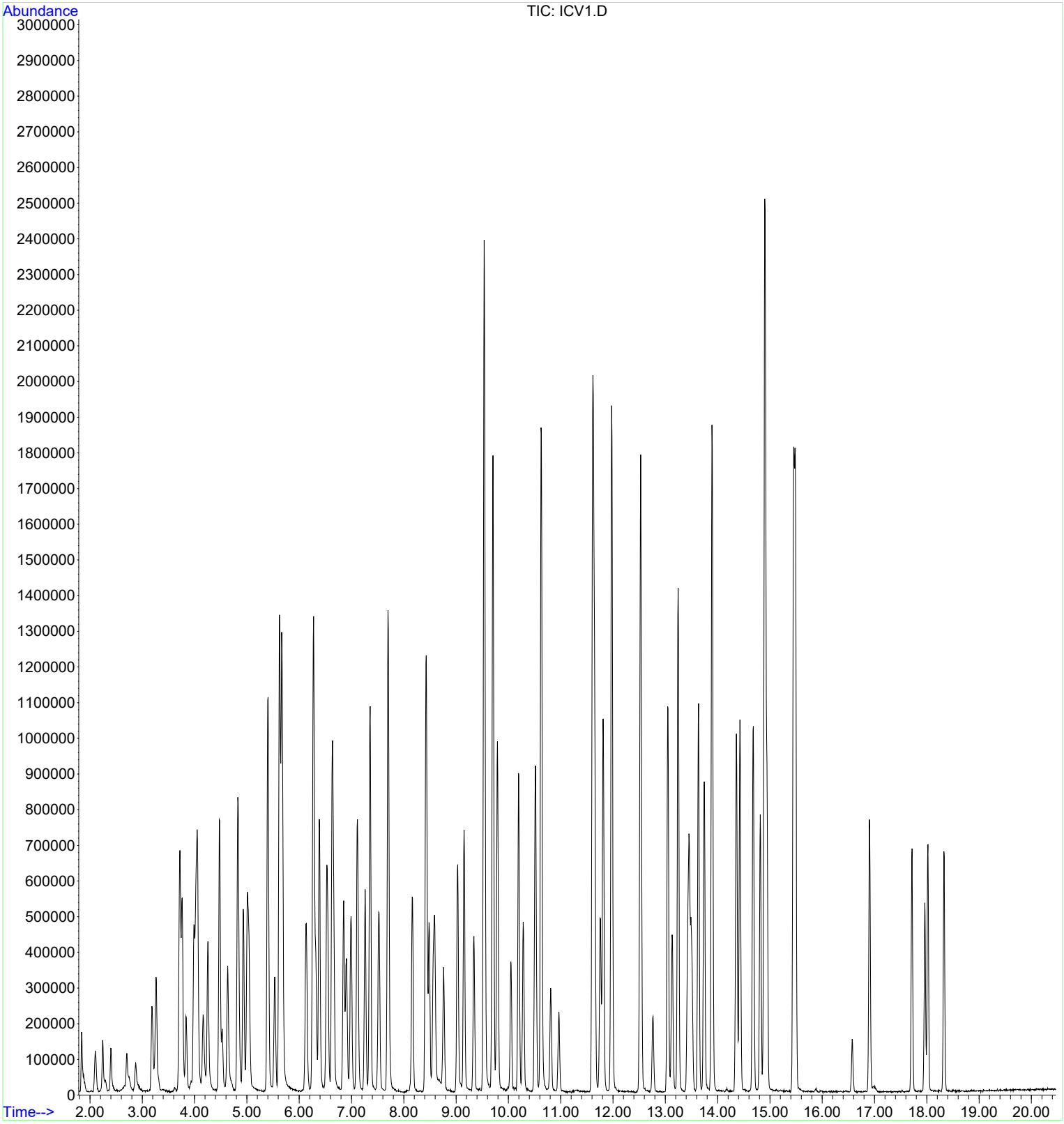
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 29 09:21:20 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 28 20:29:00 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00
2	PT	Dichlorodi	30.0000	37.0645	-23.55#	111	0.00
3	PT	Chloromethan	30.0000	28.0618	6.46	101	0.00
4	PT	VinylChlorid	30.0000	31.0784	-3.59	104	0.00
5	PT	Bromomethane	30.0000	29.7987	0.67	101	-0.01
6	PT	Chloroethane	30.0000	29.5794	1.40	102	0.00
7	T	Dichloroflmethane	30.0000	29.2800	2.40	98	0.00
8	PT	Trichlorofma	30.0000	34.5810	-15.27	106	0.00
9	T	Ethylether	30.0000	31.6949	-5.65	103	0.00
10	T	dichlorotfluoroethan	30.0000	31.7807	-5.94	100	0.00
11	T	propyleneoxide	300.0000	311.6794	-3.89	100	0.00
12	T	Acrolein	150.0000	148.4097	1.06	97	0.00
13	PT	11dichlorthe	30.0000	34.0860	-13.62	104	0.00
14	PT	Trichlorotfluoroeth	60.0000	65.4812	-9.14	104	0.00
15	PT	Acetone	300.0000	292.2127	2.60	102	0.00
16	T	Iodomethane	60.0000	63.4080	-5.68	98	0.00
17	PT	Carbon Dislf	60.0000	60.8723	-1.45	105	0.00
18	T	allylchloride	60.0000	58.8705	1.88	97	0.00
19	PT	methylacetate	30.0000	31.6417	-5.47	102	0.00
20	PT	Methylchlorid	30.0000	30.3371	-1.12	102	0.00
21	T	tbutylalcohol	1500.0000	1619.0083	-7.93	103	0.00
22	T	Acrylonitrile	150.0000	152.6713	-1.78	102	0.00
23	PT	t12dichlorte	30.0000	31.9904	-6.63	102	0.00
24	PT	MtBE	30.0000	31.6492	-5.50	103	0.00
25	T	Hexane	60.0000	66.6023	-11.00	97	0.00
26	PT	11dichlorota	30.0000	31.7750	-5.92	101	0.00
27	T	Vinylacetate	300.0000	312.8181	-4.27	97	0.00
28	T	chloroprene	60.0000	62.0681	-3.45	99	0.00
29	T	Diisopether	30.0000	30.2307	-0.77	100	0.00
30	T	ETBE	30.0000	31.9047	-6.35	104	0.00
31	T	22dichloropr	30.0000	32.8614	-9.54	98	0.00
32	PT	c12dichlorte	30.0000	31.2207	-4.07	100	0.00
33	PT	2Butanone	300.0000	319.7577	-6.59	104	0.00
34	T	propionitrile	300.0000	301.9681	-0.66	100	0.00
35	T	Ethylacetate	150.0000	169.2475	-12.83	105	0.00
36	T	methacrylonitrile	60.0000	61.1545	-1.92	100	0.00
37	T	Bromochlorma	30.0000	32.4201	-8.07	102	0.00
38	T	Tetrahydofur	300.0000	308.6403	-2.88	104	0.00
39	PT	Chloroform	30.0000	31.1858	-3.95	101	0.00
40	PT	111trichlota	30.0000	33.7187	-12.40	105	0.00
41	S	SURRDibrflma	20.0000	19.9952	0.02	100	0.00
42	PT	Cyclohexane	30.0000	35.0307	-16.77	103	0.00
43	PT	Carbtetraclo	30.0000	36.0553	-20.18#	102	0.00
44	T	11dicloprope	30.0000	33.5728	-11.91	99	0.00
45	S	SURR12DCAd4	20.0000	20.2204	-1.10	103	0.00
46	PT	Benzene	30.0000	29.9190	0.27	101	0.00
47	PT	12dichlorota	30.0000	30.3680	-1.23	101	0.00
48	T	TAME	30.0000	33.3505	-11.17	103	0.00

49	PT	trichloroete	30.0000	32.6413	-8.80	105	0.00	
50	PT	methylcyclohexane	30.0000	30.7857	-2.62	98	0.00	
51	PT	12dicloropra	30.0000	32.3859	-7.95	103	0.00	
52	T	23Dicl1propene	30.0000	31.5268	-5.09	104	0.00	
53	T	Dibromometha	30.0000	31.2862	-4.29	101	0.00	
54	T	methylmethacrylate	30.0000	33.1856	-10.62	106	0.00	
55	T	14dioxane	1500.0000	1596.0290	-6.40	101	0.00	
56	PT	Bromodiclrma	30.0000	31.7644	-5.88	101	0.00	
57	T	2Nitropropane	300.0000	325.0294	-8.34	99	0.00	
58	T	2CLEVE	150.0000	168.4786	-12.32	106	0.00	
59	PT	c13dicloproe	30.0000	32.4990	-8.33	100	0.00	
60	PT	4Meth2Pentan	300.0000	310.1742	-3.39	102	0.00	
61	S	SURRd8Tolule	20.0000	20.5105	-2.55	102	0.00	
62	PT	Toluene	30.0000	30.8979	-2.99	101	0.00	
63	PT	t13Dicloprop	30.0000	34.7496	-15.83	102	0.00	
64	T	ethylmethacrylate	60.0000	63.6626	-6.10	100	0.00	
65	PT	112Triclotha	30.0000	31.7745	-5.91	101	0.00	
66	PT	Tetrachlorte	30.0000	32.3157	-7.72	104	0.00	
67	T	13Diclorpropa	30.0000	31.0459	-3.49	101	0.00	
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00	
69	PT	2Hexanone	300.0000	272.1872	9.27	103	0.00	
70	PT	Clorodibrmta	30.0000	32.1499	-7.17	104	0.00	
71	PT	12Dibrometha	30.0000	31.8908	-6.30	104	0.00	
72	PT	Chlorobenzen	30.0000	28.6896	4.37	101	0.00	
73	T	1Clhexane	30.0000	30.2422	-0.81	101	0.00	
74	T	1112Tetclota	30.0000	31.6101	-5.37	99	0.00	
75	PT	Ethylbenzene	30.0000	29.1208	2.93	101	0.00	
76	PT	m p-Xylene	60.0000	59.3911	1.01	101	0.00	
77	PT	o-Xylene	30.0000	31.3303	-4.43	101	0.00	
78	PT	Styrene	30.0000	30.7989	-2.66	101	0.00	
79	PT	Bromoform	30.0000	32.4230	-8.08	101	0.00	
80	PT	Isopropylben	30.0000	30.1879	-0.63	102	0.00	
81	T	cyclohexanone	600.0000	628.6478	-4.77	110	0.00	
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	102	0.00	
83	S	SURR4BrFBenz	20.0000	20.0131	-0.07	103	0.00	
84	T	Bromobenzene	30.0000	28.8641	3.79	103	0.00	
85	PT	1122Tetrclta	30.0000	28.3544	5.49	101	0.00	
86	T	123Triclproa	30.0000	30.5822	-1.94	102	0.00	
87	T	14dichloro2butene	30.0000	33.0951	-10.32	100	0.00	
88	T	n-Propylbenz	30.0000	27.9890	6.70	101	0.00	
89	T	2chlorotolue	30.0000	27.9519	6.83	101	0.00	
90	T	4chlorotolue	30.0000	28.2118	5.96	100	0.00	
91	T	135Trimebenz	30.0000	28.9973	3.34	101	0.00	
92	T	tbutylbenzen	30.0000	29.4989	1.67	102	0.00	
93	T	124Trimetben	30.0000	28.8175	3.94	100	0.00	
94	T	sbutylbenzen	30.0000	29.2703	2.43	101	0.00	
95	PT	13Diclorbenz	30.0000	28.6570	4.48	102	0.00	
96	T	pIsopropylto	30.0000	29.5244	1.59	102	0.00	
97	PT	14dichlorobe	30.0000	28.2423	5.86	101	0.00	
98	PT	12dichlorobe	30.0000	28.7089	4.30	101	0.00	
99	T	nButylbenzen	30.0000	28.6331	4.56	100	0.00	
100	PT	12dibromo3cl	30.0000	32.0957	-6.99	103	0.00	
101	T	135Trichlorobenzene	30.0000	28.0118	6.63	98	0.00	
102	PT	124Trichlobe	30.0000	30.2030	-0.68	101	0.00	
103	T	Hexachlorobu	30.0000	31.3109	-4.37	102	0.00	
104	T	Naphthalene	30.0000	31.4965	-4.99	105	0.00	
105	T	123Trichlben	30.0000	29.5853	1.38	101	0.00	

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Mon May 02 08:16:54 2022

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 20:29:00 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1439164	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1149131	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	654334	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	378028	19.995	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.26	102	103349	20.220	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.70	98	1512916	20.511	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103	%		
83) SURR4BrFBenz	13.25	95	646838	20.013	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	629806	37.0645	ug/L	98
3) Chloromethan	2.10	50	495888	28.0618	ug/L	100
4) VinylChlorid	2.24	62	530710	31.0784	ug/L	98
5) Bromomethane	2.70	94	286311	29.7987	ug/L	97
6) Chloroethane	2.87	64	318469	29.5794	ug/L	99
7) Dichloroflmethane	3.18	67	1078375	29.2800	ug/L	98
8) Trichlorofma	3.26	101	877119	34.5810	ug/L	100
9) Ethylether	3.71	59	442865	31.6949	ug/L	99
10) dichlorotfluoroethan	3.72	67	1069185	31.7807	ug/L	99
11) propyleneoxide	3.76	58	1471546	311.6794	ug/L	99
12) Acrolein	3.84	56	585730	148.4097	ug/L	98
13) 11dichlorthe	3.99	96	584268	34.0860	ug/L	98
14) Trichlorotfluoroeth	4.03	101	973855	65.4812	ug/L	97
15) Acetone	4.05	43	2000894	292.2127	ug/L	98
16) Iodomethane	4.16	142	1202160	63.4080	ug/L	98
17) Carbon Dislf	4.26	76	2099200	60.8723	ug/L	98
18) allylchloride	4.47	41	1715688	58.8705	ug/L	97
19) methylacetate	4.53	74	171331	31.6417	ug/L	98
20) Methylchlorid	4.63	84	639175	30.3371	ug/L	96
21) tbutylalcohol	4.83	59	3140950	1619.0083	ug/L	97
22) Acrylonitrile	4.93	53	1340833	152.6713	ug/L	98
23) t12dichlorte	5.01	96	629726	31.9904	ug/L	98
24) MtBE	5.03	73	1444667	31.6492	ug/L	97
25) Hexane	5.40	57	1921740	66.6023	ug/L	98
26) 11dichlorota	5.53	63	1062557	31.7750	ug/L	98
27) Vinylacetate	5.62	43	6331497	312.8181	ug/L	91
28) chloroprene	5.66	53	1826935	62.0681	ug/L	97
29) Diisopether	5.68	45	1661597	30.2307	ug/L	100
30) ETBE	6.13	59	1445393	31.9047	ug/L	96
31) 22dichloropr	6.27	77	654326	32.8614	ug/L	98
32) c12dichlorte	6.26	96	666336	31.2207	ug/L	98
33) 2Butanone	6.28	72	922729	319.7577	ug/L	96
34) propionitrile	6.32	54	1127797	301.9681	ug/L	99
35) Ethylacetate	6.38	88	153744	169.2475	ug/L	94
36) methacrylonitrile	6.53	67	645397	61.1545	ug/L	98
37) Bromochlorma	6.55	128	310404	32.4201	ug/L	95
38) Tetrahydofur	6.63	42	1892122	308.6403	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 20:29:00 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	1026082	31.1858	ug/L	98
40)	111trichlota	6.90	97	902186	33.7187	ug/L	97
42)	Cyclohexane	6.99	56	887288	35.0307	ug/L	97
43)	Carbtetraclo	7.12	119	730448	36.0553	ug/L	100
44)	11dicloprope	7.11	110	312577	33.5728	ug/L	98
46)	Benzene	7.36	78	2289814	29.9190	ug/L	98
47)	12dichlorota	7.36	62	760862	30.3680	ug/L	98
48)	TAME	7.52	73	1381453	33.3505	ug/L	95
49)	trichloroete	8.16	95	655845	32.6413	ug/L	99
50)	methylcyclohexane	8.43	83	1312337	30.7857	ug/L	98
51)	12dicloropra	8.42	63	670320	32.3859	ug/L	93
52)	23Dicl1propene	8.48	75	984081	31.5268	ug/L	98
53)	Dibromometha	8.56	93	368354	31.2862	ug/L	97
54)	methylmethacrylate	8.59	69	513177	33.1856	ug/L	98
55)	14dioxane	8.60	88	470484	1596.0290	ug/L	98
56)	Bromodiclrma	8.76	83	783702	31.7644	ug/L	98
57)	2Nitropropane	9.03	43	1729388	325.0294	ug/L	99
58)	2CLEVE	9.15	63	1175760	168.4786	ug/L	98
59)	c13dicloproe	9.34	75	923106	32.4990	ug/L	98
60)	4Meth2Pentan	9.54	43	4580497	310.1742	ug/L	90
62)	Toluene	9.79	92	1517917	30.8979	ug/L	94
63)	t13Dicloprop	10.05	75	778106	34.7496	ug/L	98
64)	ethylmethacrylate	10.19	69	1717648	63.6626	ug/L	98
65)	112Triclotha	10.28	83	478732	31.7745	ug/L	98
66)	Tetrachlorte	10.52	166	679873	32.3157	ug/L	98
67)	13Diclorpropa	10.51	76	955018	31.0459	ug/L	99
69)	2Hexanone	10.62	43	3647906	272.1872	ug/L	93
70)	Clorodibrmta	10.81	129	605156	32.1499	ug/L	98
71)	12Dibrometha	10.97	107	566662	31.8908	ug/L	100
72)	Chlorobenzen	11.65	112	1596698	28.6896	ug/L	99
73)	1Clhexane	11.63	91	878746	30.2422	ug/L	94
74)	1112Tetclota	11.76	131	537681	31.6101	ug/L	92
75)	Ethylbenzene	11.81	91	2567112	29.1208	ug/L	94
76)	m p-Xylene	11.98	106	2060078	59.3911	ug/L	90
77)	o-Xylene	12.52	106	1065840	31.3303	ug/L	88
78)	Styrene	12.53	104	1714833	30.7989	ug/L	98
79)	Bromoform	12.77	173	418659	32.4230	ug/L	99
80)	Isopropylben	13.05	105	2507235	30.1879	ug/L	95
81)	cyclohexanone	13.13	55	729202	628.6478	ug/L	98
84)	Bromobenzene	13.46	156	679447	28.8641	ug/L	97
85)	1122Tetrclta	13.43	83	775653	28.3544	ug/L	96
86)	123Triclproa	13.49	75	1001587	30.5822	ug/L	99
87)	14dichloro2butene	13.51	53	242149	33.0951	ug/L	95
88)	n-Propylbenz	13.64	91	2844258	27.9890	ug/L	93
89)	2chlorotolue	13.75	91	1811448	27.9519	ug/L	97
90)	4chlorotolue	13.90	91	2037312	28.2118	ug/L	96
91)	135Trimebenz	13.89	105	2106431	28.9973	ug/L	97
92)	tbutylbenzen	14.36	119	1841593	29.4989	ug/L	96
93)	124Trimetben	14.43	105	2047778	28.8175	ug/L	95
94)	sbutylbenzen	14.68	105	2574772	29.2703	ug/L	95
95)	13Diclorbenz	14.82	146	1195371	28.6570	ug/L	98
96)	pIsopropylto	14.90	119	2205358	29.5244	ug/L	96
97)	14dichlorobe	14.94	146	1208315	28.2423	ug/L	99
98)	12dichlorobe	15.48	146	1124243	28.7089	ug/L	98
99)	nButylbenzen	15.49	91	1994369	28.6331	ug/L	94
100)	12dibromo3cl	16.57	157	162851	32.0957	ug/L	96
101)	135Trichlorobenzene	16.90	180	913302	28.0118	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 20:29:00 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	766211	30.2030	ug/L	97
103) Hexachlorobu	17.97	225	361327	31.3109	ug/L	99
104) Naphthalene	18.02	128	1805809	31.4965	ug/L	97
105) 123Trichlben	18.33	180	714913	29.5853	ug/L	99

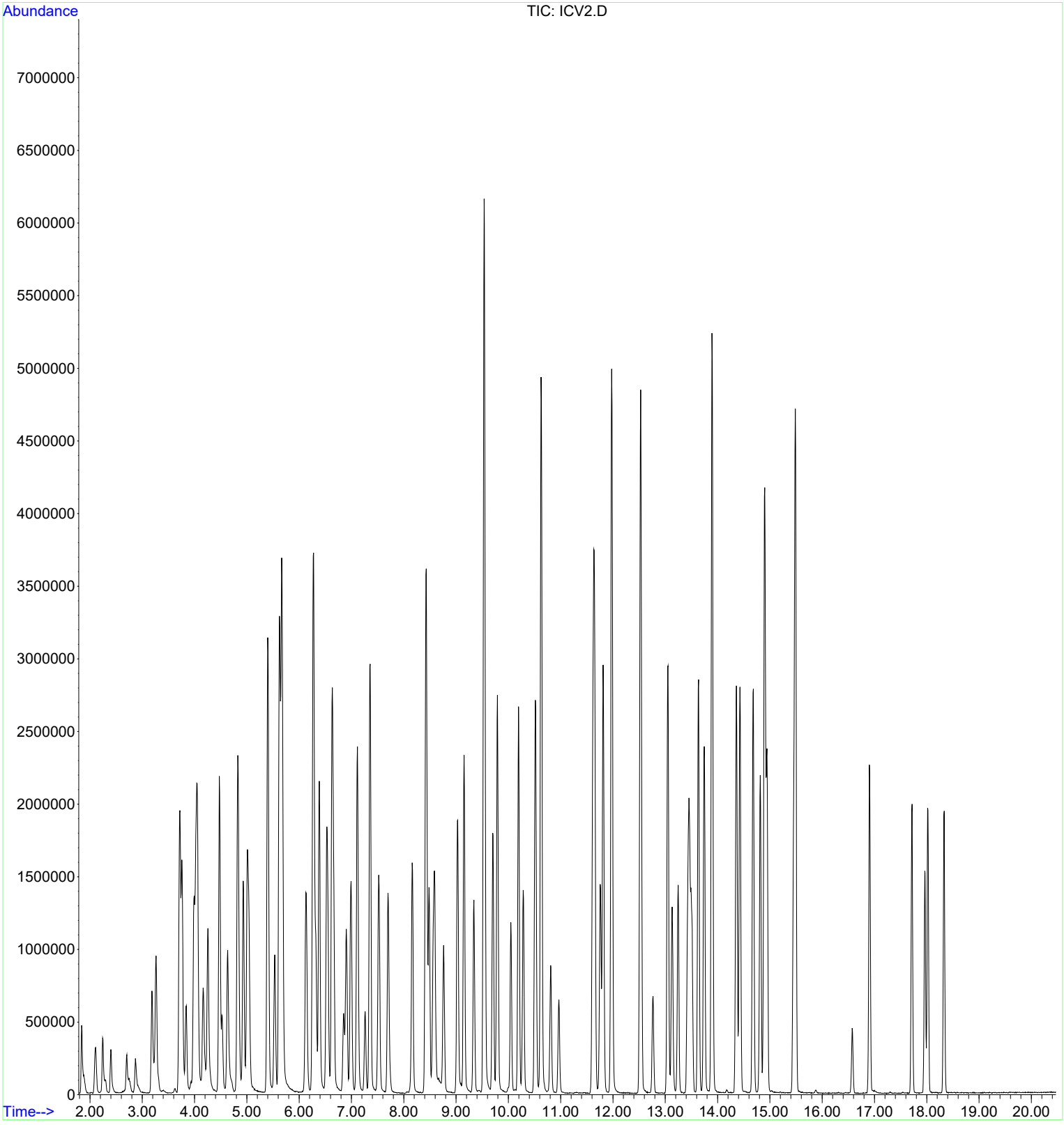
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 20:29:00 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\ICB1.D Vial: 18
Acq On : 28 Apr 2022 21:36 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK. Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 21:57:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1342168	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1085790	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	581690	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	352853	20.012 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
45) SURR12DCAd4	7.26	102	94383	19.801 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %		
61) SURRd8Tolule	9.71	98	1382857	20.102 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	588119	20.469 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	11922	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	3900	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.85	59	7107	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\ICB1.D Vial: 18
Acq On : 28 Apr 2022 21:36 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK. Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 21:57:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	9.02	43	4215	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	9.54	43	9716	Below	Cal	93
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	10.63	43	11884	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.61	91	5339	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	11.81	91	6260	N.D.		
76)	m p-Xylene	11.98	106	4243	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	13.05	105	7332	N.D.		
81)	cyclohexanone	13.13	55	4544	20.6152	ug/L #	80
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	13.63	91	10706	N.D.		
89)	2chlorotolue	13.75	91	4210	N.D.		
90)	4chlorotolue	13.90	91	4172	N.D.		
91)	135Trimebenz	13.89	105	5278	N.D.		
92)	tbutylbenzen	14.36	119	8155	N.D.		
93)	124Trimetben	14.43	105	6409	N.D.		
94)	sbutylbenzen	14.68	105	11927	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	14.90	119	11796	N.D.		
97)	14dichlorobe	14.93	146	2580	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.50	91	14851	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	16.91	180	3160	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\ICB1.D Vial: 18
Acq On : 28 Apr 2022 21:36 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK. Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 21:57:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.71	180	3714	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	18.02	128	12000	N.D.		
105) 123Trichlben	18.34	180	3620	N.D.		

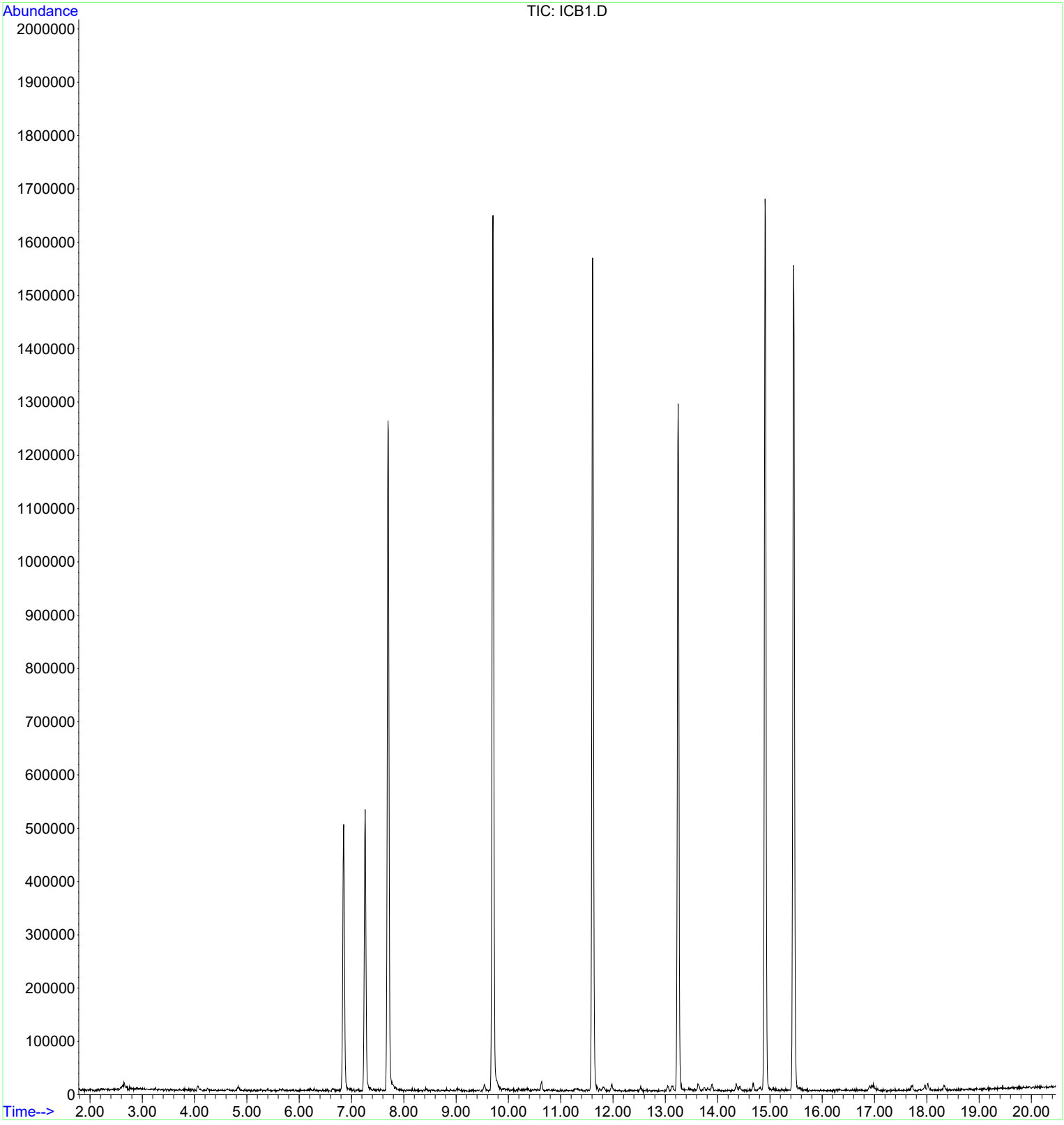
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\ICB1.D Vial: 18
Acq On : 28 Apr 2022 21:36 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK. Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 21:57:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 29 09:21:20 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	106	0.00
2	PT	Dichlorodi	0.2581	0.2910	-12.75	113	0.00
3	PT	Chloromethan	0.2382	0.2351	1.30	102	0.00
4	PT	VinylChlorid	0.2431	0.2502	-2.92	105	0.00
5	PT	Bromomethane	0.1405	0.1557	-10.82	121	0.00
6	PT	Chloroethane	0.1567	0.1546	1.34	110	0.00
7	T	Dichloroflmethane	0.5294	0.5144	2.83	102	0.00
8	PT	Trichlorofma	0.3882	0.4207	-8.37	106	0.00
9	T	Ethylether	0.1949	0.2039	-4.62	115	0.00
10	T	dichlorotfluoroethan	0.4948	0.5196	-5.01	105	0.00
11	T	propyleneoxide	0.0691	0.0691	0.00	109	0.00
12	T	Acrolein	0.0566	0.0560	1.06	106	0.00
13	PT	11dichlorthe	0.2560	0.2754	-7.58	111	0.00
14	PT	Trichlorotfluoroeth	0.2132	0.2285	-7.18	106	0.00
15	PT	Acetone	0.1042	0.0990#	4.99	109	0.00
16	T	Iodomethane	0.2651	0.2449	7.62	94	0.00
17	PT	Carbon Dislf	0.4879	0.5112	-4.78	108	0.00
18	T	allylchloride	0.4204	0.4210	-0.14	102	0.00
19	PT	methylacetate	0.0773	0.0749#	3.10	119	0.00
20	PT	Methylchlorid	0.3175	0.3043	4.16	107	0.00
21	T	tbutylalcohol	0.0282	0.0312	-10.64	119	0.00
22	T	Acrylonitrile	0.1258	0.1304	-3.66	111	0.00
23	PT	t12dichlorte	0.2902	0.2971	-2.38	107	0.00
24	PT	MtBE	0.6525	0.6828	-4.64	112	0.00
25	T	Hexane	0.4321	0.4744	-9.79	101	0.00
26	PT	11dichlorota	0.5022	0.5110	-1.75	107	0.00
27	T	Vinylacetate	0.3685	0.3475	5.70	91	0.00
28	T	chloroprene	0.4236	0.4522	-6.75	104	0.00
29	T	Diisopether	0.7765	0.8368	-7.77	108	0.00
30	T	ETBE	0.6416	0.6906	-7.64	114	0.00
31	T	22dichloropr	0.2949	0.2878	2.41	104	0.00
32	PT	c12dichlorte	0.3068	0.3192	-4.04	109	0.00
33	PT	2Butanone	0.0411	0.0433#	-5.35	116	0.00
34	T	propionitrile	0.0541	0.0539	0.37	108	0.00
35	T	Ethylacetate	0.0130	0.0136#	-4.62	117	0.00
36	T	methacrylonitrile	0.1528	0.1536	-0.52	108	0.00
37	T	Bromochlorma	0.1448	0.1421	1.86	107	0.00
38	T	Tetrahydofur	0.0888	0.0925	-4.17	110	0.00
39	PT	Chloroform	0.4912	0.5031	-2.42	110	0.00
40	PT	111trichlota	0.3965	0.4137	-4.34	108	0.00
41	S	SURRDibrflma	0.2659	0.2613	1.73	105	0.00
42	PT	Cyclohexane	0.3737	0.4206	-12.55	109	0.00
43	PT	Carbtetraclo	0.3103	0.3269	-5.35	108	0.00
44	T	11dicloprope	0.1417	0.1469	-3.67	109	0.00
45	S	SURR12DCAd4	0.0709	0.0672	5.22	97	0.00
46	PT	Benzene	1.1203	1.1686	-4.31	105	0.00
47	PT	12dichlorota	0.3677	0.3691	-0.38	106	0.00
48	T	TAME	0.5985	0.6497	-8.55	115	0.00

49	PT	trichloroete	0.2940	0.3091	-5.14	112	0.00
50	PT	methylcyclohexane	0.5670	0.6139	-8.27	102	0.00
51	PT	12dicloropra	0.3099	0.3122	-0.74	106	0.00
52	T	23Dicl1propene	0.4418	0.4552	-3.03	109	0.00
53	T	Dibromometha	0.1741	0.1787	-2.64	113	0.00
54	T	methylmethacrylate	0.2175	0.2335	-7.36	118	0.00
55	T	14dioxane	0.0044	0.0043#	2.27	115	0.00
56	PT	Bromodiclrma	0.3686	0.3708	-0.60	107	0.00
57	T	2Nitropropane	0.0782	0.0807	-3.20	107	0.00
58	T	2CLEVE	0.0959	0.1059	-10.43	122	0.00
59	PT	c13dicloproe	0.4161	0.4355	-4.66	111	0.00
60	PT	4Meth2Pentan	0.2366	0.2655	-12.21	112	0.00
61	S	SURRd8Tolule	1.0461	1.0304	1.50	103	0.00
62	PT	Toluene	0.7215	0.7591	-5.21	109	0.00
63	PT	t13Dicloprop	0.3396	0.3571	-5.15	113	0.00
64	T	ethylmethacrylate	0.3848	0.4110	-6.81	111	0.00
65	PT	112Triclotha	0.2212	0.2240	-1.27	109	0.00
66	PT	Tetrachlorte	0.3038	0.3135	-3.19	104	0.00
67	T	13Diclorpropa	0.4572	0.4641	-1.51	110	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	103	0.00
69	PT	2Hexanone	0.2204	0.2578	-16.97	115	0.00
70	PT	Clorodibrmta	0.3407	0.3543	-3.99	109	0.00
71	PT	12Dibrometha	0.3149	0.3392	-7.72	115	0.00
72	PT	Chlorobenzen	0.9740	1.0176	-4.48	108	0.00
73	T	1Clhexane	0.4841	0.5422	-12.00	114	0.00
74	T	1112Tetclota	0.3104	0.3210	-3.41	108	0.00
75	PT	Ethylbenzene	1.5510	1.7074	-10.08	108	0.00
76	PT	m p-Xylene	0.6021	0.6709	-11.43	109	0.00
77	PT	o-Xylene	0.6026	0.6562	-8.89	108	0.00
78	PT	Styrene	0.9711	1.0820	-11.42	110	0.00
79	PT	Bromoform	0.2277	0.2413	-5.97	115	0.00
80	PT	Isopropylben	1.4429	1.6641	-15.33	111	0.00
81	T	cyclohexanone	0.0184	0.0221#	-20.11#	133	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	103	0.00
83	S	SURR4BrFBenz	0.9896	1.0035	-1.40	105	0.00
84	T	Bromobenzene	0.6980	0.7333	-5.06	108	0.00
85	PT	1122Tetrclta	0.8297	0.8516	-2.64	109	0.00
86	T	123Triclproa	1.0131	1.0322	-1.89	108	0.00
87	T	14dichloro2butene	0.2339	0.2357	-0.77	109	0.00
88	T	n-Propylbenz	3.0653	3.4971	-14.09	109	0.00
89	T	2chlorotolue	1.9399	2.1132	-8.93	111	0.00
90	T	4chlorotolue	2.2100	2.4384	-10.33	110	0.00
91	T	135Trimebenz	2.1966	2.4487	-11.48	107	0.00
92	T	tbutylbenzen	1.8566	2.1226	-14.33	111	0.00
93	T	124Trimetben	2.1381	2.4036	-12.42	110	0.00
94	T	sbutylbenzen	2.6311	3.1057	-18.04	111	0.00
95	PT	13Diclorbenz	1.2599	1.3275	-5.37	107	0.00
96	T	pIsopropylto	2.2538	2.6180	-16.16	112	0.00
97	PT	14dichlorobe	1.2966	1.3627	-5.10	108	0.00
98	PT	12dichlorobe	1.2210	1.2836	-5.13	110	0.00
99	T	nButylbenzen	2.0963	2.3982	-14.40	111	0.00
100	PT	12dibromo3cl	0.1572	0.1610	-2.42	115	0.00
101	T	135Trichlorobenzene	0.9798	1.0200	-4.10	107	0.00
102	PT	124Trichlobe	0.7749	0.8374	-8.07	113	0.00
103	T	Hexachlorobu	0.3464	0.3822	-10.33	110	0.00
104	T	Naphthalene	1.7086	2.0297	-18.79	123	0.00
105	T	123Trichlben	0.7370	0.7957	-7.96	114	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W042822.M Mon May 02 08:15:47 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 29 09:21:20 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	106	0.00
2	PT	Dichlorodi	10.0000	11.2739	-12.74	113	0.00
3	PT	Chloromethan	10.0000	9.8670	1.33	102	0.00
4	PT	VinylChlorid	10.0000	10.2931	-2.93	105	0.00
5	PT	Bromomethane	10.0000	11.0876	-10.88	121	0.00
6	PT	Chloroethane	10.0000	9.8665	1.33	110	0.00
7	T	Dichloroflmethane	10.0000	9.7168	2.83	102	0.00
8	PT	Trichlorofma	10.0000	10.8364	-8.36	106	0.00
9	T	Ethylether	10.0000	10.4600	-4.60	115	0.00
10	T	dichlorotfluoroethan	10.0000	10.5020	-5.02	105	0.00
11	T	propyleneoxide	100.0000	99.9346	0.07	109	0.00
12	T	Acrolein	50.0000	49.4490	1.10	106	0.00
13	PT	11dichlorthe	10.0000	10.7543	-7.54	111	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.4367	-7.18	106	0.00
15	PT	Acetone	100.0000	95.0403	4.96	109	0.00
16	T	Iodomethane	20.0000	18.4787	7.61	94	0.00
17	PT	Carbon Dislf	20.0000	20.9543	-4.77	108	0.00
18	T	allylchloride	20.0000	20.0321	-0.16	102	0.00
19	PT	methylacetate	10.0000	9.6943	3.06	119	0.00
20	PT	Methylchlorid	10.0000	9.5861	4.14	107	0.00
21	T	tbutylalcohol	500.0000	553.3846	-10.68	119	0.00
22	T	Acrylonitrile	50.0000	51.8264	-3.65	111	0.00
23	PT	t12dichlorte	10.0000	10.2391	-2.39	107	0.00
24	PT	MtBE	10.0000	10.4639	-4.64	112	0.00
25	T	Hexane	20.0000	21.9541	-9.77	101	0.00
26	PT	11dichlorota	10.0000	10.1752	-1.75	107	0.00
27	T	Vinylacetate	100.0000	96.3568	3.64	91	0.00
28	T	chloroprene	20.0000	21.3479	-6.74	104	0.00
29	T	Diisopether	10.0000	10.7764	-7.76	108	0.00
30	T	ETBE	10.0000	10.7634	-7.63	114	0.00
31	T	22dichloropr	10.0000	9.7580	2.42	104	0.00
32	PT	c12dichlorte	10.0000	10.4039	-4.04	109	0.00
33	PT	2Butanone	100.0000	105.1965	-5.20	116	0.00
34	T	propionitrile	100.0000	99.5900	0.41	108	0.00
35	T	Ethylacetate	50.0000	52.4562	-4.91	117	0.00
36	T	methacrylonitrile	20.0000	20.0968	-0.48	108	0.00
37	T	Bromochlorma	10.0000	9.8134	1.87	107	0.00
38	T	Tetrahydofur	100.0000	104.1942	-4.19	110	0.00
39	PT	Chloroform	10.0000	10.2406	-2.41	110	0.00
40	PT	111trichlota	10.0000	10.4356	-4.36	108	0.00
41	S	SURRDibrflma	20.0000	19.6610	1.69	105	0.00
42	PT	Cyclohexane	10.0000	11.2534	-12.53	109	0.00
43	PT	Carbtetraclo	10.0000	10.5358	-5.36	108	0.00
44	T	11dicloprope	10.0000	10.3700	-3.70	109	0.00
45	S	SURR12DCAd4	20.0000	18.9397	5.30	97	0.00
46	PT	Benzene	10.0000	10.4312	-4.31	105	0.00
47	PT	12dichlorota	10.0000	10.0390	-0.39	106	0.00
48	T	TAME	10.0000	10.8561	-8.56	115	0.00

49	PT	trichloroete	10.0000	10.5127	-5.13	112	0.00
50	PT	methylcyclohexane	10.0000	9.5555	4.44	102	0.00
51	PT	12dicloropra	10.0000	10.0726	-0.73	106	0.00
52	T	23Dicl1propene	10.0000	10.3040	-3.04	109	0.00
53	T	Dibromometha	10.0000	10.2644	-2.64	113	0.00
54	T	methylmethacrylate	10.0000	10.7362	-7.36	118	0.00
55	T	14dioxane	500.0000	497.8570	0.43	115	0.00
56	PT	Bromodiclrma	10.0000	10.0613	-0.61	107	0.00
57	T	2Nitropropane	100.0000	103.1676	-3.17	107	0.00
58	T	2CLEVE	50.0000	55.2626	-10.53	122	0.00
59	PT	c13dicloproe	10.0000	10.4658	-4.66	111	0.00
60	PT	4Meth2Pentan	100.0000	108.2315	-8.23	112	0.00
61	S	SURRd8Tolule	20.0000	19.7007	1.50	103	0.00
62	PT	Toluene	10.0000	10.5204	-5.20	109	0.00
63	PT	t13Dicloprop	10.0000	10.5149	-5.15	113	0.00
64	T	ethylmethacrylate	20.0000	21.3637	-6.82	111	0.00
65	PT	112Triclotha	10.0000	10.1282	-1.28	109	0.00
66	PT	Tetrachlorte	10.0000	10.3196	-3.20	104	0.00
67	T	13Diclorpropa	10.0000	10.1490	-1.49	110	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	103	0.00
69	PT	2Hexanone	100.0000	109.1787	-9.18	115	0.00
70	PT	Clorodibrmta	10.0000	10.3988	-3.99	109	0.00
71	PT	12Dibrometha	10.0000	10.7723	-7.72	115	0.00
72	PT	Chlorobenzen	10.0000	10.4478	-4.48	108	0.00
73	T	1Clhexane	10.0000	11.2005	-12.00	114	0.00
74	T	1112Tetclota	10.0000	10.3399	-3.40	108	0.00
75	PT	Ethylbenzene	10.0000	11.0083	-10.08	108	0.00
76	PT	m p-Xylene	20.0000	22.2865	-11.43	109	0.00
77	PT	o-Xylene	10.0000	10.8902	-8.90	108	0.00
78	PT	Styrene	10.0000	11.1420	-11.42	110	0.00
79	PT	Bromoform	10.0000	10.5992	-5.99	115	0.00
80	PT	Isopropylben	10.0000	11.5328	-15.33	111	0.00
81	T	cyclohexanone	200.0000	222.6149	-11.31	133	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	103	0.00
83	S	SURR4BrFBenz	20.0000	20.2799	-1.40	105	0.00
84	T	Bromobenzene	10.0000	10.5051	-5.05	108	0.00
85	PT	1122Tetrclta	10.0000	10.2648	-2.65	109	0.00
86	T	123Triclproa	10.0000	10.1886	-1.89	108	0.00
87	T	14dichloro2butene	10.0000	10.0794	-0.79	109	0.00
88	T	n-Propylbenz	10.0000	11.4090	-14.09	109	0.00
89	T	2chlorotolue	10.0000	10.8932	-8.93	111	0.00
90	T	4chlorotolue	10.0000	11.0336	-10.34	110	0.00
91	T	135Trimebenz	10.0000	11.1473	-11.47	107	0.00
92	T	tbutylbenzen	10.0000	11.4323	-14.32	111	0.00
93	T	124Trimetben	10.0000	11.2416	-12.42	110	0.00
94	T	sbutylbenzen	10.0000	11.8035	-18.03	111	0.00
95	PT	13Diclorbenz	10.0000	10.5368	-5.37	107	0.00
96	T	pIsopropylto	10.0000	11.6160	-16.16	112	0.00
97	PT	14dichlorobe	10.0000	10.5093	-5.09	108	0.00
98	PT	12dichlorobe	10.0000	10.5125	-5.12	110	0.00
99	T	nButylbenzen	10.0000	11.4406	-14.41	111	0.00
100	PT	12dibromo3cl	10.0000	10.2413	-2.41	115	0.00
101	T	135Trichlorobenzene	10.0000	10.4099	-4.10	107	0.00
102	PT	124Trichlobe	10.0000	10.8059	-8.06	113	0.00
103	T	Hexachlorobu	10.0000	11.0336	-10.34	110	0.00
104	T	Naphthalene	10.0000	11.8796	-18.80	123	0.00
105	T	123Trichlben	10.0000	10.7961	-7.96	114	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Mon May 02 08:16:13 2022

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 29 09:21:20 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1439577	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1137009	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	633016	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	376228	19.661	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
45) SURR12DCAd4	7.26	102	96687	18.940	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 95 %			
61) SURRd8Tolule	9.71	98	1483371	19.701	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	635218	20.280	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	209431	11.2739	ug/L	99
3) Chloromethan	2.10	50	169194	9.8670	ug/L	96
4) VinylChlorid	2.24	62	180101	10.2931	ug/L	99
5) Bromomethane	2.70	94	112103	11.0876	ug/L	98
6) Chloroethane	2.87	64	111282	9.8665	ug/L	92
7) Dichloroflmethane	3.18	67	370261	9.7168	ug/L	100
8) Trichlorofma	3.26	101	302816	10.8364	ug/L	98
9) Ethylether	3.71	59	146743	10.4600	ug/L	97
10) dichlorotfluoroethan	3.72	67	374018	10.5020	ug/L	99
11) propyleneoxide	3.76	58	497196	99.9346	ug/L	97
12) Acrolein	3.84	56	201584	49.4490	ug/L	99
13) 11dichlorthe	3.99	96	198196	10.7543	ug/L	99
14) Trichlorotfluoroeth	4.03	101	328915	21.4367	ug/L	99
15) Acetone	4.05	43	712652	95.0403	ug/L	97
16) Iodomethane	4.16	142	352619	18.4787	ug/L	98
17) Carbon Dislf	4.25	76	735957	20.9543	ug/L	99
18) allylchloride	4.47	41	606127	20.0321	ug/L	97
19) methylacetate	4.53	74	53925	9.6943	ug/L	91
20) Methylchlorid	4.63	84	219062	9.5861	ug/L	99
21) tbutylalcohol	4.83	59	1121600	553.3846	ug/L	97
22) Acrylonitrile	4.93	53	469185	51.8264	ug/L	99
23) t12dichlorte	5.01	96	213872	10.2391	ug/L	99
24) MtBE	5.03	73	491454	10.4639	ug/L	99
25) Hexane	5.40	57	682883	21.9541	ug/L	99
26) 11dichlorota	5.53	63	367779	10.1752	ug/L	99
27) Vinylacetate	5.62	43	2501564	96.3568	ug/L	100
28) chloroprene	5.67	53	650932	21.3479	ug/L	99
29) Diisopether	5.68	45	602302	10.7764	ug/L	93
30) ETBE	6.13	59	497053	10.7634	ug/L	99
31) 22dichloropr	6.27	77	207131	9.7580	ug/L	97
32) c12dichlorte	6.26	96	229737	10.4039	ug/L	100
33) 2Butanone	6.28	72	311544	105.1965	ug/L	98
34) propionitrile	6.32	54	387646	99.5900	ug/L	100
35) Ethylacetate	6.39	88	48997	52.4562	ug/L #	92
36) methacrylonitrile	6.52	67	221064	20.0968	ug/L	98
37) Bromochlorma	6.55	128	102276	9.8134	ug/L	99
38) Tetrahydofur	6.63	42	665637	104.1942	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 29 09:21:20 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	362100	10.2406	ug/L	98
40)	111trichlota	6.91	97	297803	10.4356	ug/L	98
42)	Cyclohexane	6.99	56	302733	11.2534	ug/L	98
43)	Carbtetraclo	7.12	119	235310	10.5358	ug/L	98
44)	11dicloprope	7.11	110	105738	10.3700	ug/L	96
46)	Benzene	7.36	78	841139	10.4312	ug/L	99
47)	12dichlorota	7.36	62	265707	10.0390	ug/L	99
48)	TAME	7.53	73	467664	10.8561	ug/L	97
49)	trichloroete	8.16	95	222452	10.5127	ug/L	98
50)	methylcyclohexane	8.43	83	441867	9.5555	ug/L	98
51)	12dicloropra	8.43	63	224691	10.0726	ug/L	100
52)	23Dicl1propene	8.48	75	327645	10.3040	ug/L	99
53)	Dibromometha	8.56	93	128606	10.2644	ug/L	98
54)	methylmethacrylate	8.59	69	168100	10.7362	ug/L	97
55)	14dioxane	8.60	88	156129	497.8570	ug/L	98
56)	Bromodiclrma	8.76	83	266906	10.0613	ug/L	98
57)	2Nitropropane	9.03	43	581047	103.1676	ug/L	99
58)	2CLEVE	9.15	63	381278	55.2626	ug/L	100
59)	c13dicloproe	9.34	75	313483	10.4658	ug/L	99
60)	4Meth2Pentan	9.54	43	1910863	108.2315	ug/L	99
62)	Toluene	9.79	92	546375	10.5204	ug/L	99
63)	t13Dicloprop	10.05	75	257013	10.5149	ug/L	99
64)	ethylmethacrylate	10.20	69	591716	21.3637	ug/L	98
65)	112Triclotha	10.28	83	161253	10.1282	ug/L	97
66)	Tetrachlorte	10.52	166	225668	10.3196	ug/L	97
67)	13Diclorpropa	10.51	76	334021	10.1490	ug/L	99
69)	2Hexanone	10.62	43	1465379	109.1787	ug/L	98
70)	Clorodibrmta	10.81	129	201435	10.3988	ug/L	99
71)	12Dibrometha	10.97	107	192831	10.7723	ug/L	98
72)	Chlorobenzen	11.65	112	578510	10.4478	ug/L	99
73)	1Clhexane	11.63	91	308246	11.2005	ug/L	94
74)	1112Tetclota	11.76	131	182483	10.3399	ug/L	98
75)	Ethylbenzene	11.81	91	970667	11.0083	ug/L	98
76)	m p-Xylene	11.98	106	762857	22.2865	ug/L	99
77)	o-Xylene	12.53	106	373073	10.8902	ug/L	99
78)	Styrene	12.53	104	615119	11.1420	ug/L	100
79)	Bromoform	12.77	173	137179	10.5992	ug/L	98
80)	Isopropylben	13.05	105	946029	11.5328	ug/L	98
81)	cyclohexanone	13.14	55	250994	222.6149	ug/L	98
84)	Bromobenzene	13.46	156	232096	10.5051	ug/L	98
85)	1122Tetrclta	13.43	83	269548	10.2648	ug/L	99
86)	123Triclproa	13.49	75	326703	10.1886	ug/L	96
87)	14dichloro2butene	13.51	53	74606	10.0794	ug/L	95
88)	n-Propylbenz	13.64	91	1106873	11.4090	ug/L	99
89)	2chlorotolue	13.75	91	668833	10.8932	ug/L	98
90)	4chlorotolue	13.90	91	771785	11.0336	ug/L	99
91)	135Trimebenz	13.89	105	775026	11.1473	ug/L	98
92)	tbutylbenzen	14.36	119	671810	11.4323	ug/L	99
93)	124Trimetben	14.43	105	760745	11.2416	ug/L	100
94)	sbutylbenzen	14.68	105	982966	11.8035	ug/L	98
95)	13Diclorbenz	14.82	146	420172	10.5368	ug/L	98
96)	pIsopropylto	14.90	119	828620	11.6160	ug/L	98
97)	14dichlorobe	14.94	146	431302	10.5093	ug/L	99
98)	12dichlorobe	15.48	146	406259	10.5125	ug/L	99
99)	nButylbenzen	15.49	91	759061	11.4406	ug/L	99
100)	12dibromo3cl	16.58	157	50962	10.2413	ug/L	93
101)	135Trichlorobenzene	16.90	180	322832	10.4099	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 29 09:21:20 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	265036	10.8059	ug/L	99
103) Hexachlorobu	17.96	225	120956	11.0336	ug/L	98
104) Naphthalene	18.02	128	642431	11.8796	ug/L	99
105) 123Trichlben	18.33	180	251841	10.7961	ug/L	98

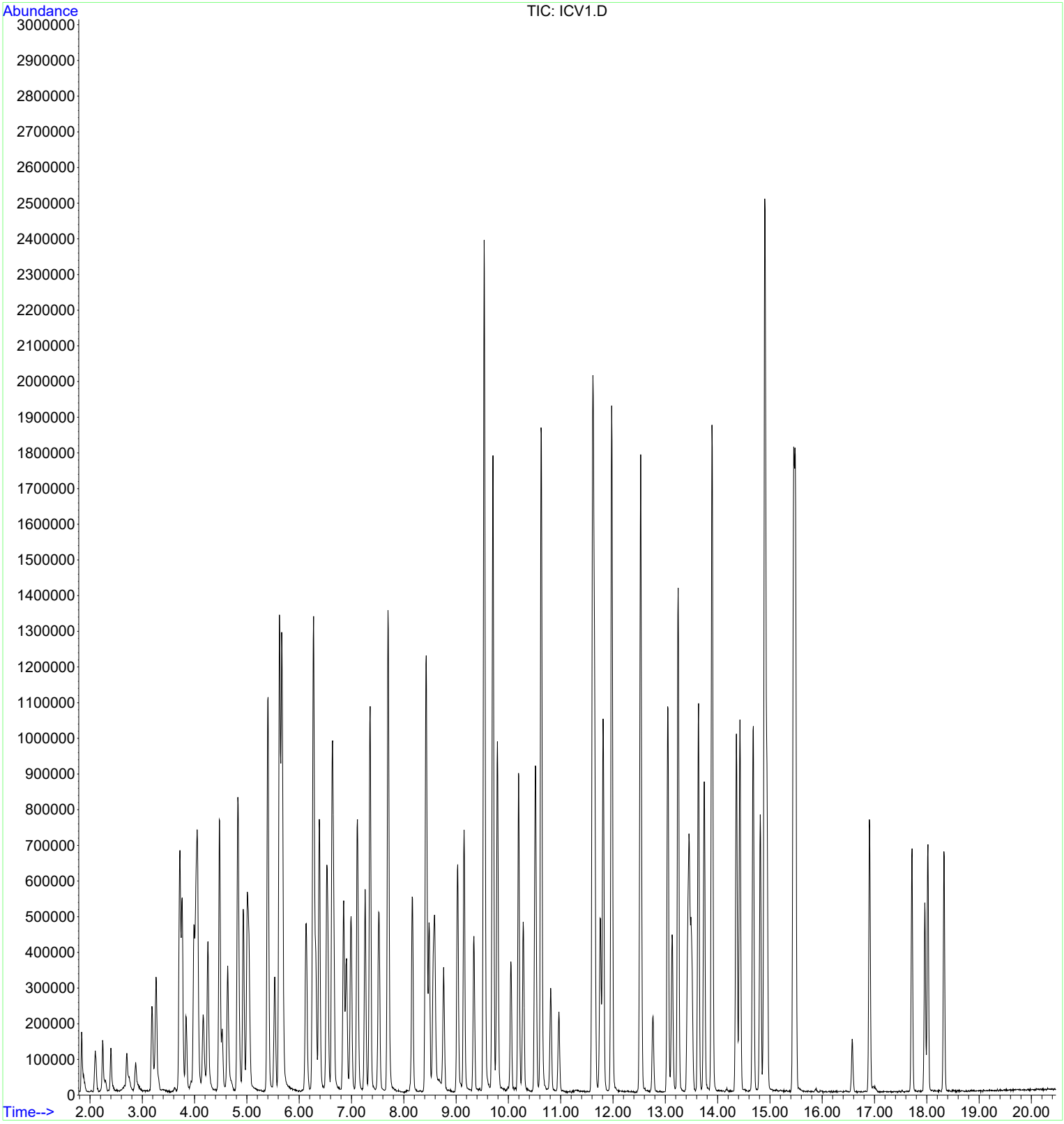
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV1.D Vial: 14
Acq On : 28 Apr 2022 19:37 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 29 09:21:20 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 28 20:29:00 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00
2	PT	Dichlorodi	30.0000	37.0645	-23.55#	111	0.00
3	PT	Chloromethan	30.0000	28.0618	6.46	101	0.00
4	PT	VinylChlorid	30.0000	31.0784	-3.59	104	0.00
5	PT	Bromomethane	30.0000	29.7987	0.67	101	-0.01
6	PT	Chloroethane	30.0000	29.5794	1.40	102	0.00
7	T	Dichloroflmethane	30.0000	29.2800	2.40	98	0.00
8	PT	Trichlorofma	30.0000	34.5810	-15.27	106	0.00
9	T	Ethylether	30.0000	31.6949	-5.65	103	0.00
10	T	dichlorotfluoroethan	30.0000	31.7807	-5.94	100	0.00
11	T	propyleneoxide	300.0000	311.6794	-3.89	100	0.00
12	T	Acrolein	150.0000	148.4097	1.06	97	0.00
13	PT	11dichlorthe	30.0000	34.0860	-13.62	104	0.00
14	PT	Trichlorotfluoroeth	60.0000	65.4812	-9.14	104	0.00
15	PT	Acetone	300.0000	292.2127	2.60	102	0.00
16	T	Iodomethane	60.0000	63.4080	-5.68	98	0.00
17	PT	Carbon Dislf	60.0000	60.8723	-1.45	105	0.00
18	T	allylchloride	60.0000	58.8705	1.88	97	0.00
19	PT	methylacetate	30.0000	31.6417	-5.47	102	0.00
20	PT	Methylchlorid	30.0000	30.3371	-1.12	102	0.00
21	T	tbutylalcohol	1500.0000	1619.0083	-7.93	103	0.00
22	T	Acrylonitrile	150.0000	152.6713	-1.78	102	0.00
23	PT	t12dichlorte	30.0000	31.9904	-6.63	102	0.00
24	PT	MtBE	30.0000	31.6492	-5.50	103	0.00
25	T	Hexane	60.0000	66.6023	-11.00	97	0.00
26	PT	11dichlorota	30.0000	31.7750	-5.92	101	0.00
27	T	Vinylacetate	300.0000	312.8181	-4.27	97	0.00
28	T	chloroprene	60.0000	62.0681	-3.45	99	0.00
29	T	Diisopether	30.0000	30.2307	-0.77	100	0.00
30	T	ETBE	30.0000	31.9047	-6.35	104	0.00
31	T	22dichloropr	30.0000	32.8614	-9.54	98	0.00
32	PT	c12dichlorte	30.0000	31.2207	-4.07	100	0.00
33	PT	2Butanone	300.0000	319.7577	-6.59	104	0.00
34	T	propionitrile	300.0000	301.9681	-0.66	100	0.00
35	T	Ethylacetate	150.0000	169.2475	-12.83	105	0.00
36	T	methacrylonitrile	60.0000	61.1545	-1.92	100	0.00
37	T	Bromochlorma	30.0000	32.4201	-8.07	102	0.00
38	T	Tetrahydofur	300.0000	308.6403	-2.88	104	0.00
39	PT	Chloroform	30.0000	31.1858	-3.95	101	0.00
40	PT	111trichlota	30.0000	33.7187	-12.40	105	0.00
41	S	SURRDibrflma	20.0000	19.9952	0.02	100	0.00
42	PT	Cyclohexane	30.0000	35.0307	-16.77	103	0.00
43	PT	Carbtetraclo	30.0000	36.0553	-20.18#	102	0.00
44	T	11dicloprope	30.0000	33.5728	-11.91	99	0.00
45	S	SURR12DCAd4	20.0000	20.2204	-1.10	103	0.00
46	PT	Benzene	30.0000	29.9190	0.27	101	0.00
47	PT	12dichlorota	30.0000	30.3680	-1.23	101	0.00
48	T	TAME	30.0000	33.3505	-11.17	103	0.00

49	PT	trichloroete	30.0000	32.6413	-8.80	105	0.00	
50	PT	methylcyclohexane	30.0000	30.7857	-2.62	98	0.00	
51	PT	12dicloropra	30.0000	32.3859	-7.95	103	0.00	
52	T	23Dicl1propene	30.0000	31.5268	-5.09	104	0.00	
53	T	Dibromometha	30.0000	31.2862	-4.29	101	0.00	
54	T	methylmethacrylate	30.0000	33.1856	-10.62	106	0.00	
55	T	14dioxane	1500.0000	1596.0290	-6.40	101	0.00	
56	PT	Bromodiclrma	30.0000	31.7644	-5.88	101	0.00	
57	T	2Nitropropane	300.0000	325.0294	-8.34	99	0.00	
58	T	2CLEVE	150.0000	168.4786	-12.32	106	0.00	
59	PT	c13dicloproe	30.0000	32.4990	-8.33	100	0.00	
60	PT	4Meth2Pentan	300.0000	310.1742	-3.39	102	0.00	
61	S	SURRd8Tolule	20.0000	20.5105	-2.55	102	0.00	
62	PT	Toluene	30.0000	30.8979	-2.99	101	0.00	
63	PT	t13Dicloprop	30.0000	34.7496	-15.83	102	0.00	
64	T	ethylmethacrylate	60.0000	63.6626	-6.10	100	0.00	
65	PT	112Triclotha	30.0000	31.7745	-5.91	101	0.00	
66	PT	Tetrachlorte	30.0000	32.3157	-7.72	104	0.00	
67	T	13Diclorpropa	30.0000	31.0459	-3.49	101	0.00	
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00	
69	PT	2Hexanone	300.0000	272.1872	9.27	103	0.00	
70	PT	Clorodibrmta	30.0000	32.1499	-7.17	104	0.00	
71	PT	12Dibrometha	30.0000	31.8908	-6.30	104	0.00	
72	PT	Chlorobenzen	30.0000	28.6896	4.37	101	0.00	
73	T	1Clhexane	30.0000	30.2422	-0.81	101	0.00	
74	T	1112Tetclota	30.0000	31.6101	-5.37	99	0.00	
75	PT	Ethylbenzene	30.0000	29.1208	2.93	101	0.00	
76	PT	m p-Xylene	60.0000	59.3911	1.01	101	0.00	
77	PT	o-Xylene	30.0000	31.3303	-4.43	101	0.00	
78	PT	Styrene	30.0000	30.7989	-2.66	101	0.00	
79	PT	Bromoform	30.0000	32.4230	-8.08	101	0.00	
80	PT	Isopropylben	30.0000	30.1879	-0.63	102	0.00	
81	T	cyclohexanone	600.0000	628.6478	-4.77	110	0.00	
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	102	0.00	
83	S	SURR4BrFBenz	20.0000	20.0131	-0.07	103	0.00	
84	T	Bromobenzene	30.0000	28.8641	3.79	103	0.00	
85	PT	1122Tetrclta	30.0000	28.3544	5.49	101	0.00	
86	T	123Triclproa	30.0000	30.5822	-1.94	102	0.00	
87	T	14dichloro2butene	30.0000	33.0951	-10.32	100	0.00	
88	T	n-Propylbenz	30.0000	27.9890	6.70	101	0.00	
89	T	2chlorotolue	30.0000	27.9519	6.83	101	0.00	
90	T	4chlorotolue	30.0000	28.2118	5.96	100	0.00	
91	T	135Trimebenz	30.0000	28.9973	3.34	101	0.00	
92	T	tbutylbenzen	30.0000	29.4989	1.67	102	0.00	
93	T	124Trimetben	30.0000	28.8175	3.94	100	0.00	
94	T	sbutylbenzen	30.0000	29.2703	2.43	101	0.00	
95	PT	13Diclorbenz	30.0000	28.6570	4.48	102	0.00	
96	T	pIsopropylto	30.0000	29.5244	1.59	102	0.00	
97	PT	14dichlorobe	30.0000	28.2423	5.86	101	0.00	
98	PT	12dichlorobe	30.0000	28.7089	4.30	101	0.00	
99	T	nButylbenzen	30.0000	28.6331	4.56	100	0.00	
100	PT	12dibromo3cl	30.0000	32.0957	-6.99	103	0.00	
101	T	135Trichlorobenzene	30.0000	28.0118	6.63	98	0.00	
102	PT	124Trichlobe	30.0000	30.2030	-0.68	101	0.00	
103	T	Hexachlorobu	30.0000	31.3109	-4.37	102	0.00	
104	T	Naphthalene	30.0000	31.4965	-4.99	105	0.00	
105	T	123Trichlben	30.0000	29.5853	1.38	101	0.00	

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Mon May 02 08:16:54 2022

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 20:29:00 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1439164	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1149131	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	654334	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	378028	19.995	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.26	102	103349	20.220	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.70	98	1512916	20.511	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103	%		
83) SURR4BrFBenz	13.25	95	646838	20.013	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	629806	37.0645	ug/L	98
3) Chloromethan	2.10	50	495888	28.0618	ug/L	100
4) VinylChlorid	2.24	62	530710	31.0784	ug/L	98
5) Bromomethane	2.70	94	286311	29.7987	ug/L	97
6) Chloroethane	2.87	64	318469	29.5794	ug/L	99
7) Dichloroflmethane	3.18	67	1078375	29.2800	ug/L	98
8) Trichlorofma	3.26	101	877119	34.5810	ug/L	100
9) Ethylether	3.71	59	442865	31.6949	ug/L	99
10) dichlorotfluoroethan	3.72	67	1069185	31.7807	ug/L	99
11) propyleneoxide	3.76	58	1471546	311.6794	ug/L	99
12) Acrolein	3.84	56	585730	148.4097	ug/L	98
13) 11dichlorthe	3.99	96	584268	34.0860	ug/L	98
14) Trichlorotfluoroeth	4.03	101	973855	65.4812	ug/L	97
15) Acetone	4.05	43	2000894	292.2127	ug/L	98
16) Iodomethane	4.16	142	1202160	63.4080	ug/L	98
17) Carbon Dislf	4.26	76	2099200	60.8723	ug/L	98
18) allylchloride	4.47	41	1715688	58.8705	ug/L	97
19) methylacetate	4.53	74	171331	31.6417	ug/L	98
20) Methylchlorid	4.63	84	639175	30.3371	ug/L	96
21) tbutylalcohol	4.83	59	3140950	1619.0083	ug/L	97
22) Acrylonitrile	4.93	53	1340833	152.6713	ug/L	98
23) t12dichlorte	5.01	96	629726	31.9904	ug/L	98
24) MtBE	5.03	73	1444667	31.6492	ug/L	97
25) Hexane	5.40	57	1921740	66.6023	ug/L	98
26) 11dichlorota	5.53	63	1062557	31.7750	ug/L	98
27) Vinylacetate	5.62	43	6331497	312.8181	ug/L	91
28) chloroprene	5.66	53	1826935	62.0681	ug/L	97
29) Diisopether	5.68	45	1661597	30.2307	ug/L	100
30) ETBE	6.13	59	1445393	31.9047	ug/L	96
31) 22dichloropr	6.27	77	654326	32.8614	ug/L	98
32) c12dichlorte	6.26	96	666336	31.2207	ug/L	98
33) 2Butanone	6.28	72	922729	319.7577	ug/L	96
34) propionitrile	6.32	54	1127797	301.9681	ug/L	99
35) Ethylacetate	6.38	88	153744	169.2475	ug/L	94
36) methacrylonitrile	6.53	67	645397	61.1545	ug/L	98
37) Bromochlorma	6.55	128	310404	32.4201	ug/L	95
38) Tetrahydofur	6.63	42	1892122	308.6403	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 20:29:00 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	1026082	31.1858 ug/L	98
40)	111trichlota	6.90	97	902186	33.7187 ug/L	97
42)	Cyclohexane	6.99	56	887288	35.0307 ug/L	97
43)	Carbtetraclo	7.12	119	730448	36.0553 ug/L	100
44)	11dicloprope	7.11	110	312577	33.5728 ug/L	98
46)	Benzene	7.36	78	2289814	29.9190 ug/L	98
47)	12dichlorota	7.36	62	760862	30.3680 ug/L	98
48)	TAME	7.52	73	1381453	33.3505 ug/L	95
49)	trichloroete	8.16	95	655845	32.6413 ug/L	99
50)	methylcyclohexane	8.43	83	1312337	30.7857 ug/L	98
51)	12dicloropra	8.42	63	670320	32.3859 ug/L	93
52)	23Dicl1propene	8.48	75	984081	31.5268 ug/L	98
53)	Dibromometha	8.56	93	368354	31.2862 ug/L	97
54)	methylmethacrylate	8.59	69	513177	33.1856 ug/L	98
55)	14dioxane	8.60	88	470484	1596.0290 ug/L	98
56)	Bromodiclrma	8.76	83	783702	31.7644 ug/L	98
57)	2Nitropropane	9.03	43	1729388	325.0294 ug/L	99
58)	2CLEVE	9.15	63	1175760	168.4786 ug/L	98
59)	c13dicloproe	9.34	75	923106	32.4990 ug/L	98
60)	4Meth2Pentan	9.54	43	4580497	310.1742 ug/L	90
62)	Toluene	9.79	92	1517917	30.8979 ug/L	94
63)	t13Dicloprop	10.05	75	778106	34.7496 ug/L	98
64)	ethylmethacrylate	10.19	69	1717648	63.6626 ug/L	98
65)	112Triclotha	10.28	83	478732	31.7745 ug/L	98
66)	Tetrachlorte	10.52	166	679873	32.3157 ug/L	98
67)	13Diclorpropa	10.51	76	955018	31.0459 ug/L	99
69)	2Hexanone	10.62	43	3647906	272.1872 ug/L	93
70)	Clorodibrmta	10.81	129	605156	32.1499 ug/L	98
71)	12Dibrometha	10.97	107	566662	31.8908 ug/L	100
72)	Chlorobenzen	11.65	112	1596698	28.6896 ug/L	99
73)	1Clhexane	11.63	91	878746	30.2422 ug/L	94
74)	1112Tetclota	11.76	131	537681	31.6101 ug/L	92
75)	Ethylbenzene	11.81	91	2567112	29.1208 ug/L	94
76)	m p-Xylene	11.98	106	2060078	59.3911 ug/L	90
77)	o-Xylene	12.52	106	1065840	31.3303 ug/L	88
78)	Styrene	12.53	104	1714833	30.7989 ug/L	98
79)	Bromoform	12.77	173	418659	32.4230 ug/L	99
80)	Isopropylben	13.05	105	2507235	30.1879 ug/L	95
81)	cyclohexanone	13.13	55	729202	628.6478 ug/L	98
84)	Bromobenzene	13.46	156	679447	28.8641 ug/L	97
85)	1122Tetrclta	13.43	83	775653	28.3544 ug/L	96
86)	123Triclproa	13.49	75	1001587	30.5822 ug/L	99
87)	14dichloro2butene	13.51	53	242149	33.0951 ug/L	95
88)	n-Propylbenz	13.64	91	2844258	27.9890 ug/L	93
89)	2chlorotolue	13.75	91	1811448	27.9519 ug/L	97
90)	4chlorotolue	13.90	91	2037312	28.2118 ug/L	96
91)	135Trimebenz	13.89	105	2106431	28.9973 ug/L	97
92)	tbutylbenzen	14.36	119	1841593	29.4989 ug/L	96
93)	124Trimetben	14.43	105	2047778	28.8175 ug/L	95
94)	sbutylbenzen	14.68	105	2574772	29.2703 ug/L	95
95)	13Diclorbenz	14.82	146	1195371	28.6570 ug/L	98
96)	pIsopropylto	14.90	119	2205358	29.5244 ug/L	96
97)	14dichlorobe	14.94	146	1208315	28.2423 ug/L	99
98)	12dichlorobe	15.48	146	1124243	28.7089 ug/L	98
99)	nButylbenzen	15.49	91	1994369	28.6331 ug/L	94
100)	12dibromo3cl	16.57	157	162851	32.0957 ug/L	96
101)	135Trichlorobenzene	16.90	180	913302	28.0118 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 20:29:00 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	766211	30.2030	ug/L	97
103) Hexachlorobu	17.97	225	361327	31.3109	ug/L	99
104) Naphthalene	18.02	128	1805809	31.4965	ug/L	97
105) 123Trichlben	18.33	180	714913	29.5853	ug/L	99

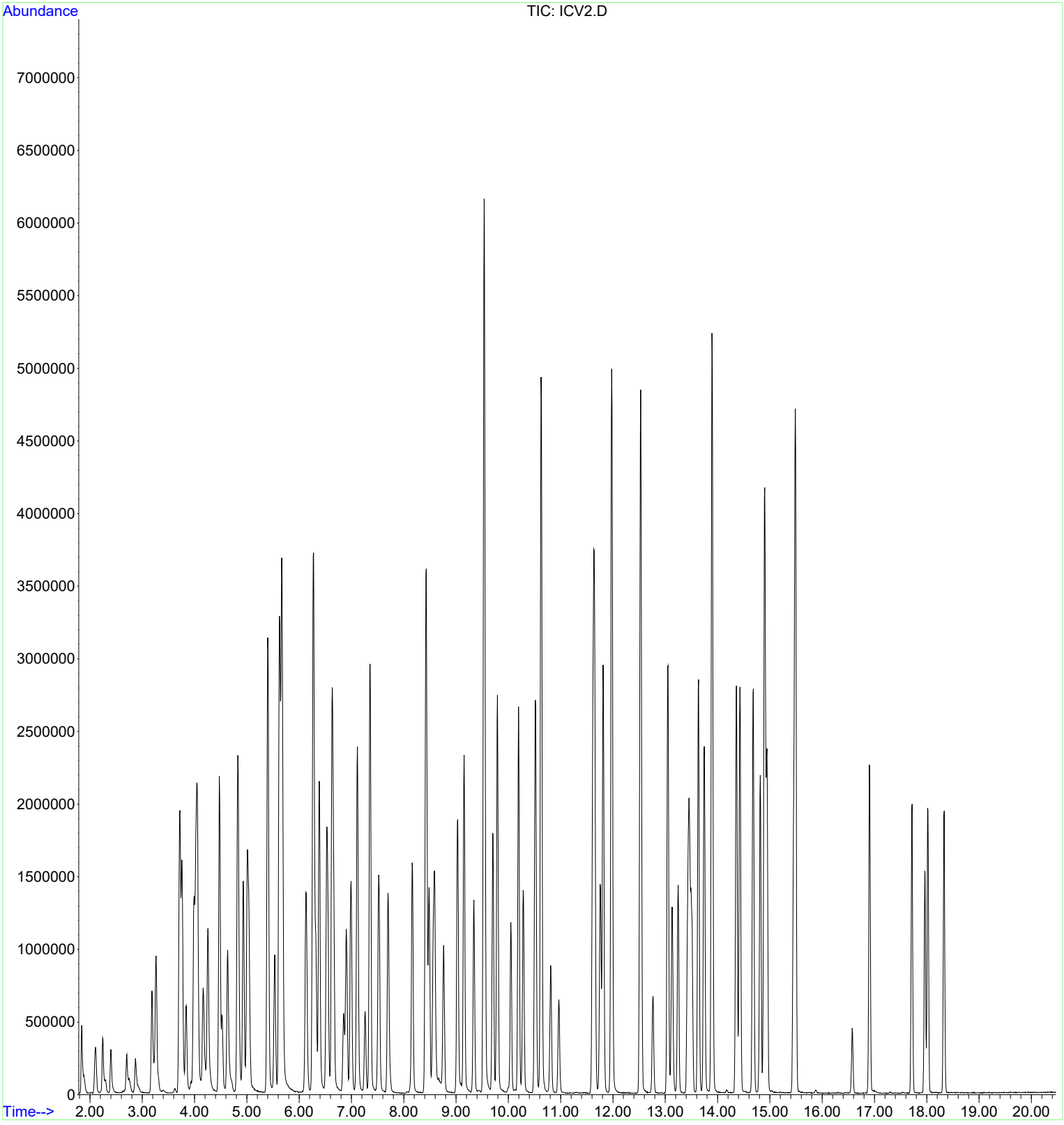
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR2822\ICV2.D Vial: 15
Acq On : 28 Apr 2022 20:08 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 20:29:00 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\ICB1.D Vial: 18
Acq On : 28 Apr 2022 21:36 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK. Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 21:57:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1342168	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1085790	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	581690	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	352853	20.012 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
45) SURR12DCAd4	7.26	102	94383	19.801 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %		
61) SURRd8Tolule	9.71	98	1382857	20.102 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	588119	20.469 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	11922	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	3900	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.85	59	7107	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\ICB1.D Vial: 18
Acq On : 28 Apr 2022 21:36 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK. Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 21:57:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	9.02	43	4215	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	9.54	43	9716	Below	Cal	93
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	10.63	43	11884	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.61	91	5339	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	11.81	91	6260	N.D.		
76)	m p-Xylene	11.98	106	4243	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	13.05	105	7332	N.D.		
81)	cyclohexanone	13.13	55	4544	20.6152	ug/L #	80
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	13.63	91	10706	N.D.		
89)	2chlorotolue	13.75	91	4210	N.D.		
90)	4chlorotolue	13.90	91	4172	N.D.		
91)	135Trimebenz	13.89	105	5278	N.D.		
92)	tbutylbenzen	14.36	119	8155	N.D.		
93)	124Trimetben	14.43	105	6409	N.D.		
94)	sbutylbenzen	14.68	105	11927	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	14.90	119	11796	N.D.		
97)	14dichlorobe	14.93	146	2580	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.50	91	14851	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	16.91	180	3160	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\ICB1.D Vial: 18
Acq On : 28 Apr 2022 21:36 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK. Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 21:57:02 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.71	180	3714	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	18.02	128	12000	N.D.		
105) 123Trichlben	18.34	180	3620	N.D.		

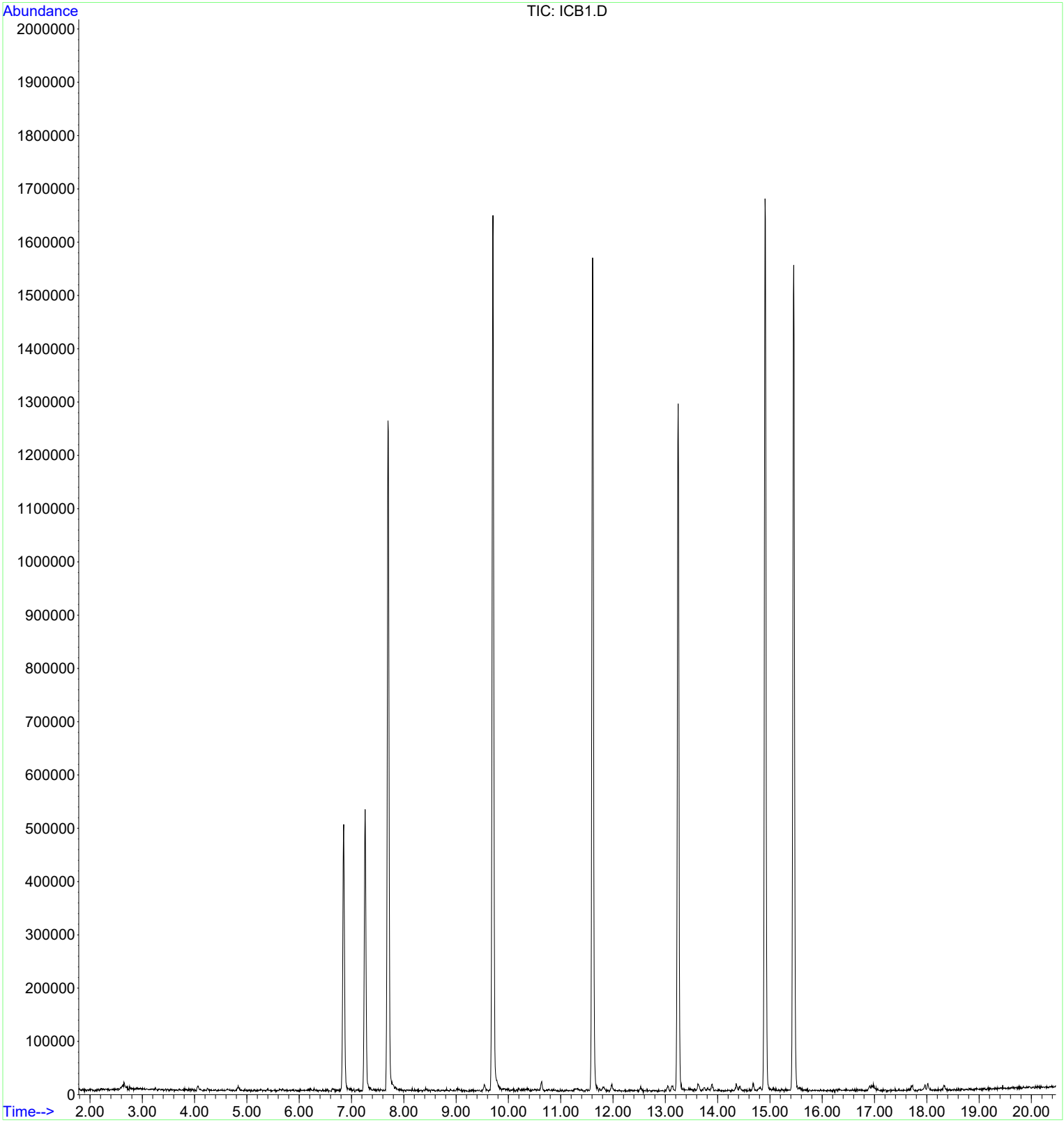
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR2822\ICB1.D Vial: 18
Acq On : 28 Apr 2022 21:36 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK. Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 28 21:57:02 2022 Results File: W042822.RES

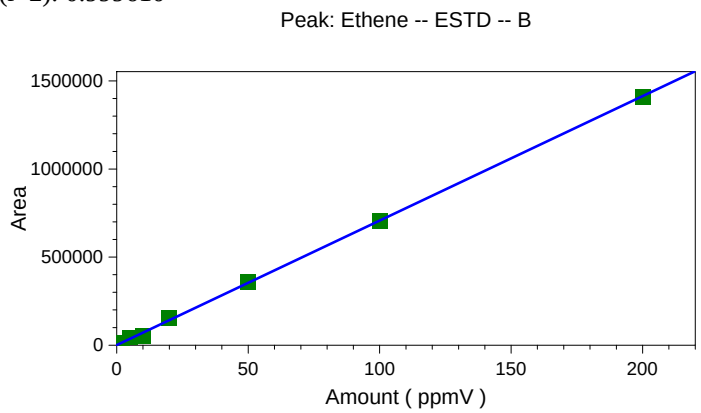
Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Apr 20 10:41:55 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:15:01
User: KMT
Instrument: PVOC4

Ethene (B)
Average RF: 6995.06 RF StDev: 840.320 RF %RSD: 12.0131
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 7067.11x + 680.644
Goodness of fit (r^2): 0.999610



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	14156	37706	52014	156179	359851
RF	7078	7541.2	5201.4	7808.95	7197.02
Last Area					
Residual	0.0932302	-0.239107	2.7363	-2.0031	-0.822788
Rep StDev					
Rep %RSD					
Rep 1 Area	14156	37706	52014	156179	359851
Rep 1 User	TMG	TMG	TMG	RLD	TMG
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\001.dat	C:\Instarch\PVOC4\Data\070121icdg\002.dat	C:\Instarch\PVOC4\Data\070121icdg\003.dat	C:\Instarch\PVOC4\Data\070121icdg\008.dat	C:\Instarch\PVOC4\Data\070121icdg\005.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:52:15	Jul 01, 2021 09:52:48	Jul 01, 2021 09:53:03	Jul 01, 2021 10:02:51	Jul 01, 2021 09:54:05

	Level 6	Level 7
Amount	100	200
Area	707940	1411891
RF	7079.4	7059.455

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:15:01
User: KMT
Instrument: PVOC4

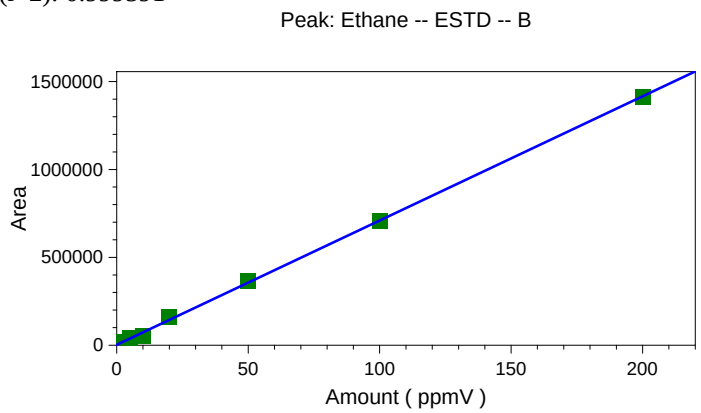
Last Area Residual	-0.0775589	0.313016
Rep StDev		
Rep %RSD		
Rep 1 Area	707940	1411891
Rep 1 User	TMG	RLD
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\006.dat	C:\Instarch\PVOC4\Data\070121icdg\009.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:53:49	Jul 01, 2021 10:08:25

RJ 07/12/2021

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:15:53
User: KMT
Instrument: PVOC4

Ethane (B)
Average RF: 7151.52 RF StDev: 875.473 RF %RSD: 12.2418
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 7073.40x + 2261.66
Goodness of fit (r^2): 0.999591



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	14561	40290	53831	158690	362395
RF	7280.5	8058	5383.1	7934.5	7247.9
Last Area					
Residual	0.261184	-0.376247	2.7094	-2.11502	-0.913761
Rep StDev					
Rep %RSD					
Rep 1 Area	14561	40290	53831	158690	362395
Rep 1 User	TMG	TMG	TMG	RLD	TMG
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\001.dat	C:\Instarch\PVOC4\Data\070121icdg\002.dat	C:\Instarch\PVOC4\Data\070121icdg\003.dat	C:\Instarch\PVOC4\Data\070121icdg\008.dat	C:\Instarch\PVOC4\Data\070121icdg\005.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:52:15	Jul 01, 2021 09:52:48	Jul 01, 2021 09:53:03	Jul 01, 2021 10:02:51	Jul 01, 2021 09:54:05

	Level 6	Level 7
Amount	100	200
Area	707859	1415611
RF	7078.59	7078.055

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:15:53
User: KMT
Instrument: PVOC4

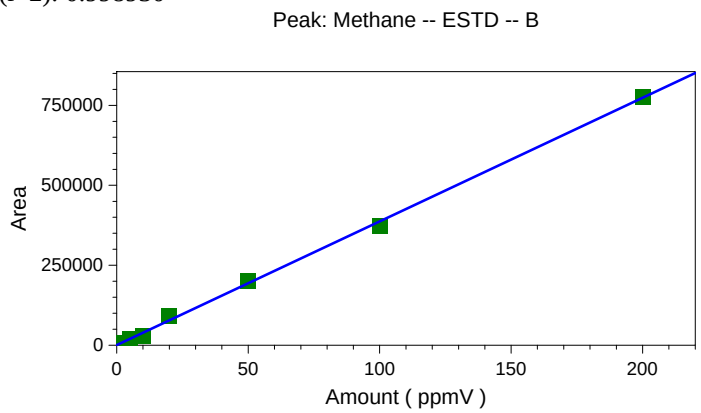
Last Area		
Residual	0.246352	0.18809
Rep StDev		
Rep %RSD		
Rep 1 Area	707859	1415611
Rep 1 User	TMG	RLD
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\006.dat	C:\Instarch\PVOC4\Data\070121icdg\009.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:53:49	Jul 01, 2021 10:08:25

RJ 07/12/2021

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:14:11
User: KMT
Instrument: PVOC4

Methane (B)
Average RF: 3810.66 RF StDev: 470.853 RF %RSD: 12.3562
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 3864.77x + 603.445
Goodness of fit (r^2): 0.998930



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	7052	19674	30219	91189	200412
RF	3526	3934.8	3021.9	4559.45	4008.24
Last Area					
Residual	0.331453	0.0655425	2.33705	-3.43878	-1.69996
Rep StDev					
Rep %RSD					
Rep 1 Area	7052	19674	30219	91189	200412
Rep 1 User	TMG	TMG	TMG	RLD	TMG
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\001.dat	C:\Instarch\PVOC4\Data\070121icdg\002.dat	C:\Instarch\PVOC4\Data\070121icdg\003.dat	C:\Instarch\PVOC4\Data\070121icdg\008.dat	C:\Instarch\PVOC4\Data\070121icdg\005.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:52:15	Jul 01, 2021 09:52:48	Jul 01, 2021 09:53:03	Jul 01, 2021 10:02:51	Jul 01, 2021 09:54:05

	Level 6	Level 7
Amount	100	200
Area	373495	777850
RF	3734.95	3889.25

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:14:11
User: KMT
Instrument: PVOC4

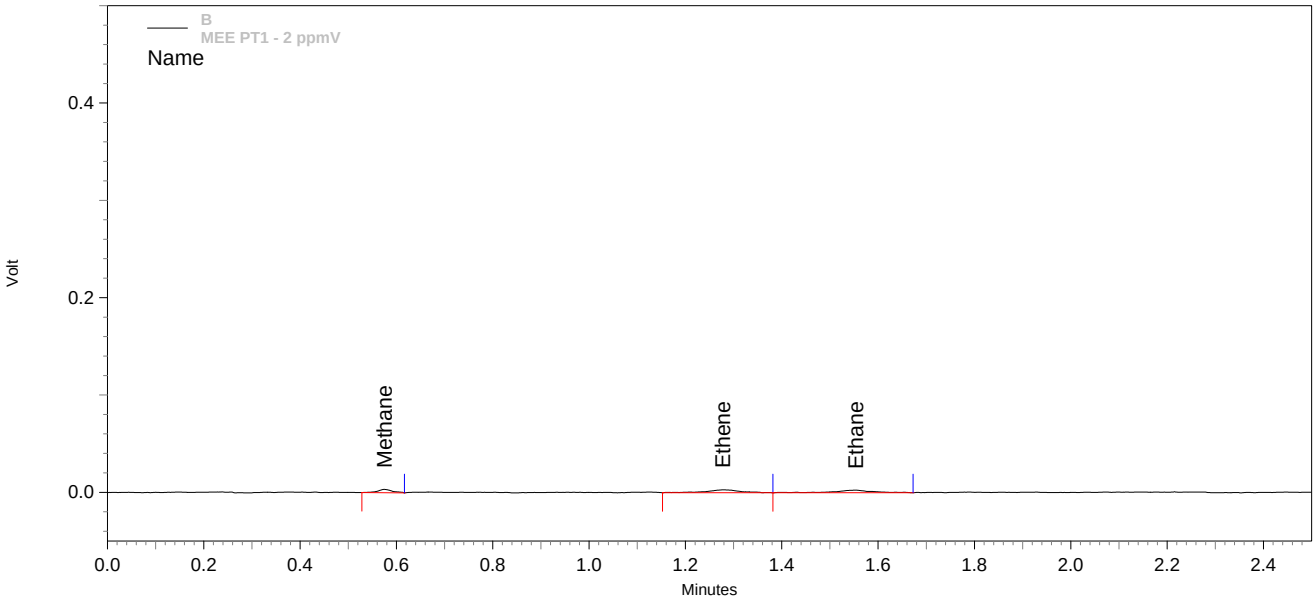
Last Area		
Residual	3.51526	-1.11057
Rep StDev		
Rep %RSD		
Rep 1 Area	373495	777850
Rep 1 User	TMG	RLD
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\006.dat	C:\Instarch\PVOC4\Data\070121icdg\009.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:53:49	Jul 01, 2021 10:08:25

RJ 07/12/2021

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\001.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT1 - 2 ppmV
Acquired: Jul 01, 2021 09:09:22
File Desc. 0.01 mL injection (Methane, Ethene, Ethane)



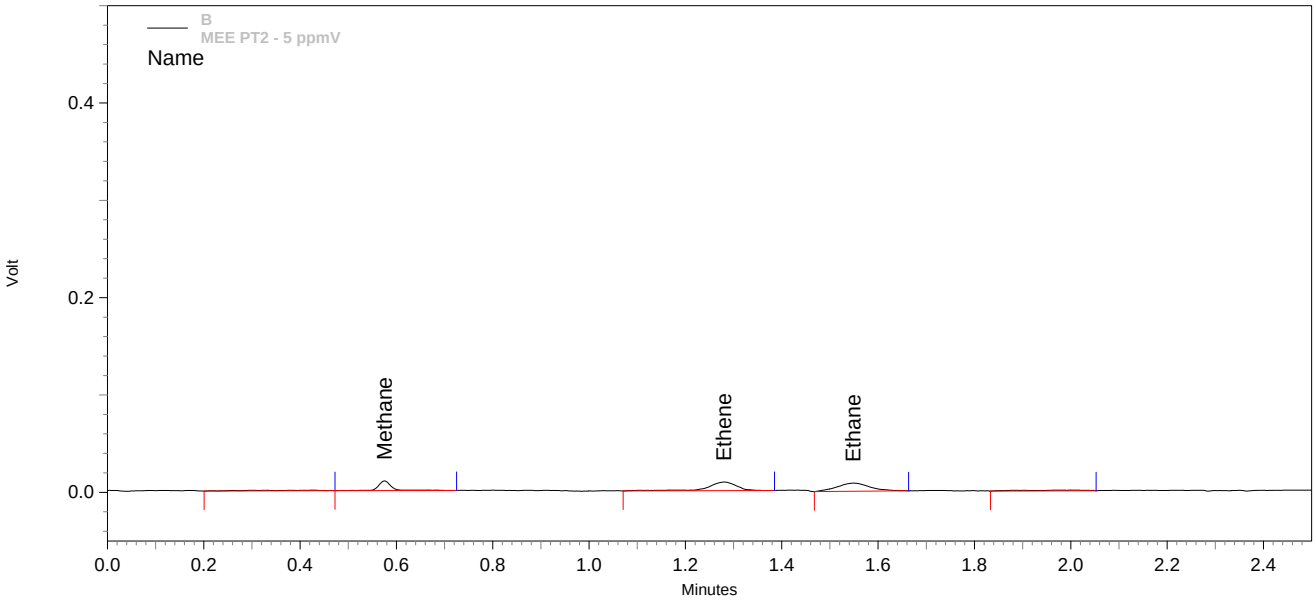
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.575**	**0.580**	**7052**	**2.000 CAL**	**ppmV**
2	**Ethene**	**1.278**	**1.300**	**14156**	**2.000 CAL**	**ppmV**
3	**Ethane**	**1.554**	**1.600**	**14561**	**2.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT2 - 5 ppmV
Acquired: Jul 01, 2021 09:19:07
File Desc. 0.025 mL injection (Methane, Ethene, Ethane)



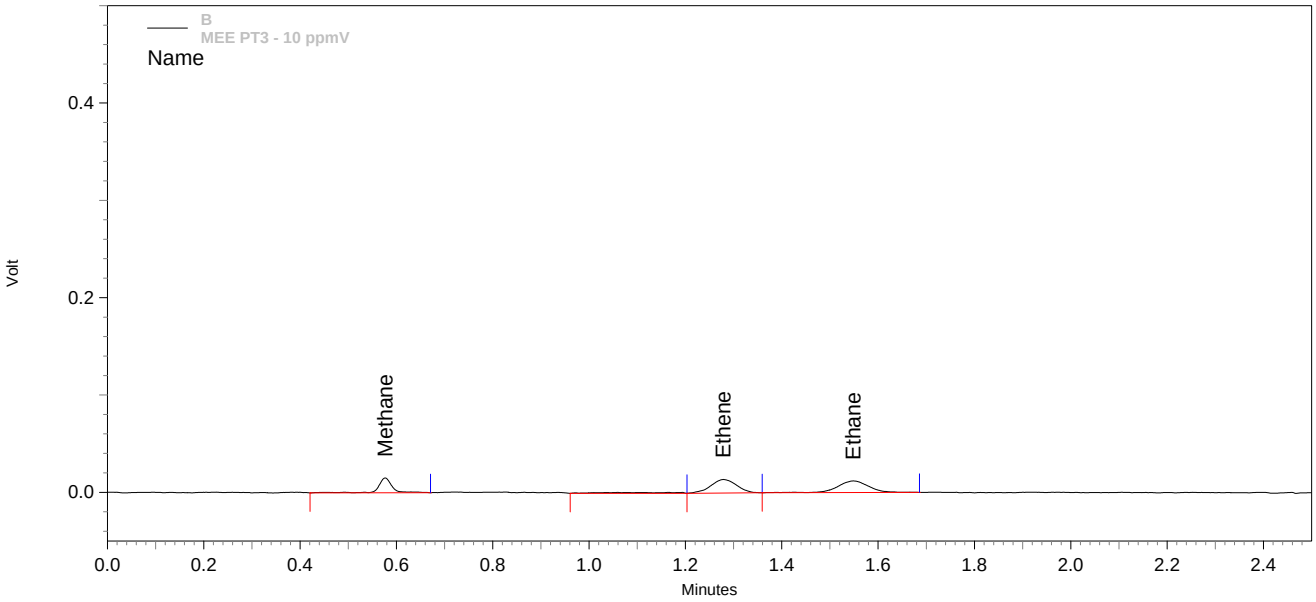
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.303**	**0.000**	**6196**	**0.000**	
2	**Methane**	**0.575**	**0.580**	**19674**	**5.000 CAL**	**ppmV**
3	**Ethene**	**1.280**	**1.300**	**37706**	**5.000 CAL**	**ppmV**
4	**Ethane**	**1.548**	**1.600**	**40290**	**5.000 CAL**	**ppmV**
5		**1.976**	**0.000**	**6841**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT3 - 10 ppmV
Acquired: Jul 01, 2021 09:24:05
File Desc. 0.05 mL injection (Methane, Ethene, Ethane)



B Results

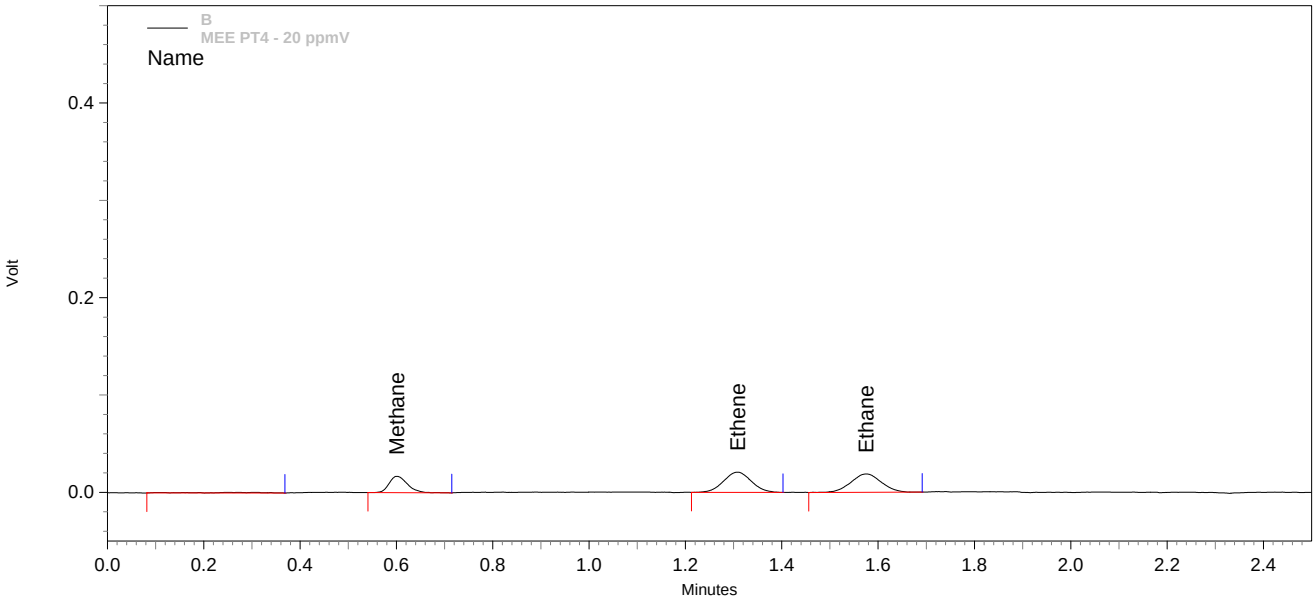
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.580**	**30219**	**10.000 CAL**	**ppmV**
2		**1.060**	**0.000**	**9781**	**0.000**	
3	**Ethene**	**1.278**	**1.300**	**52014**	**10.000 CAL**	**ppmV**
4	**Ethane**	**1.548**	**1.600**	**53831**	**10.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

NOT USED

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT4 - 20 ppmV
Acquired: Jul 01, 2021 09:38:00
File Desc. 0.1 mL injection (Methane, Ethene, Ethane)



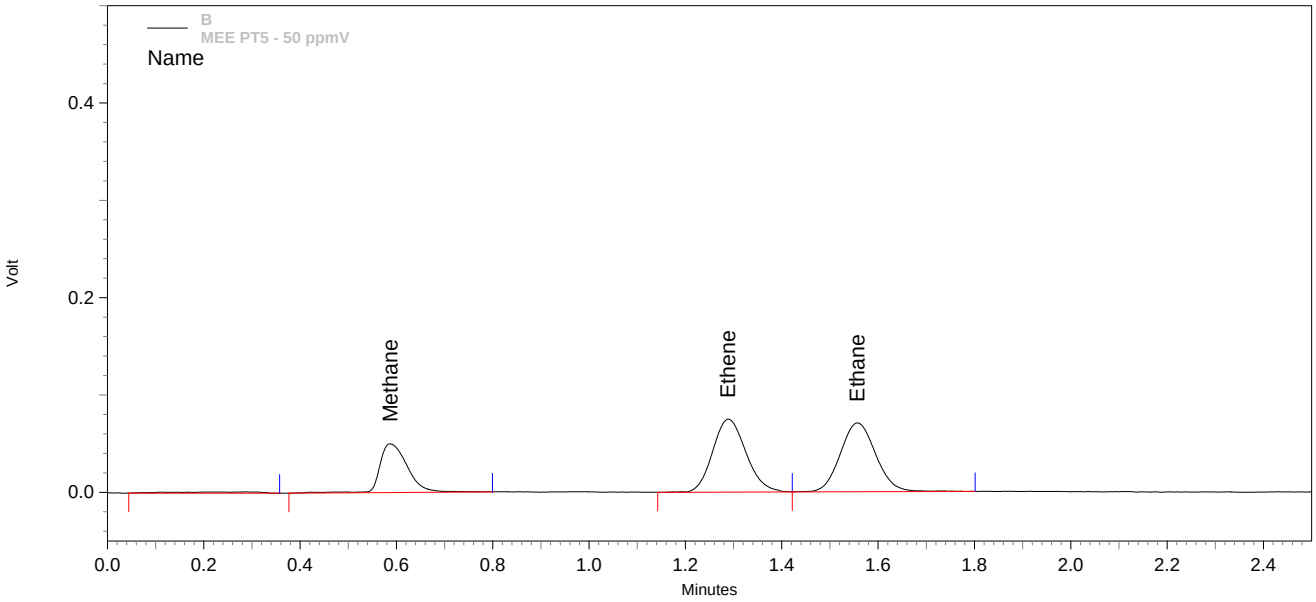
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.253**	**0.000**	**7117**	**0.000**	
2	**Methane**	**0.601**	**0.580**	**44488**	**20.000 CAL**	**ppmV**
3	**Ethene**	**1.308**	**1.300**	**83515**	**20.000 CAL**	**ppmV**
4	**Ethane**	**1.575**	**1.600**	**82881**	**20.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\005.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT5 - 50 ppmV
Acquired: Jul 01, 2021 09:41:21
File Desc. 0.25 mL injection (Methane, Ethene, Ethane)



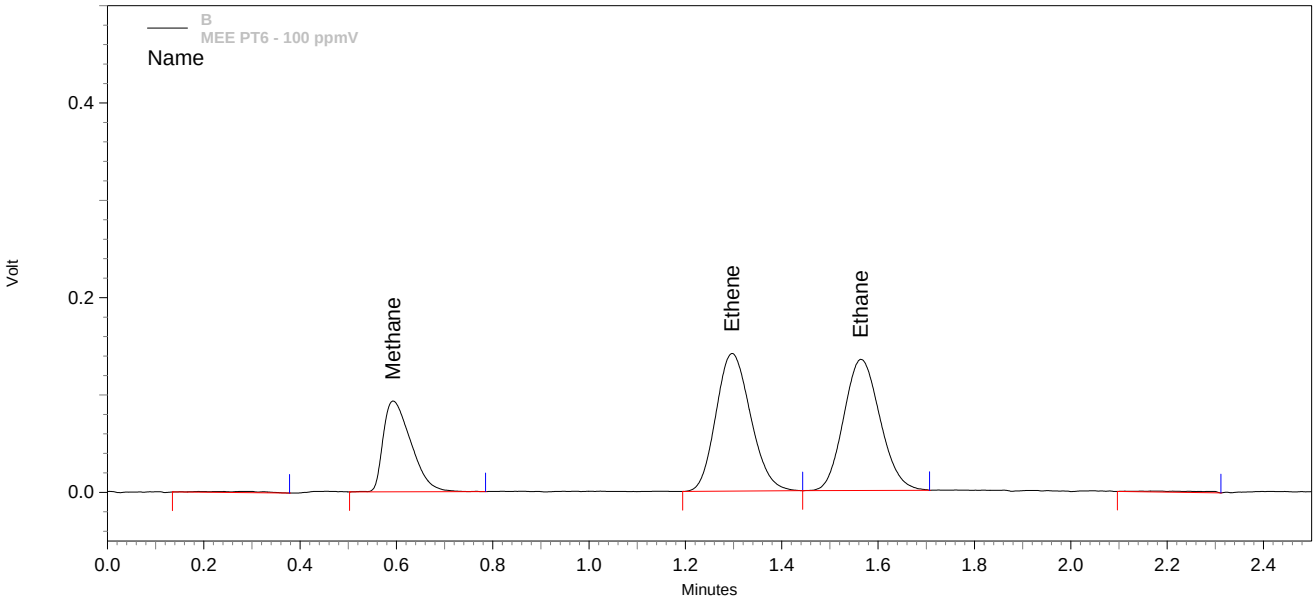
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.218**	**0.000**	**16192**	**0.000**	
2	**Methane**	**0.587**	**0.580**	**200412**	**50.000 CAL**	**ppmV**
3	**Ethene**	**1.288**	**1.300**	**359851**	**50.000 CAL**	**ppmV**
4	**Ethane**	**1.557**	**1.600**	**362395**	**50.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\006.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT6 - 100 ppmV
Acquired: Jul 01, 2021 09:45:28
File Desc. 0.5 mL injection (Methane, Ethene, Ethane)



B Results

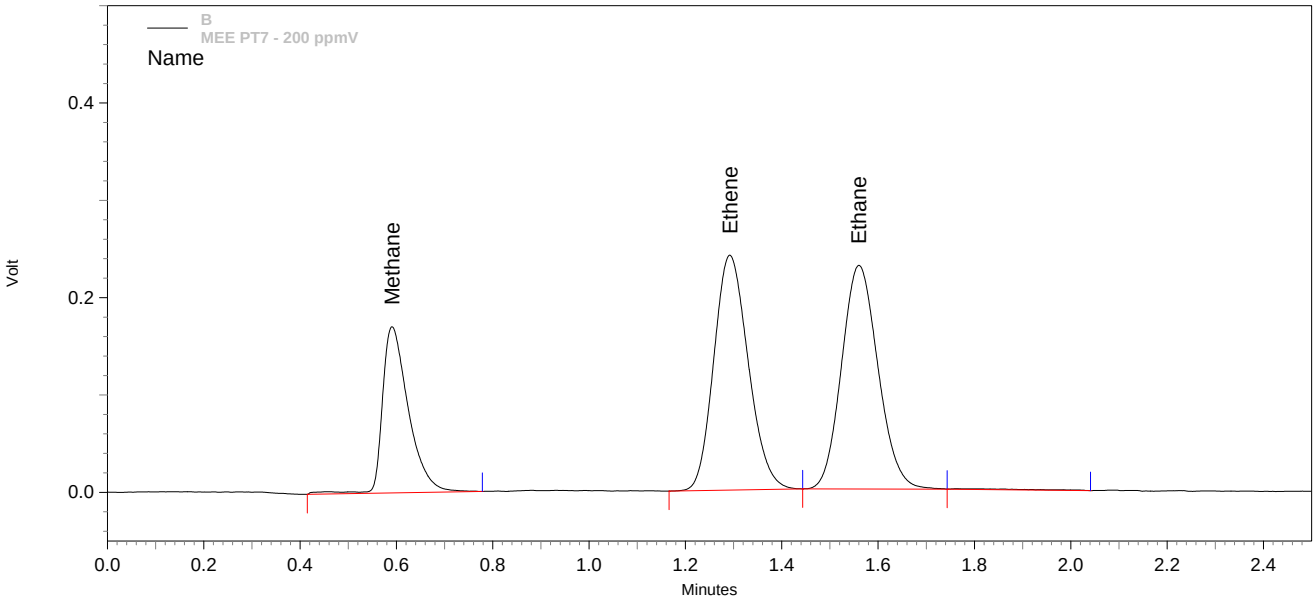
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.298**	**0.000**	**9802**	**0.000**	
2	**Methane**	**0.592**	**0.580**	**373495**	**100.000 CAL**	**ppmV**
3	**Ethene**	**1.297**	**1.300**	**707940**	**100.000 CAL**	**ppmV**
4	**Ethane**	**1.563**	**1.600**	**707859**	**100.000 CAL**	**ppmV**
5		**2.175**	**0.000**	**10216**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

NOT USED

Data File: C:\Instarch\PVOC4\Data\070121icdg\007.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT7 - 200 ppmV
Acquired: Jul 01, 2021 09:48:59
File Desc. 1.0 mL injection (Methane, Ethene, Ethane)



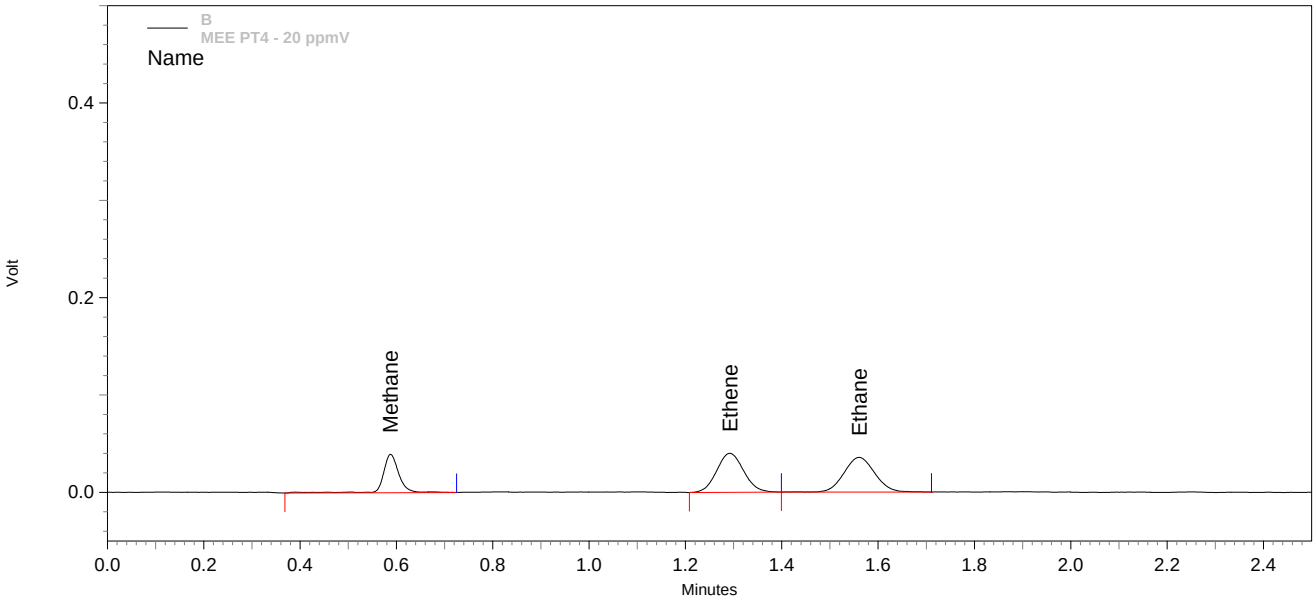
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.591**	**0.580**	**641532**	**200.000 CAL**	**ppmV**
2	**Ethene**	**1.293**	**1.300**	**1198307**	**200.000 CAL**	**ppmV**
3	**Ethane**	**1.560**	**1.600**	**1209201**	**200.000 CAL**	**ppmV**
4		**1.764**	**0.000**	**8808**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\008.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT4 - 20 ppmV
Acquired: Jul 01, 2021 09:59:16
File Desc. 0.1 mL injection (Methane, Ethene, Ethane)



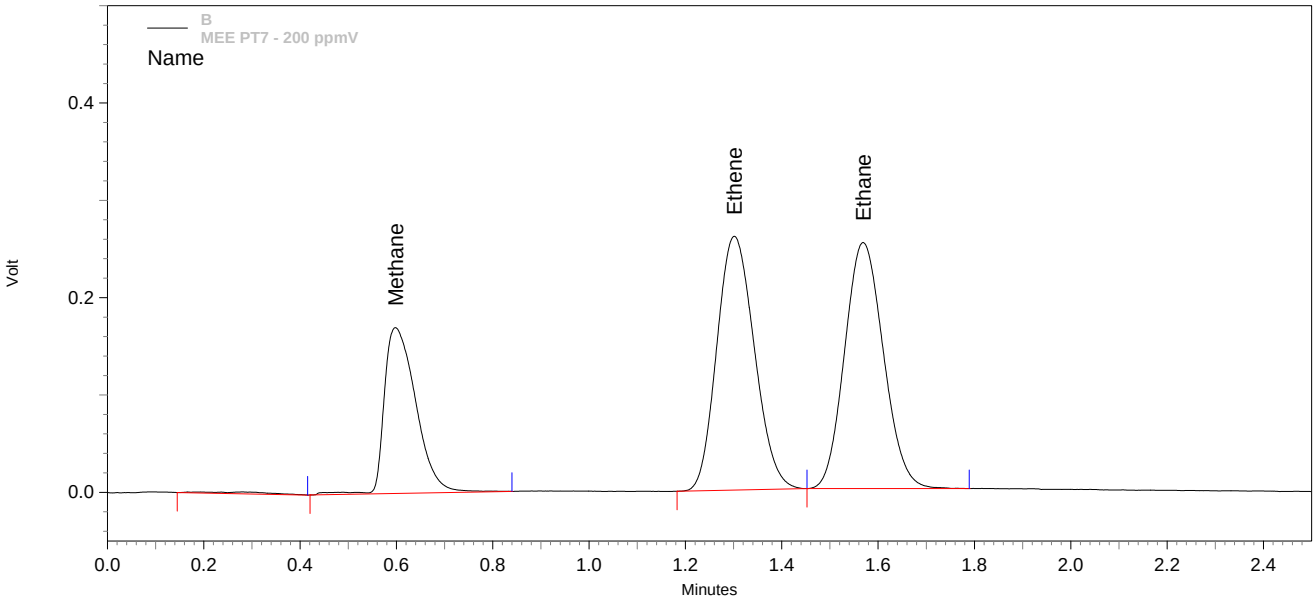
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.588**	**0.580**	**91189**	**20.000 CAL**	**ppmV**
2	**Ethene**	**1.293**	**1.300**	**156179**	**20.000 CAL**	**ppmV**
3	**Ethane**	**1.561**	**1.600**	**158690**	**20.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\009.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT7 - 200 ppmV
Acquired: Jul 01, 2021 10:04:41
File Desc. 1.0 mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.281**	**0.000**	**16527**	**0.000**	
2	**Methane**	**0.598**	**0.580**	**777850**	**200.000 CAL**	**ppmV**
3	**Ethene**	**1.302**	**1.300**	**1411891**	**200.000 CAL**	**ppmV**
4	**Ethane**	**1.569**	**1.600**	**1415611**	**200.000 CAL**	**ppmV**

QC Check Standard Report

Sequence : C:\INSTARCH\PVOC4\Sequence\070121 - MEE ICAL.seq
User : RLD
Printed : Jul 08, 2021 10:58:25

File	Sample ID	Acquired
C:\Instarch\PVOC4\Data\070121icdg\010.dat	ICV - 50 ppmV	Jul 08, 2021 10:58:25

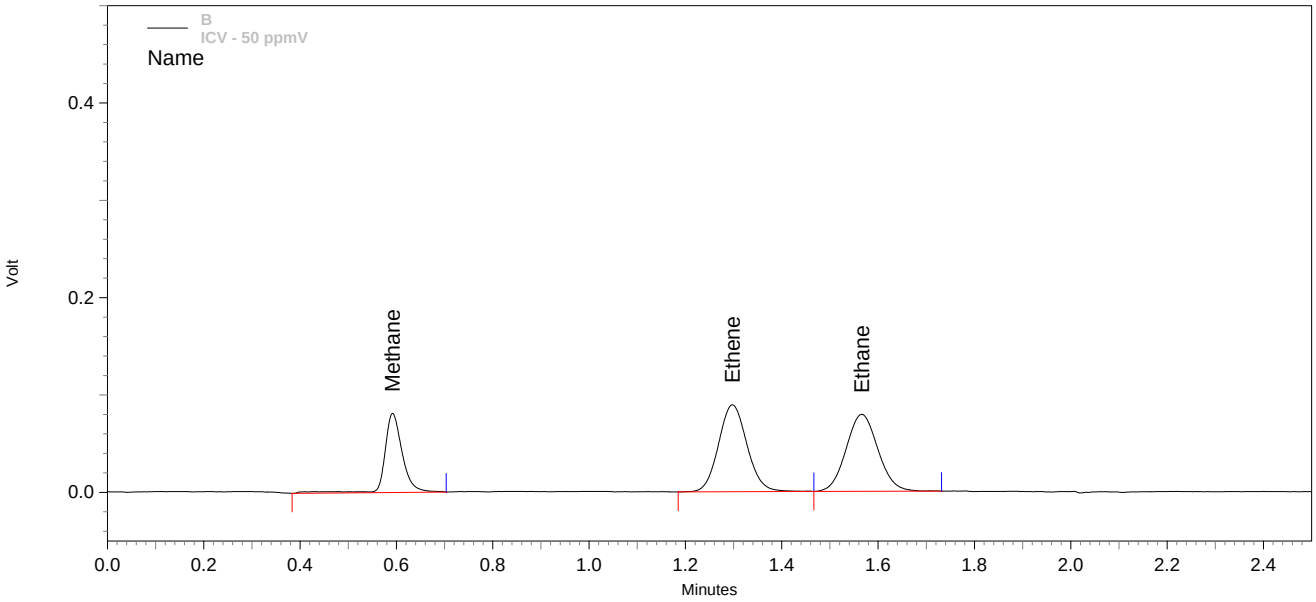
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	53.365	6.731	15.000	**Passed**
Ethene	50.000	51.970	3.941	15.000	**Passed**
Ethane	50.000	51.025	2.051	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\010.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: ICV - 50 ppmV
Acquired: Jul 01, 2021 10:24:08
File Desc. INITIAL CALIB. VERIF. - 0.25 mL injection (Methane, Ethene, Ethane)



B Results

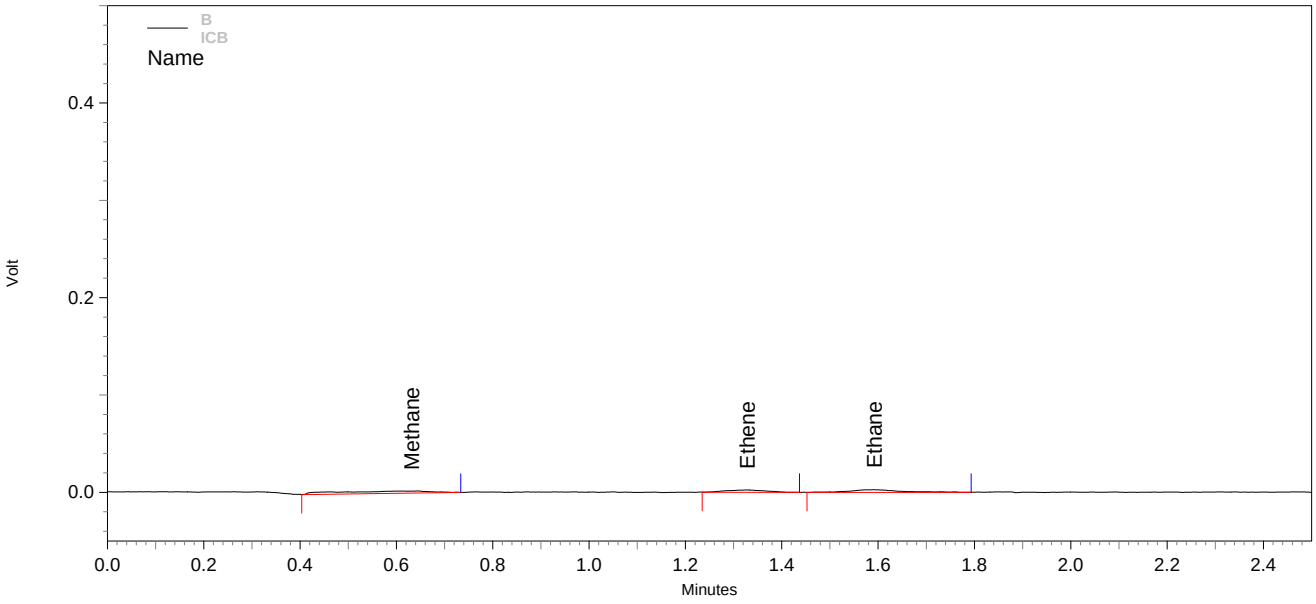
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.592**	**0.580**	**206848**	**53.365**	**ppmV**
2	**Ethene**	**1.297**	**1.300**	**367962**	**51.970**	**ppmV**
3	**Ethane**	**1.566**	**1.600**	**363184**	**51.025**	**ppmV**

Dissolved Gases External Standard Report

NOT USED

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\011.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: ICB
Acquired: Jul 01, 2021 10:29:15
File Desc. INITIAL CALIB. BLANK - 1.0 mL injection (Methane, Ethene, Ethane)



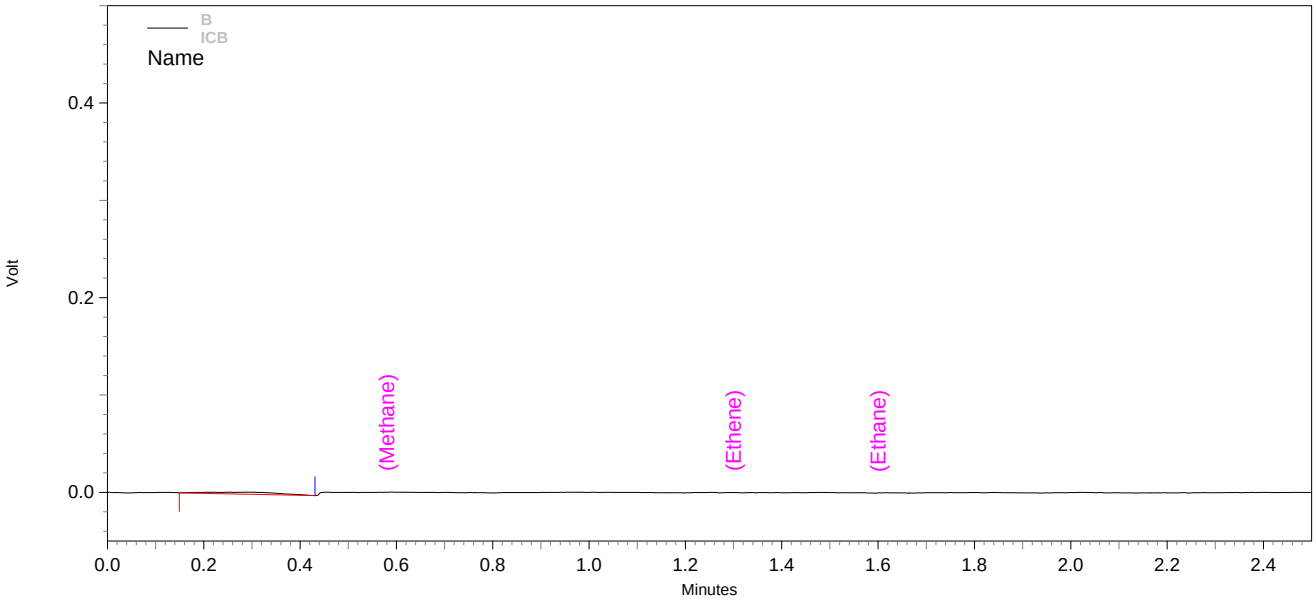
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.632**	**0.580**	**32868**	**8.348**	**ppmV**
2	**Ethene**	**1.329**	**1.300**	**13422**	**1.803**	**ppmV**
3	**Ethane**	**1.593**	**1.600**	**19513**	**2.439**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\012.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: ICB
Acquired: Jul 01, 2021 11:06:20
File Desc. INITIAL CALIB. BLANK - 1.0 mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.217**	**0.000**	**19676**	**0.000**	
	Methane		**0.580**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.600**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
CONTINUING CALIBRATION
DOCUMENTS

Data File : C:\Instarch\Data\MAY0522\BFB1.D Vial: 1
Acq On : 5 May 2022 7:12 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.663 to 4.675 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	13111	PASS
75	95	30	60	47.7	36938	PASS
95	95	100	100	100.0	77434	PASS
96	95	5	9	6.6	5078	PASS
173	174	0.00	2	0.6	340	PASS
174	95	50	100	77.9	60288	PASS
175	174	5	9	7.1	4301	PASS
176	174	95	101	96.9	58394	PASS
177	176	5	9	6.5	3797	PASS

W042822.M Fri May 06 09:32:54 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 05 08:15:32 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	96	0.00
2	PT	Dichlorodi	0.2581	0.2829	-9.61	100	0.00
3	PT	Chloromethan	0.2382	0.2218	6.88	87	0.00
4	PT	VinylChlorid	0.2431	0.2456	-1.03	93	0.00
5	PT	Bromomethane	0.1405	0.1458	-3.77	102	0.00
6	PT	Chloroethane	0.1567	0.1484	5.30	95	0.00
7	T	Dichloroflmethane	0.5294	0.5257	0.70	94	0.00
8	PT	Trichlorofma	0.3882	0.4195	-8.06	96	0.00
9	T	Ethylether	0.1949	0.1971	-1.13	101	0.00
10	T	dichlorotfluoroethan	0.4948	0.5254	-6.18	96	0.00
11	T	propyleneoxide	0.0691	0.0685	0.87	98	0.00
12	T	Acrolein	0.0566	0.0512	9.54	88	0.00
13	PT	11dichlorthe	0.2560	0.2701	-5.51	99	0.00
14	PT	Trichlorotfluoroeth	0.2132	0.2309	-8.30	97	0.00
15	PT	Acetone	0.1042	0.0959#	7.97	95	0.00
16	T	Iodomethane	0.2651	0.2623	1.06	91	0.00
17	PT	Carbon Dislf	0.4879	0.5030	-3.09	96	0.00
18	T	allylchloride	0.4204	0.4232	-0.67	93	0.00
19	PT	methylacetate	0.0773	0.0656#	15.14	94	0.00
20	PT	Methylchlorid	0.3175	0.2936	7.53	93	0.00
21	T	tbutylalcohol	0.0282	0.0264#	6.38	91	0.00
22	T	Acrylonitrile	0.1258	0.1269	-0.87	98	0.00
23	PT	t12dichlorte	0.2902	0.2919	-0.59	96	0.00
24	PT	MtBE	0.6525	0.6386	2.13	95	0.00
25	T	Hexane	0.4321	0.4626	-7.06	89	0.00
26	PT	11dichlorota	0.5022	0.4984	0.76	95	0.00
27	T	Vinylacetate	0.3685	0.3387	8.09	80	0.00
28	T	chloroprene	0.4236	0.4559	-7.63	95	0.00
29	T	Diisopether	0.7765	0.7842	-0.99	92	0.00
30	T	ETBE	0.6416	0.6038	5.89	91	0.00
31	T	22dichloropr	0.2949	0.2867	2.78	94	0.00
32	PT	c12dichlorte	0.3068	0.3036	1.04	94	0.00
33	PT	2Butanone	0.0411	0.0391#	4.87	95	0.00
34	T	propionitrile	0.0541	0.0535	1.11	97	0.00
35	T	Ethylacetate	0.0130	0.0122#	6.15	95	0.00
36	T	methacrylonitrile	0.1528	0.1520	0.52	97	0.00
37	T	Bromochlorma	0.1448	0.1383	4.49	95	0.00
38	T	Tetrahydofur	0.0888	0.0871	1.91	93	0.00
39	PT	Chloroform	0.4912	0.4826	1.75	96	0.00
40	PT	111trichlota	0.3965	0.4070	-2.65	97	0.00
41	S	SURRDibrflma	0.2659	0.2687	-1.05	98	0.00
42	PT	Cyclohexane	0.3737	0.4037	-8.03	95	0.00
43	PT	Carbtetraclo	0.3103	0.3368	-8.54	101	0.00
44	T	11dicloprope	0.1417	0.1419	-0.14	95	0.00
45	S	SURR12DCAd4	0.0709	0.0717	-1.13	94	0.00
46	PT	Benzene	1.1203	1.1588	-3.44	95	0.00
47	PT	12dichlorota	0.3677	0.3702	-0.68	96	0.00
48	T	TAME	0.5985	0.5823	2.71	93	0.00

49	PT	trichloroete	0.2940	0.2916	0.82	96	0.00
50	PT	methylcyclohexane	0.5670	0.6399	-12.86	97	0.00
51	PT	12dicloropra	0.3099	0.2980	3.84	92	0.00
52	T	23Dicl1propene	0.4418	0.4308	2.49	94	0.00
53	T	Dibromometha	0.1741	0.1712	1.67	98	0.00
54	T	methylmethacrylate	0.2175	0.2092	3.82	96	0.00
55	T	14dioxane	0.0044	0.0041#	6.82	97	0.00
56	PT	Bromodiclrma	0.3686	0.3568	3.20	94	0.00
57	T	2Nitropropane	0.0782	0.0803	-2.69	96	0.00
58	T	2CLEVE	0.0959	0.0861	10.22	90	0.00
59	PT	c13dicloproe	0.4161	0.4094	1.61	95	0.00
60	PT	4Meth2Pentan	0.2366	0.2455	-3.76	94	0.00
61	S	SURRd8Tolule	1.0461	1.0590	-1.23	96	0.00
62	PT	Toluene	0.7215	0.7337	-1.69	95	0.00
63	PT	t13Dicloprop	0.3396	0.3316	2.36	95	0.00
64	T	ethylmethacrylate	0.3848	0.3862	-0.36	95	0.00
65	PT	112Triclotha	0.2212	0.2220	-0.36	98	0.00
66	PT	Tetrachlorte	0.3038	0.3178	-4.61	95	0.00
67	T	13Diclorpropa	0.4572	0.4526	1.01	97	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	98	0.00
69	PT	2Hexanone	0.2204	0.2215	-0.50	95	0.00
70	PT	Clorodibrmta	0.3407	0.3245	4.75	95	0.00
71	PT	12Dibrometha	0.3149	0.2953	6.22	95	0.01
72	PT	Chlorobenzen	0.9740	0.9402	3.47	95	0.00
73	T	1Clhexane	0.4841	0.4797	0.91	96	0.00
74	T	1112Tetclota	0.3104	0.2964	4.51	95	0.00
75	PT	Ethylbenzene	1.5510	1.5574	-0.41	94	0.00
76	PT	m p-Xylene	0.6021	0.6207	-3.09	96	0.00
77	PT	o-Xylene	0.6026	0.5861	2.74	92	0.00
78	PT	Styrene	0.9711	0.9730	-0.20	94	0.00
79	PT	Bromoform	0.2277	0.2206	3.12	100	0.00
80	PT	Isopropylben	1.4429	1.4998	-3.94	96	0.00
81	T	cyclohexanone	0.0184	0.0161#	12.50	92	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	101	0.00
83	S	SURR4BrFBenz	0.9896	0.9712	1.86	100	0.00
84	T	Bromobenzene	0.6980	0.6549	6.17	94	0.00
85	PT	1122Tetrclta	0.8297	0.7623	8.12	95	0.00
86	T	123Triclproa	1.0131	0.9098	10.20	93	0.00
87	T	14dichloro2butene	0.2339	0.2076	11.24	94	0.00
88	T	n-Propylbenz	3.0653	3.0769	-0.38	94	0.00
89	T	2chlorotolue	1.9399	1.8570	4.27	96	0.00
90	T	4chlorotolue	2.2100	2.1215	4.00	94	0.00
91	T	135Trimebenz	2.1966	2.1731	1.07	93	0.00
92	T	tbutylbenzen	1.8566	1.8685	-0.64	95	0.00
93	T	124Trimetben	2.1381	2.0961	1.96	94	0.00
94	T	sbutylbenzen	2.6311	2.7070	-2.88	95	0.00
95	PT	13Diclorbenz	1.2599	1.1939	5.24	95	0.00
96	T	pIsopropylto	2.2538	2.2767	-1.02	95	0.00
97	PT	14dichlorobe	1.2966	1.2317	5.01	96	0.00
98	PT	12dichlorobe	1.2210	1.1513	5.71	97	0.00
99	T	nButylbenzen	2.0963	2.0332	3.01	92	0.00
100	PT	12dibromo3cl	0.1572	0.1400	10.94	98	0.00
101	T	135Trichlorobenzene	0.9798	0.8880	9.37	92	0.00
102	PT	124Trichlobe	0.7749	0.7024	9.36	93	0.00
103	T	Hexachlorobu	0.3464	0.3422	1.21	97	0.00
104	T	Naphthalene	1.7086	1.5648	8.42	93	0.00
105	T	123Trichlben	0.7370	0.6637	9.95	93	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W042822.M Fri May 06 09:36:42 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 05 08:15:32 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	96	0.00
2	PT	Dichlorodi	10.0000	10.9614	-9.61	100	0.00
3	PT	Chloromethan	10.0000	9.3095	6.91	87	0.00
4	PT	VinylChlorid	10.0000	10.1053	-1.05	93	0.00
5	PT	Bromomethane	10.0000	10.3821	-3.82	102	0.00
6	PT	Chloroethane	10.0000	9.4678	5.32	95	0.00
7	T	Dichloroflmethane	10.0000	9.9306	0.69	94	0.00
8	PT	Trichlorofma	10.0000	10.8047	-8.05	96	0.00
9	T	Ethylether	10.0000	10.1105	-1.11	101	0.00
10	T	dichlorotfluoroethan	10.0000	10.6188	-6.19	96	0.00
11	T	propyleneoxide	100.0000	99.0600	0.94	98	0.00
12	T	Acrolein	50.0000	45.2159	9.57	88	0.00
13	PT	11dichlorthe	10.0000	10.5501	-5.50	99	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.6655	-8.33	97	0.00
15	PT	Acetone	100.0000	92.0930	7.91	95	0.00
16	T	Iodomethane	20.0000	19.7867	1.07	91	0.00
17	PT	Carbon Dislf	20.0000	20.6169	-3.08	96	0.00
18	T	allylchloride	20.0000	20.1346	-0.67	93	0.00
19	PT	methylacetate	10.0000	8.4923	15.08	94	0.00
20	PT	Methylchlorid	10.0000	9.2478	7.52	93	0.00
21	T	tbutylalcohol	500.0000	468.2134	6.36	91	0.00
22	T	Acrylonitrile	50.0000	50.4425	-0.89	98	0.00
23	PT	t12dichlorte	10.0000	10.0599	-0.60	96	0.00
24	PT	MtBE	10.0000	9.7872	2.13	95	0.00
25	T	Hexane	20.0000	21.4095	-7.05	89	0.00
26	PT	11dichlorota	10.0000	9.9248	0.75	95	0.00
27	T	Vinylacetate	100.0000	93.5247	6.48	80	0.00
28	T	chloroprene	20.0000	21.5249	-7.62	95	0.00
29	T	Diisopether	10.0000	10.0994	-0.99	92	0.00
30	T	ETBE	10.0000	9.4115	5.88	91	0.00
31	T	22dichloropr	10.0000	9.7230	2.77	94	0.00
32	PT	c12dichlorte	10.0000	9.8972	1.03	94	0.00
33	PT	2Butanone	100.0000	95.1052	4.89	95	0.00
34	T	propionitrile	100.0000	98.8952	1.10	97	0.00
35	T	Ethylacetate	50.0000	47.0127	5.97	95	0.00
36	T	methacrylonitrile	20.0000	19.8885	0.56	97	0.00
37	T	Bromochlorma	10.0000	9.5482	4.52	95	0.00
38	T	Tetrahydofur	100.0000	98.1866	1.81	93	0.00
39	PT	Chloroform	10.0000	9.8237	1.76	96	0.00
40	PT	111trichlota	10.0000	10.2655	-2.65	97	0.00
41	S	SURRDibrflma	20.0000	20.2149	-1.07	98	0.00
42	PT	Cyclohexane	10.0000	10.8023	-8.02	95	0.00
43	PT	Carbtetraclo	10.0000	10.8546	-8.55	101	0.00
44	T	11dicloprope	10.0000	10.0163	-0.16	95	0.00
45	S	SURR12DCAd4	20.0000	20.2146	-1.07	94	0.00
46	PT	Benzene	10.0000	10.3434	-3.43	95	0.00
47	PT	12dichlorota	10.0000	10.0675	-0.68	96	0.00
48	T	TAME	10.0000	9.7293	2.71	93	0.00

49	PT	trichloroete	10.0000	9.9189	0.81	96	0.00
50	PT	methylcyclohexane	10.0000	9.9542	0.46	97	0.00
51	PT	12dicloropra	10.0000	9.6166	3.83	92	0.00
52	T	23Dicl1propene	10.0000	9.7509	2.49	94	0.00
53	T	Dibromometha	10.0000	9.8350	1.65	98	0.00
54	T	methylmethacrylate	10.0000	9.6194	3.81	96	0.00
55	T	14dioxane	500.0000	466.5810	6.68	97	0.00
56	PT	Bromodiclrma	10.0000	9.6805	3.19	94	0.00
57	T	2Nitropropane	100.0000	102.6703	-2.67	96	0.00
58	T	2CLEVE	50.0000	44.8868	10.23	90	0.00
59	PT	c13dicloproe	10.0000	9.8379	1.62	95	0.00
60	PT	4Meth2Pentan	100.0000	99.1889	0.81	94	0.00
61	S	SURRd8Tolule	20.0000	20.2479	-1.24	96	0.00
62	PT	Toluene	10.0000	10.1681	-1.68	95	0.00
63	PT	t13Dicloprop	10.0000	9.7662	2.34	95	0.00
64	T	ethylmethacrylate	20.0000	20.0749	-0.37	95	0.00
65	PT	112Triclotha	10.0000	10.0385	-0.39	98	0.00
66	PT	Tetrachlorte	10.0000	10.4601	-4.60	95	0.00
67	T	13Diclorpropa	10.0000	9.8989	1.01	97	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	98	0.00
69	PT	2Hexanone	100.0000	92.6215	7.38	95	0.00
70	PT	Clorodibrmta	10.0000	9.5245	4.76	95	0.00
71	PT	12Dibrometha	10.0000	9.3790	6.21	95	0.01
72	PT	Chlorobenzen	10.0000	9.6532	3.47	95	0.00
73	T	1Clhexane	10.0000	9.9094	0.91	96	0.00
74	T	1112Tetclota	10.0000	9.5489	4.51	95	0.00
75	PT	Ethylbenzene	10.0000	10.0410	-0.41	94	0.00
76	PT	m p-Xylene	20.0000	20.6184	-3.09	96	0.00
77	PT	o-Xylene	10.0000	9.7258	2.74	92	0.00
78	PT	Styrene	10.0000	10.0201	-0.20	94	0.00
79	PT	Bromoform	10.0000	9.6901	3.10	100	0.00
80	PT	Isopropylben	10.0000	10.3944	-3.94	96	0.00
81	T	cyclohexanone	200.0000	164.5907	17.70	92	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	101	0.00
83	S	SURR4BrFBenz	20.0000	19.6268	1.87	100	0.00
84	T	Bromobenzene	10.0000	9.3815	6.18	94	0.00
85	PT	1122Tetrclta	10.0000	9.1877	8.12	95	0.00
86	T	123Triclproa	10.0000	8.9799	10.20	93	0.00
87	T	14dichloro2butene	10.0000	8.8754	11.25	94	0.00
88	T	n-Propylbenz	10.0000	10.0381	-0.38	94	0.00
89	T	2chlorotolue	10.0000	9.5726	4.27	96	0.00
90	T	4chlorotolue	10.0000	9.5996	4.00	94	0.00
91	T	135Trimebenz	10.0000	9.8926	1.07	93	0.00
92	T	tbutylbenzen	10.0000	10.0638	-0.64	95	0.00
93	T	124Trimetben	10.0000	9.8035	1.97	94	0.00
94	T	sbutylbenzen	10.0000	10.2882	-2.88	95	0.00
95	PT	13Diclorbenz	10.0000	9.4762	5.24	95	0.00
96	T	pIsopropylto	10.0000	10.1016	-1.02	95	0.00
97	PT	14dichlorobe	10.0000	9.4992	5.01	96	0.00
98	PT	12dichlorobe	10.0000	9.4292	5.71	97	0.00
99	T	nButylbenzen	10.0000	9.6990	3.01	92	0.00
100	PT	12dibromo3cl	10.0000	8.9029	10.97	98	0.00
101	T	135Trichlorobenzene	10.0000	9.0630	9.37	92	0.00
102	PT	124Trichlobe	10.0000	9.0643	9.36	93	0.00
103	T	Hexachlorobu	10.0000	9.8796	1.20	97	0.00
104	T	Naphthalene	10.0000	9.1584	8.42	93	0.00
105	T	123Trichlben	10.0000	9.0060	9.94	93	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Fri May 06 09:37:04 2022

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 08:15:32 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1304103	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1082679	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	620213	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	350424	20.215	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.26	102	93484	20.215	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1381105	20.248	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.25	95	602326	19.627	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	184464	10.9614	ug/L	96
3) Chloromethan	2.10	50	144612	9.3095	ug/L	97
4) VinylChlorid	2.25	62	160176	10.1053	ug/L	97
5) Bromomethane	2.71	94	95092	10.3821	ug/L	96
6) Chloroethane	2.87	64	96736	9.4678	ug/L	98
7) Dichloroflmethane	3.19	67	342796	9.9306	ug/L	98
8) Trichlorofma	3.26	101	273516	10.8047	ug/L	97
9) Ethylether	3.71	59	128491	10.1105	ug/L	92
10) dichlorotfluoroethan	3.72	67	342588	10.6188	ug/L	98
11) propyleneoxide	3.76	58	446465	99.0600	ug/L	99
12) Acrolein	3.84	56	166981	45.2159	ug/L	99
13) 11dichlorthe	3.99	96	176135	10.5501	ug/L	100
14) Trichlorotfluoroeth	4.03	101	301142	21.6655	ug/L	99
15) Acetone	4.05	43	625566	92.0930	ug/L	99
16) Iodomethane	4.16	142	342046	19.7867	ug/L	98
17) Carbon Dislf	4.25	76	655963	20.6169	ug/L	100
18) allylchloride	4.47	41	551898	20.1346	ug/L	99
19) methylacetate	4.53	74	42793	8.4923	ug/L	98
20) Methylchlorid	4.63	84	191444	9.2478	ug/L	99
21) tbutylalcohol	4.83	59	859670	468.2134	ug/L	100
22) Acrylonitrile	4.94	53	413682	50.4425	ug/L	96
23) t12dichlorte	5.00	96	190354	10.0599	ug/L	99
24) MtBE	5.04	73	416411	9.7872	ug/L	99
25) Hexane	5.40	57	603273	21.4095	ug/L	98
26) 11dichlorota	5.53	63	324968	9.9248	ug/L	98
27) Vinylacetate	5.62	43	2208329	93.5247	ug/L	99
28) chloroprene	5.66	53	594562	21.5249	ug/L	98
29) Diisopether	5.68	45	511344	10.0994	ug/L	99
30) ETBE	6.13	59	393723	9.4115	ug/L	100
31) 22dichloropr	6.27	77	186966	9.7230	ug/L	98
32) c12dichlorte	6.26	96	197982	9.8972	ug/L	100
33) 2Butanone	6.28	72	255152	95.1052	ug/L	97
34) propionitrile	6.32	54	348716	98.8952	ug/L	99
35) Ethylacetate	6.38	88	39780	47.0127	ug/L	96
36) methacrylonitrile	6.52	67	198184	19.8885	ug/L	99
37) Bromochlorma	6.55	128	90148	9.5482	ug/L	100
38) Tetrahydofur	6.63	42	568229	98.1866	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 08:15:32 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	314669	9.8237	ug/L	98
40)	111trichlota	6.90	97	265381	10.2655	ug/L	98
42)	Cyclohexane	6.99	56	263251	10.8023	ug/L	99
43)	Carbtetraclo	7.12	119	219614	10.8546	ug/L	100
44)	11dicloprope	7.11	110	92520	10.0163	ug/L	100
46)	Benzene	7.36	78	755569	10.3434	ug/L	100
47)	12dichlorota	7.36	62	241385	10.0675	ug/L	100
48)	TAME	7.52	73	379678	9.7293	ug/L	99
49)	trichloroete	8.17	95	190134	9.9189	ug/L	100
50)	methylcyclohexane	8.43	83	417234	9.9542	ug/L	97
51)	12dicloropra	8.42	63	194331	9.6166	ug/L	92
52)	23Dicl1propene	8.48	75	280878	9.7509	ug/L	99
53)	Dibromometha	8.56	93	111630	9.8350	ug/L	97
54)	methylmethacrylate	8.59	69	136441	9.6194	ug/L	98
55)	14dioxane	8.60	88	132551	466.5810	ug/L	99
56)	Bromodiclrma	8.76	83	232638	9.6805	ug/L	98
57)	2Nitropropane	9.02	43	523829	102.6703	ug/L	100
58)	2CLEVE	9.15	63	280547	44.8868	ug/L	98
59)	c13dicloproe	9.34	75	266944	9.8379	ug/L	98
60)	4Meth2Pentan	9.54	43	1600538	99.1889	ug/L	99
62)	Toluene	9.79	92	478380	10.1681	ug/L	100
63)	t13Dicloprop	10.05	75	216247	9.7662	ug/L	99
64)	ethylmethacrylate	10.19	69	503695	20.0749	ug/L	98
65)	112Triclotha	10.28	83	144785	10.0385	ug/L	97
66)	Tetrachlorte	10.53	166	207215	10.4601	ug/L	99
67)	13Diclorpropa	10.51	76	295132	9.8989	ug/L	100
69)	2Hexanone	10.63	43	1199078	92.6215	ug/L	100
70)	Clorodibrmta	10.81	129	175683	9.5245	ug/L	99
71)	12Dibrometha	10.97	107	159867	9.3790	ug/L	99
72)	Chlorobenzen	11.65	112	508972	9.6532	ug/L	98
73)	1Clhexane	11.63	91	259685	9.9094	ug/L	99
74)	1112Tetclota	11.76	131	160470	9.5489	ug/L	99
75)	Ethylbenzene	11.81	91	843063	10.0410	ug/L	100
76)	m p-Xylene	11.98	106	672035	20.6184	ug/L	98
77)	o-Xylene	12.52	106	317264	9.7258	ug/L	96
78)	Styrene	12.53	104	526747	10.0201	ug/L	99
79)	Bromoform	12.77	173	119420	9.6901	ug/L	98
80)	Isopropylben	13.05	105	811900	10.3944	ug/L	99
81)	cyclohexanone	13.13	55	174119	164.5907	ug/L	98
84)	Bromobenzene	13.45	156	203080	9.3815	ug/L	99
85)	1122Tetrclta	13.43	83	236384	9.1877	ug/L	99
86)	123Triclproa	13.49	75	282121	8.9799	ug/L	98
87)	14dichloro2butene	13.51	53	64365	8.8754	ug/L	100
88)	n-Propylbenz	13.64	91	954175	10.0381	ug/L	100
89)	2chlorotolue	13.75	91	575861	9.5726	ug/L	98
90)	4chlorotolue	13.90	91	657900	9.5996	ug/L	99
91)	135Trimebenz	13.89	105	673878	9.8926	ug/L	100
92)	tbutylbenzen	14.36	119	579432	10.0638	ug/L	99
93)	124Trimetben	14.43	105	650006	9.8035	ug/L	99
94)	sbutylbenzen	14.68	105	839443	10.2882	ug/L	99
95)	13Diclorbenz	14.82	146	370238	9.4762	ug/L	99
96)	pIsopropylto	14.90	119	706017	10.1016	ug/L	100
97)	14dichlorobe	14.94	146	381961	9.4992	ug/L	97
98)	12dichlorobe	15.48	146	357024	9.4292	ug/L	98
99)	nButylbenzen	15.49	91	630494	9.6990	ug/L	99
100)	12dibromo3cl	16.58	157	43406	8.9029	ug/L	98
101)	135Trichlorobenzene	16.91	180	275376	9.0630	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 08:15:32 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	217824	9.0643	ug/L	99
103) Hexachlorobu	17.97	225	106115	9.8796	ug/L	98
104) Naphthalene	18.02	128	485259	9.1584	ug/L	98
105) 123Trichlben	18.33	180	205833	9.0060	ug/L	99

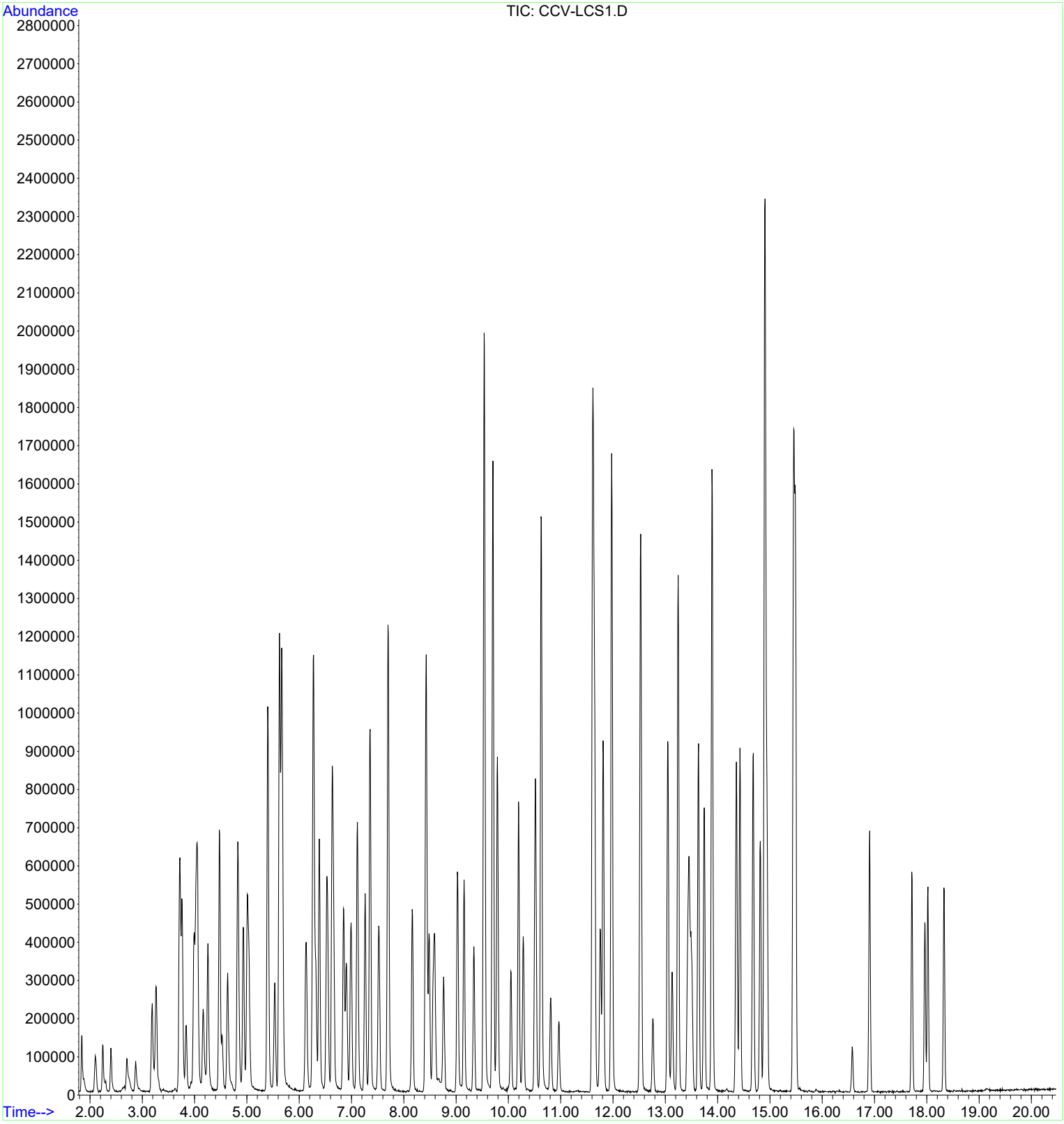
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 08:15:32 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCVF1.D Vial: 10
Acq On : 5 May 2022 11:21 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 05 11:42:07 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	95	0.00
2	PT	Dichlorodi	0.2581	0.2748	-6.47	95	0.00
3	PT	Chloromethan	0.2382	0.2256	5.29	87	0.00
4	PT	VinylChlorid	0.2431	0.2385	1.89	89	0.00
5	PT	Bromomethane	0.1405	0.1479	-5.27	102	0.00
6	PT	Chloroethane	0.1567	0.1514	3.38	96	0.00
7	T	Dichloroflmethane	0.5294	0.5453	-3.00	96	0.00
8	PT	Trichlorofma	0.3882	0.4138	-6.59	93	0.00
9	T	Ethylether	0.1949	0.1997	-2.46	101	0.00
10	T	dichlorotfluoroethan	0.4948	0.5230	-5.70	94	0.00
11	T	propyleneoxide	0.0691	0.0728	-5.35	102	0.00
12	T	Acrolein	0.0566	0.0586	-3.53	99	0.00
13	PT	11dichlorthe	0.2560	0.2674	-4.45	96	0.00
14	PT	Trichlorotfluoroeth	0.2132	0.2297	-7.74	95	0.00
15	PT	Acetone	0.1042	0.0925#	11.23	91	0.00
16	T	Iodomethane	0.2651	0.2540	4.19	87	0.00
17	PT	Carbon Dislf	0.4879	0.4870	0.18	92	0.00
18	T	allylchloride	0.4204	0.4236	-0.76	92	0.00
19	PT	methylacetate	0.0773	0.0770#	0.39	109	0.00
20	PT	Methylchlorid	0.3175	0.2972	6.39	93	0.00
21	T	tbutylalcohol	0.0282	0.0291#	-3.19	99	0.00
22	T	Acrylonitrile	0.1258	0.1339	-6.44	102	0.00
23	PT	t12dichlorte	0.2902	0.2832	2.41	91	0.00
24	PT	MtBE	0.6525	0.6616	-1.39	97	0.00
25	T	Hexane	0.4321	0.4901	-13.42	93	0.00
26	PT	11dichlorota	0.5022	0.4997	0.50	94	0.00
27	T	Vinylacetate	0.3685	0.3955	-7.33	92	0.00
28	T	chloroprene	0.4236	0.4600	-8.59	94	0.00
29	T	Diisopether	0.7765	0.8160	-5.09	94	0.00
30	T	ETBE	0.6416	0.6123	4.57	91	0.00
31	T	22dichloropr	0.2949	0.2701	8.41	87	0.00
32	PT	c12dichlorte	0.3068	0.3060	0.26	94	0.00
33	PT	2Butanone	0.0411	0.0414#	-0.73	99	0.00
34	T	propionitrile	0.0541	0.0574	-6.10	103	0.00
35	T	Ethylacetate	0.0130	0.0130#	0.00	99	0.00
36	T	methacrylonitrile	0.1528	0.1573	-2.95	99	0.00
37	T	Bromochlorma	0.1448	0.1452	-0.28	98	0.00
38	T	Tetrahydofur	0.0888	0.0945	-6.42	100	0.00
39	PT	Chloroform	0.4912	0.4839	1.49	95	0.00
40	PT	111trichlota	0.3965	0.3903	1.56	91	0.00
41	S	SURRDibrflma	0.2659	0.2749	-3.38	98	0.00
42	PT	Cyclohexane	0.3737	0.3968	-6.18	92	0.00
43	PT	Carbtetraclo	0.3103	0.3159	-1.80	94	0.00
44	T	11dicloprope	0.1417	0.1406	0.78	93	0.00
45	S	SURR12DCAd4	0.0709	0.0694	2.12	90	0.00
46	PT	Benzene	1.1203	1.1432	-2.04	92	0.00
47	PT	12dichlorota	0.3677	0.3733	-1.52	95	0.00
48	T	TAME	0.5985	0.5945	0.67	94	0.00

49	PT	trichloroete	0.2940	0.2928	0.41	95	0.00
50	PT	methylcyclohexane	0.5670	0.6443	-13.63	96	0.00
51	PT	12dicloropra	0.3099	0.3109	-0.32	94	0.00
52	T	23Dicl1propene	0.4418	0.4547	-2.92	97	0.00
53	T	Dibromometha	0.1741	0.1771	-1.72	100	0.00
54	T	methylmethacrylate	0.2175	0.2208	-1.52	100	0.00
55	T	14dioxane	0.0044	0.0044#	0.00	104	0.00
56	PT	Bromodiclrma	0.3686	0.3619	1.82	94	0.00
57	T	2Nitropropane	0.0782	0.0846	-8.18	100	0.00
58	T	2CLEVE	0.0959	0.0966	-0.73	100	0.00
59	PT	c13dicloproe	0.4161	0.4107	1.30	94	0.00
60	PT	4Meth2Pentan	0.2366	0.2619	-10.69	98	0.00
61	S	SURRd8Tolule	1.0461	1.0773	-2.98	96	0.00
62	PT	Toluene	0.7215	0.7343	-1.77	94	0.00
63	PT	t13Dicloprop	0.3396	0.3233	4.80	92	0.00
64	T	ethylmethacrylate	0.3848	0.4071	-5.80	99	0.00
65	PT	112Triclotha	0.2212	0.2332	-5.42	101	0.00
66	PT	Tetrachlorte	0.3038	0.3155	-3.85	93	0.00
67	T	13Diclorpropa	0.4572	0.4572	0.00	97	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	98	0.00
69	PT	2Hexanone	0.2204	0.2295	-4.13	98	0.00
70	PT	Clorodibrmta	0.3407	0.3206	5.90	94	0.00
71	PT	12Dibrometha	0.3149	0.3096	1.68	100	0.00
72	PT	Chlorobenzen	0.9740	0.9566	1.79	96	0.00
73	T	1Clhexane	0.4841	0.4786	1.14	96	0.00
74	T	1112Tetclota	0.3104	0.2889	6.93	92	0.00
75	PT	Ethylbenzene	1.5510	1.5651	-0.91	94	0.00
76	PT	m p-Xylene	0.6021	0.6085	-1.06	94	0.00
77	PT	o-Xylene	0.6026	0.5938	1.46	93	0.00
78	PT	Styrene	0.9711	0.9789	-0.80	94	0.00
79	PT	Bromoform	0.2277	0.2206	3.12	100	0.00
80	PT	Isopropylben	1.4429	1.4904	-3.29	95	0.00
81	T	cyclohexanone	0.0184	0.0155#	15.76	89	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	101	0.00
83	S	SURR4BrFBenz	0.9896	0.9829	0.68	101	0.00
84	T	Bromobenzene	0.6980	0.6463	7.41	93	0.00
85	PT	1122Tetrclta	0.8297	0.7965	4.00	99	0.00
86	T	123Triclproa	1.0131	0.9471	6.51	97	0.00
87	T	14dichloro2butene	0.2339	0.2115	9.58	96	0.00
88	T	n-Propylbenz	3.0653	3.1138	-1.58	95	0.00
89	T	2chlorotolue	1.9399	1.8749	3.35	96	0.00
90	T	4chlorotolue	2.2100	2.1614	2.20	95	0.00
91	T	135Trimebenz	2.1966	2.1962	0.02	94	0.00
92	T	tbutylbenzen	1.8566	1.8678	-0.60	95	0.00
93	T	124Trimetben	2.1381	2.1226	0.72	95	0.00
94	T	sbutylbenzen	2.6311	2.7266	-3.63	96	0.00
95	PT	13Diclorbenz	1.2599	1.2073	4.17	96	0.00
96	T	pIsopropylto	2.2538	2.2981	-1.97	96	0.00
97	PT	14dichlorobe	1.2966	1.2280	5.29	95	0.00
98	PT	12dichlorobe	1.2210	1.1301	7.44	95	0.00
99	T	nButylbenzen	2.0963	2.0907	0.27	94	0.00
100	PT	12dibromo3cl	0.1572	0.1436	8.65	100	0.00
101	T	135Trichlorobenzene	0.9798	0.9148	6.63	94	0.00
102	PT	124Trichlobe	0.7749	0.7171	7.46	95	0.00
103	T	Hexachlorobu	0.3464	0.3354	3.18	95	0.00
104	T	Naphthalene	1.7086	1.6287	4.68	97	0.00
105	T	123Trichlben	0.7370	0.7067	4.11	99	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W042822.M Fri May 06 09:44:13 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCVF1.D Vial: 10
Acq On : 5 May 2022 11:21 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 05 11:42:07 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	95	0.00
2	PT	Dichlorodi	10.0000	10.6487	-6.49	95	0.00
3	PT	Chloromethan	10.0000	9.4706	5.29	87	0.00
4	PT	VinylChlorid	10.0000	9.8101	1.90	89	0.00
5	PT	Bromomethane	10.0000	10.5265	-5.27	102	0.00
6	PT	Chloroethane	10.0000	9.6649	3.35	96	0.00
7	T	Dichloroflmethane	10.0000	10.3013	-3.01	96	0.00
8	PT	Trichlorofma	10.0000	10.6590	-6.59	93	0.00
9	T	Ethylether	10.0000	10.2475	-2.48	101	0.00
10	T	dichlorotfluoroethan	10.0000	10.5706	-5.71	94	0.00
11	T	propyleneoxide	100.0000	105.2962	-5.30	102	0.00
12	T	Acrolein	50.0000	51.7546	-3.51	99	0.00
13	PT	11dichlorthe	10.0000	10.4436	-4.44	96	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.5544	-7.77	95	0.00
15	PT	Acetone	100.0000	88.7513	11.25	91	0.00
16	T	Iodomethane	20.0000	19.1638	4.18	87	0.00
17	PT	Carbon Dislf	20.0000	19.9609	0.20	92	0.00
18	T	allylchloride	20.0000	20.1544	-0.77	92	0.00
19	PT	methylacetate	10.0000	9.9638	0.36	109	0.00
20	PT	Methylchlorid	10.0000	9.3613	6.39	93	0.00
21	T	tbutylalcohol	500.0000	516.2468	-3.25	99	0.00
22	T	Acrylonitrile	50.0000	53.2501	-6.50	102	0.00
23	PT	t12dichlorte	10.0000	9.7607	2.39	91	0.00
24	PT	MtBE	10.0000	10.1390	-1.39	97	0.00
25	T	Hexane	20.0000	22.6829	-13.41	93	0.00
26	PT	11dichlorota	10.0000	9.9517	0.48	94	0.00
27	T	Vinylacetate	100.0000	111.8694	-11.87	92	0.00
28	T	chloroprene	20.0000	21.7186	-8.59	94	0.00
29	T	Diisopether	10.0000	10.5084	-5.08	94	0.00
30	T	ETBE	10.0000	9.5436	4.56	91	0.00
31	T	22dichloropr	10.0000	9.1595	8.41	87	0.00
32	PT	c12dichlorte	10.0000	9.9741	0.26	94	0.00
33	PT	2Butanone	100.0000	100.5191	-0.52	99	0.00
34	T	propionitrile	100.0000	106.2244	-6.22	103	0.00
35	T	Ethylacetate	50.0000	49.9852	0.03	99	0.00
36	T	methacrylonitrile	20.0000	20.5826	-2.91	99	0.00
37	T	Bromochlorma	10.0000	10.0294	-0.29	98	0.00
38	T	Tetrahydofur	100.0000	106.4781	-6.48	100	0.00
39	PT	Chloroform	10.0000	9.8513	1.49	95	0.00
40	PT	111trichlota	10.0000	9.8455	1.55	91	0.00
41	S	SURRDibrflma	20.0000	20.6786	-3.39	98	0.00
42	PT	Cyclohexane	10.0000	10.6168	-6.17	92	0.00
43	PT	Carbtetraclo	10.0000	10.1823	-1.82	94	0.00
44	T	11dicloprope	10.0000	9.9275	0.72	93	0.00
45	S	SURR12DCAd4	20.0000	19.5786	2.11	90	0.00
46	PT	Benzene	10.0000	10.2049	-2.05	92	0.00
47	PT	12dichlorota	10.0000	10.1513	-1.51	95	0.00
48	T	TAME	10.0000	9.9338	0.66	94	0.00

49	PT	trichloroete	10.0000	9.9615	0.39	95	0.00
50	PT	methylcyclohexane	10.0000	10.0216	-0.22	96	0.00
51	PT	12dicloropra	10.0000	10.0324	-0.32	94	0.00
52	T	23Dicl1propene	10.0000	10.2925	-2.93	97	0.00
53	T	Dibromometha	10.0000	10.1758	-1.76	100	0.00
54	T	methylmethacrylate	10.0000	10.1493	-1.49	100	0.00
55	T	14dioxane	500.0000	503.3973	-0.68	104	0.00
56	PT	Bromodiclrma	10.0000	9.8198	1.80	94	0.00
57	T	2Nitropropane	100.0000	108.1122	-8.11	100	0.00
58	T	2CLEVE	50.0000	50.3724	-0.74	100	0.00
59	PT	c13dicloproe	10.0000	9.8697	1.30	94	0.00
60	PT	4Meth2Pentan	100.0000	106.6278	-6.63	98	0.00
61	S	SURRd8Tolule	20.0000	20.5974	-2.99	96	0.00
62	PT	Toluene	10.0000	10.1766	-1.77	94	0.00
63	PT	t13Dicloprop	10.0000	9.5212	4.79	92	0.00
64	T	ethylmethacrylate	20.0000	21.1572	-5.79	99	0.00
65	PT	112Triclotha	10.0000	10.5408	-5.41	101	0.00
66	PT	Tetrachlorte	10.0000	10.3847	-3.85	93	0.00
67	T	13Diclorpropa	10.0000	9.9985	0.02	97	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	98	0.00
69	PT	2Hexanone	100.0000	96.2503	3.75	98	0.00
70	PT	Clorodibrmta	10.0000	9.4104	5.90	94	0.00
71	PT	12Dibrometha	10.0000	9.8337	1.66	100	0.00
72	PT	Chlorobenzen	10.0000	9.8211	1.79	96	0.00
73	T	1Clhexane	10.0000	9.8856	1.14	96	0.00
74	T	1112Tetclota	10.0000	9.3063	6.94	92	0.00
75	PT	Ethylbenzene	10.0000	10.0906	-0.91	94	0.00
76	PT	m p-Xylene	20.0000	20.2136	-1.07	94	0.00
77	PT	o-Xylene	10.0000	9.8540	1.46	93	0.00
78	PT	Styrene	10.0000	10.0801	-0.80	94	0.00
79	PT	Bromoform	10.0000	9.6898	3.10	100	0.00
80	PT	Isopropylben	10.0000	10.3293	-3.29	95	0.00
81	T	cyclohexanone	200.0000	159.0386	20.48	89	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	101	0.00
83	S	SURR4BrFBenz	20.0000	19.8642	0.68	101	0.00
84	T	Bromobenzene	10.0000	9.2588	7.41	93	0.00
85	PT	1122Tetrclta	10.0000	9.6002	4.00	99	0.00
86	T	123Triclproa	10.0000	9.3489	6.51	97	0.00
87	T	14dichloro2butene	10.0000	9.0457	9.54	96	0.00
88	T	n-Propylbenz	10.0000	10.1583	-1.58	95	0.00
89	T	2chlorotolue	10.0000	9.6648	3.35	96	0.00
90	T	4chlorotolue	10.0000	9.7799	2.20	95	0.00
91	T	135Trimebenz	10.0000	9.9978	0.02	94	0.00
92	T	tbutylbenzen	10.0000	10.0602	-0.60	95	0.00
93	T	124Trimetben	10.0000	9.9277	0.72	95	0.00
94	T	sbutylbenzen	10.0000	10.3629	-3.63	96	0.00
95	PT	13Diclorbenz	10.0000	9.5826	4.17	96	0.00
96	T	pIsopropylto	10.0000	10.1966	-1.97	96	0.00
97	PT	14dichlorobe	10.0000	9.4707	5.29	95	0.00
98	PT	12dichlorobe	10.0000	9.2558	7.44	95	0.00
99	T	nButylbenzen	10.0000	9.9737	0.26	94	0.00
100	PT	12dibromo3cl	10.0000	9.1317	8.68	100	0.00
101	T	135Trichlorobenzene	10.0000	9.3360	6.64	94	0.00
102	PT	124Trichlobe	10.0000	9.2535	7.46	95	0.00
103	T	Hexachlorobu	10.0000	9.6841	3.16	95	0.00
104	T	Naphthalene	10.0000	9.5321	4.68	97	0.00
105	T	123Trichlben	10.0000	9.5887	4.11	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Fri May 06 09:44:36 2022

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF1.D Vial: 10
Acq On : 5 May 2022 11:21 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 11:42:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1286028	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1083020	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	619399	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	353494	20.679	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.27	102	89288	19.579	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98	%		
61) SURRd8Tolule	9.71	98	1385472	20.597	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103	%		
83) SURR4BrFBenz	13.25	95	608813	19.864	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	176717	10.6487	ug/L	96
3) Chloromethan	2.11	50	145076	9.4706	ug/L	95
4) VinylChlorid	2.24	62	153342	9.8101	ug/L	99
5) Bromomethane	2.70	94	95078	10.5265	ug/L	99
6) Chloroethane	2.87	64	97381	9.6649	ug/L	90
7) Dichloroflmethane	3.18	67	350663	10.3013	ug/L	99
8) Trichlorofma	3.27	101	266088	10.6590	ug/L	100
9) Ethylether	3.71	59	128428	10.2475	ug/L	94
10) dichlorotfluoroethan	3.72	67	336307	10.5706	ug/L	99
11) propyleneoxide	3.76	58	467994	105.2962	ug/L	99
12) Acrolein	3.84	56	188479	51.7546	ug/L	100
13) 11dichlorthe	3.98	96	171941	10.4436	ug/L	99
14) Trichlorotfluoroeth	4.03	101	295445	21.5544	ug/L	99
15) Acetone	4.06	43	594511	88.7513	ug/L	99
16) Iodomethane	4.17	142	326687	19.1638	ug/L	99
17) Carbon Dislf	4.26	76	626290	19.9609	ug/L	99
18) allylchloride	4.48	41	544782	20.1544	ug/L	99
19) methylacetate	4.53	74	49512	9.9638	ug/L	86
20) Methylchlorid	4.63	84	191109	9.3613	ug/L	100
21) tbutylalcohol	4.83	59	934725	516.2468	ug/L	98
22) Acrylonitrile	4.94	53	430654	53.2501	ug/L	97
23) t12dichlorte	5.01	96	182133	9.7607	ug/L	97
24) MtBE	5.03	73	425402	10.1390	ug/L	97
25) Hexane	5.40	57	630295	22.6829	ug/L	100
26) 11dichlorota	5.53	63	321335	9.9517	ug/L	99
27) Vinylacetate	5.62	43	2543051	111.8694	ug/L	99
28) chloroprene	5.66	53	591599	21.7186	ug/L	99
29) Diisopether	5.68	45	524676	10.5084	ug/L	94
30) ETBE	6.13	59	393713	9.5436	ug/L	99
31) 22dichloropr	6.27	77	173690	9.1595	ug/L	99
32) c12dichlorte	6.26	96	196755	9.9741	ug/L	99
33) 2Butanone	6.28	72	265939	100.5191	ug/L	98
34) propionitrile	6.32	54	369368	106.2244	ug/L	100
35) Ethylacetate	6.39	88	41709	49.9852	ug/L	95
36) methacrylonitrile	6.53	67	202258	20.5826	ug/L	98
37) Bromochlorma	6.55	128	93378	10.0294	ug/L	97
38) Tetrahydofur	6.63	42	607673	106.4781	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF1.D Vial: 10
Acq On : 5 May 2022 11:21 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 11:42:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	311180	9.8513	ug/L	100
40)	111trichlota	6.90	97	250996	9.8455	ug/L	95
42)	Cyclohexane	6.99	56	255143	10.6168	ug/L	96
43)	Carbtetraclo	7.12	119	203158	10.1823	ug/L	99
44)	11dicloprope	7.11	110	90429	9.9275	ug/L	99
46)	Benzene	7.36	78	735121	10.2049	ug/L	99
47)	12dichlorota	7.36	62	240021	10.1513	ug/L	99
48)	TAME	7.53	73	382286	9.9338	ug/L	97
49)	trichloroete	8.16	95	188304	9.9615	ug/L	99
50)	methylcyclohexane	8.43	83	414274	10.0216	ug/L	97
51)	12dicloropra	8.42	63	199924	10.0324	ug/L	90
52)	23Dicl1propene	8.49	75	292372	10.2925	ug/L	99
53)	Dibromometha	8.56	93	113897	10.1758	ug/L	98
54)	methylmethacrylate	8.59	69	141961	10.1493	ug/L	98
55)	14dioxane	8.60	88	141028	503.3973	ug/L	98
56)	Bromodiclrma	8.76	83	232715	9.8198	ug/L	97
57)	2Nitropropane	9.03	43	543949	108.1122	ug/L	98
58)	2CLEVE	9.15	63	310469	50.3724	ug/L	98
59)	c13dicloproe	9.34	75	264097	9.8697	ug/L	99
60)	4Meth2Pentan	9.54	43	1684338	106.6278	ug/L	99
62)	Toluene	9.79	92	472147	10.1766	ug/L	100
63)	t13Dicloprop	10.05	75	207900	9.5212	ug/L	99
64)	ethylmethacrylate	10.20	69	523494	21.1572	ug/L	98
65)	112Triclotha	10.28	83	149922	10.5408	ug/L	96
66)	Tetrachlorte	10.53	166	202869	10.3847	ug/L	98
67)	13Diclorpropa	10.51	76	293968	9.9985	ug/L	99
69)	2Hexanone	10.63	43	1242830	96.2503	ug/L	100
70)	Clorodibrmta	10.81	129	173634	9.4104	ug/L	97
71)	12Dibrometha	10.97	107	167670	9.8337	ug/L	96
72)	Chlorobenzen	11.65	112	517984	9.8211	ug/L	99
73)	1Clhexane	11.63	91	259141	9.8856	ug/L	99
74)	1112Tetclota	11.76	131	156443	9.3063	ug/L	97
75)	Ethylbenzene	11.81	91	847498	10.0906	ug/L	99
76)	m p-Xylene	11.98	106	659048	20.2136	ug/L	99
77)	o-Xylene	12.53	106	321547	9.8540	ug/L	96
78)	Styrene	12.53	104	530071	10.0801	ug/L	99
79)	Bromoform	12.77	173	119454	9.6898	ug/L	98
80)	Isopropylben	13.05	105	807069	10.3293	ug/L	100
81)	cyclohexanone	13.13	55	167912	159.0386	ug/L	100
84)	Bromobenzene	13.46	156	200161	9.2588	ug/L	97
85)	1122Tetrclta	13.43	83	246671	9.6002	ug/L	98
86)	123Triclproa	13.49	75	293327	9.3489	ug/L	95
87)	14dichloro2butene	13.51	53	65514	9.0457	ug/L	98
88)	n-Propylbenz	13.64	91	964334	10.1583	ug/L	100
89)	2chlorotolue	13.75	91	580647	9.6648	ug/L	99
90)	4chlorotolue	13.90	91	669381	9.7799	ug/L	99
91)	135Trimebenz	13.89	105	680152	9.9978	ug/L	99
92)	tbutylbenzen	14.36	119	578463	10.0602	ug/L	100
93)	124Trimetben	14.43	105	657376	9.9277	ug/L	100
94)	sbutylbenzen	14.68	105	844431	10.3629	ug/L	99
95)	13Diclorbenz	14.82	146	373901	9.5826	ug/L	99
96)	pIsopropylto	14.90	119	711718	10.1966	ug/L	99
97)	14dichlorobe	14.94	146	380317	9.4707	ug/L	98
98)	12dichlorobe	15.49	146	349997	9.2558	ug/L	98
99)	nButylbenzen	15.49	91	647504	9.9737	ug/L	99
100)	12dibromo3cl	16.58	157	44463	9.1317	ug/L	95
101)	135Trichlorobenzene	16.90	180	283300	9.3360	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF1.D Vial: 10
Acq On : 5 May 2022 11:21 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 11:42:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	222080	9.2535	ug/L	99
103) Hexachlorobu	17.96	225	103878	9.6841	ug/L	100
104) Naphthalene	18.02	128	504396	9.5321	ug/L	99
105) 123Trichlben	18.33	180	218863	9.5887	ug/L	98

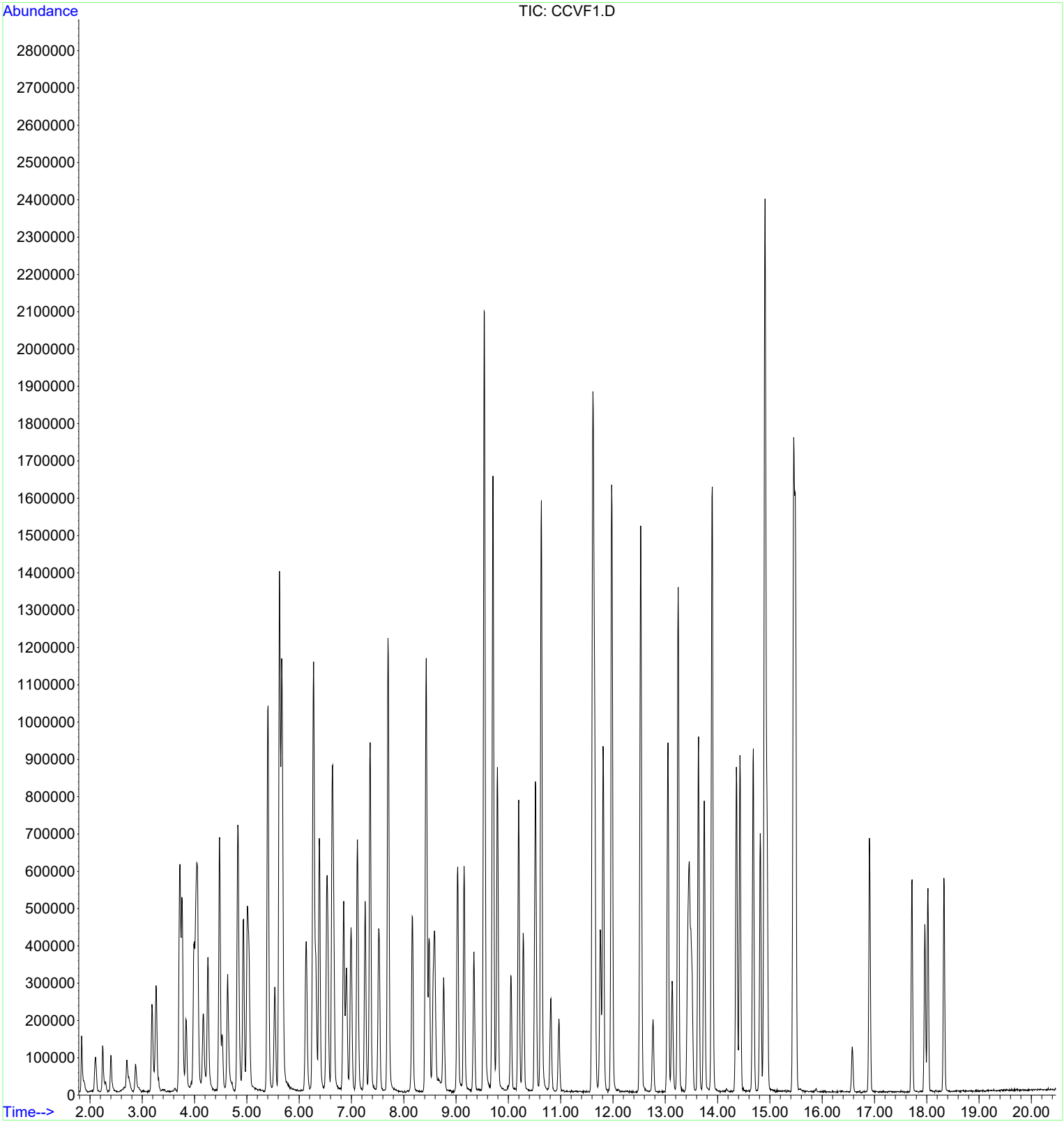
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF1.D Vial: 10
Acq On : 5 May 2022 11:21 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 11:42:07 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



BFB

Data File : C:\Instarch\Data\MAY0522\BFB2.D Vial: 11
Acq On : 5 May 2022 11:45 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.663 to 4.675 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.2	12354	PASS
75	95	30	60	48.1	34573	PASS
95	95	100	100	100.0	71890	PASS
96	95	5	9	6.7	4848	PASS
173	174	0.00	2	0.8	456	PASS
174	95	50	100	82.5	59322	PASS
175	174	5	9	6.6	3931	PASS
176	174	95	101	100.1	59378	PASS
177	176	5	9	7.4	4381	PASS

W042822.M Fri May 06 09:34:02 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCV2.D Vial: 13
Acq On : 5 May 2022 12:28 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 05 12:49:30 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	96	0.00
2	PT	Dichlorodi	0.2581	0.2807	-8.76	99	0.00
3	PT	Chloromethan	0.2382	0.2299	3.48	90	0.00
4	PT	VinylChlorid	0.2431	0.2432	-0.04	92	0.00
5	PT	Bromomethane	0.1405	0.1401	0.28	98	0.00
6	PT	Chloroethane	0.1567	0.1520	3.00	98	0.00
7	T	Dichloroflmethane	0.5294	0.5551	-4.85	100	0.00
8	PT	Trichlorofma	0.3882	0.4256	-9.63	97	0.00
9	T	Ethylether	0.1949	0.1885	3.28	96	0.00
10	T	dichlorotfluoroethan	0.4948	0.5475	-10.65	100	0.00
11	T	propyleneoxide	0.0691	0.0703	-1.74	100	0.00
12	T	Acrolein	0.0566	0.0576	-1.77	99	0.00
13	PT	11dichlorthe	0.2560	0.2707	-5.74	99	0.00
14	PT	Trichlorotfluoroeth	0.2132	0.2425	-13.74	102	0.00
15	PT	Acetone	0.1042	0.0980#	5.95	97	0.00
16	T	Iodomethane	0.2651	0.2771	-4.53	96	0.00
17	PT	Carbon Dislf	0.4879	0.5147	-5.49	98	0.00
18	T	allylchloride	0.4204	0.4425	-5.26	98	0.00
19	PT	methylacetate	0.0773	0.0724#	6.34	104	0.00
20	PT	Methylchlorid	0.3175	0.3011	5.17	96	0.00
21	T	tbutylalcohol	0.0282	0.0272#	3.55	94	0.00
22	T	Acrylonitrile	0.1258	0.1310	-4.13	101	0.00
23	PT	t12dichlorte	0.2902	0.2876	0.90	94	0.00
24	PT	MtBE	0.6525	0.6481	0.67	96	0.00
25	T	Hexane	0.4321	0.5222	-20.85#	101	0.00
26	PT	11dichlorota	0.5022	0.5083	-1.21	97	0.00
27	T	Vinylacetate	0.3685	0.4249	-15.31	100	0.00
28	T	chloroprene	0.4236	0.4742	-11.95	99	0.00
29	T	Diisopether	0.7765	0.8061	-3.81	95	0.00
30	T	ETBE	0.6416	0.6269	2.29	94	0.00
31	T	22dichloropr	0.2949	0.2995	-1.56	98	0.00
32	PT	c12dichlorte	0.3068	0.3162	-3.06	98	0.00
33	PT	2Butanone	0.0411	0.0411#	0.00	100	0.00
34	T	propionitrile	0.0541	0.0544	-0.55	99	0.00
35	T	Ethylacetate	0.0130	0.0129#	0.77	100	0.00
36	T	methacrylonitrile	0.1528	0.1543	-0.98	99	0.00
37	T	Bromochlorma	0.1448	0.1385	4.35	95	0.00
38	T	Tetrahydofur	0.0888	0.0887	0.11	95	0.00
39	PT	Chloroform	0.4912	0.4868	0.90	97	0.00
40	PT	111trichlota	0.3965	0.4066	-2.55	97	0.00
41	S	SURRDibrflma	0.2659	0.2713	-2.03	98	0.00
42	PT	Cyclohexane	0.3737	0.4209	-12.63	99	0.00
43	PT	Carbtetraclo	0.3103	0.3300	-6.35	99	0.00
44	T	11dicloprope	0.1417	0.1454	-2.61	98	0.00
45	S	SURR12DCAd4	0.0709	0.0697	1.69	92	0.00
46	PT	Benzene	1.1203	1.1588	-3.44	95	0.00
47	PT	12dichlorota	0.3677	0.3717	-1.09	96	0.00
48	T	TAME	0.5985	0.5842	2.39	94	0.00

49	PT	trichloroete	0.2940	0.2906	1.16	96	0.00
50	PT	methylcyclohexane	0.5670	0.6634	-17.00	100	0.00
51	PT	12dicloropra	0.3099	0.3115	-0.52	96	0.00
52	T	23Dicl1propene	0.4418	0.4434	-0.36	96	0.00
53	T	Dibromometha	0.1741	0.1745	-0.23	100	0.00
54	T	methylmethacrylate	0.2175	0.2153	1.01	99	0.00
55	T	14dioxane	0.0044	0.0039#	11.36	94	0.00
56	PT	Bromodiclrma	0.3686	0.3577	2.96	94	0.00
57	T	2Nitropropane	0.0782	0.0822	-5.12	98	0.00
58	T	2CLEVE	0.0959	0.0942	1.77	98	0.00
59	PT	c13dicloproe	0.4161	0.4165	-0.10	96	0.00
60	PT	4Meth2Pentan	0.2366	0.2495	-5.45	95	0.00
61	S	SURRd8Tolule	1.0461	1.0709	-2.37	97	0.00
62	PT	Toluene	0.7215	0.7479	-3.66	97	0.00
63	PT	t13Dicloprop	0.3396	0.3377	0.56	97	0.00
64	T	ethylmethacrylate	0.3848	0.3980	-3.43	98	0.00
65	PT	112Triclotha	0.2212	0.2236	-1.08	98	0.00
66	PT	Tetrachlorte	0.3038	0.3144	-3.49	94	0.00
67	T	13Diclorpropa	0.4572	0.4640	-1.49	100	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	100	0.00
69	PT	2Hexanone	0.2204	0.2192	0.54	95	0.00
70	PT	Clorodibrmta	0.3407	0.3230	5.20	96	0.00
71	PT	12Dibrometha	0.3149	0.2943	6.54	96	0.00
72	PT	Chlorobenzen	0.9740	0.9468	2.79	97	0.00
73	T	1Clhexane	0.4841	0.5047	-4.26	102	0.00
74	T	1112Tetclota	0.3104	0.2821	9.12	92	0.00
75	PT	Ethylbenzene	1.5510	1.5864	-2.28	97	0.00
76	PT	m p-Xylene	0.6021	0.6238	-3.60	98	0.00
77	PT	o-Xylene	0.6026	0.5956	1.16	95	0.00
78	PT	Styrene	0.9711	0.9873	-1.67	97	0.00
79	PT	Bromoform	0.2277	0.2112	7.25	97	0.00
80	PT	Isopropylben	1.4429	1.5182	-5.22	98	0.00
81	T	cyclohexanone	0.0184	0.0164#	10.87	95	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	102	0.00
83	S	SURR4BrFBenz	0.9896	0.9836	0.61	101	0.00
84	T	Bromobenzene	0.6980	0.6643	4.83	96	0.00
85	PT	1122Tetrclta	0.8297	0.8024	3.29	101	0.00
86	T	123Triclproa	1.0131	0.9274	8.46	96	0.00
87	T	14dichloro2butene	0.2339	0.2185	6.58	100	0.00
88	T	n-Propylbenz	3.0653	3.1438	-2.56	96	0.00
89	T	2chlorotolue	1.9399	1.8829	2.94	97	0.00
90	T	4chlorotolue	2.2100	2.2177	-0.35	98	0.00
91	T	135Trimebenz	2.1966	2.2191	-1.02	96	0.00
92	T	tbutylbenzen	1.8566	1.8858	-1.57	97	0.00
93	T	124Trimetben	2.1381	2.1428	-0.22	96	0.00
94	T	sbutylbenzen	2.6311	2.7542	-4.68	97	0.00
95	PT	13Diclorbenz	1.2599	1.2079	4.13	96	0.00
96	T	pIsopropylto	2.2538	2.3539	-4.44	99	0.00
97	PT	14dichlorobe	1.2966	1.2573	3.03	98	0.00
98	PT	12dichlorobe	1.2210	1.1493	5.87	97	0.00
99	T	nButylbenzen	2.0963	2.1397	-2.07	97	0.00
100	PT	12dibromo3cl	0.1572	0.1335	15.08	94	0.00
101	T	135Trichlorobenzene	0.9798	0.9273	5.36	96	0.00
102	PT	124Trichlobe	0.7749	0.7361	5.01	98	0.00
103	T	Hexachlorobu	0.3464	0.3568	-3.00	101	0.00
104	T	Naphthalene	1.7086	1.6200	5.19	97	0.00
105	T	123Trichlben	0.7370	0.6778	8.03	95	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W042822.M Fri May 06 09:38:09 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCV2.D Vial: 13
Acq On : 5 May 2022 12:28 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 05 12:49:30 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	96	0.00
2	PT	Dichlorodi	10.0000	10.8779	-8.78	99	0.00
3	PT	Chloromethan	10.0000	9.6483	3.52	90	0.00
4	PT	VinylChlorid	10.0000	10.0031	-0.03	92	0.00
5	PT	Bromomethane	10.0000	9.9741	0.26	98	0.00
6	PT	Chloroethane	10.0000	9.6995	3.00	98	0.00
7	T	Dichloroflmethane	10.0000	10.4853	-4.85	100	0.00
8	PT	Trichlorofma	10.0000	10.9613	-9.61	97	0.00
9	T	Ethylether	10.0000	9.6730	3.27	96	0.00
10	T	dichlorotfluoroethan	10.0000	11.0664	-10.66	100	0.00
11	T	propyleneoxide	100.0000	101.6899	-1.69	100	0.00
12	T	Acrolein	50.0000	50.8898	-1.78	99	0.00
13	PT	11dichlorthe	10.0000	10.5728	-5.73	99	0.00
14	PT	Trichlorotfluoroeth	20.0000	22.7522	-13.76	102	0.00
15	PT	Acetone	100.0000	94.0908	5.91	97	0.00
16	T	Iodomethane	20.0000	20.9041	-4.52	96	0.00
17	PT	Carbon Dislf	20.0000	21.0950	-5.47	98	0.00
18	T	allylchloride	20.0000	21.0505	-5.25	98	0.00
19	PT	methylacetate	10.0000	9.3683	6.32	104	0.00
20	PT	Methylchlorid	10.0000	9.4835	5.17	96	0.00
21	T	tbutylalcohol	500.0000	483.7076	3.26	94	0.00
22	T	Acrylonitrile	50.0000	52.0744	-4.15	101	0.00
23	PT	t12dichlorte	10.0000	9.9101	0.90	94	0.00
24	PT	MtBE	10.0000	9.9327	0.67	96	0.00
25	T	Hexane	20.0000	24.1667	-20.83#	101	0.00
26	PT	11dichlorota	10.0000	10.1230	-1.23	97	0.00
27	T	Vinylacetate	100.0000	121.5457	-21.55#	100	0.00
28	T	chloroprene	20.0000	22.3886	-11.94	99	0.00
29	T	Diisopether	10.0000	10.3817	-3.82	95	0.00
30	T	ETBE	10.0000	9.7708	2.29	94	0.00
31	T	22dichloropr	10.0000	10.1563	-1.56	98	0.00
32	PT	c12dichlorte	10.0000	10.3057	-3.06	98	0.00
33	PT	2Butanone	100.0000	99.8523	0.15	100	0.00
34	T	propionitrile	100.0000	100.6026	-0.60	99	0.00
35	T	Ethylacetate	50.0000	49.6767	0.65	100	0.00
36	T	methacrylonitrile	20.0000	20.1945	-0.97	99	0.00
37	T	Bromochlorma	10.0000	9.5669	4.33	95	0.00
38	T	Tetrahydofur	100.0000	99.8970	0.10	95	0.00
39	PT	Chloroform	10.0000	9.9094	0.91	97	0.00
40	PT	111trichlota	10.0000	10.2551	-2.55	97	0.00
41	S	SURRDibrflma	20.0000	20.4065	-2.03	98	0.00
42	PT	Cyclohexane	10.0000	11.2623	-12.62	99	0.00
43	PT	Carbtetraclo	10.0000	10.6350	-6.35	99	0.00
44	T	11dicloprope	10.0000	10.2608	-2.61	98	0.00
45	S	SURR12DCAd4	20.0000	19.6415	1.79	92	0.00
46	PT	Benzene	10.0000	10.3436	-3.44	95	0.00
47	PT	12dichlorota	10.0000	10.1091	-1.09	96	0.00
48	T	TAME	10.0000	9.7612	2.39	94	0.00

49	PT	trichloroete	10.0000	9.8840	1.16	96	0.00
50	PT	methylcyclohexane	10.0000	10.3157	-3.16	100	0.00
51	PT	12dicloropra	10.0000	10.0499	-0.50	96	0.00
52	T	23Dicl1propene	10.0000	10.0360	-0.36	96	0.00
53	T	Dibromometha	10.0000	10.0236	-0.24	100	0.00
54	T	methylmethacrylate	10.0000	9.8960	1.04	99	0.00
55	T	14dioxane	500.0000	448.1054	10.38	94	0.00
56	PT	Bromodiclrma	10.0000	9.7056	2.94	94	0.00
57	T	2Nitropropane	100.0000	105.0151	-5.02	98	0.00
58	T	2CLEVE	50.0000	49.1359	1.73	98	0.00
59	PT	c13dicloproe	10.0000	10.0090	-0.09	96	0.00
60	PT	4Meth2Pentan	100.0000	101.0139	-1.01	95	0.00
61	S	SURRd8Tolule	20.0000	20.4754	-2.38	97	0.00
62	PT	Toluene	10.0000	10.3657	-3.66	97	0.00
63	PT	t13Dicloprop	10.0000	9.9460	0.54	97	0.00
64	T	ethylmethacrylate	20.0000	20.6838	-3.42	98	0.00
65	PT	112Triclotha	10.0000	10.1078	-1.08	98	0.00
66	PT	Tetrachlorte	10.0000	10.3498	-3.50	94	0.00
67	T	13Diclorpropa	10.0000	10.1484	-1.48	100	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	100	0.00
69	PT	2Hexanone	100.0000	91.5737	8.43	95	0.00
70	PT	Clorodibrmta	10.0000	9.4793	5.21	96	0.00
71	PT	12Dibrometha	10.0000	9.3474	6.53	96	0.00
72	PT	Chlorobenzen	10.0000	9.7206	2.79	97	0.00
73	T	1Clhexane	10.0000	10.4258	-4.26	102	0.00
74	T	1112Tetclota	10.0000	9.0860	9.14	92	0.00
75	PT	Ethylbenzene	10.0000	10.2284	-2.28	97	0.00
76	PT	m p-Xylene	20.0000	20.7201	-3.60	98	0.00
77	PT	o-Xylene	10.0000	9.8841	1.16	95	0.00
78	PT	Styrene	10.0000	10.1671	-1.67	97	0.00
79	PT	Bromoform	10.0000	9.2787	7.21	97	0.00
80	PT	Isopropylben	10.0000	10.5218	-5.22	98	0.00
81	T	cyclohexanone	200.0000	167.6771	16.16	95	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	102	0.00
83	S	SURR4BrFBenz	20.0000	19.8782	0.61	101	0.00
84	T	Bromobenzene	10.0000	9.5164	4.84	96	0.00
85	PT	1122Tetrclta	10.0000	9.6715	3.29	101	0.00
86	T	123Triclproa	10.0000	9.1537	8.46	96	0.00
87	T	14dichloro2butene	10.0000	9.3423	6.58	100	0.00
88	T	n-Propylbenz	10.0000	10.2561	-2.56	96	0.00
89	T	2chlorotolue	10.0000	9.7060	2.94	97	0.00
90	T	4chlorotolue	10.0000	10.0348	-0.35	98	0.00
91	T	135Trimebenz	10.0000	10.1023	-1.02	96	0.00
92	T	tbutylbenzen	10.0000	10.1570	-1.57	97	0.00
93	T	124Trimetben	10.0000	10.0223	-0.22	96	0.00
94	T	sbutylbenzen	10.0000	10.4677	-4.68	97	0.00
95	PT	13Diclorbenz	10.0000	9.5875	4.12	96	0.00
96	T	pIsopropylto	10.0000	10.4444	-4.44	99	0.00
97	PT	14dichlorobe	10.0000	9.6963	3.04	98	0.00
98	PT	12dichlorobe	10.0000	9.4130	5.87	97	0.00
99	T	nButylbenzen	10.0000	10.2074	-2.07	97	0.00
100	PT	12dibromo3cl	10.0000	8.4889	15.11	94	0.00
101	T	135Trichlorobenzene	10.0000	9.4640	5.36	96	0.00
102	PT	124Trichlobe	10.0000	9.4984	5.02	98	0.00
103	T	Hexachlorobu	10.0000	10.3018	-3.02	101	0.00
104	T	Naphthalene	10.0000	9.4816	5.18	97	0.00
105	T	123Trichlben	10.0000	9.1963	8.04	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Fri May 06 09:38:35 2022

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV2.D Vial: 13
Acq On : 5 May 2022 12:28 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 12:49:30 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1304377	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1100048	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	622966	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	353820	20.406	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	90853	19.642	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98	%		
61) SURRd8Tolule	9.71	98	1396917	20.475	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.25	95	612749	19.878	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	183097	10.8779	ug/L	100
3) Chloromethan	2.10	50	149907	9.6483	ug/L	97
4) VinylChlorid	2.24	62	158590	10.0031	ug/L	97
5) Bromomethane	2.70	94	91374	9.9741	ug/L	93
6) Chloroethane	2.87	64	99124	9.6995	ug/L	98
7) Dichloroflmethane	3.18	67	362019	10.4853	ug/L	99
8) Trichlorofma	3.26	101	277540	10.9613	ug/L	98
9) Ethylether	3.71	59	122957	9.6730	ug/L	98
10) dichlorotfluoroethan	3.72	67	357103	11.0664	ug/L	99
11) propyleneoxide	3.76	58	458414	101.6899	ug/L	98
12) Acrolein	3.84	56	187974	50.8898	ug/L	100
13) 11dichlorthe	3.99	96	176552	10.5728	ug/L	99
14) Trichlorotfluoroeth	4.03	101	316313	22.7522	ug/L	99
15) Acetone	4.05	43	639271	94.0908	ug/L	99
16) Iodomethane	4.16	142	361438	20.9041	ug/L	100
17) Carbon Dislf	4.25	76	671317	21.0950	ug/L	99
18) allylchloride	4.47	41	577123	21.0505	ug/L	99
19) methylacetate	4.53	74	47217	9.3683	ug/L	90
20) Methylchlorid	4.63	84	196365	9.4835	ug/L	99
21) tbutylalcohol	4.83	59	888305	483.7076	ug/L	100
22) Acrylonitrile	4.94	53	427155	52.0744	ug/L	95
23) t12dichlorte	5.01	96	187559	9.9101	ug/L	96
24) MtBE	5.04	73	422691	9.9327	ug/L	99
25) Hexane	5.40	57	681108	24.1667	ug/L	99
26) 11dichlorota	5.53	63	331528	10.1230	ug/L	99
27) Vinylacetate	5.62	43	2770912	121.5457	ug/L	99
28) chloroprene	5.67	53	618550	22.3886	ug/L	98
29) Diisopether	5.68	45	525745	10.3817	ug/L	99
30) ETBE	6.13	59	408840	9.7708	ug/L	99
31) 22dichloropr	6.27	77	195340	10.1563	ug/L	99
32) c12dichlorte	6.26	96	206197	10.3057	ug/L	98
33) 2Butanone	6.28	72	267944	99.8523	ug/L	98
34) propionitrile	6.32	54	354811	100.6026	ug/L	99
35) Ethylacetate	6.38	88	42043	49.6767	ug/L #	91
36) methacrylonitrile	6.53	67	201276	20.1945	ug/L	97
37) Bromochlorma	6.55	128	90343	9.5669	ug/L	98
38) Tetrahydofur	6.63	42	578249	99.8970	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV2.D Vial: 13
Acq On : 5 May 2022 12:28 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 12:49:30 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	317482	9.9094	ug/L	99
40)	111trichlota	6.90	97	265168	10.2551	ug/L	97
42)	Cyclohexane	6.99	56	274518	11.2623	ug/L	98
43)	Carbtetraclo	7.12	119	215216	10.6350	ug/L	98
44)	11dicloprope	7.11	110	94798	10.2608	ug/L	98
46)	Benzene	7.36	78	755739	10.3436	ug/L	99
47)	12dichlorota	7.36	62	242434	10.1091	ug/L	98
48)	TAME	7.53	73	381005	9.7612	ug/L	97
49)	trichloroete	8.17	95	189506	9.8840	ug/L	98
50)	methylcyclohexane	8.43	83	432660	10.3157	ug/L	98
51)	12dicloropra	8.42	63	203130	10.0499	ug/L	98
52)	23Dicl1propene	8.48	75	289153	10.0360	ug/L	99
53)	Dibromometha	8.56	93	113794	10.0236	ug/L	98
54)	methylmethacrylate	8.59	69	140393	9.8960	ug/L	97
55)	14dioxane	8.60	88	127329	448.1054	ug/L	98
56)	Bromodiclrma	8.76	83	233289	9.7056	ug/L	97
57)	2Nitropropane	9.03	43	535905	105.0151	ug/L	99
58)	2CLEVE	9.15	63	307169	49.1359	ug/L	99
59)	c13dicloproe	9.34	75	271645	10.0090	ug/L	99
60)	4Meth2Pentan	9.54	43	1627348	101.0139	ug/L	99
62)	Toluene	9.79	92	487781	10.3657	ug/L	99
63)	t13Dicloprop	10.05	75	220276	9.9460	ug/L	99
64)	ethylmethacrylate	10.20	69	519081	20.6838	ug/L	99
65)	112Triclotha	10.28	83	145814	10.1078	ug/L	98
66)	Tetrachlorte	10.52	166	205072	10.3498	ug/L	96
67)	13Diclorpropa	10.51	76	302634	10.1484	ug/L	98
69)	2Hexanone	10.62	43	1205558	91.5737	ug/L	99
70)	Clorodibrmta	10.81	129	177655	9.4793	ug/L	98
71)	12Dibrometha	10.97	107	161885	9.3474	ug/L	100
72)	Chlorobenzen	11.65	112	520744	9.7206	ug/L	100
73)	1Clhexane	11.63	91	277600	10.4258	ug/L	95
74)	1112Tetclota	11.76	131	155141	9.0860	ug/L	97
75)	Ethylbenzene	11.82	91	872575	10.2284	ug/L	98
76)	m p-Xylene	11.98	106	686183	20.7201	ug/L	98
77)	o-Xylene	12.52	106	327599	9.8841	ug/L	97
78)	Styrene	12.53	104	543054	10.1671	ug/L	99
79)	Bromoform	12.76	173	116184	9.2787	ug/L	97
80)	Isopropylben	13.05	105	835042	10.5218	ug/L	99
81)	cyclohexanone	13.13	55	180444	167.6771	ug/L	98
84)	Bromobenzene	13.46	156	206913	9.5164	ug/L	100
85)	1122Tetrclta	13.43	83	249934	9.6715	ug/L	99
86)	123Triclproa	13.49	75	288858	9.1537	ug/L	99
87)	14dichloro2butene	13.51	53	68052	9.3423	ug/L	98
88)	n-Propylbenz	13.64	91	979230	10.2561	ug/L	99
89)	2chlorotolue	13.75	91	586479	9.7060	ug/L	100
90)	4chlorotolue	13.90	91	690779	10.0348	ug/L	100
91)	135Trimebenz	13.89	105	691217	10.1023	ug/L	100
92)	tbutylbenzen	14.36	119	587390	10.1570	ug/L	99
93)	124Trimetben	14.43	105	667461	10.0223	ug/L	99
94)	sbutylbenzen	14.68	105	857883	10.4677	ug/L	100
95)	13Diclorbenz	14.82	146	376249	9.5875	ug/L	98
96)	pIsopropylto	14.90	119	733213	10.4444	ug/L	99
97)	14dichlorobe	14.94	146	391618	9.6963	ug/L	97
98)	12dichlorobe	15.49	146	357992	9.4130	ug/L	97
99)	nButylbenzen	15.49	91	666492	10.2074	ug/L	99
100)	12dibromo3cl	16.58	157	41571	8.4889	ug/L	88
101)	135Trichlorobenzene	16.91	180	288837	9.4640	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV2.D Vial: 13
Acq On : 5 May 2022 12:28 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 12:49:30 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	229268	9.4984	ug/L	99
103) Hexachlorobu	17.97	225	111140	10.3018	ug/L	96
104) Naphthalene	18.02	128	504614	9.4816	ug/L	99
105) 123Trichlben	18.33	180	211115	9.1963	ug/L	100

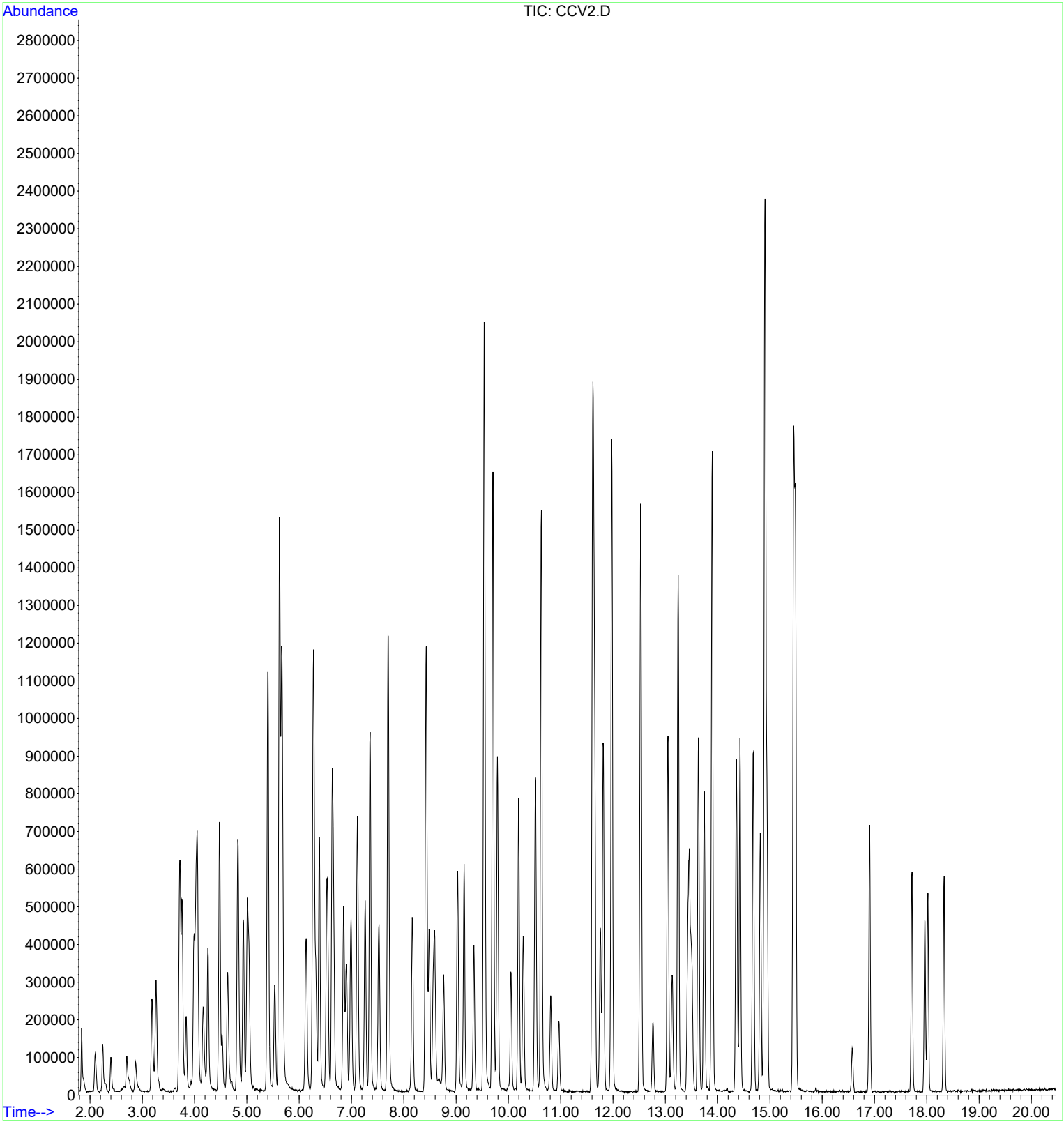
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV2.D Vial: 13
Acq On : 5 May 2022 12:28 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 12:49:30 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\CCB1.D Vial: 15
Acq On : 5 May 2022 13:26 Operator: DGS-RLD
Sample : 211603,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 13:47:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1255693	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1060285	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	572748	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	343801	20.597	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.27	102	87829	19.724	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1324543	20.167	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.25	95	565802	19.965	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	7206	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.27	76	3500	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.83	59	5289	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\CCB1.D Vial: 15
Acq On : 5 May 2022 13:26 Operator: DGS-RLD
Sample : 211603,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 13:47:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.54	43	5601	Below Cal #	37
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.63	43	5894	Below Cal #	86
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3188	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.63	91	4594	N.D.	
89)	2chlorotolue	13.63	91	4333	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.68	105	3250	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.90	119	3544	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.48	91	3846	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\CCB1.D Vial: 15
Acq On : 5 May 2022 13:26 Operator: DGS-RLD
Sample : 211603,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 13:47:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.02	128	6435	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

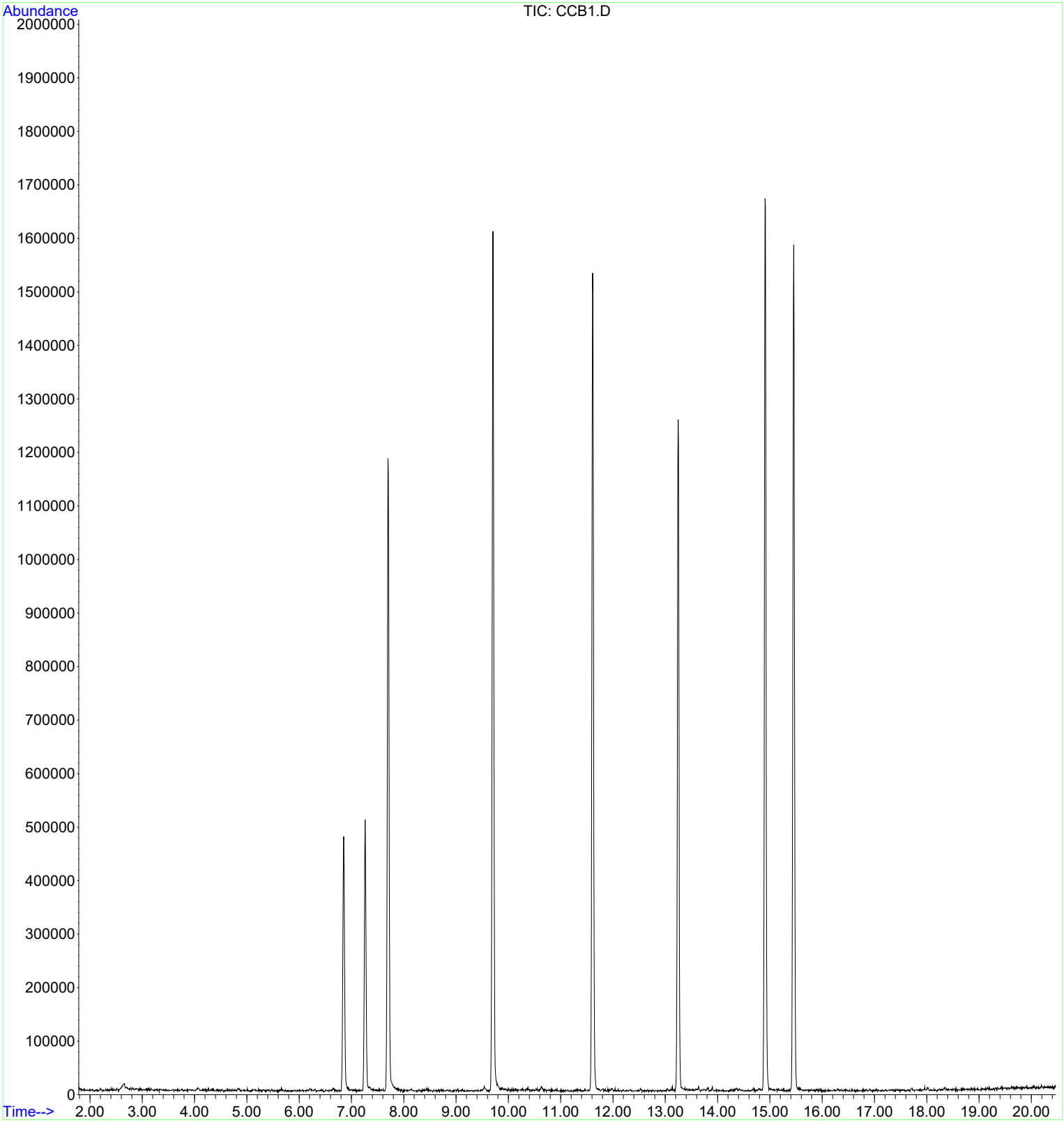
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\CCB1.D Vial: 15
Acq On : 5 May 2022 13:26 Operator: DGS-RLD
Sample : 211603,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 13:47:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCVF2.D Vial: 34
Acq On : 5 May 2022 22:39 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 05 23:00:22 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	96	0.00
2	PT	Dichlorodi	0.2581	0.2851	-10.46	100	0.00
3	PT	Chloromethan	0.2382	0.2253	5.42	88	0.00
4	PT	VinylChlorid	0.2431	0.2513	-3.37	95	0.00
5	PT	Bromomethane	0.1405	0.1443	-2.70	101	0.00
6	PT	Chloroethane	0.1567	0.1538	1.85	99	0.00
7	T	Dichloroflmethane	0.5294	0.5475	-3.42	98	0.00
8	PT	Trichlorofma	0.3882	0.4268	-9.94	97	0.00
9	T	Ethylether	0.1949	0.1977	-1.44	101	0.00
10	T	dichlorotfluoroethan	0.4948	0.5489	-10.93	100	0.00
11	T	propyleneoxide	0.0691	0.0715	-3.47	102	0.00
12	T	Acrolein	0.0566	0.0509	10.07	87	0.00
13	PT	11dichlorthe	0.2560	0.2726	-6.48	99	0.00
14	PT	Trichlorotfluoroeth	0.2132	0.2342	-9.85	98	0.00
15	PT	Acetone	0.1042	0.0928#	10.94	92	0.00
16	T	Iodomethane	0.2651	0.2820	-6.37	98	0.00
17	PT	Carbon Dislf	0.4879	0.5112	-4.78	98	0.00
18	T	allylchloride	0.4204	0.4307	-2.45	95	0.00
19	PT	methylacetate	0.0773	0.0784#	-1.42	113	0.00
20	PT	Methylchlorid	0.3175	0.3123	1.64	99	0.00
21	T	tbutylalcohol	0.0282	0.0307	-8.87	106	0.00
22	T	Acrylonitrile	0.1258	0.1328	-5.56	103	0.00
23	PT	t12dichlorte	0.2902	0.3022	-4.14	99	0.00
24	PT	MtBE	0.6525	0.6686	-2.47	99	0.00
25	T	Hexane	0.4321	0.4755	-10.04	92	0.00
26	PT	11dichlorota	0.5022	0.5172	-2.99	98	0.00
27	T	Vinylacetate	0.3685	0.3121	15.31	74	0.00
28	T	chloroprene	0.4236	0.4721	-11.45	98	0.00
29	T	Diisopether	0.7765	0.8206	-5.68	96	0.00
30	T	ETBE	0.6416	0.6626	-3.27	99	0.00
31	T	22dichloropr	0.2949	0.2573	12.75	84	0.00
32	PT	c12dichlorte	0.3068	0.3295	-7.40	102	0.00
33	PT	2Butanone	0.0411	0.0422#	-2.68	102	0.00
34	T	propionitrile	0.0541	0.0562	-3.88	102	0.00
35	T	Ethylacetate	0.0130	0.0133#	-2.31	103	0.00
36	T	methacrylonitrile	0.1528	0.1554	-1.70	99	0.00
37	T	Bromochlorma	0.1448	0.1478	-2.07	101	0.00
38	T	Tetrahydofur	0.0888	0.0927	-4.39	99	0.00
39	PT	Chloroform	0.4912	0.5039	-2.59	100	0.00
40	PT	111trichlota	0.3965	0.4140	-4.41	98	0.00
41	S	SURRDibrflma	0.2659	0.2661	-0.08	97	0.00
42	PT	Cyclohexane	0.3737	0.4114	-10.09	97	0.00
43	PT	Carbtetraclo	0.3103	0.3428	-10.47	103	0.00
44	T	11dicloprope	0.1417	0.1465	-3.39	98	0.00
45	S	SURR12DCAd4	0.0709	0.0727	-2.54	95	0.00
46	PT	Benzene	1.1203	1.1959	-6.75	98	0.00
47	PT	12dichlorota	0.3677	0.3746	-1.88	97	0.00
48	T	TAME	0.5985	0.6088	-1.72	97	0.00

49	PT	trichloroete	0.2940	0.3054	-3.88	100	0.00
50	PT	methylcyclohexane	0.5670	0.6481	-14.30	98	0.00
51	PT	12dicloropra	0.3099	0.3157	-1.87	97	0.00
52	T	23Dicl1propene	0.4418	0.4500	-1.86	98	0.00
53	T	Dibromometha	0.1741	0.1743	-0.11	99	0.00
54	T	methylmethacrylate	0.2175	0.2232	-2.62	102	0.00
55	T	14dioxane	0.0044	0.0043#	2.27	102	0.00
56	PT	Bromodiclrma	0.3686	0.3778	-2.50	99	0.00
57	T	2Nitropropane	0.0782	0.0802	-2.56	96	0.00
58	T	2CLEVE	0.0959	0.1011	-5.42	106	0.00
59	PT	c13dicloproe	0.4161	0.4206	-1.08	97	0.00
60	PT	4Meth2Pentan	0.2366	0.2587	-9.34	99	0.00
61	S	SURRd8Tolule	1.0461	1.0645	-1.76	96	0.00
62	PT	Toluene	0.7215	0.7539	-4.49	98	0.00
63	PT	t13Dicloprop	0.3396	0.3336	1.77	96	0.00
64	T	ethylmethacrylate	0.3848	0.4166	-8.26	102	0.00
65	PT	112Triclotha	0.2212	0.2262	-2.26	100	0.00
66	PT	Tetrachlorte	0.3038	0.3297	-8.53	99	0.00
67	T	13Diclorpropa	0.4572	0.4627	-1.20	100	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	97	0.00
69	PT	2Hexanone	0.2204	0.2360	-7.08	100	0.00
70	PT	Clorodibrmta	0.3407	0.3417	-0.29	99	0.00
71	PT	12Dibrometha	0.3149	0.3150	-0.03	100	0.00
72	PT	Chlorobenzen	0.9740	0.9685	0.56	96	0.00
73	T	1Clhexane	0.4841	0.5073	-4.79	100	0.00
74	T	1112Tetclota	0.3104	0.3064	1.29	97	0.00
75	PT	Ethylbenzene	1.5510	1.6303	-5.11	97	0.00
76	PT	m p-Xylene	0.6021	0.6369	-5.78	98	0.00
77	PT	o-Xylene	0.6026	0.6234	-3.45	96	0.00
78	PT	Styrene	0.9711	1.0207	-5.11	97	0.00
79	PT	Bromoform	0.2277	0.2242	1.54	101	0.00
80	PT	Isopropylben	1.4429	1.5515	-7.53	98	0.00
81	T	cyclohexanone	0.0184	0.0168#	8.70	95	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	104	0.00
83	S	SURR4BrFBenz	0.9896	0.9456	4.45	100	0.00
84	T	Bromobenzene	0.6980	0.6495	6.95	96	0.00
85	PT	1122Tetrclta	0.8297	0.7428	10.47	95	0.00
86	T	123Triclproa	1.0131	0.8964	11.52	95	0.00
87	T	14dichloro2butene	0.2339	0.2064	11.76	97	0.00
88	T	n-Propylbenz	3.0653	3.0900	-0.81	97	0.00
89	T	2chlorotolue	1.9399	1.8640	3.91	99	0.00
90	T	4chlorotolue	2.2100	2.1437	3.00	97	0.00
91	T	135Trimebenz	2.1966	2.1922	0.20	97	0.00
92	T	tbutylbenzen	1.8566	1.9040	-2.55	100	0.00
93	T	124Trimetben	2.1381	2.1635	-1.19	99	0.00
94	T	sbutylbenzen	2.6311	2.7379	-4.06	99	0.00
95	PT	13Diclorbenz	1.2599	1.2312	2.28	100	0.00
96	T	pIsopropylto	2.2538	2.3251	-3.16	100	0.00
97	PT	14dichlorobe	1.2966	1.2254	5.49	98	0.00
98	PT	12dichlorobe	1.2210	1.1284	7.58	97	0.00
99	T	nButylbenzen	2.0963	2.0839	0.59	97	0.00
100	PT	12dibromo3cl	0.1572	0.1375	12.53	99	0.00
101	T	135Trichlorobenzene	0.9798	0.9160	6.51	97	0.00
102	PT	124Trichlobe	0.7749	0.7338	5.30	100	0.00
103	T	Hexachlorobu	0.3464	0.3433	0.89	100	0.00
104	T	Naphthalene	1.7086	1.7430	-2.01	107	0.00
105	T	123Trichlben	0.7370	0.6892	6.49	99	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W042822.M Fri May 06 09:45:59 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCVF2.D Vial: 34
Acq On : 5 May 2022 22:39 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 05 23:00:22 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	96	0.00
2	PT	Dichlorodi	10.0000	11.0469	-10.47	100	0.00
3	PT	Chloromethan	10.0000	9.4583	5.42	88	0.00
4	PT	VinylChlorid	10.0000	10.3362	-3.36	95	0.00
5	PT	Bromomethane	10.0000	10.2715	-2.71	101	0.00
6	PT	Chloroethane	10.0000	9.8169	1.83	99	0.00
7	T	Dichloroflmethane	10.0000	10.3414	-3.41	98	0.00
8	PT	Trichlorofma	10.0000	10.9937	-9.94	97	0.00
9	T	Ethylether	10.0000	10.1443	-1.44	101	0.00
10	T	dichlorotfluoroethan	10.0000	11.0933	-10.93	100	0.00
11	T	propyleneoxide	100.0000	103.4334	-3.43	102	0.00
12	T	Acrolein	50.0000	44.9423	10.12	87	0.00
13	PT	11dichlorthe	10.0000	10.6481	-6.48	99	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.9692	-9.85	98	0.00
15	PT	Acetone	100.0000	89.0664	10.93	92	0.00
16	T	Iodomethane	20.0000	21.2743	-6.37	98	0.00
17	PT	Carbon Dislf	20.0000	20.9514	-4.76	98	0.00
18	T	allylchloride	20.0000	20.4906	-2.45	95	0.00
19	PT	methylacetate	10.0000	10.1422	-1.42	113	0.00
20	PT	Methylchlorid	10.0000	9.8374	1.63	99	0.00
21	T	tbutylalcohol	500.0000	544.8038	-8.96	106	0.00
22	T	Acrylonitrile	50.0000	52.8012	-5.60	103	0.00
23	PT	t12dichlorte	10.0000	10.4132	-4.13	99	0.00
24	PT	MtBE	10.0000	10.2463	-2.46	99	0.00
25	T	Hexane	20.0000	22.0088	-10.04	92	0.00
26	PT	11dichlorota	10.0000	10.2989	-2.99	98	0.00
27	T	Vinylacetate	100.0000	85.1048	14.90	74	0.00
28	T	chloroprene	20.0000	22.2910	-11.46	98	0.00
29	T	Diisopether	10.0000	10.5679	-5.68	96	0.00
30	T	ETBE	10.0000	10.3276	-3.28	99	0.00
31	T	22dichloropr	10.0000	8.7244	12.76	84	0.00
32	PT	c12dichlorte	10.0000	10.7393	-7.39	102	0.00
33	PT	2Butanone	100.0000	102.6254	-2.63	102	0.00
34	T	propionitrile	100.0000	104.0089	-4.01	102	0.00
35	T	Ethylacetate	50.0000	51.2520	-2.50	103	0.00
36	T	methacrylonitrile	20.0000	20.3352	-1.68	99	0.00
37	T	Bromochlorma	10.0000	10.2077	-2.08	101	0.00
38	T	Tetrahydofur	100.0000	104.4130	-4.41	99	0.00
39	PT	Chloroform	10.0000	10.2574	-2.57	100	0.00
40	PT	111trichlota	10.0000	10.4419	-4.42	98	0.00
41	S	SURRDibrflma	20.0000	20.0154	-0.08	97	0.00
42	PT	Cyclohexane	10.0000	11.0084	-10.08	97	0.00
43	PT	Carbtetraclo	10.0000	11.0479	-10.48	103	0.00
44	T	11dicloprope	10.0000	10.3448	-3.45	98	0.00
45	S	SURR12DCAd4	20.0000	20.4969	-2.48	95	0.00
46	PT	Benzene	10.0000	10.6751	-6.75	98	0.00
47	PT	12dichlorota	10.0000	10.1880	-1.88	97	0.00
48	T	TAME	10.0000	10.1730	-1.73	97	0.00

49	PT	trichloroete	10.0000	10.3892	-3.89	100	0.00
50	PT	methylcyclohexane	10.0000	10.0800	-0.80	98	0.00
51	PT	12dicloropra	10.0000	10.1862	-1.86	97	0.00
52	T	23Dicl1propene	10.0000	10.1872	-1.87	98	0.00
53	T	Dibromometha	10.0000	10.0118	-0.12	99	0.00
54	T	methylmethacrylate	10.0000	10.2624	-2.62	102	0.00
55	T	14dioxane	500.0000	489.2264	2.15	102	0.00
56	PT	Bromodiclrma	10.0000	10.2498	-2.50	99	0.00
57	T	2Nitropropane	100.0000	102.4569	-2.46	96	0.00
58	T	2CLEVE	50.0000	52.7179	-5.44	106	0.00
59	PT	c13dicloproe	10.0000	10.1074	-1.07	97	0.00
60	PT	4Meth2Pentan	100.0000	105.1645	-5.16	99	0.00
61	S	SURRd8Tolule	20.0000	20.3523	-1.76	96	0.00
62	PT	Toluene	10.0000	10.4484	-4.48	98	0.00
63	PT	t13Dicloprop	10.0000	9.8239	1.76	96	0.00
64	T	ethylmethacrylate	20.0000	21.6551	-8.28	102	0.00
65	PT	112Triclotha	10.0000	10.2273	-2.27	100	0.00
66	PT	Tetrachlorte	10.0000	10.8522	-8.52	99	0.00
67	T	13Diclorpropa	10.0000	10.1184	-1.18	100	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	97	0.00
69	PT	2Hexanone	100.0000	99.1796	0.82	100	0.00
70	PT	Clorodibrmta	10.0000	10.0289	-0.29	99	0.00
71	PT	12Dibrometha	10.0000	10.0052	-0.05	100	0.00
72	PT	Chlorobenzen	10.0000	9.9441	0.56	96	0.00
73	T	1Clhexane	10.0000	10.4793	-4.79	100	0.00
74	T	1112Tetclota	10.0000	9.8699	1.30	97	0.00
75	PT	Ethylbenzene	10.0000	10.5114	-5.11	97	0.00
76	PT	m p-Xylene	20.0000	21.1569	-5.78	98	0.00
77	PT	o-Xylene	10.0000	10.3450	-3.45	96	0.00
78	PT	Styrene	10.0000	10.5109	-5.11	97	0.00
79	PT	Bromoform	10.0000	9.8478	1.52	101	0.00
80	PT	Isopropylben	10.0000	10.7530	-7.53	98	0.00
81	T	cyclohexanone	200.0000	171.8748	14.06	95	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	104	0.00
83	S	SURR4BrFBenz	20.0000	19.1100	4.45	100	0.00
84	T	Bromobenzene	10.0000	9.3051	6.95	96	0.00
85	PT	1122Tetrclta	10.0000	8.9534	10.47	95	0.00
86	T	123Triclproa	10.0000	8.8478	11.52	95	0.00
87	T	14dichloro2butene	10.0000	8.8274	11.73	97	0.00
88	T	n-Propylbenz	10.0000	10.0808	-0.81	97	0.00
89	T	2chlorotolue	10.0000	9.6089	3.91	99	0.00
90	T	4chlorotolue	10.0000	9.7001	3.00	97	0.00
91	T	135Trimebenz	10.0000	9.9799	0.20	97	0.00
92	T	tbutylbenzen	10.0000	10.2549	-2.55	100	0.00
93	T	124Trimetben	10.0000	10.1189	-1.19	99	0.00
94	T	sbutylbenzen	10.0000	10.4058	-4.06	99	0.00
95	PT	13Diclorbenz	10.0000	9.7722	2.28	100	0.00
96	T	pIsopropylto	10.0000	10.3165	-3.16	100	0.00
97	PT	14dichlorobe	10.0000	9.4509	5.49	98	0.00
98	PT	12dichlorobe	10.0000	9.2418	7.58	97	0.00
99	T	nButylbenzen	10.0000	9.9409	0.59	97	0.00
100	PT	12dibromo3cl	10.0000	8.7485	12.52	99	0.00
101	T	135Trichlorobenzene	10.0000	9.3488	6.51	97	0.00
102	PT	124Trichlobe	10.0000	9.4690	5.31	100	0.00
103	T	Hexachlorobu	10.0000	9.9118	0.88	100	0.00
104	T	Naphthalene	10.0000	10.2014	-2.01	107	0.00
105	T	123Trichlben	10.0000	9.3507	6.49	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Fri May 06 09:46:28 2022

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF2.D Vial: 34
Acq On : 5 May 2022 22:39 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 23:00:22 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1303077	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1071450	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	637939	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	346693	20.015	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.26	102	94715	20.497	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102	%		
61) SURRd8Tolule	9.71	98	1387134	20.352	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.25	95	603227	19.110	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 96	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	185756	11.0469	ug/L	96
3) Chloromethan	2.11	50	146808	9.4583	ug/L	95
4) VinylChlorid	2.25	62	163707	10.3362	ug/L	99
5) Bromomethane	2.71	94	94005	10.2715	ug/L	97
6) Chloroethane	2.87	64	100224	9.8169	ug/L	96
7) Dichloroflmethane	3.18	67	356695	10.3414	ug/L	99
8) Trichlorofma	3.26	101	278083	10.9937	ug/L	98
9) Ethylether	3.71	59	128819	10.1443	ug/L	96
10) dichlorotfluoroethan	3.72	67	357615	11.0933	ug/L	99
11) propyleneoxide	3.76	58	465809	103.4334	ug/L	99
12) Acrolein	3.84	56	165840	44.9423	ug/L	98
13) 11dichlorthe	3.99	96	177632	10.6481	ug/L	99
14) Trichlorotfluoroeth	4.03	101	305122	21.9692	ug/L	99
15) Acetone	4.05	43	604531	89.0664	ug/L	98
16) Iodomethane	4.16	142	367473	21.2743	ug/L	99
17) Carbon Dislf	4.25	76	666083	20.9514	ug/L	99
18) allylchloride	4.47	41	561214	20.4906	ug/L	99
19) methylacetate	4.53	74	51067	10.1422	ug/L	86
20) Methylchlorid	4.63	84	203489	9.8374	ug/L	97
21) tbutylalcohol	4.83	59	999508	544.8038	ug/L	100
22) Acrylonitrile	4.93	53	432685	52.8012	ug/L	98
23) t12dichlorte	5.01	96	196884	10.4132	ug/L	99
24) MtBE	5.04	73	435603	10.2463	ug/L	98
25) Hexane	5.40	57	619673	22.0088	ug/L	99
26) 11dichlorota	5.53	63	336955	10.2989	ug/L	98
27) Vinylacetate	5.62	43	2033471	85.1048	ug/L	98
28) chloroprene	5.67	53	615240	22.2910	ug/L	100
29) Diisopether	5.68	45	534644	10.5679	ug/L	95
30) ETBE	6.13	59	431707	10.3276	ug/L	99
31) 22dichloropr	6.27	77	167631	8.7244	ug/L	99
32) c12dichlorte	6.26	96	214658	10.7393	ug/L	96
33) 2Butanone	6.28	72	275111	102.6254	ug/L	99
34) propionitrile	6.32	54	366459	104.0089	ug/L	100
35) Ethylacetate	6.38	88	43333	51.2520	ug/L	94
36) methacrylonitrile	6.53	67	202476	20.3352	ug/L	99
37) Bromochlorma	6.55	128	96298	10.2077	ug/L	96
38) Tetrahydofur	6.63	42	603787	104.4130	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF2.D Vial: 34
Acq On : 5 May 2022 22:39 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 23:00:22 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	328303	10.2574	ug/L	99
40)	111trichlota	6.90	97	269729	10.4419	ug/L	99
42)	Cyclohexane	6.99	56	268062	11.0084	ug/L	97
43)	Carbtetraclo	7.12	119	223349	11.0479	ug/L	98
44)	11dicloprope	7.11	110	95479	10.3448	ug/L	96
46)	Benzene	7.36	78	779182	10.6751	ug/L	100
47)	12dichlorota	7.36	62	244082	10.1880	ug/L	99
48)	TAME	7.53	73	396681	10.1730	ug/L	98
49)	trichloroete	8.16	95	198994	10.3892	ug/L	98
50)	methylcyclohexane	8.43	83	422244	10.0800	ug/L	99
51)	12dicloropra	8.42	63	205681	10.1862	ug/L	99
52)	23Dicl1propene	8.48	75	293216	10.1872	ug/L	99
53)	Dibromometha	8.56	93	113547	10.0118	ug/L	98
54)	methylmethacrylate	8.59	69	145447	10.2624	ug/L	99
55)	14dioxane	8.60	88	138875	489.2264	ug/L	99
56)	Bromodiclrma	8.76	83	246125	10.2498	ug/L	99
57)	2Nitropropane	9.03	43	522329	102.4569	ug/L	98
58)	2CLEVE	9.15	63	329233	52.7179	ug/L	99
59)	c13dicloproe	9.34	75	274042	10.1074	ug/L	98
60)	4Meth2Pentan	9.54	43	1685628	105.1645	ug/L	99
62)	Toluene	9.79	92	491183	10.4484	ug/L	100
63)	t13Dicloprop	10.05	75	217354	9.8239	ug/L	98
64)	ethylmethacrylate	10.19	69	542916	21.6551	ug/L	98
65)	112Triclotha	10.28	83	147391	10.2273	ug/L	98
66)	Tetrachlorte	10.53	166	214814	10.8522	ug/L	98
67)	13Diclorpropa	10.51	76	301439	10.1184	ug/L	100
69)	2Hexanone	10.63	43	1264053	99.1796	ug/L	100
70)	Clorodibrmta	10.81	129	183068	10.0289	ug/L	99
71)	12Dibrometha	10.97	107	168773	10.0052	ug/L	98
72)	Chlorobenzen	11.65	112	518870	9.9441	ug/L	98
73)	1Clhexane	11.63	91	271770	10.4793	ug/L	97
74)	1112Tetclota	11.76	131	164144	9.8699	ug/L	96
75)	Ethylbenzene	11.81	91	873407	10.5114	ug/L	97
76)	m p-Xylene	11.98	106	682436	21.1569	ug/L	99
77)	o-Xylene	12.52	106	333964	10.3450	ug/L	99
78)	Styrene	12.53	104	546820	10.5109	ug/L	99
79)	Bromoform	12.77	173	120105	9.8478	ug/L	100
80)	Isopropylben	13.05	105	831201	10.7530	ug/L	98
81)	cyclohexanone	13.13	55	180427	171.8748	ug/L	98
84)	Bromobenzene	13.46	156	207181	9.3051	ug/L	100
85)	1122Tetrclta	13.43	83	236940	8.9534	ug/L	98
86)	123Triclproa	13.50	75	285916	8.8478	ug/L	94
87)	14dichloro2butene	13.51	53	65847	8.8274	ug/L	96
88)	n-Propylbenz	13.64	91	985624	10.0808	ug/L	99
89)	2chlorotolue	13.75	91	594564	9.6089	ug/L	99
90)	4chlorotolue	13.90	91	683786	9.7001	ug/L	99
91)	135Trimebenz	13.89	105	699252	9.9799	ug/L	99
92)	tbutylbenzen	14.36	119	607307	10.2549	ug/L	99
93)	124Trimetben	14.43	105	690095	10.1189	ug/L	99
94)	sbutylbenzen	14.68	105	873305	10.4058	ug/L	97
95)	13Diclorbenz	14.82	146	392714	9.7722	ug/L	97
96)	pIsopropylto	14.90	119	741642	10.3165	ug/L	99
97)	14dichlorobe	14.94	146	390881	9.4509	ug/L	98
98)	12dichlorobe	15.49	146	359928	9.2418	ug/L	97
99)	nButylbenzen	15.49	91	664688	9.9409	ug/L	99
100)	12dibromo3cl	16.57	157	43872	8.7485	ug/L	93
101)	135Trichlorobenzene	16.91	180	292178	9.3488	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF2.D Vial: 34
Acq On : 5 May 2022 22:39 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 23:00:22 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	234054	9.4690	ug/L	99
103) Hexachlorobu	17.96	225	109503	9.9118	ug/L	99
104) Naphthalene	18.02	128	555970	10.2014	ug/L	99
105) 123Trichlben	18.33	180	219819	9.3507	ug/L	98

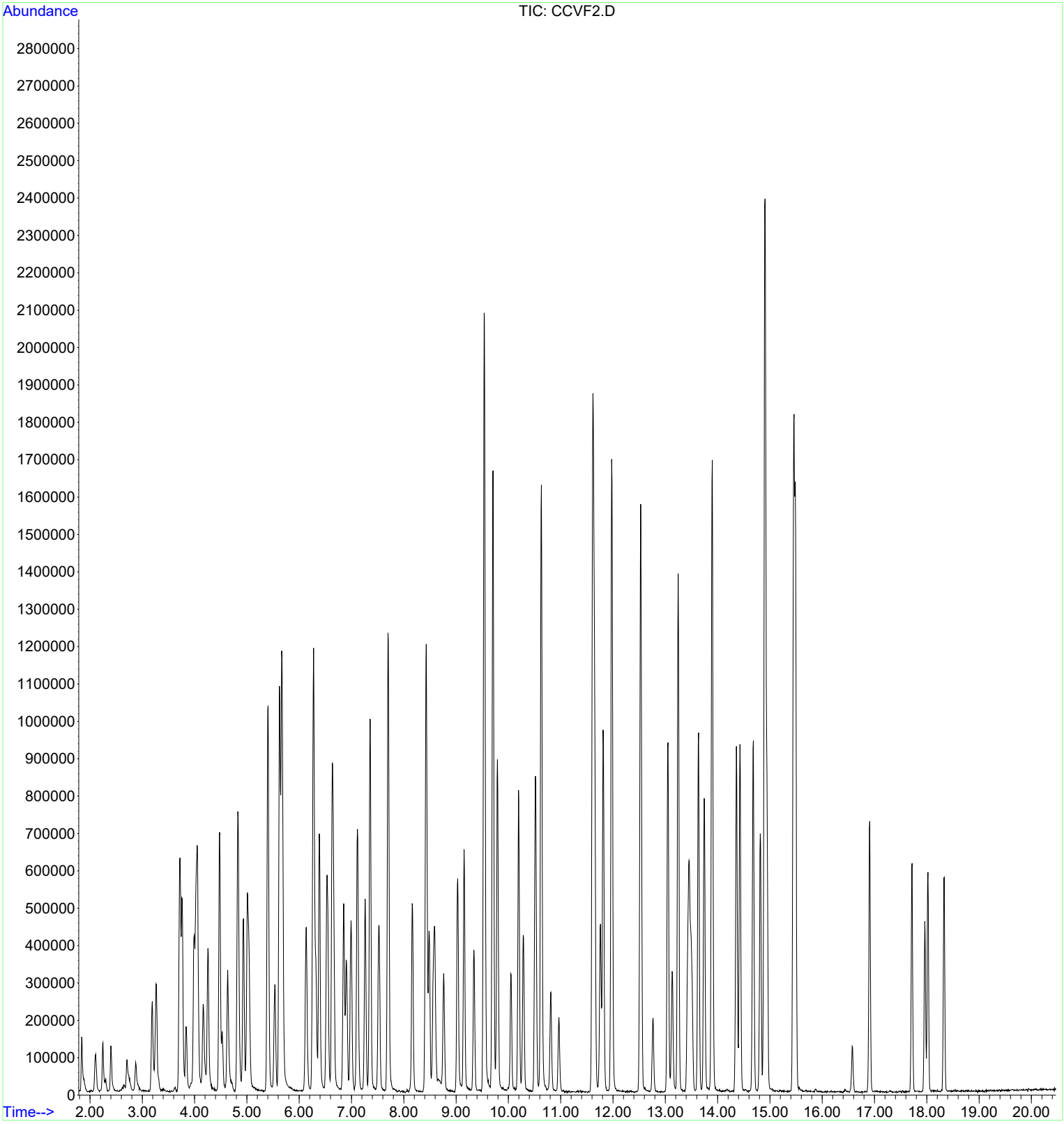
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF2.D Vial: 34
Acq On : 5 May 2022 22:39 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 23:00:22 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Data File : C:\Instarch\Data\MAY0522\BFB3.D Vial: 35
Acq On : 6 May 2022 7:12 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.663 to 4.675 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.7	10205	PASS
75	95	30	60	46.4	30237	PASS
95	95	100	100	100.0	65162	PASS
96	95	5	9	7.5	4913	PASS
173	174	0.00	2	1.2	670	PASS
174	95	50	100	85.6	55786	PASS
175	174	5	9	7.0	3921	PASS
176	174	95	101	95.7	53360	PASS
177	176	5	9	6.1	3278	PASS

W042822.M Fri May 06 09:34:23 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCV3.D Vial: 37
Acq On : 6 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 06 08:14:41 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	96	0.00
2	PT	Dichlorodi	0.2581	0.2766	-7.17	97	0.00
3	PT	Chloromethan	0.2382	0.2275	4.49	89	0.00
4	PT	VinylChlorid	0.2431	0.2414	0.70	91	0.00
5	PT	Bromomethane	0.1405	0.1402	0.21	98	0.00
6	PT	Chloroethane	0.1567	0.1502	4.15	96	0.00
7	T	Dichloroflmethane	0.5294	0.5453	-3.00	98	0.00
8	PT	Trichlorofma	0.3882	0.4261	-9.76	97	0.00
9	T	Ethylether	0.1949	0.1935	0.72	99	0.00
10	T	dichlorotfluoroethan	0.4948	0.5532	-11.80	101	0.00
11	T	propyleneoxide	0.0691	0.0681	1.45	97	0.00
12	T	Acrolein	0.0566	0.0543	4.06	93	0.00
13	PT	11dichlorthe	0.2560	0.2679	-4.65	98	0.00
14	PT	Trichlorotfluoroeth	0.2132	0.2370	-11.16	99	0.00
15	PT	Acetone	0.1042	0.0954#	8.45	95	0.00
16	T	Iodomethane	0.2651	0.2790	-5.24	97	0.00
17	PT	Carbon Dislf	0.4879	0.5201	-6.60	99	0.00
18	T	allylchloride	0.4204	0.4320	-2.76	95	0.00
19	PT	methylacetate	0.0773	0.0738#	4.53	106	0.00
20	PT	Methylchlorid	0.3175	0.3049	3.97	97	0.00
21	T	tbutylalcohol	0.0282	0.0262#	7.09	91	0.00
22	T	Acrylonitrile	0.1258	0.1275	-1.35	99	0.00
23	PT	t12dichlorte	0.2902	0.2888	0.48	94	0.00
24	PT	MtBE	0.6525	0.6386	2.13	95	0.00
25	T	Hexane	0.4321	0.5028	-16.36	97	0.00
26	PT	11dichlorota	0.5022	0.5091	-1.37	97	0.00
27	T	Vinylacetate	0.3685	0.3888	-5.51	92	0.00
28	T	chloroprene	0.4236	0.4686	-10.62	97	0.00
29	T	Diisopether	0.7765	0.8053	-3.71	94	0.00
30	T	ETBE	0.6416	0.6273	2.23	94	0.00
31	T	22dichloropr	0.2949	0.3111	-5.49	102	0.00
32	PT	c12dichlorte	0.3068	0.3089	-0.68	96	0.00
33	PT	2Butanone	0.0411	0.0396#	3.65	96	0.00
34	T	propionitrile	0.0541	0.0521	3.70	94	0.00
35	T	Ethylacetate	0.0130	0.0117#	10.00	90	0.00
36	T	methacrylonitrile	0.1528	0.1470	3.80	94	0.00
37	T	Bromochlorma	0.1448	0.1449	-0.07	99	0.00
38	T	Tetrahydofur	0.0888	0.0876	1.35	94	0.00
39	PT	Chloroform	0.4912	0.4761	3.07	94	0.00
40	PT	111trichlota	0.3965	0.4146	-4.56	98	0.00
41	S	SURRDibrflma	0.2659	0.2683	-0.90	97	0.00
42	PT	Cyclohexane	0.3737	0.4198	-12.34	99	0.00
43	PT	Carbtetraclo	0.3103	0.3279	-5.67	98	0.00
44	T	11dicloprope	0.1417	0.1427	-0.71	96	0.00
45	S	SURR12DCAd4	0.0709	0.0744	-4.94	98	0.00
46	PT	Benzene	1.1203	1.1728	-4.69	96	0.00
47	PT	12dichlorota	0.3677	0.3627	1.36	94	0.00
48	T	TAME	0.5985	0.5882	1.72	94	0.00

49	PT	trichloroete	0.2940	0.2999	-2.01	99	0.00
50	PT	methylcyclohexane	0.5670	0.6583	-16.10	99	0.00
51	PT	12dicloropra	0.3099	0.3088	0.35	95	0.00
52	T	23Dicl1propene	0.4418	0.4467	-1.11	97	0.00
53	T	Dibromometha	0.1741	0.1686	3.16	96	0.00
54	T	methylmethacrylate	0.2175	0.2117	2.67	97	0.00
55	T	14dioxane	0.0044	0.0039#	11.36	94	0.00
56	PT	Bromodiclrma	0.3686	0.3558	3.47	93	0.00
57	T	2Nitropropane	0.0782	0.0803	-2.69	96	0.00
58	T	2CLEVE	0.0959	0.0905	5.63	95	0.00
59	PT	c13dicloproe	0.4161	0.4210	-1.18	97	0.00
60	PT	4Meth2Pentan	0.2366	0.2437	-3.00	93	0.00
61	S	SURRd8Tolule	1.0461	1.0711	-2.39	97	0.00
62	PT	Toluene	0.7215	0.7512	-4.12	98	0.00
63	PT	t13Dicloprop	0.3396	0.3362	1.00	97	0.00
64	T	ethylmethacrylate	0.3848	0.3893	-1.17	96	0.00
65	PT	112Triclotha	0.2212	0.2170	1.90	95	0.00
66	PT	Tetrachlorte	0.3038	0.3181	-4.71	95	0.00
67	T	13Diclorpropa	0.4572	0.4526	1.01	97	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	99	0.00
69	PT	2Hexanone	0.2204	0.2170	1.54	93	0.00
70	PT	Clorodibrmta	0.3407	0.3270	4.02	96	0.00
71	PT	12Dibrometha	0.3149	0.2964	5.87	96	0.00
72	PT	Chlorobenzen	0.9740	0.9521	2.25	96	0.00
73	T	1Clhexane	0.4841	0.4920	-1.63	99	0.00
74	T	1112Tetclota	0.3104	0.2911	6.22	94	0.00
75	PT	Ethylbenzene	1.5510	1.6005	-3.19	97	0.00
76	PT	m p-Xylene	0.6021	0.6205	-3.06	97	0.00
77	PT	o-Xylene	0.6026	0.5964	1.03	94	0.00
78	PT	Styrene	0.9711	0.9956	-2.52	97	0.00
79	PT	Bromoform	0.2277	0.2261	0.70	103	0.00
80	PT	Isopropylben	1.4429	1.4983	-3.84	96	0.00
81	T	cyclohexanone	0.0184	0.0163#	11.41	94	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	102	0.00
83	S	SURR4BrFBenz	0.9896	0.9805	0.92	101	0.00
84	T	Bromobenzene	0.6980	0.6710	3.87	97	0.00
85	PT	1122Tetrclta	0.8297	0.7671	7.54	97	0.00
86	T	123Triclproa	1.0131	0.9215	9.04	95	0.00
87	T	14dichloro2butene	0.2339	0.2127	9.06	97	0.00
88	T	n-Propylbenz	3.0653	3.0788	-0.44	95	0.00
89	T	2chlorotolue	1.9399	1.8787	3.15	97	0.00
90	T	4chlorotolue	2.2100	2.1299	3.62	95	0.00
91	T	135Trimebenz	2.1966	2.1613	1.61	94	0.00
92	T	tbutylbenzen	1.8566	1.8660	-0.51	96	0.00
93	T	124Trimetben	2.1381	2.1009	1.74	94	0.00
94	T	sbutylbenzen	2.6311	2.7337	-3.90	97	0.00
95	PT	13Diclorbenz	1.2599	1.1824	6.15	94	0.00
96	T	pIsopropylto	2.2538	2.2663	-0.55	95	0.00
97	PT	14dichlorobe	1.2966	1.2162	6.20	95	0.00
98	PT	12dichlorobe	1.2210	1.1436	6.34	97	0.00
99	T	nButylbenzen	2.0963	2.0539	2.02	93	0.00
100	PT	12dibromo3cl	0.1572	0.1362	13.36	96	0.00
101	T	135Trichlorobenzene	0.9798	0.9014	8.00	94	0.00
102	PT	124Trichlobe	0.7749	0.7169	7.48	96	0.00
103	T	Hexachlorobu	0.3464	0.3395	1.99	97	0.00
104	T	Naphthalene	1.7086	1.5432	9.68	92	0.00
105	T	123Trichlben	0.7370	0.6661	9.62	94	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W042822.M Fri May 06 09:40:25 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCV3.D Vial: 37
Acq On : 6 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 06 08:14:41 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	96	0.00
2	PT	Dichlorodi	10.0000	10.7192	-7.19	97	0.00
3	PT	Chloromethan	10.0000	9.5507	4.49	89	0.00
4	PT	VinylChlorid	10.0000	9.9315	0.69	91	0.00
5	PT	Bromomethane	10.0000	9.9824	0.18	98	0.00
6	PT	Chloroethane	10.0000	9.5851	4.15	96	0.00
7	T	Dichloroflmethane	10.0000	10.3003	-3.00	98	0.00
8	PT	Trichlorofma	10.0000	10.9758	-9.76	97	0.00
9	T	Ethylether	10.0000	9.9264	0.74	99	0.00
10	T	dichlorotfluoroethan	10.0000	11.1812	-11.81	101	0.00
11	T	propyleneoxide	100.0000	98.4658	1.53	97	0.00
12	T	Acrolein	50.0000	47.9466	4.11	93	0.00
13	PT	11dichlorthe	10.0000	10.4615	-4.61	98	0.00
14	PT	Trichlorotfluoroeth	20.0000	22.2331	-11.17	99	0.00
15	PT	Acetone	100.0000	91.6214	8.38	95	0.00
16	T	Iodomethane	20.0000	21.0499	-5.25	97	0.00
17	PT	Carbon Dislf	20.0000	21.3163	-6.58	99	0.00
18	T	allylchloride	20.0000	20.5523	-2.76	95	0.00
19	PT	methylacetate	10.0000	9.5520	4.48	106	0.00
20	PT	Methylchlorid	10.0000	9.6047	3.95	97	0.00
21	T	tbutylalcohol	500.0000	464.3503	7.13	91	0.00
22	T	Acrylonitrile	50.0000	50.6852	-1.37	99	0.00
23	PT	t12dichlorte	10.0000	9.9535	0.46	94	0.00
24	PT	MtBE	10.0000	9.7874	2.13	95	0.00
25	T	Hexane	20.0000	23.2710	-16.36	97	0.00
26	PT	11dichlorota	10.0000	10.1382	-1.38	97	0.00
27	T	Vinylacetate	100.0000	109.6734	-9.67	92	0.00
28	T	chloroprene	20.0000	22.1241	-10.62	97	0.00
29	T	Diisopether	10.0000	10.3706	-3.71	94	0.00
30	T	ETBE	10.0000	9.7779	2.22	94	0.00
31	T	22dichloropr	10.0000	10.5487	-5.49	102	0.00
32	PT	c12dichlorte	10.0000	10.0703	-0.70	96	0.00
33	PT	2Butanone	100.0000	96.3373	3.66	96	0.00
34	T	propionitrile	100.0000	96.2895	3.71	94	0.00
35	T	Ethylacetate	50.0000	44.9205	10.16	90	0.00
36	T	methacrylonitrile	20.0000	19.2417	3.79	94	0.00
37	T	Bromochlorma	10.0000	10.0090	-0.09	99	0.00
38	T	Tetrahydofur	100.0000	98.7112	1.29	94	0.00
39	PT	Chloroform	10.0000	9.6911	3.09	94	0.00
40	PT	111trichlota	10.0000	10.4570	-4.57	98	0.00
41	S	SURRDibrflma	20.0000	20.1877	-0.94	97	0.00
42	PT	Cyclohexane	10.0000	11.2318	-12.32	99	0.00
43	PT	Carbtetraclo	10.0000	10.5675	-5.68	98	0.00
44	T	11dicloprope	10.0000	10.0748	-0.75	96	0.00
45	S	SURR12DCAd4	20.0000	20.9744	-4.87	98	0.00
46	PT	Benzene	10.0000	10.4685	-4.69	96	0.00
47	PT	12dichlorota	10.0000	9.8626	1.37	94	0.00
48	T	TAME	10.0000	9.8287	1.71	94	0.00

49	PT	trichloroete	10.0000	10.2009	-2.01	99	0.00
50	PT	methylcyclohexane	10.0000	10.2380	-2.38	99	0.00
51	PT	12dicloropra	10.0000	9.9642	0.36	95	0.00
52	T	23Dicl1propene	10.0000	10.1121	-1.12	97	0.00
53	T	Dibromometha	10.0000	9.6857	3.14	96	0.00
54	T	methylmethacrylate	10.0000	9.7325	2.68	97	0.00
55	T	14dioxane	500.0000	451.0921	9.78	94	0.00
56	PT	Bromodiclrma	10.0000	9.6534	3.47	93	0.00
57	T	2Nitropropane	100.0000	102.6862	-2.69	96	0.00
58	T	2CLEVE	50.0000	47.2337	5.53	95	0.00
59	PT	c13dicloproe	10.0000	10.1163	-1.16	97	0.00
60	PT	4Meth2Pentan	100.0000	98.4006	1.60	93	0.00
61	S	SURRd8Tolule	20.0000	20.4789	-2.39	97	0.00
62	PT	Toluene	10.0000	10.4109	-4.11	98	0.00
63	PT	t13Dicloprop	10.0000	9.9014	0.99	97	0.00
64	T	ethylmethacrylate	20.0000	20.2363	-1.18	96	0.00
65	PT	112Triclotha	10.0000	9.8101	1.90	95	0.00
66	PT	Tetrachlorte	10.0000	10.4704	-4.70	95	0.00
67	T	13Diclorpropa	10.0000	9.8983	1.02	97	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	99	0.00
69	PT	2Hexanone	100.0000	90.5726	9.43	93	0.00
70	PT	Clorodibrmta	10.0000	9.5964	4.04	96	0.00
71	PT	12Dibrometha	10.0000	9.4131	5.87	96	0.00
72	PT	Chlorobenzen	10.0000	9.7754	2.25	96	0.00
73	T	1Clhexane	10.0000	10.1629	-1.63	99	0.00
74	T	1112Tetclota	10.0000	9.3787	6.21	94	0.00
75	PT	Ethylbenzene	10.0000	10.3194	-3.19	97	0.00
76	PT	m p-Xylene	20.0000	20.6125	-3.06	97	0.00
77	PT	o-Xylene	10.0000	9.8965	1.04	94	0.00
78	PT	Styrene	10.0000	10.2528	-2.53	97	0.00
79	PT	Bromoform	10.0000	9.9328	0.67	103	0.00
80	PT	Isopropylben	10.0000	10.3841	-3.84	96	0.00
81	T	cyclohexanone	200.0000	166.4084	16.80	94	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	102	0.00
83	S	SURR4BrFBenz	20.0000	19.8162	0.92	101	0.00
84	T	Bromobenzene	10.0000	9.6129	3.87	97	0.00
85	PT	1122Tetrclta	10.0000	9.2463	7.54	97	0.00
86	T	123Triclproa	10.0000	9.0956	9.04	95	0.00
87	T	14dichloro2butene	10.0000	9.0970	9.03	97	0.00
88	T	n-Propylbenz	10.0000	10.0443	-0.44	95	0.00
89	T	2chlorotolue	10.0000	9.6843	3.16	97	0.00
90	T	4chlorotolue	10.0000	9.6375	3.63	95	0.00
91	T	135Trimebenz	10.0000	9.8389	1.61	94	0.00
92	T	tbutylbenzen	10.0000	10.0502	-0.50	96	0.00
93	T	124Trimetben	10.0000	9.8261	1.74	94	0.00
94	T	sbutylbenzen	10.0000	10.3900	-3.90	97	0.00
95	PT	13Diclorbenz	10.0000	9.3849	6.15	94	0.00
96	T	pIsopropylto	10.0000	10.0556	-0.56	95	0.00
97	PT	14dichlorobe	10.0000	9.3794	6.21	95	0.00
98	PT	12dichlorobe	10.0000	9.3666	6.33	97	0.00
99	T	nButylbenzen	10.0000	9.7978	2.02	93	0.00
100	PT	12dibromo3cl	10.0000	8.6605	13.39	96	0.00
101	T	135Trichlorobenzene	10.0000	9.1996	8.00	94	0.00
102	PT	124Trichlobe	10.0000	9.2507	7.49	96	0.00
103	T	Hexachlorobu	10.0000	9.8024	1.98	97	0.00
104	T	Naphthalene	10.0000	9.0319	9.68	92	0.00
105	T	123Trichlben	10.0000	9.0380	9.62	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Fri May 06 09:40:52 2022

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV3.D Vial: 37
Acq On : 6 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 08:14:41 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1303393	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1087796	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	624527	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	349763	20.188	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.25	102	96945	20.974	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 105	%		
61) SURRd8Tolule	9.70	98	1396101	20.479	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.25	95	612368	19.816	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	180290	10.7192	ug/L	99
3) Chloromethan	2.10	50	148278	9.5507	ug/L	97
4) VinylChlorid	2.24	62	157336	9.9315	ug/L	99
5) Bromomethane	2.70	94	91381	9.9824	ug/L	96
6) Chloroethane	2.87	64	97881	9.5851	ug/L	93
7) Dichloroflmethane	3.18	67	355363	10.3003	ug/L	100
8) Trichlorofma	3.26	101	277696	10.9758	ug/L	99
9) Ethylether	3.70	59	126083	9.9264	ug/L	99
10) dichlorotfluoroethan	3.71	67	360534	11.1812	ug/L	98
11) propyleneoxide	3.76	58	443545	98.4658	ug/L	98
12) Acrolein	3.84	56	176969	47.9466	ug/L	96
13) 11dichlorthe	3.99	96	174561	10.4615	ug/L	97
14) Trichlorotfluoroeth	4.02	101	308863	22.2331	ug/L	99
15) Acetone	4.05	43	622024	91.6214	ug/L	98
16) Iodomethane	4.16	142	363684	21.0499	ug/L	100
17) Carbon Dislf	4.26	76	677846	21.3163	ug/L	99
18) allylchloride	4.47	41	563040	20.5523	ug/L	99
19) methylacetate	4.53	74	48107	9.5520	ug/L	97
20) Methylchlorid	4.63	84	198724	9.6047	ug/L	97
21) tbutylalcohol	4.83	59	852113	464.3503	ug/L	99
22) Acrylonitrile	4.93	53	415446	50.6852	ug/L	97
23) t12dichlorte	5.00	96	188238	9.9535	ug/L	96
24) MtBE	5.03	73	416195	9.7874	ug/L	99
25) Hexane	5.40	57	655370	23.2710	ug/L	99
26) 11dichlorota	5.53	63	331775	10.1382	ug/L	99
27) Vinylacetate	5.62	43	2533573	109.6734	ug/L	100
28) chloroprene	5.66	53	610780	22.1241	ug/L	99
29) Diisopether	5.68	45	524788	10.3706	ug/L	100
30) ETBE	6.13	59	408825	9.7779	ug/L	98
31) 22dichloropr	6.27	77	202733	10.5487	ug/L	99
32) c12dichlorte	6.26	96	201335	10.0703	ug/L	99
33) 2Butanone	6.29	72	258317	96.3373	ug/L	99
34) propionitrile	6.32	54	339343	96.2895	ug/L	99
35) Ethylacetate	6.38	88	37989	44.9205	ug/L #	94
36) methacrylonitrile	6.53	67	191635	19.2417	ug/L	98
37) Bromochlorma	6.55	128	94447	10.0090	ug/L	97
38) Tetrahydofur	6.63	42	570954	98.7112	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV3.D Vial: 37
Acq On : 6 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 08:14:41 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	310254	9.6911	ug/L	99
40)	111trichlota	6.90	97	270184	10.4570	ug/L	100
42)	Cyclohexane	6.99	56	273569	11.2318	ug/L	98
43)	Carbtetraclo	7.12	119	213690	10.5675	ug/L	98
44)	11dicloprope	7.11	110	93010	10.0748	ug/L	98
46)	Benzene	7.36	78	764290	10.4685	ug/L	100
47)	12dichlorota	7.35	62	236345	9.8626	ug/L	100
48)	TAME	7.52	73	383351	9.8287	ug/L	98
49)	trichloroete	8.16	95	195434	10.2009	ug/L	99
50)	methylcyclohexane	8.43	83	429043	10.2380	ug/L	98
51)	12dicloropra	8.42	63	201246	9.9642	ug/L	93
52)	23Dicl1propene	8.48	75	291125	10.1121	ug/L	99
53)	Dibromometha	8.56	93	109875	9.6857	ug/L	98
54)	methylmethacrylate	8.59	69	137969	9.7325	ug/L	98
55)	14dioxane	8.60	88	128081	451.0921	ug/L	98
56)	Bromodiclrma	8.76	83	231859	9.6534	ug/L	96
57)	2Nitropropane	9.02	43	523625	102.6862	ug/L	99
58)	2CLEVE	9.15	63	295055	47.2337	ug/L	99
59)	c13dicloproe	9.34	75	274349	10.1163	ug/L	99
60)	4Meth2Pentan	9.54	43	1588221	98.4006	ug/L	99
62)	Toluene	9.79	92	489540	10.4109	ug/L	98
63)	t13Dicloprop	10.05	75	219122	9.9014	ug/L	99
64)	ethylmethacrylate	10.20	69	507467	20.2363	ug/L	98
65)	112Triclotha	10.28	83	141414	9.8101	ug/L	97
66)	Tetrachlorte	10.52	166	207306	10.4704	ug/L	99
67)	13Diclorpropa	10.51	76	294953	9.8983	ug/L	98
69)	2Hexanone	10.62	43	1180063	90.5726	ug/L	99
70)	Clorodibrmta	10.81	129	177846	9.5964	ug/L	98
71)	12Dibrometha	10.97	107	161207	9.4131	ug/L	100
72)	Chlorobenzen	11.65	112	517850	9.7754	ug/L	99
73)	1Clhexane	11.63	91	267585	10.1629	ug/L	97
74)	1112Tetclota	11.76	131	158355	9.3787	ug/L	97
75)	Ethylbenzene	11.81	91	870534	10.3194	ug/L	99
76)	m p-Xylene	11.98	106	675017	20.6125	ug/L	99
77)	o-Xylene	12.52	106	324358	9.8965	ug/L	97
78)	Styrene	12.53	104	541528	10.2528	ug/L	98
79)	Bromoform	12.76	173	122990	9.9328	ug/L	96
80)	Isopropylben	13.05	105	814930	10.3841	ug/L	98
81)	cyclohexanone	13.13	55	176999	166.4084	ug/L	100
84)	Bromobenzene	13.46	156	209536	9.6129	ug/L	98
85)	1122Tetrclta	13.43	83	239546	9.2463	ug/L	99
86)	123Triclproa	13.49	75	287744	9.0956	ug/L	96
87)	14dichloro2butene	13.51	53	66431	9.0970	ug/L	96
88)	n-Propylbenz	13.63	91	961403	10.0443	ug/L	99
89)	2chlorotolue	13.75	91	586635	9.6843	ug/L	99
90)	4chlorotolue	13.90	91	665092	9.6375	ug/L	99
91)	135Trimebenz	13.89	105	674881	9.8389	ug/L	99
92)	tbutylbenzen	14.36	119	582674	10.0502	ug/L	99
93)	124Trimetben	14.43	105	656039	9.8261	ug/L	100
94)	sbutylbenzen	14.68	105	853649	10.3900	ug/L	99
95)	13Diclorbenz	14.82	146	369222	9.3849	ug/L	99
96)	pIsopropylto	14.90	119	707687	10.0556	ug/L	100
97)	14dichlorobe	14.94	146	379768	9.3794	ug/L	99
98)	12dichlorobe	15.49	146	357118	9.3666	ug/L	98
99)	nButylbenzen	15.49	91	641346	9.7978	ug/L	99
100)	12dibromo3cl	16.57	157	42518	8.6605	ug/L	95
101)	135Trichlorobenzene	16.90	180	281472	9.1996	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV3.D Vial: 37
Acq On : 6 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 08:14:41 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	223849	9.2507	ug/L	99
103) Hexachlorobu	17.96	225	106018	9.8024	ug/L	98
104) Naphthalene	18.02	128	481885	9.0319	ug/L	98
105) 123Trichlben	18.33	180	208002	9.0380	ug/L	99

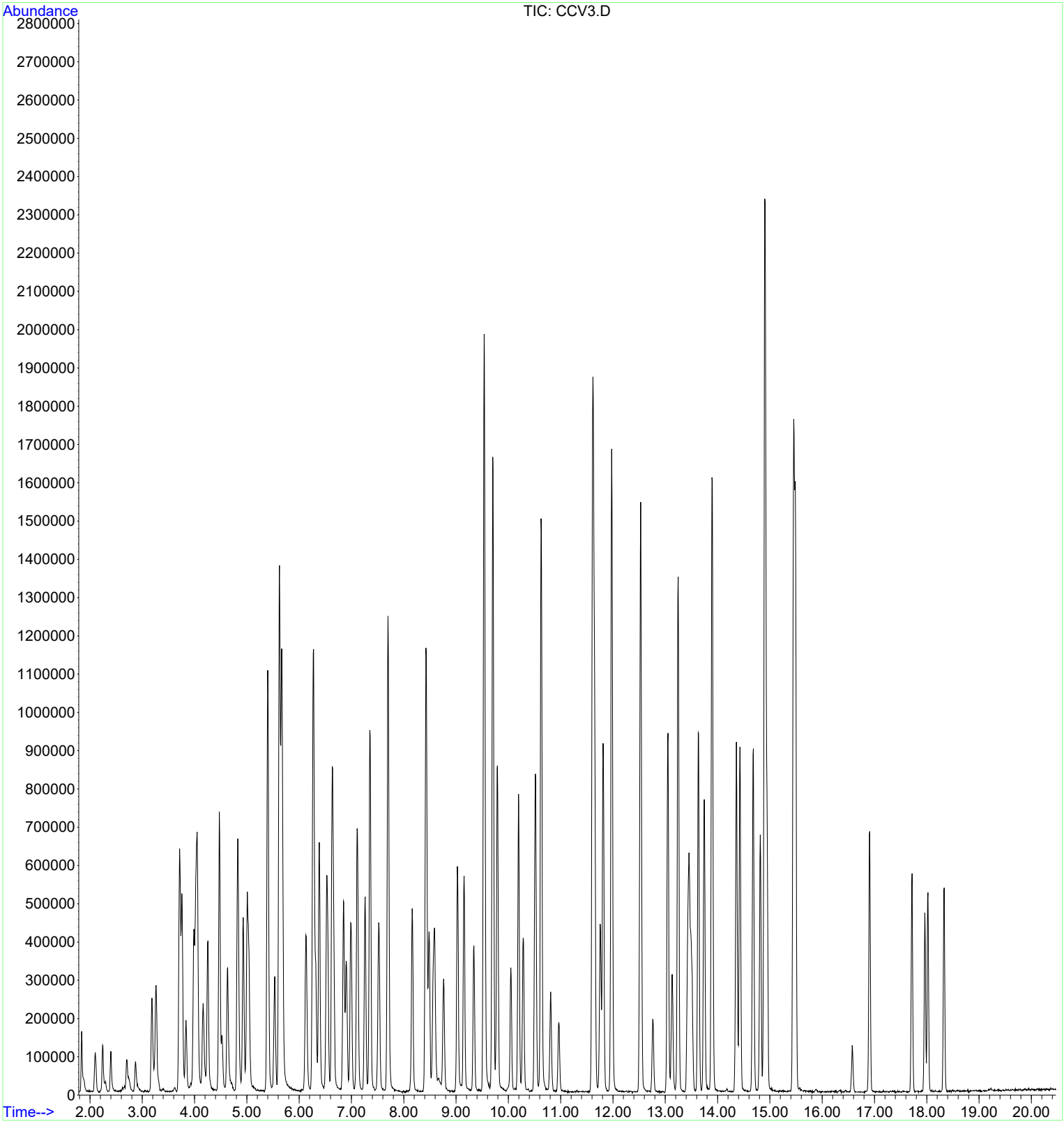
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV3.D Vial: 37
Acq On : 6 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,CCV, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 08:14:41 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\CCB2.D Vial: 39
Acq On : 6 May 2022 8:54 Operator: DGS-RLD
Sample : 211603,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 09:14:48 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1250976	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1054853	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	580325	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	339637	20.425	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.26	102	87769	19.785	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1313389	20.073	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.25	95	578835	20.158	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101	%		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	7367	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	3183	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.85	59	4695	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\CCB2.D Vial: 39
Acq On : 6 May 2022 8:54 Operator: DGS-RLD
Sample : 211603,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 09:14:48 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.54	43	4883	Below Cal #	37
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.62	43	6235	Below Cal #	81
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.63	91	3244	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	13.04	105	2554	N.D.	
81)	cyclohexanone	13.14	55	2734	15.4245 ug/L #	39
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.63	91	3928	N.D.	
89)	2chlorotolue	13.63	91	3679	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.68	105	4166	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.90	119	5342	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.48	91	6515	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\CCB2.D Vial: 39
Acq On : 6 May 2022 8:54 Operator: DGS-RLD
Sample : 211603,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 09:14:48 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.02	128	6554	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

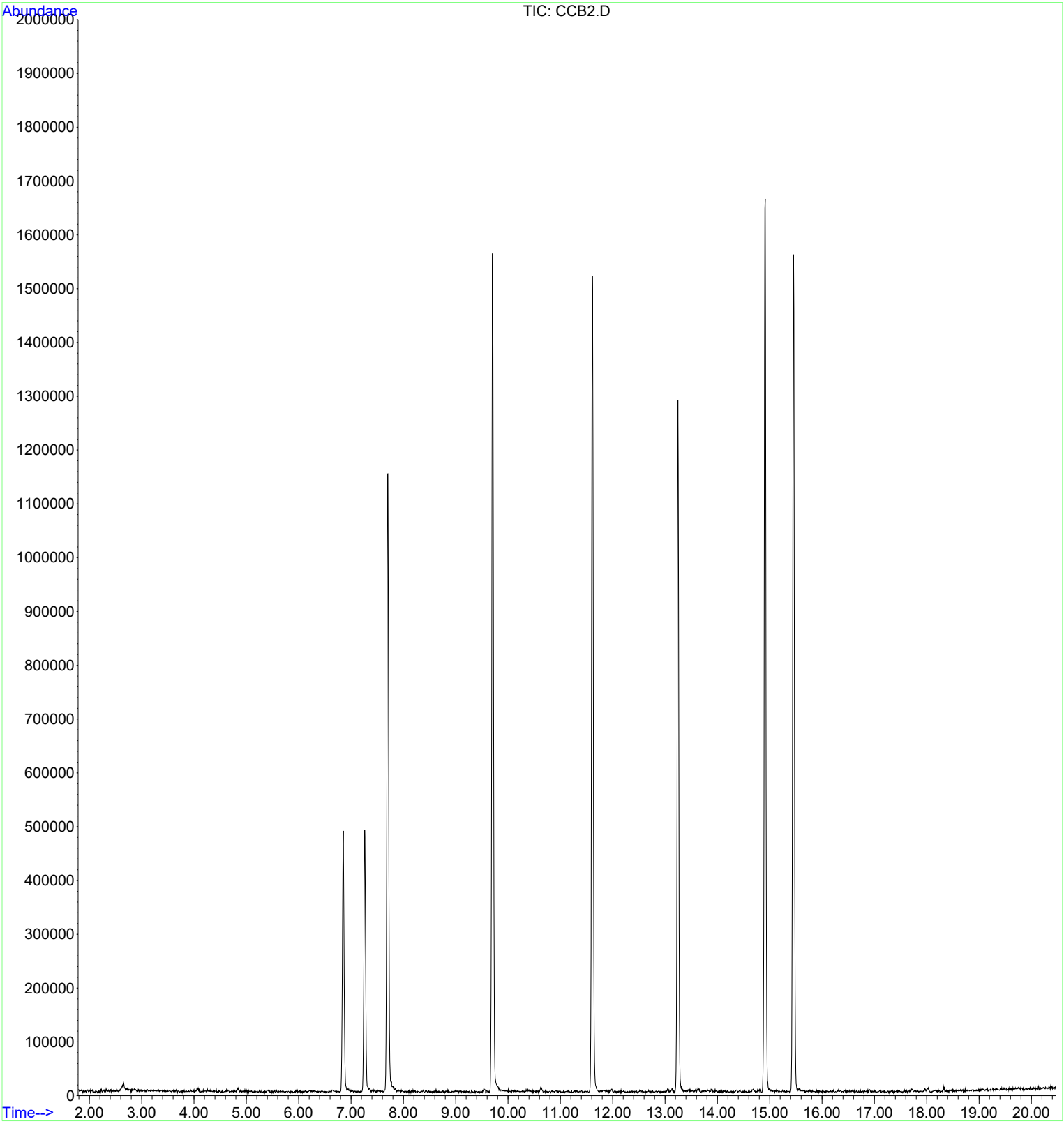
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\CCB2.D Vial: 39
Acq On : 6 May 2022 8:54 Operator: DGS-RLD
Sample : 211603,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 09:14:48 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCVF3.D Vial: 41
Acq On : 6 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 06 10:13:56 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	93	0.00
2	PT	Dichlorodi	0.2581	0.2821	-9.30	97	0.00
3	PT	Chloromethan	0.2382	0.2234	6.21	85	0.00
4	PT	VinylChlorid	0.2431	0.2475	-1.81	91	0.00
5	PT	Bromomethane	0.1405	0.1454	-3.49	99	0.00
6	PT	Chloroethane	0.1567	0.1525	2.68	95	0.00
7	T	Dichloroflmethane	0.5294	0.5515	-4.17	96	0.00
8	PT	Trichlorofma	0.3882	0.4284	-10.36	95	0.00
9	T	Ethylether	0.1949	0.2030	-4.16	101	0.00
10	T	dichlorotfluoroethan	0.4948	0.5513	-11.42	98	0.00
11	T	propyleneoxide	0.0691	0.0731	-5.79	101	0.00
12	T	Acrolein	0.0566	0.0584	-3.18	98	0.00
13	PT	11dichlorthe	0.2560	0.2784	-8.75	99	0.00
14	PT	Trichlorotfluoroeth	0.2132	0.2414	-13.23	99	0.00
15	PT	Acetone	0.1042	0.0996#	4.41	96	0.00
16	T	Iodomethane	0.2651	0.2741	-3.39	93	0.00
17	PT	Carbon Dislf	0.4879	0.5123	-5.00	95	0.00
18	T	allylchloride	0.4204	0.4465	-6.21	96	0.00
19	PT	methylacetate	0.0773	0.0758#	1.94	106	0.00
20	PT	Methylchlorid	0.3175	0.3110	2.05	96	0.00
21	T	tbutylalcohol	0.0282	0.0285#	-1.06	96	0.00
22	T	Acrylonitrile	0.1258	0.1304	-3.66	98	0.00
23	PT	t12dichlorte	0.2902	0.2951	-1.69	94	0.00
24	PT	MtBE	0.6525	0.6601	-1.16	96	0.00
25	T	Hexane	0.4321	0.5253	-21.57	99	0.00
26	PT	11dichlorota	0.5022	0.5193	-3.41	96	0.00
27	T	Vinylacetate	0.3685	0.4541	-23.23	105	0.00
28	T	chloroprene	0.4236	0.4712	-11.24	95	0.00
29	T	Diisopether	0.7765	0.8245	-6.18	94	0.00
30	T	ETBE	0.6416	0.6453	-0.58	94	0.00
31	T	22dichloropr	0.2949	0.3201	-8.55	102	0.00
32	PT	c12dichlorte	0.3068	0.3229	-5.25	98	0.00
33	PT	2Butanone	0.0411	0.0428#	-4.14	101	0.00
34	T	propionitrile	0.0541	0.0554	-2.40	98	0.00
35	T	Ethylacetate	0.0130	0.0125#	3.85	95	0.00
36	T	methacrylonitrile	0.1528	0.1536	-0.52	96	0.00
37	T	Bromochlorma	0.1448	0.1490	-2.90	99	0.00
38	T	Tetrahydofur	0.0888	0.0917	-3.27	96	0.00
39	PT	Chloroform	0.4912	0.5022	-2.24	97	0.00
40	PT	111trichlota	0.3965	0.4118	-3.86	95	0.00
41	S	SURRDibrflma	0.2659	0.2687	-1.05	95	0.00
42	PT	Cyclohexane	0.3737	0.4164	-11.43	95	0.00
43	PT	Carbtetraclo	0.3103	0.3376	-8.80	99	0.00
44	T	11dicloprope	0.1417	0.1460	-3.03	96	0.00
45	S	SURR12DCAd4	0.0709	0.0697	1.69	89	0.00
46	PT	Benzene	1.1203	1.1801	-5.34	94	0.00
47	PT	12dichlorota	0.3677	0.3661	0.44	92	0.00
48	T	TAME	0.5985	0.6131	-2.44	96	0.00

49	PT	trichloroete	0.2940	0.3105	-5.61	100	0.00
50	PT	methylcyclohexane	0.5670	0.6634	-17.00	98	0.00
51	PT	12dicloropra	0.3099	0.3177	-2.52	95	0.00
52	T	23Dicl1propene	0.4418	0.4435	-0.38	94	0.00
53	T	Dibromometha	0.1741	0.1718	1.32	96	0.00
54	T	methylmethacrylate	0.2175	0.2241	-3.03	100	0.00
55	T	14dioxane	0.0044	0.0042#	4.55	98	0.00
56	PT	Bromodiclrma	0.3686	0.3640	1.25	93	0.00
57	T	2Nitropropane	0.0782	0.0832	-6.39	97	0.00
58	T	2CLEVE	0.0959	0.0981	-2.29	100	0.00
59	PT	c13dicloproe	0.4161	0.4319	-3.80	97	0.00
60	PT	4Meth2Pentan	0.2366	0.2576	-8.88	96	0.00
61	S	SURRd8Tolule	1.0461	1.0733	-2.60	95	0.00
62	PT	Toluene	0.7215	0.7566	-4.86	96	0.00
63	PT	t13Dicloprop	0.3396	0.3414	-0.53	96	0.00
64	T	ethylmethacrylate	0.3848	0.4077	-5.95	97	0.00
65	PT	112Triclotha	0.2212	0.2312	-4.52	99	0.00
66	PT	Tetrachlorte	0.3038	0.3279	-7.93	96	0.00
67	T	13Diclorpropa	0.4572	0.4666	-2.06	98	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	97	0.00
69	PT	2Hexanone	0.2204	0.2303	-4.49	97	0.00
70	PT	Clorodibrmta	0.3407	0.3273	3.93	95	0.00
71	PT	12Dibrometha	0.3149	0.3061	2.79	98	0.00
72	PT	Chlorobenzen	0.9740	0.9595	1.49	96	0.00
73	T	1Clhexane	0.4841	0.4865	-0.50	96	0.00
74	T	1112Tetclota	0.3104	0.2860	7.86	91	0.00
75	PT	Ethylbenzene	1.5510	1.5933	-2.73	95	0.00
76	PT	m p-Xylene	0.6021	0.6225	-3.39	96	0.00
77	PT	o-Xylene	0.6026	0.6008	0.30	93	0.00
78	PT	Styrene	0.9711	1.0099	-4.00	97	0.00
79	PT	Bromoform	0.2277	0.2207	3.07	99	0.00
80	PT	Isopropylben	1.4429	1.5147	-4.98	96	0.00
81	T	cyclohexanone	0.0184	0.0172#	6.52	98	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	102	0.00
83	S	SURR4BrFBenz	0.9896	0.9745	1.53	101	0.00
84	T	Bromobenzene	0.6980	0.6391	8.44	93	0.00
85	PT	1122Tetrclta	0.8297	0.7959	4.07	101	0.00
86	T	123Triclproa	1.0131	0.9166	9.53	95	0.00
87	T	14dichloro2butene	0.2339	0.2172	7.14	100	0.00
88	T	n-Propylbenz	3.0653	3.1124	-1.54	96	0.00
89	T	2chlorotolue	1.9399	1.8714	3.53	97	0.00
90	T	4chlorotolue	2.2100	2.1362	3.34	95	0.00
91	T	135Trimebenz	2.1966	2.1792	0.79	95	0.00
92	T	tbutylbenzen	1.8566	1.8516	0.27	96	0.00
93	T	124Trimetben	2.1381	2.1227	0.72	96	0.00
94	T	sbutylbenzen	2.6311	2.7314	-3.81	97	0.00
95	PT	13Diclorbenz	1.2599	1.2093	4.02	97	0.00
96	T	pIsopropylto	2.2538	2.3186	-2.88	98	0.00
97	PT	14dichlorobe	1.2966	1.2126	6.48	95	0.00
98	PT	12dichlorobe	1.2210	1.1583	5.14	98	0.00
99	T	nButylbenzen	2.0963	2.1145	-0.87	97	0.00
100	PT	12dibromo3cl	0.1572	0.1416	9.92	100	0.00
101	T	135Trichlorobenzene	0.9798	0.9147	6.64	95	0.00
102	PT	124Trichlobe	0.7749	0.7291	5.91	98	0.00
103	T	Hexachlorobu	0.3464	0.3548	-2.42	101	0.00
104	T	Naphthalene	1.7086	1.5985	6.44	96	0.00
105	T	123Trichlben	0.7370	0.6888	6.54	98	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W042822.M Fri May 06 10:14:45 2022

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\MAY0522\CCVF3.D Vial: 41
Acq On : 6 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: May 06 10:13:56 2022

Quant Method : C:\INSTARCH\METHODS\W042822.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W042822.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	93	0.00
2	PT	Dichlorodi	10.0000	10.9291	-9.29	97	0.00
3	PT	Chloromethan	10.0000	9.3756	6.24	85	0.00
4	PT	VinylChlorid	10.0000	10.1830	-1.83	91	0.00
5	PT	Bromomethane	10.0000	10.3486	-3.49	99	0.00
6	PT	Chloroethane	10.0000	9.7302	2.70	95	0.00
7	T	Dichloroflmethane	10.0000	10.4174	-4.17	96	0.00
8	PT	Trichlorofma	10.0000	11.0351	-10.35	95	0.00
9	T	Ethylether	10.0000	10.4177	-4.18	101	0.00
10	T	dichlorotfluoroethan	10.0000	11.1416	-11.42	98	0.00
11	T	propyleneoxide	100.0000	105.7782	-5.78	101	0.00
12	T	Acrolein	50.0000	51.5533	-3.11	98	0.00
13	PT	11dichlorthe	10.0000	10.8738	-8.74	99	0.00
14	PT	Trichlorotfluoroeth	20.0000	22.6506	-13.25	99	0.00
15	PT	Acetone	100.0000	95.6056	4.39	96	0.00
16	T	Iodomethane	20.0000	20.6814	-3.41	93	0.00
17	PT	Carbon Dislf	20.0000	20.9969	-4.98	95	0.00
18	T	allylchloride	20.0000	21.2435	-6.22	96	0.00
19	PT	methylacetate	10.0000	9.8059	1.94	106	0.00
20	PT	Methylchlorid	10.0000	9.7953	2.05	96	0.00
21	T	tbutylalcohol	500.0000	506.4967	-1.30	96	0.00
22	T	Acrylonitrile	50.0000	51.8379	-3.68	98	0.00
23	PT	t12dichlorte	10.0000	10.1691	-1.69	94	0.00
24	PT	MtBE	10.0000	10.1171	-1.17	96	0.00
25	T	Hexane	20.0000	24.3095	-21.55	99	0.00
26	PT	11dichlorota	10.0000	10.3421	-3.42	96	0.00
27	T	Vinylacetate	100.0000	131.3129	-31.31	105	0.00
28	T	chloroprene	20.0000	22.2480	-11.24	95	0.00
29	T	Diisopether	10.0000	10.6190	-6.19	94	0.00
30	T	ETBE	10.0000	10.0575	-0.57	94	0.00
31	T	22dichloropr	10.0000	10.8546	-8.55	102	0.00
32	PT	c12dichlorte	10.0000	10.5256	-5.26	98	0.00
33	PT	2Butanone	100.0000	103.9601	-3.96	101	0.00
34	T	propionitrile	100.0000	102.4004	-2.40	98	0.00
35	T	Ethylacetate	50.0000	48.2865	3.43	95	0.00
36	T	methacrylonitrile	20.0000	20.1030	-0.52	96	0.00
37	T	Bromochlorma	10.0000	10.2921	-2.92	99	0.00
38	T	Tetrahydofur	100.0000	103.3733	-3.37	96	0.00
39	PT	Chloroform	10.0000	10.2222	-2.22	97	0.00
40	PT	111trichlota	10.0000	10.3864	-3.86	95	0.00
41	S	SURRDibrflma	20.0000	20.2177	-1.09	95	0.00
42	PT	Cyclohexane	10.0000	11.1405	-11.40	95	0.00
43	PT	Carbtetraclo	10.0000	10.8787	-8.79	99	0.00
44	T	11dicloprope	10.0000	10.3098	-3.10	96	0.00
45	S	SURR12DCAd4	20.0000	19.6513	1.74	89	0.00
46	PT	Benzene	10.0000	10.5336	-5.34	94	0.00
47	PT	12dichlorota	10.0000	9.9568	0.43	92	0.00
48	T	TAME	10.0000	10.2438	-2.44	96	0.00

49	PT	trichloroete	10.0000	10.5605	-5.60	100	0.00
50	PT	methylcyclohexane	10.0000	10.3150	-3.15	98	0.00
51	PT	12dicloropra	10.0000	10.2508	-2.51	95	0.00
52	T	23Dicl1propene	10.0000	10.0383	-0.38	94	0.00
53	T	Dibromometha	10.0000	9.8685	1.32	96	0.00
54	T	methylmethacrylate	10.0000	10.2999	-3.00	100	0.00
55	T	14dioxane	500.0000	482.8489	3.43	98	0.00
56	PT	Bromodiclrma	10.0000	9.8763	1.24	93	0.00
57	T	2Nitropropane	100.0000	106.3767	-6.38	97	0.00
58	T	2CLEVE	50.0000	51.1652	-2.33	100	0.00
59	PT	c13dicloproe	10.0000	10.3797	-3.80	97	0.00
60	PT	4Meth2Pentan	100.0000	104.6783	-4.68	96	0.00
61	S	SURRd8Tolule	20.0000	20.5202	-2.60	95	0.00
62	PT	Toluene	10.0000	10.4859	-4.86	96	0.00
63	PT	t13Dicloprop	10.0000	10.0543	-0.54	96	0.00
64	T	ethylmethacrylate	20.0000	21.1887	-5.94	97	0.00
65	PT	112Triclotha	10.0000	10.4519	-4.52	99	0.00
66	PT	Tetrachlorte	10.0000	10.7928	-7.93	96	0.00
67	T	13Diclorpropa	10.0000	10.2041	-2.04	98	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	97	0.00
69	PT	2Hexanone	100.0000	96.6155	3.38	97	0.00
70	PT	Clorodibrmta	10.0000	9.6053	3.95	95	0.00
71	PT	12Dibrometha	10.0000	9.7210	2.79	98	0.00
72	PT	Chlorobenzen	10.0000	9.8513	1.49	96	0.00
73	T	1Clhexane	10.0000	10.0496	-0.50	96	0.00
74	T	1112Tetclota	10.0000	9.2129	7.87	91	0.00
75	PT	Ethylbenzene	10.0000	10.2725	-2.73	95	0.00
76	PT	m p-Xylene	20.0000	20.6791	-3.40	96	0.00
77	PT	o-Xylene	10.0000	9.9699	0.30	93	0.00
78	PT	Styrene	10.0000	10.4001	-4.00	97	0.00
79	PT	Bromoform	10.0000	9.6964	3.04	99	0.00
80	PT	Isopropylben	10.0000	10.4977	-4.98	96	0.00
81	T	cyclohexanone	200.0000	175.8067	12.10	98	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	102	0.00
83	S	SURR4BrFBenz	20.0000	19.6946	1.53	101	0.00
84	T	Bromobenzene	10.0000	9.1551	8.45	93	0.00
85	PT	1122Tetrclta	10.0000	9.5928	4.07	101	0.00
86	T	123Triclproa	10.0000	9.0472	9.53	95	0.00
87	T	14dichloro2butene	10.0000	9.2875	7.13	100	0.00
88	T	n-Propylbenz	10.0000	10.1538	-1.54	96	0.00
89	T	2chlorotolue	10.0000	9.6472	3.53	97	0.00
90	T	4chlorotolue	10.0000	9.6659	3.34	95	0.00
91	T	135Trimebenz	10.0000	9.9204	0.80	95	0.00
92	T	tbutylbenzen	10.0000	9.9726	0.27	96	0.00
93	T	124Trimetben	10.0000	9.9281	0.72	96	0.00
94	T	sbutylbenzen	10.0000	10.3809	-3.81	97	0.00
95	PT	13Diclorbenz	10.0000	9.5987	4.01	97	0.00
96	T	pIsopropylto	10.0000	10.2874	-2.87	98	0.00
97	PT	14dichlorobe	10.0000	9.3516	6.48	95	0.00
98	PT	12dichlorobe	10.0000	9.4870	5.13	98	0.00
99	T	nButylbenzen	10.0000	10.0869	-0.87	97	0.00
100	PT	12dibromo3cl	10.0000	9.0056	9.94	100	0.00
101	T	135Trichlorobenzene	10.0000	9.3357	6.64	95	0.00
102	PT	124Trichlobe	10.0000	9.4080	5.92	98	0.00
103	T	Hexachlorobu	10.0000	10.2433	-2.43	101	0.00
104	T	Naphthalene	10.0000	9.3555	6.45	96	0.00
105	T	123Trichlben	10.0000	9.3465	6.53	98	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W042822.M Fri May 06 10:15:14 2022

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF3.D Vial: 41
Acq On : 6 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 10:13:56 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1270595	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1074033	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	626930	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	341468	20.218	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	88544	19.651	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %			
61) SURRd8Tolule	9.71	98	1363712	20.520	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %			
83) SURR4BrFBenz	13.25	95	610952	19.695	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	179194	10.9291	ug/L	97
3) Chloromethan	2.10	50	141896	9.3756	ug/L	95
4) VinylChlorid	2.25	62	157261	10.1830	ug/L	99
5) Bromomethane	2.71	94	92349	10.3486	ug/L	94
6) Chloroethane	2.87	64	96863	9.7302	ug/L	97
7) Dichloroflmethane	3.18	67	350359	10.4174	ug/L	99
8) Trichlorofma	3.27	101	272173	11.0351	ug/L	98
9) Ethylether	3.71	59	128994	10.4177	ug/L	96
10) dichlorotfluoroethan	3.73	67	350219	11.1416	ug/L	100
11) propyleneoxide	3.76	58	464494	105.7782	ug/L	98
12) Acrolein	3.84	56	185493	51.5533	ug/L	98
13) 11dichlorthe	3.99	96	176875	10.8738	ug/L	98
14) Trichlorotfluoroeth	4.03	101	306745	22.6506	ug/L	100
15) Acetone	4.06	43	632740	95.6056	ug/L	96
16) Iodomethane	4.17	142	348326	20.6814	ug/L	99
17) Carbon Dislf	4.26	76	650888	20.9969	ug/L	99
18) allylchloride	4.48	41	567331	21.2435	ug/L	99
19) methylacetate	4.53	74	48143	9.8059	ug/L	91
20) Methylchlorid	4.64	84	197569	9.7953	ug/L	100
21) tbutylalcohol	4.83	59	906066	506.4967	ug/L	98
22) Acrylonitrile	4.93	53	414202	51.8379	ug/L	98
23) t12dichlorte	5.01	96	187475	10.1691	ug/L	97
24) MtBE	5.04	73	419390	10.1171	ug/L	99
25) Hexane	5.40	57	667388	24.3095	ug/L	98
26) 11dichlorota	5.53	63	329933	10.3421	ug/L	98
27) Vinylacetate	5.62	43	2884875	131.3129	ug/L	98
28) chloroprene	5.66	53	598747	22.2480	ug/L	100
29) Diisopether	5.68	45	523833	10.6190	ug/L	94
30) ETBE	6.13	59	409937	10.0575	ug/L	98
31) 22dichloropr	6.27	77	203363	10.8546	ug/L	99
32) c12dichlorte	6.26	96	205142	10.5256	ug/L	98
33) 2Butanone	6.28	72	271742	103.9601	ug/L	99
34) propionitrile	6.32	54	351798	102.4004	ug/L	100
35) Ethylacetate	6.38	88	39808	48.2865	ug/L	98
36) methacrylonitrile	6.53	67	195175	20.1030	ug/L	97
37) Bromochlorma	6.55	128	94674	10.2921	ug/L	95
38) Tetrahydofur	6.63	42	582874	103.3733	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF3.D Vial: 41
Acq On : 6 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 10:13:56 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	319022	10.2222	ug/L	99
40)	111trichlota	6.90	97	261607	10.3864	ug/L	98
42)	Cyclohexane	6.99	56	264517	11.1405	ug/L	98
43)	Carbtetraclo	7.12	119	214448	10.8787	ug/L	99
44)	11dicloprope	7.11	110	92784	10.3098	ug/L	96
46)	Benzene	7.36	78	749688	10.5336	ug/L	98
47)	12dichlorota	7.36	62	232597	9.9568	ug/L	99
48)	TAME	7.53	73	389486	10.2438	ug/L	99
49)	trichloroete	8.16	95	197233	10.5605	ug/L	95
50)	methylcyclohexane	8.43	83	421427	10.3150	ug/L	99
51)	12dicloropra	8.42	63	201824	10.2508	ug/L	90
52)	23Dicl1propene	8.49	75	281729	10.0383	ug/L	98
53)	Dibromometha	8.56	93	109132	9.8685	ug/L	96
54)	methylmethacrylate	8.59	69	142339	10.2999	ug/L	97
55)	14dioxane	8.60	88	133648	482.8489	ug/L	99
56)	Bromodiclrma	8.76	83	231244	9.8763	ug/L	96
57)	2Nitropropane	9.03	43	528794	106.3767	ug/L	98
58)	2CLEVE	9.15	63	311571	51.1652	ug/L	99
59)	c13dicloproe	9.34	75	274410	10.3797	ug/L	99
60)	4Meth2Pentan	9.54	43	1636786	104.6783	ug/L	100
62)	Toluene	9.79	92	480655	10.4859	ug/L	100
63)	t13Dicloprop	10.05	75	216907	10.0543	ug/L	98
64)	ethylmethacrylate	10.20	69	517980	21.1887	ug/L	99
65)	112Triclotha	10.29	83	146873	10.4519	ug/L	100
66)	Tetrachlorte	10.52	166	208312	10.7928	ug/L	99
67)	13Diclorpropa	10.51	76	296413	10.2041	ug/L	99
69)	2Hexanone	10.63	43	1236835	96.6155	ug/L	100
70)	Clorodibrmta	10.81	129	175760	9.6053	ug/L	98
71)	12Dibrometha	10.97	107	164373	9.7210	ug/L	98
72)	Chlorobenzen	11.65	112	515265	9.8513	ug/L	99
73)	1Clhexane	11.63	91	261255	10.0496	ug/L	99
74)	1112Tetclota	11.76	131	153588	9.2129	ug/L	92
75)	Ethylbenzene	11.82	91	855617	10.2725	ug/L	99
76)	m p-Xylene	11.98	106	668630	20.6791	ug/L	100
77)	o-Xylene	12.53	106	322629	9.9699	ug/L	97
78)	Styrene	12.53	104	542359	10.4001	ug/L	99
79)	Bromoform	12.77	173	118543	9.6964	ug/L	99
80)	Isopropylben	13.05	105	813422	10.4977	ug/L	98
81)	cyclohexanone	13.13	55	185246	175.8067	ug/L	98
84)	Bromobenzene	13.46	156	200325	9.1551	ug/L	94
85)	1122Tetrclta	13.43	83	249479	9.5928	ug/L	99
86)	123Triclproa	13.49	75	287314	9.0472	ug/L	98
87)	14dichloro2butene	13.51	53	68083	9.2875	ug/L	94
88)	n-Propylbenz	13.64	91	975623	10.1538	ug/L	98
89)	2chlorotolue	13.75	91	586633	9.6472	ug/L	99
90)	4chlorotolue	13.90	91	669620	9.6659	ug/L	100
91)	135Trimebenz	13.89	105	683088	9.9204	ug/L	100
92)	tbutylbenzen	14.36	119	580399	9.9726	ug/L	99
93)	124Trimetben	14.43	105	665396	9.9281	ug/L	100
94)	sbutylbenzen	14.68	105	856184	10.3809	ug/L	99
95)	13Diclorbenz	14.82	146	379086	9.5987	ug/L	98
96)	pIsopropylto	14.90	119	726790	10.2874	ug/L	99
97)	14dichlorobe	14.94	146	380098	9.3516	ug/L	99
98)	12dichlorobe	15.49	146	363101	9.4870	ug/L	98
99)	nButylbenzen	15.49	91	662816	10.0869	ug/L	99
100)	12dibromo3cl	16.57	157	44382	9.0056	ug/L	92
101)	135Trichlorobenzene	16.90	180	286736	9.3357	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF3.D Vial: 41
Acq On : 6 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 10:13:56 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	228532	9.4080	ug/L	100
103) Hexachlorobu	17.97	225	111213	10.2433	ug/L	99
104) Naphthalene	18.02	128	501069	9.3555	ug/L	99
105) 123Trichlben	18.33	180	215929	9.3465	ug/L	100

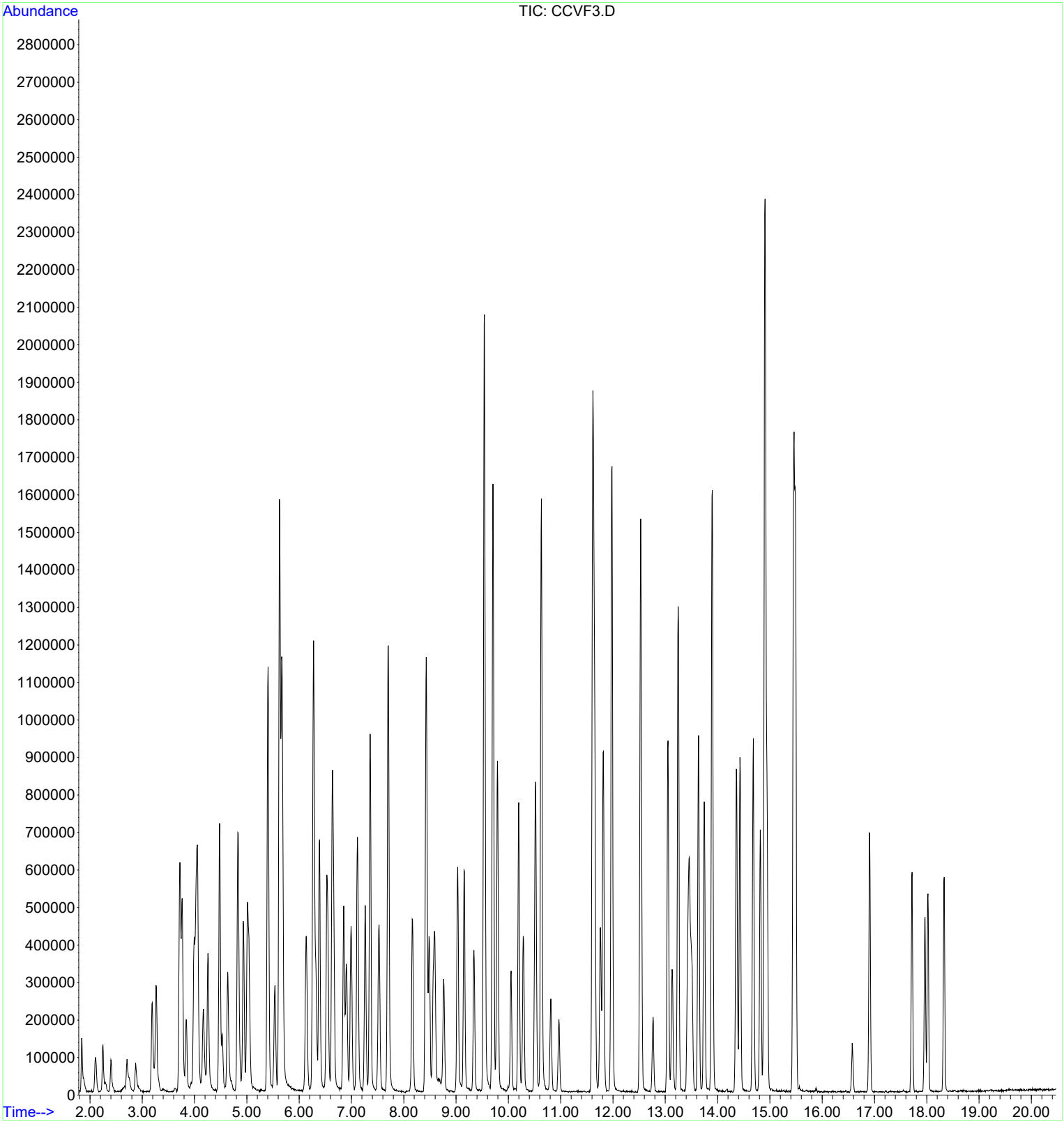
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCVF3.D Vial: 41
Acq On : 6 May 2022 9:53 Operator: DGS-RLD
Sample : 211603,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 06 10:13:56 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



QC Check Standard Report

Sequence : C:\INSTARCH\PVOC4\Sequence\050422 - 211667.seq
User : dgs
Printed : May 04, 2022 11:32:24

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\050422 -\002.dat	211667,CCV,	May 04, 2022 11:32:24

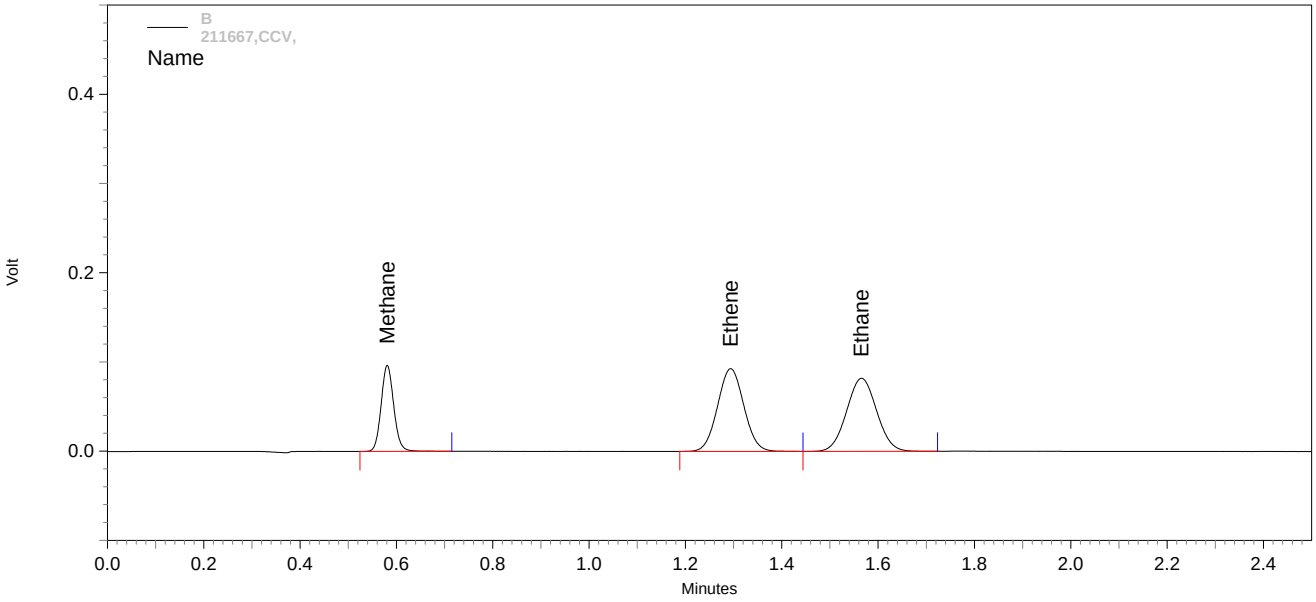
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	45.333	9.333	15.000	Passed
Ethene	50.000	49.600	0.801	15.000	Passed
Ethane	50.000	49.908	0.185	15.000	Passed

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,CCV,
Acquired: May 04, 2022 08:47:08
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.581	0.574	175807	45.333	ppmV
2	Ethene	1.293	1.287	351206	49.600	ppmV
3	Ethane	1.565	1.559	355278	49.908	ppmV

QC Check Standard Report

Sequence : C:\INSTARCH\PVOC4\Sequence\050422 - 211667.seq
User : dgs
Printed : May 04, 2022 11:35:55

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\050422 -\018.dat	211667,CCV,	May 04, 2022 11:35:54

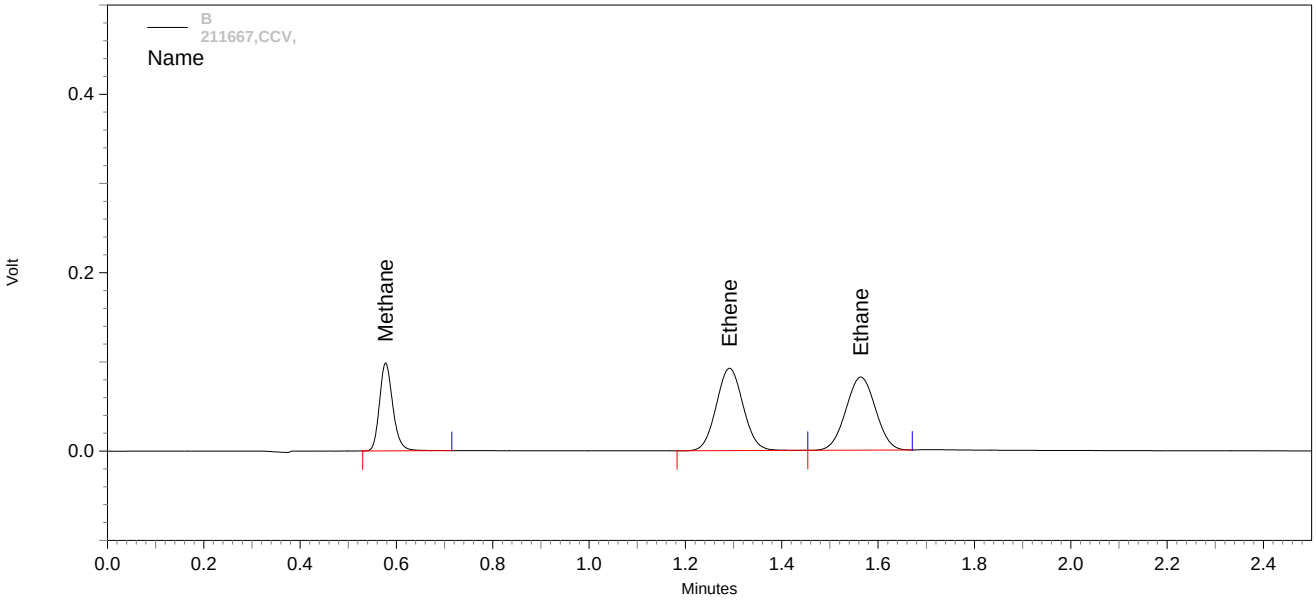
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	48.863	2.275	15.000	Passed
Ethene	50.000	50.411	0.823	15.000	Passed
Ethane	50.000	49.348	1.304	15.000	Passed

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\018.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,CCV,
Acquired: May 04, 2022 10:10:58
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



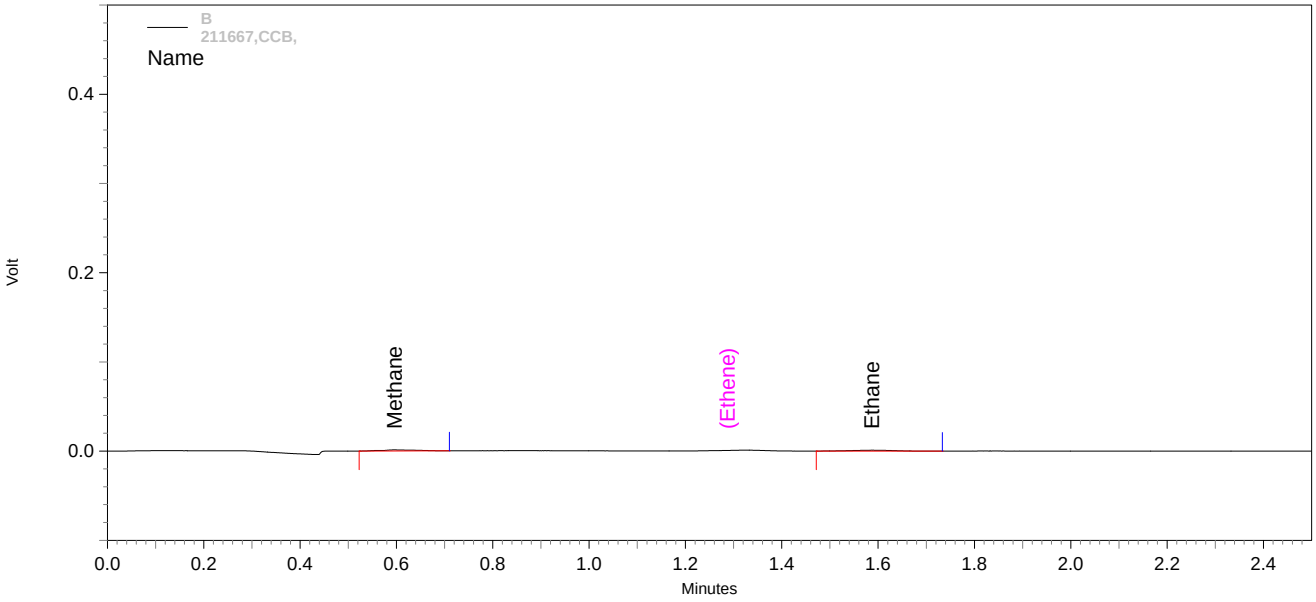
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.578	0.574	189446	48.863	ppmV
2	Ethene	1.292	1.287	356943	50.411	ppmV
3	Ethane	1.564	1.559	351319	49.348	ppmV

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\019.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,CCB,
Acquired: May 04, 2022 10:14:39
File Desc. MEE Continuing Calibration Blank
1.0 mL injection Helium



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.596**	**0.574**	**5725**	**1.325**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
2	**Ethane**	**1.587**	**1.559**	**6155**	**0.550**	**ppmV**

QC Check Standard Report

Sequence : C:\INSTARCH\PVOC4\Sequence\050422 - 211667.seq
User : dgs
Printed : May 04, 2022 11:36:47

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\050422 -\027.dat	211667,CCV,	May 04, 2022 11:36:47

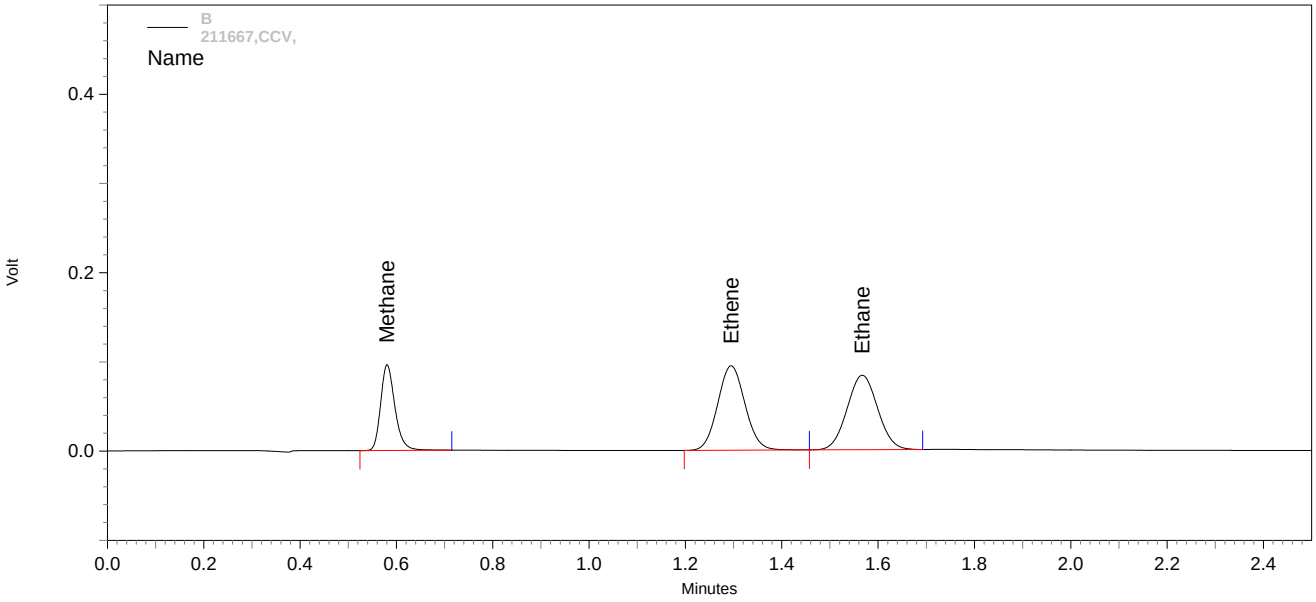
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	51.027	2.055	15.000	Passed
Ethene	50.000	52.634	5.268	15.000	Passed
Ethane	50.000	51.720	3.439	15.000	Passed

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\027.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,CCV,
Acquired: May 04, 2022 11:06:18
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.580	0.574	197813	51.027	ppmV
2	Ethene	1.295	1.287	372650	52.634	ppmV
3	Ethane	1.567	1.559	368095	51.720	ppmV

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL
DOCUMENTS

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 08:15:32 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1304103	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1082679	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	620213	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	350424	20.215	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.26	102	93484	20.215	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1381105	20.248	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.25	95	602326	19.627	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	184464	10.9614	ug/L	96
3) Chloromethan	2.10	50	144612	9.3095	ug/L	97
4) VinylChlorid	2.25	62	160176	10.1053	ug/L	97
5) Bromomethane	2.71	94	95092	10.3821	ug/L	96
6) Chloroethane	2.87	64	96736	9.4678	ug/L	98
7) Dichloroflmethane	3.19	67	342796	9.9306	ug/L	98
8) Trichlorofma	3.26	101	273516	10.8047	ug/L	97
9) Ethylether	3.71	59	128491	10.1105	ug/L	92
10) dichlorotfluoroethan	3.72	67	342588	10.6188	ug/L	98
11) propyleneoxide	3.76	58	446465	99.0600	ug/L	99
12) Acrolein	3.84	56	166981	45.2159	ug/L	99
13) 11dichlorthe	3.99	96	176135	10.5501	ug/L	100
14) Trichlorotfluoroeth	4.03	101	301142	21.6655	ug/L	99
15) Acetone	4.05	43	625566	92.0930	ug/L	99
16) Iodomethane	4.16	142	342046	19.7867	ug/L	98
17) Carbon Dislf	4.25	76	655963	20.6169	ug/L	100
18) allylchloride	4.47	41	551898	20.1346	ug/L	99
19) methylacetate	4.53	74	42793	8.4923	ug/L	98
20) Methylchlorid	4.63	84	191444	9.2478	ug/L	99
21) tbutylalcohol	4.83	59	859670	468.2134	ug/L	100
22) Acrylonitrile	4.94	53	413682	50.4425	ug/L	96
23) t12dichlorte	5.00	96	190354	10.0599	ug/L	99
24) MtBE	5.04	73	416411	9.7872	ug/L	99
25) Hexane	5.40	57	603273	21.4095	ug/L	98
26) 11dichlorota	5.53	63	324968	9.9248	ug/L	98
27) Vinylacetate	5.62	43	2208329	93.5247	ug/L	99
28) chloroprene	5.66	53	594562	21.5249	ug/L	98
29) Diisopether	5.68	45	511344	10.0994	ug/L	99
30) ETBE	6.13	59	393723	9.4115	ug/L	100
31) 22dichloropr	6.27	77	186966	9.7230	ug/L	98
32) c12dichlorte	6.26	96	197982	9.8972	ug/L	100
33) 2Butanone	6.28	72	255152	95.1052	ug/L	97
34) propionitrile	6.32	54	348716	98.8952	ug/L	99
35) Ethylacetate	6.38	88	39780	47.0127	ug/L	96
36) methacrylonitrile	6.52	67	198184	19.8885	ug/L	99
37) Bromochlorma	6.55	128	90148	9.5482	ug/L	100
38) Tetrahydofur	6.63	42	568229	98.1866	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 08:15:32 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	314669	9.8237	ug/L	98
40)	111trichlota	6.90	97	265381	10.2655	ug/L	98
42)	Cyclohexane	6.99	56	263251	10.8023	ug/L	99
43)	Carbtetraclo	7.12	119	219614	10.8546	ug/L	100
44)	11dicloprope	7.11	110	92520	10.0163	ug/L	100
46)	Benzene	7.36	78	755569	10.3434	ug/L	100
47)	12dichlorota	7.36	62	241385	10.0675	ug/L	100
48)	TAME	7.52	73	379678	9.7293	ug/L	99
49)	trichloroete	8.17	95	190134	9.9189	ug/L	100
50)	methylcyclohexane	8.43	83	417234	9.9542	ug/L	97
51)	12dicloropra	8.42	63	194331	9.6166	ug/L	92
52)	23Dicl1propene	8.48	75	280878	9.7509	ug/L	99
53)	Dibromometha	8.56	93	111630	9.8350	ug/L	97
54)	methylmethacrylate	8.59	69	136441	9.6194	ug/L	98
55)	14dioxane	8.60	88	132551	466.5810	ug/L	99
56)	Bromodiclrma	8.76	83	232638	9.6805	ug/L	98
57)	2Nitropropane	9.02	43	523829	102.6703	ug/L	100
58)	2CLEVE	9.15	63	280547	44.8868	ug/L	98
59)	c13dicloproe	9.34	75	266944	9.8379	ug/L	98
60)	4Meth2Pentan	9.54	43	1600538	99.1889	ug/L	99
62)	Toluene	9.79	92	478380	10.1681	ug/L	100
63)	t13Dicloprop	10.05	75	216247	9.7662	ug/L	99
64)	ethylmethacrylate	10.19	69	503695	20.0749	ug/L	98
65)	112Triclotha	10.28	83	144785	10.0385	ug/L	97
66)	Tetrachlorte	10.53	166	207215	10.4601	ug/L	99
67)	13Diclorpropa	10.51	76	295132	9.8989	ug/L	100
69)	2Hexanone	10.63	43	1199078	92.6215	ug/L	100
70)	Clorodibrmta	10.81	129	175683	9.5245	ug/L	99
71)	12Dibrometha	10.97	107	159867	9.3790	ug/L	99
72)	Chlorobenzen	11.65	112	508972	9.6532	ug/L	98
73)	1Clhexane	11.63	91	259685	9.9094	ug/L	99
74)	1112Tetclota	11.76	131	160470	9.5489	ug/L	99
75)	Ethylbenzene	11.81	91	843063	10.0410	ug/L	100
76)	m p-Xylene	11.98	106	672035	20.6184	ug/L	98
77)	o-Xylene	12.52	106	317264	9.7258	ug/L	96
78)	Styrene	12.53	104	526747	10.0201	ug/L	99
79)	Bromoform	12.77	173	119420	9.6901	ug/L	98
80)	Isopropylben	13.05	105	811900	10.3944	ug/L	99
81)	cyclohexanone	13.13	55	174119	164.5907	ug/L	98
84)	Bromobenzene	13.45	156	203080	9.3815	ug/L	99
85)	1122Tetrclta	13.43	83	236384	9.1877	ug/L	99
86)	123Triclproa	13.49	75	282121	8.9799	ug/L	98
87)	14dichloro2butene	13.51	53	64365	8.8754	ug/L	100
88)	n-Propylbenz	13.64	91	954175	10.0381	ug/L	100
89)	2chlorotolue	13.75	91	575861	9.5726	ug/L	98
90)	4chlorotolue	13.90	91	657900	9.5996	ug/L	99
91)	135Trimebenz	13.89	105	673878	9.8926	ug/L	100
92)	tbutylbenzen	14.36	119	579432	10.0638	ug/L	99
93)	124Trimetben	14.43	105	650006	9.8035	ug/L	99
94)	sbutylbenzen	14.68	105	839443	10.2882	ug/L	99
95)	13Diclorbenz	14.82	146	370238	9.4762	ug/L	99
96)	pIsopropylto	14.90	119	706017	10.1016	ug/L	100
97)	14dichlorobe	14.94	146	381961	9.4992	ug/L	97
98)	12dichlorobe	15.48	146	357024	9.4292	ug/L	98
99)	nButylbenzen	15.49	91	630494	9.6990	ug/L	99
100)	12dibromo3cl	16.58	157	43406	8.9029	ug/L	98
101)	135Trichlorobenzene	16.91	180	275376	9.0630	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 08:15:32 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	217824	9.0643	ug/L	99
103) Hexachlorobu	17.97	225	106115	9.8796	ug/L	98
104) Naphthalene	18.02	128	485259	9.1584	ug/L	98
105) 123Trichlben	18.33	180	205833	9.0060	ug/L	99

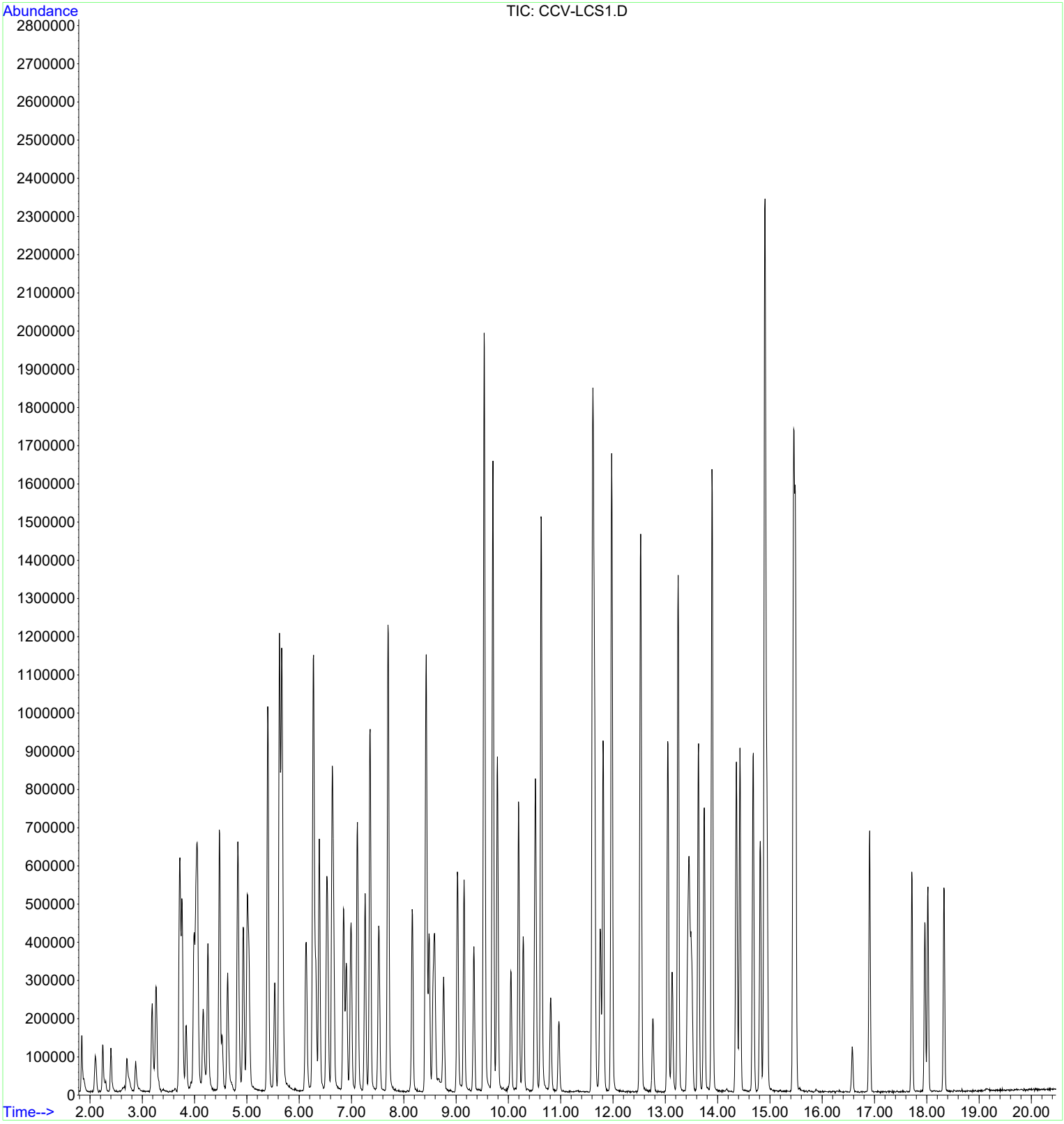
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\MAY0522\CCV-LCS1.D Vial: 3
Acq On : 5 May 2022 7:54 Operator: DGS-RLD
Sample : 211603,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 08:15:32 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\MB1.D Vial: 5
Acq On : 5 May 2022 8:55 Operator: DGS-RLD
Sample : 211603,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 09:15:38 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1260344	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1051959	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	583749	20.00 ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.85	113	339603	20.271 ug/L	0.00	
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.26	102	88640	19.833 ug/L	0.00	
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %			
61) SURRd8Tolule	9.71	98	1338018	20.297 ug/L	0.00	
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.25	95	574915	19.904 ug/L	0.00	
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.05	43	2976	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	3457	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.84	59	4189	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\MB1.D Vial: 5
Acq On : 5 May 2022 8:55 Operator: DGS-RLD
Sample : 211603,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 09:15:38 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.56	43	4993	Below Cal #	37
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.62	43	5916	Below Cal #	87
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3655	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.64	91	2829	N.D.	
89)	2chlorotolue	13.64	91	2595	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.68	105	3408	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.90	119	3207	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.49	91	3051	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\MB1.D Vial: 5
Acq On : 5 May 2022 8:55 Operator: DGS-RLD
Sample : 211603,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 09:15:38 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.01	128	6300	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

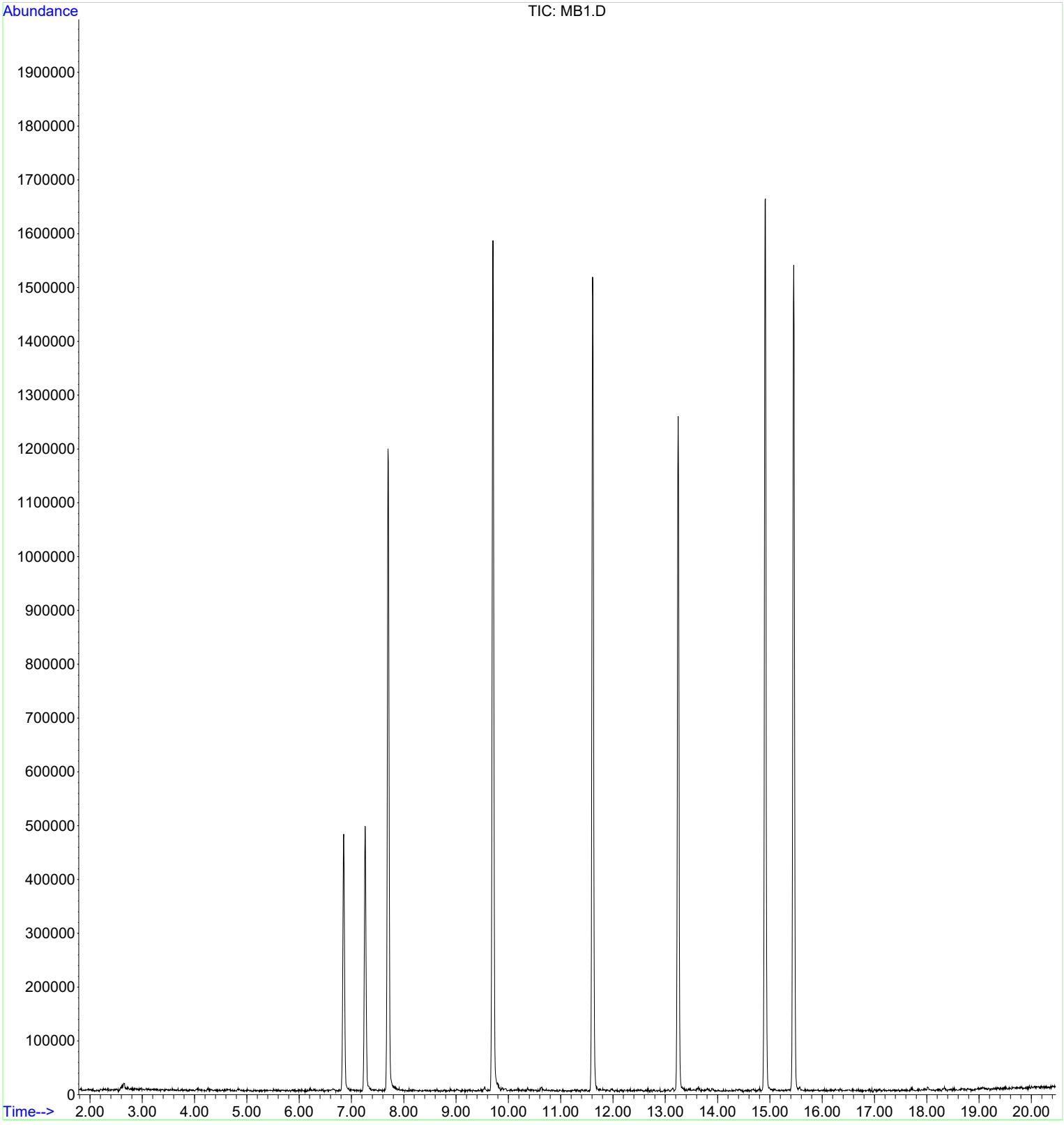
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\MB1.D Vial: 5
Acq On : 5 May 2022 8:55 Operator: DGS-RLD
Sample : 211603,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 09:15:38 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203M.D Vial: 32
Acq On : 5 May 2022 21:40 Operator: DGS-RLD
Sample : 211603,MSW1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 22:01:09 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1276393	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1080209	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	617675	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	342825	20.206	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.26	102	88531	19.559	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98	%		
61) SURRd8Tolule	9.71	98	1373780	20.578	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103	%		
83) SURR4BrFBenz	13.25	95	601473	19.680	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	187468	11.3818	ug/L	96
3) Chloromethan	2.11	50	154666	10.1729	ug/L	95
4) VinylChlorid	2.25	62	168792	10.8801	ug/L	100
5) Bromomethane	2.70	94	95175	10.6168	ug/L	97
6) Chloroethane	2.87	64	101666	10.1663	ug/L	97
7) Dichloroflmethane	3.18	67	348631	10.3189	ug/L	99
8) Trichlorofma	3.26	101	284598	11.4865	ug/L	98
9) Ethylether	3.71	59	107715	8.6597	ug/L	93
10) dichlorotfluoroethan	3.72	67	357795	11.3309	ug/L	98
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	166824	46.1541	ug/L	99
13) 11dichlorthe	3.99	96	182744	11.1836	ug/L	99
14) Trichlorotfluoroeth	4.03	101	286826	21.0836	ug/L	99
15) Acetone	4.06	43	532772	80.1350	ug/L	99
16) Iodomethane	4.16	142	338560	20.0102	ug/L	99
17) Carbon Dislf	4.25	76	680307	21.8462	ug/L	100
18) allylchloride	4.48	41	539420	20.1066	ug/L	99
19) methylacetate	4.53	74	43236	8.7665	ug/L	93
20) Methylchlorid	4.63	84	187288	9.2434	ug/L	97
21) tbutylalcohol	4.83	59	822095	457.4689	ug/L	98
22) Acrylonitrile	4.94	53	395049	49.2163	ug/L	100
23) t12dichlorte	5.00	96	193215	10.4328	ug/L	98
24) MtBE	5.03	73	402571	9.6673	ug/L	98
25) Hexane	5.40	57	545275	19.7713	ug/L	99
26) 11dichlorota	5.53	63	328125	10.2387	ug/L	99
27) Vinylacetate	5.62	43	2618696	116.7404	ug/L	100
28) chloroprene	5.67	53	600668	22.2180	ug/L	98
29) Diisopether	5.68	45	519319	10.4796	ug/L	99
30) ETBE	6.13	59	391385	9.5588	ug/L	99
31) 22dichloropr	6.27	77	162258	8.6213	ug/L	97
32) c12dichlorte	6.26	96	202107	10.3228	ug/L	99
33) 2Butanone	6.28	72	252876	96.3031	ug/L	99
34) propionitrile	6.32	54	327900	95.0106	ug/L	99
35) Ethylacetate	6.39	88	38502	46.4902	ug/L #	89
36) methacrylonitrile	6.53	67	183843	18.8498	ug/L	98
37) Bromochlorma	6.55	128	93271	10.0935	ug/L	97
38) Tetrahydofur	6.63	42	570350	100.6927	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203M.D Vial: 32
Acq On : 5 May 2022 21:40 Operator: DGS-RLD
Sample : 211603,MSW1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 22:01:09 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	326981	10.4296	ug/L	100
40)	111trichlota	6.91	97	266306	10.5249	ug/L	98
42)	Cyclohexane	6.99	56	266722	11.1823	ug/L	96
43)	Carbtetraclo	7.12	119	220078	11.1136	ug/L	95
44)	11dicloprope	7.11	110	97353	10.7683	ug/L	97
46)	Benzene	7.36	78	764273	10.6897	ug/L	99
47)	12dichlorota	7.36	62	238423	10.1598	ug/L	99
48)	TAME	7.52	73	367444	9.6202	ug/L	96
49)	trichloroete	8.16	95	192508	10.2607	ug/L	99
50)	methylcyclohexane	8.43	83	386505	9.4289	ug/L	97
51)	12dicloropra	8.42	63	198444	10.0333	ug/L	93
52)	23Dicl1propene	8.48	75	279397	9.9100	ug/L	100
53)	Dibromometha	8.56	93	110520	9.9486	ug/L	98
54)	methylmethacrylate	8.59	69	137119	9.8771	ug/L	96
55)	14dioxane	8.60	88	125749	452.2474	ug/L	97
56)	Bromodiclrma	8.76	83	233536	9.9289	ug/L	99
57)	2Nitropropane	9.03	43	482918	96.7066	ug/L	97
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.34	75	257085	9.6802	ug/L	99
60)	4Meth2Pentan	9.54	43	1567506	99.2576	ug/L	100
62)	Toluene	9.79	92	486872	10.5732	ug/L	99
63)	t13Dicloprop	10.05	75	196712	9.0768	ug/L	99
64)	ethylmethacrylate	10.20	69	465569	18.9582	ug/L	99
65)	112Triclotha	10.28	83	142750	10.1123	ug/L	98
66)	Tetrachlorte	10.53	166	209273	10.7933	ug/L	98
67)	13Diclorpropa	10.51	76	285225	9.7743	ug/L	100
69)	2Hexanone	10.63	43	1142232	88.1050	ug/L	99
70)	Clorodibrmta	10.81	129	163796	8.9003	ug/L	97
71)	12Dibrometha	10.97	107	159728	9.3923	ug/L	98
72)	Chlorobenzen	11.65	112	513235	9.7563	ug/L	99
73)	1Clhexane	11.63	91	250932	9.5973	ug/L	99
74)	1112Tetclota	11.76	131	154053	9.1880	ug/L	97
75)	Ethylbenzene	11.82	91	854768	10.2037	ug/L	98
76)	m p-Xylene	11.97	106	664942	20.4474	ug/L	98
77)	o-Xylene	12.52	106	323448	9.9381	ug/L	97
78)	Styrene	12.53	104	515773	9.8337	ug/L	100
79)	Bromoform	12.77	173	114001	9.2715	ug/L	98
80)	Isopropylben	13.05	105	807830	10.3659	ug/L	99
81)	cyclohexanone	13.14	55	124542	121.0858	ug/L	99
84)	Bromobenzene	13.46	156	205121	9.5148	ug/L	98
85)	1122Tetrclta	13.43	83	239194	9.3352	ug/L	100
86)	123Triclproa	13.49	75	271102	8.6646	ug/L	95
87)	14dichloro2butene	13.51	53	58377	8.0827	ug/L	96
88)	n-Propylbenz	13.64	91	956643	10.1054	ug/L	99
89)	2chlorotolue	13.75	91	572780	9.5605	ug/L	99
90)	4chlorotolue	13.90	91	656998	9.6258	ug/L	99
91)	135Trimebenz	13.89	105	674844	9.9475	ug/L	99
92)	tbutylbenzen	14.36	119	578877	10.0955	ug/L	99
93)	124Trimetben	14.43	105	648521	9.8213	ug/L	99
94)	sbutylbenzen	14.68	105	847324	10.4275	ug/L	100
95)	13Diclorbenz	14.82	146	372267	9.5673	ug/L	98
96)	pIsopropylto	14.90	119	711731	10.2252	ug/L	99
97)	14dichlorobe	14.94	146	377015	9.4147	ug/L	97
98)	12dichlorobe	15.49	146	340468	9.0289	ug/L	98
99)	nButylbenzen	15.49	91	646020	9.9787	ug/L	98
100)	12dibromo3cl	16.58	157	39612	8.1581	ug/L	91
101)	135Trichlorobenzene	16.91	180	273928	9.0524	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203M.D Vial: 32
Acq On : 5 May 2022 21:40 Operator: DGS-RLD
Sample : 211603,MSW1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 22:01:09 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	211793	8.8495	ug/L	98
103) Hexachlorobu	17.96	225	107060	10.0086	ug/L	97
104) Naphthalene	18.02	128	470938	8.9247	ug/L	99
105) 123Trichlben	18.33	180	203960	8.9607	ug/L	99

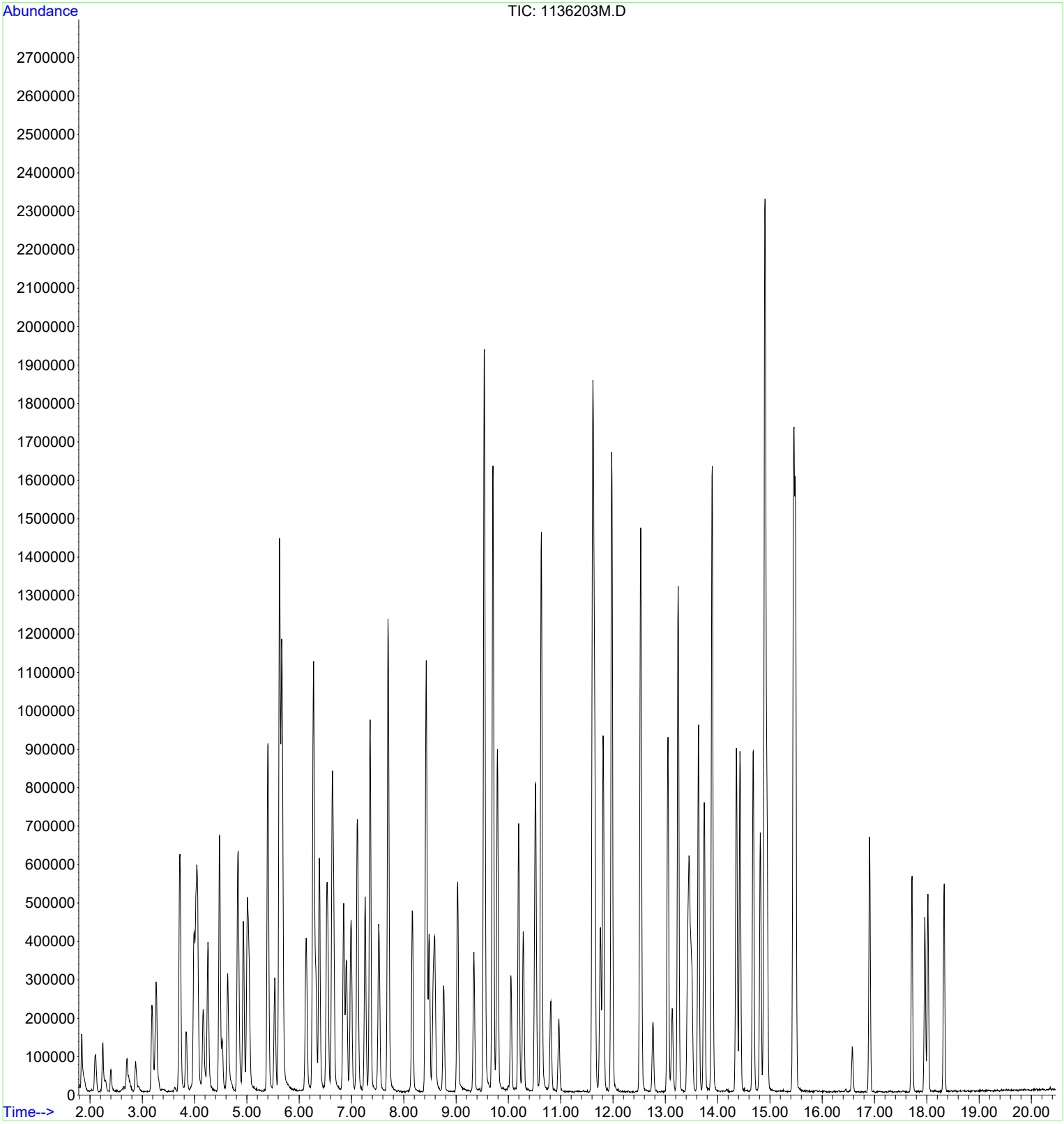
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203M.D Vial: 32
Acq On : 5 May 2022 21:40 Operator: DGS-RLD
Sample : 211603,MSW1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 22:01:09 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M



Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203S.D Vial: 33
Acq On : 5 May 2022 22:10 Operator: DGS-RLD
Sample : 211603,MSDW1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 22:31:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1301854	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.61	117	1079764	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	624415	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	346486	20.022	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.26	102	90574	19.619	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98	%		
61) SURRd8Tolule	9.71	98	1380151	20.269	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.25	95	599045	19.389	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 97	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	202815	12.0727	ug/L	100
3) Chloromethan	2.11	50	174384	11.2455	ug/L	100
4) VinylChlorid	2.25	62	180404	11.4011	ug/L	100
5) Bromomethane	2.70	94	105745	11.5652	ug/L	97
6) Chloroethane	2.87	64	109140	10.7003	ug/L	96
7) Dichloroflmethane	3.18	67	378687	10.9893	ug/L	99
8) Trichlorofma	3.26	101	313745	12.4152	ug/L	99
9) Ethylether	3.71	59	123514	9.7356	ug/L	96
10) dichlorotfluoroethan	3.73	67	381116	11.8334	ug/L	99
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	177015	48.0158	ug/L	99
13) 11dichlorthe	3.99	96	201091	12.0657	ug/L	99
14) Trichlorotfluoroeth	4.03	101	318975	22.9882	ug/L	99
15) Acetone	4.06	43	574428	84.7107	ug/L	96
16) Iodomethane	4.16	142	393618	22.8094	ug/L	99
17) Carbon Dislf	4.26	76	753846	23.7343	ug/L	100
18) allylchloride	4.48	41	594093	21.7115	ug/L	100
19) methylacetate	4.53	74	46084	9.1612	ug/L	92
20) Methylchlorid	4.64	84	211433	10.2310	ug/L	99
21) tbutylalcohol	4.83	59	952653	519.7523	ug/L	99
22) Acrylonitrile	4.93	53	432751	52.8589	ug/L	97
23) t12dichlorte	5.00	96	213463	11.3007	ug/L	98
24) MtBE	5.04	73	449939	10.5935	ug/L	98
25) Hexane	5.40	57	622015	22.1128	ug/L	98
26) 11dichlorota	5.53	63	358997	10.9830	ug/L	100
27) Vinylacetate	5.62	43	2820830	124.3685	ug/L	98
28) chloroprene	5.66	53	645722	23.4174	ug/L	98
29) Diisopether	5.68	45	566315	11.2045	ug/L	96
30) ETBE	6.13	59	441106	10.5624	ug/L	99
31) 22dichloropr	6.27	77	182155	9.4892	ug/L	97
32) c12dichlorte	6.26	96	223919	11.2132	ug/L	99
33) 2Butanone	6.28	72	272866	101.8836	ug/L	99
34) propionitrile	6.32	54	357443	101.5453	ug/L	98
35) Ethylacetate	6.39	88	40997	48.5347	ug/L	93
36) methacrylonitrile	6.53	67	201692	20.2755	ug/L	96
37) Bromochlorma	6.55	128	102354	10.8598	ug/L	97
38) Tetrahydofur	6.63	42	605070	104.7332	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203S.D Vial: 33
Acq On : 5 May 2022 22:10 Operator: DGS-RLD
Sample : 211603,MSDW1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 22:31:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	355336	11.1124	ug/L	98
40)	111trichlota	6.90	97	295157	11.4371	ug/L	97
42)	Cyclohexane	6.99	56	290967	11.9602	ug/L	97
43)	Carbtetraclo	7.12	119	246512	12.2051	ug/L	97
44)	11dicloprope	7.11	110	103168	11.1884	ug/L	97
46)	Benzene	7.36	78	830075	11.3830	ug/L	100
47)	12dichlorota	7.36	62	258591	10.8037	ug/L	99
48)	TAME	7.53	73	410242	10.5306	ug/L	100
49)	trichloroete	8.16	95	209219	10.9333	ug/L	99
50)	methylcyclohexane	8.43	83	417972	9.9886	ug/L	100
51)	12dicloropra	8.42	63	214598	10.6378	ug/L	93
52)	23Dicl1propene	8.48	75	313933	10.9172	ug/L	97
53)	Dibromometha	8.56	93	121115	10.6891	ug/L	97
54)	methylmethacrylate	8.59	69	146480	10.3450	ug/L	98
55)	14dioxane	8.60	88	135928	479.2946	ug/L	98
56)	Bromodiclrma	8.76	83	254187	10.5955	ug/L	99
57)	2Nitropropane	9.03	43	529282	103.9183	ug/L	98
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.34	75	284365	10.4980	ug/L	100
60)	4Meth2Pentan	9.54	43	1713546	107.2191	ug/L	99
62)	Toluene	9.79	92	526933	11.2194	ug/L	100
63)	t13Dicloprop	10.05	75	221085	10.0019	ug/L	99
64)	ethylmethacrylate	10.20	69	516253	20.6110	ug/L	99
65)	112Triclotha	10.28	83	150343	10.4419	ug/L	97
66)	Tetrachlorte	10.53	166	230787	11.6701	ug/L	99
67)	13Diclorpropa	10.51	76	311358	10.4612	ug/L	99
69)	2Hexanone	10.63	43	1262225	98.1981	ug/L	99
70)	Clorodibrmta	10.81	129	190749	10.3692	ug/L	99
71)	12Dibrometha	10.97	107	174124	10.2430	ug/L	95
72)	Chlorobenzen	11.65	112	555742	10.5687	ug/L	100
73)	1Clhexane	11.63	91	294005	11.2494	ug/L	97
74)	1112Tetclota	11.76	131	169994	10.1429	ug/L	97
75)	Ethylbenzene	11.82	91	939794	11.2233	ug/L	99
76)	m p-Xylene	11.98	106	729422	22.4395	ug/L	99
77)	o-Xylene	12.52	106	352525	10.8359	ug/L	95
78)	Styrene	12.53	104	574563	10.9591	ug/L	100
79)	Bromoform	12.76	173	121506	9.8860	ug/L	99
80)	Isopropylben	13.05	105	896109	11.5034	ug/L	98
81)	cyclohexanone	13.13	55	143426	137.7853	ug/L	99
84)	Bromobenzene	13.46	156	224175	10.2864	ug/L	99
85)	1122Tetrclta	13.43	83	261719	10.1040	ug/L	99
86)	123Triclproa	13.49	75	295691	9.3485	ug/L	96
87)	14dichloro2butene	13.51	53	66034	9.0442	ug/L	98
88)	n-Propylbenz	13.64	91	1061062	11.0874	ug/L	100
89)	2chlorotolue	13.75	91	633620	10.4619	ug/L	100
90)	4chlorotolue	13.90	91	721477	10.4564	ug/L	98
91)	135Trimebenz	13.89	105	750887	10.9489	ug/L	99
92)	tbutylbenzen	14.36	119	644650	11.1212	ug/L	100
93)	124Trimetben	14.43	105	712011	10.6664	ug/L	99
94)	sbutylbenzen	14.68	105	948614	11.5480	ug/L	99
95)	13Diclorbenz	14.82	146	401899	10.2174	ug/L	98
96)	pIsopropylto	14.90	119	782705	11.1235	ug/L	100
97)	14dichlorobe	14.94	146	410192	10.1326	ug/L	98
98)	12dichlorobe	15.49	146	377043	9.8909	ug/L	97
99)	nButylbenzen	15.49	91	721610	11.0259	ug/L	99
100)	12dibromo3cl	16.57	157	47849	9.7482	ug/L	97
101)	135Trichlorobenzene	16.91	180	299952	9.8054	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203S.D Vial: 33
Acq On : 5 May 2022 22:10 Operator: DGS-RLD
Sample : 211603,MSDW1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 22:31:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	237101	9.8001	ug/L	99
103) Hexachlorobu	17.97	225	119444	11.0458	ug/L	97
104) Naphthalene	18.02	128	546852	10.2515	ug/L	99
105) 123Trichlben	18.33	180	233231	10.1361	ug/L	99

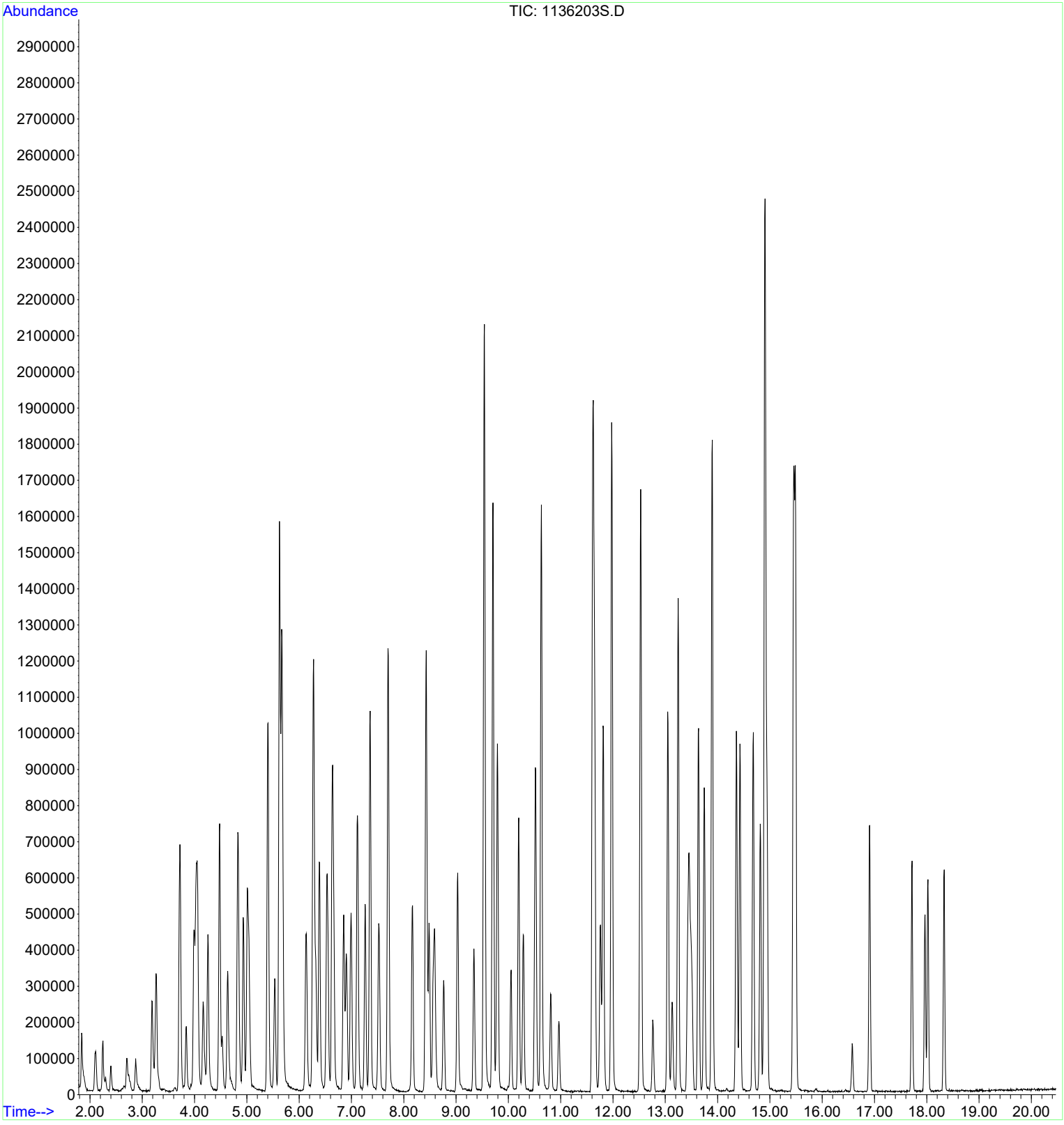
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\MAY0522\1136203S.D Vial: 33
Acq On : 5 May 2022 22:10 Operator: DGS-RLD
Sample : 211603,MSDW1136203, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: May 05 22:31:24 2022 Results File: W042822.RES

Quant Method : C:\INSTARCH\METHODS\W042822.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Apr 29 09:21:12 2022
Response via : Initial Calibration
DataAcq Meth : W042822.M

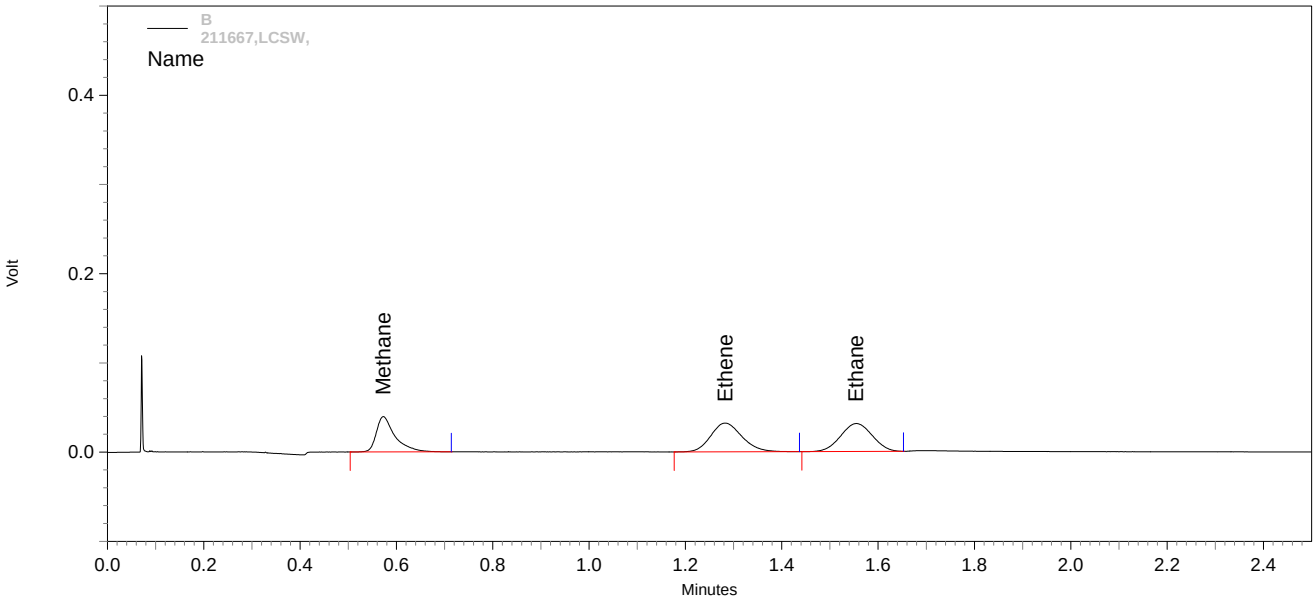


Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,LCSW,
Acquired: May 04, 2022 08:57:22
File Desc. Laboratory Control Sample - 25 ppmV -

500 uL of the 200 ppmV MEE Std. into 4 mL of headspace. 1.0 mL injection (Methane, Ethene, Ethane,)



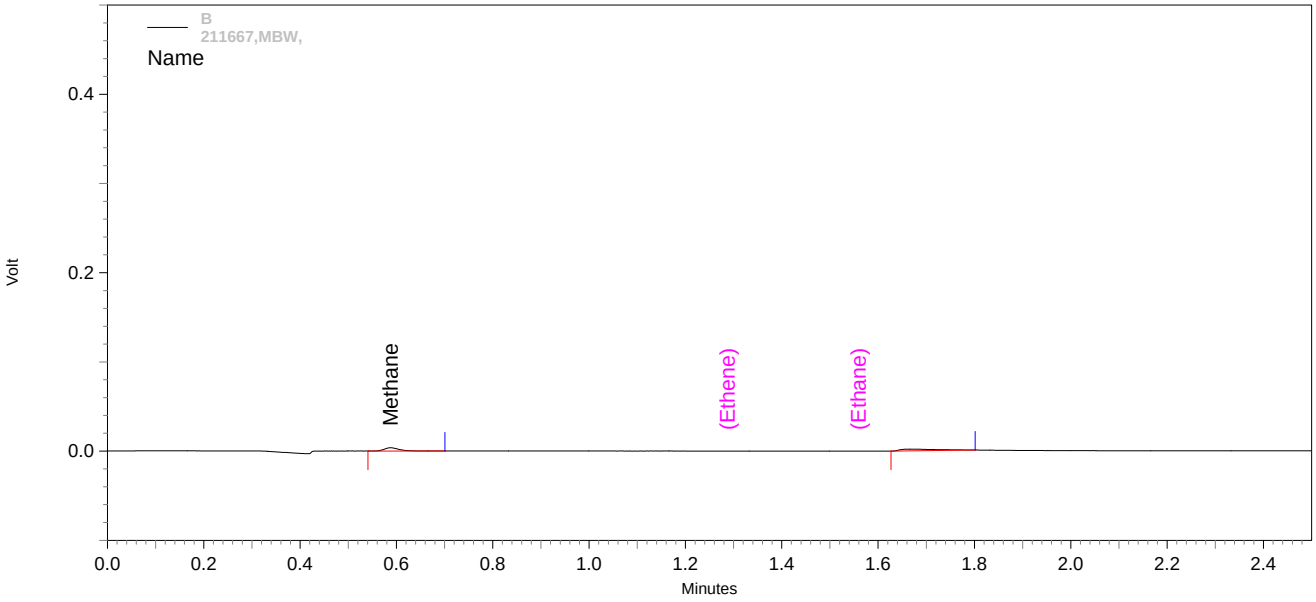
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.573	0.574	106265	27.340	ppmV
2	Ethene	1.283	1.287	144737	20.384	ppmV
3	Ethane	1.554	1.559	142790	19.867	ppmV

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,MBW,
Acquired: May 04, 2022 09:02:23
File Desc. Method Blank
1.0 mL injection (Methane, Ethene, Ethane)



B Results

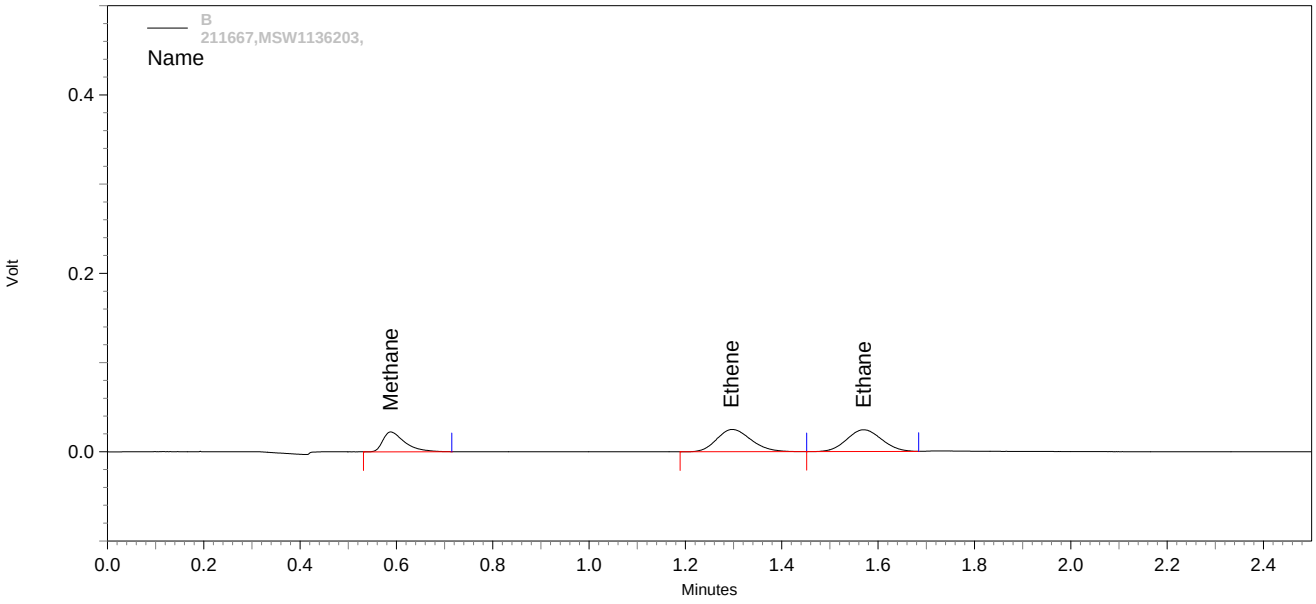
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.588**	**0.574**	**7735**	**1.845**	**ppmV**
	Ethene		**1.287**		**0.000 BDL**	**ppmV**
	Ethane		**1.559**		**0.000 BDL**	**ppmV**
2		**1.663**	**0.000**	**10269**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\006.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,MSW1136203,
Acquired: May 04, 2022 09:11:04
File Desc. MATRIX SPIKE 1mL injection (Methane, Ethene, Ethane)

NOT USED



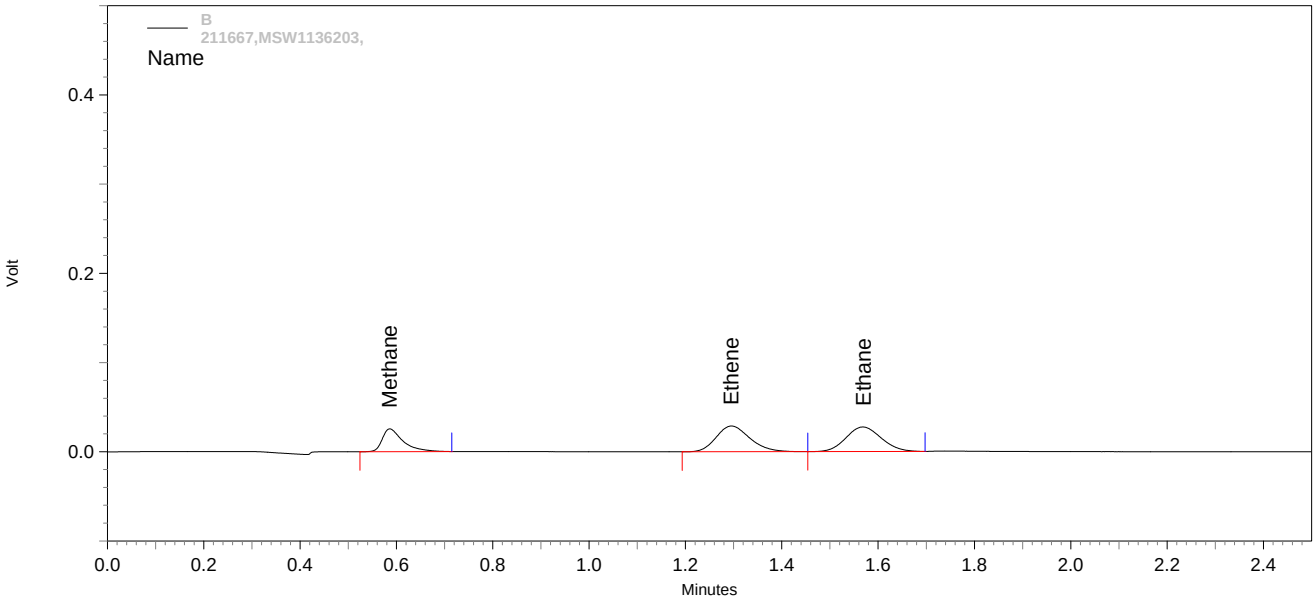
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.588	0.574	70159	17.997	ppmV
2	Ethene	1.295	1.287	124094	17.463	ppmV
3	Ethane	1.569	1.559	122388	16.983	ppmV

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\007.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,MSW1136203,
Acquired: May 04, 2022 09:15:58
File Desc. MATRIX SPIKE 1mL injection (Methane, Ethene, Ethane)



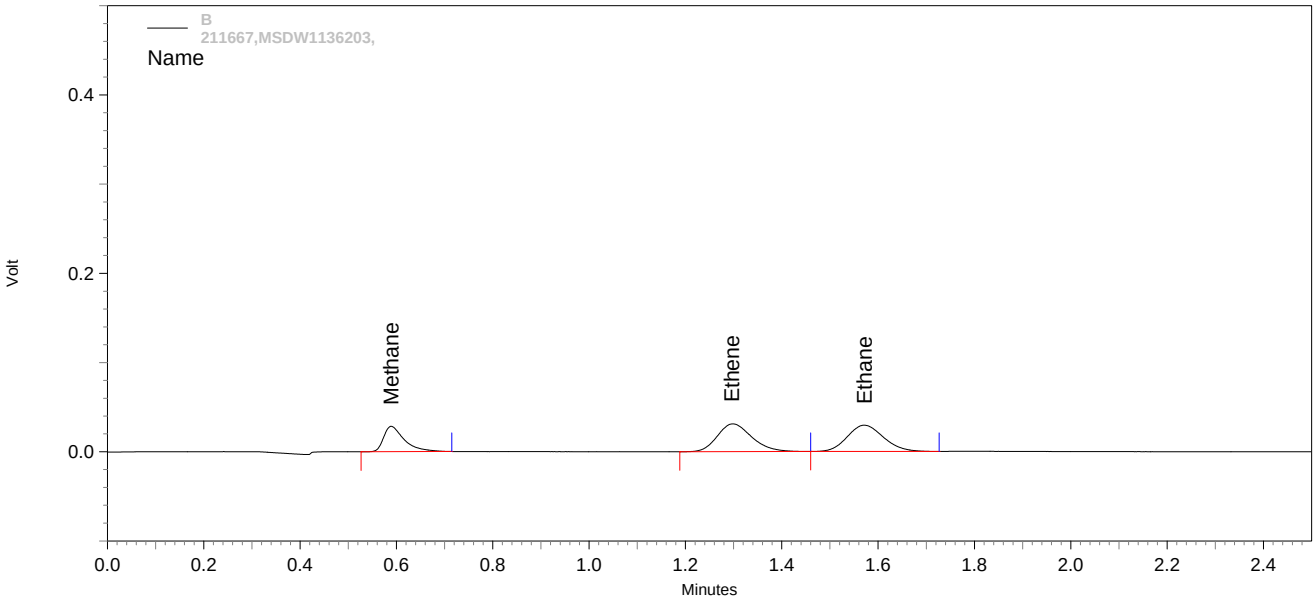
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.586**	**0.574**	**76310**	**19.589**	**ppmV**
2	**Ethene**	**1.295**	**1.287**	**140298**	**19.756**	**ppmV**
3	**Ethane**	**1.569**	**1.559**	**139754**	**19.438**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\050422 -\008.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 211667,MSDW1136203,
Acquired: May 04, 2022 09:22:28
File Desc. MATRIX SPIKE DUPLICATE 1mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.589	0.574	84744	21.771	ppmV
2	Ethene	1.297	1.287	154399	21.751	ppmV
3	Ethane	1.572	1.559	153717	21.412	ppmV

VOLATILE ORGANIC ANALYSIS
LOGBOOK
DOCUMENTS

VOC 8260 QSM WATER 5.0 Analytical Run
211603 on 5/6/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1139501						VOC 8260 QSM WATER 5.0				
				BFB				0			
	1138907						VOC 8260 QSM WATER 5.0				
				LCSW				0			
	1138908						VOC 8260 QSM WATER 5.0				
				CCV				0			
	1139090						VOC 8260 QSM WATER 5.0				
				MBW				0			
169156	1136202		4/26/2022 00:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		M	4	
		TB1									
169199	1136587		4/28/2022 00:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		M	4	
		TB2									
169227	1137437		4/29/2022 08:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		M	4	
		TB3									
169156	1136203		4/26/2022 08:21		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		13MW5		Designated MS/MSD							
	1139347						VOC 8260 QSM WATER 5.0				
				CCVF				0			
	1139502						VOC 8260 QSM WATER 5.0				
				BFB				0			
	1139500						VOC 8260 QSM WATER 5.0				
				CCV				0			
	1139717						VOC 8260 QSM WATER 5.0				
				CCB				0			
169156	1136204		4/26/2022 09:25		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		13MW4									
169156	1136205		4/26/2022 10:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		13MW3									
169156	1136206		4/26/2022 11:46		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		49MW04									
169156	1136207		4/26/2022 11:46		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		49TW04									
169156	1136208		4/26/2022 12:47		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		13MW2									

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: Volatiles C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp41DF.tmp Page 1 of 1

VOC 8260 QSM WATER 5.0 Analytical Run
211603 on 5/6/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169156	1136213		4/27/2022	08:32			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		49MW05											
169156	1136214		4/27/2022	11:32			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		49MW02											
169156	1136216		4/27/2022	14:04			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		48MW2											
169156	1136217		4/27/2022	15:37			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		48MW6											
169199	1136588		4/28/2022	09:48			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		50MW2											
169199	1136671		4/28/2022	09:48			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		50TW2											
169199	1136672		4/28/2022	12:26			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		49MW01											
169199	1136673		4/28/2022	13:56			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		49MW03											
169199	1136674		4/28/2022	15:20			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		48MW7											
169227	1137438		4/29/2022	08:50			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	4	
		48MW1											
	1139722		4/26/2022	08:21					VOC 8260 QSM 5.0				
		13MW5			MSW	1136203				0			
	1139723		4/26/2022	08:21					VOC 8260 QSM 5.0				
		13MW5			MSDW	1139722				0			
	1139724								VOC 8260 QSM WATER 5.0				
					CCVF					0			
	1140447								VOC 8260 QSM WATER 5.0				
					BFB					0			
	1139733								VOC 8260 QSM WATER 5.0				
					CCV					0			
	1140062								VOC 8260 QSM WATER 5.0				
					CCB					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp41DF.tmp Page 1 of 1

VOC 8260 QSM WATER 5.0 Analytical Run
211603 on 5/6/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169156	1136215		4/27/2022	12:52		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	VOC 8260 QSM 5.0		GW	**4**	
		48MW3										
	1140124							VOC 8260 QSM WATER 5.0				
					CCVF				0			

35 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\MAY0522\BFB1.D
Injection Date : 5 May 2022 Log Time Period (hrs) : ALL
Injection Time : 07:12 Total files within period : 40
Sample Directory : C:\INSTARCH\DATA\MAY0522\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
IB1	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged	5 May 2022	07:26
CCV-LCS1	1.00	1.00	1.00	211603,LCSW, 10.0/100 ug/L, 5.0 m	5 May 2022	07:54
IB2	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged	5 May 2022	08:24
MB1	1.00	1.00	1.00	211603,MBW, pH<2,5.0 mL DI H20 P	5 May 2022	08:55
1136202	1.00	1.00	1.00	211603,1136202, pH<2,5.0 mL DI H20 P	5 May 2022	09:23
1136587	1.00	1.00	1.00	211603,1136587, pH<2,5.0 mL DI H20 P	5 May 2022	09:53
1137437	1.00	1.00	1.00	211603,1137437, pH<2,5.0 mL DI H20 P	5 May 2022	10:22
1136203	1.00	1.00	1.00	211603,1136203, pH<2,5.0 mL DI H20 P	5 May 2022	10:52
CCVF1	1.00	1.00	1.00	211603,CCVF, 10.0/100 ug/L, 5.0 m	5 May 2022	11:21
BFB2	1.00	1.00	1.00	BFB DIRECT INJ. 50 ng Inj.	5 May 2022	11:45
IB3	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged	5 May 2022	11:59
CCV2	1.00	1.00	1.00	211603,CCV, 10.0/100 ug/L, 5.0 m	5 May 2022	12:28
IB4	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged	5 May 2022	12:57
CCB1	1.00	1.00	1.00	211603,CCB, pH<2,5.0 mL DI H20 P	5 May 2022	13:26
1136204	1.00	1.00	1.00	211603,1136204, pH<2,5.0 mL DI H20 P	5 May 2022	13:55
1136205	1.00	1.00	1.00	211603,1136205, pH<2,5.0 mL DI H20 P	5 May 2022	14:24
1136206	1.00	1.00	1.00	211603,1136206, pH<2,5.0 mL DI H20 P	5 May 2022	14:53
1136207	1.00	1.00	1.00	211603,1136207, pH<2,5.0 mL DI H20 P	5 May 2022	15:22
1136208	1.00	1.00	1.00	211603,1136208,	5 May 2022	15:51

				pH<2,5.0 mL DI H20 P	
1136213	1.00	1.00	1.00	211603,1136213,	5 May 2022 16:20
				pH<2,5.0 mL DI H20 P	
1136214	1.00	1.00	1.00	211603,1136214,	5 May 2022 16:49
				pH<2,5.0 mL DI H20 P	
1136215	1.00	1.00	1.00	211603,1136215,5	5 May 2022 17:18
				pH<2,5.0 mL DI H20 P	
1136216	1.00	1.00	1.00	211603,1136216,	5 May 2022 17:47
				pH<2,5.0 mL DI H20 P	
1136217	1.00	1.00	1.00	211603,1136217,	5 May 2022 18:15
				pH<2,5.0 mL DI H20 P	
1136588	1.00	1.00	1.00	211603,1136588,	5 May 2022 18:45
				pH<2,5.0 mL DI H20 P	
1136671	1.00	1.00	1.00	211603,1136671,	5 May 2022 19:14
				pH<2,5.0 mL DI H20 P	
1136672	1.00	1.00	1.00	211603,1136672,	5 May 2022 19:43
				pH<2,5.0 mL DI H20 P	
1136673	1.00	1.00	1.00	211603,1136673,	5 May 2022 20:13
				pH<2,5.0 mL DI H20 P	
1136674	1.00	1.00	1.00	211603,1136674,	5 May 2022 20:42
				pH<2,5.0 mL DI H20 P	
1137438	1.00	1.00	1.00	211603,1137438,	5 May 2022 21:11
				pH<2,5.0 mL DI H20 P	
1136203M	1.00	1.00	1.00	211603,MSW1136203,	5 May 2022 21:40
				pH<2,5.0 mL DI H20 P	
1136203S	1.00	1.00	1.00	211603,MSDW1136203,	5 May 2022 22:10
				pH<2,5.0 mL DI H20 P	
CCVF2	1.00	1.00	1.00	211603,CCVF,	5 May 2022 22:39
				10.0/100 ug/L, 5.0 m	
BFB3	1.00	1.00	1.00	BFB DIRECT INJ.	6 May 2022 07:12
				50 ng Inj.	
IB5	1.00	1.00	1.00	INSTRUMENT BLANK	6 May 2022 07:25
				5.0 mL DI H20 Purged	
CCV3	1.00	1.00	1.00	211603,CCV,	6 May 2022 07:54
				10.0/100 ug/L, 5.0 m	
IB6	1.00	1.00	1.00	INSTRUMENT BLANK	6 May 2022 08:24
				5.0 mL DI H20 Purged	
CCB2	1.00	1.00	1.00	211603,CCB,	6 May 2022 08:54
				pH<2,5.0 mL DI H20 P	
1136215R	1.00	1.00	1.00	211603,1136215,	6 May 2022 09:24
				pH<2,5.0 mL DI H20 P	
CCVF3	1.00	1.00	1.00	211603,CCVF,	6 May 2022 09:53
				10.0/100 ug/L, 5.0 m	

8260 ISTD/SSTD 20ug/ml VOC0945
8260 BFB STD. 50ug/ml VOC0944
8260 ICV STD. 100ug/ml VOC0950
8260 CCV/CALIB. 100ug/ml VOC0951

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W042822.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\APR2822\BFB1.D
Injection Date : 28 Apr 2022 Log Time Period (hrs) : ALL
Injection Time : 13:26 Total files within period : 17
Sample Directory : C:\INSTARCH\DATA\APR2822\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.5/5.0 ug/L, 5.0 mL	28 Apr 2022	14:39
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 1.00/10.00 ug/L, 5.0	28 Apr 2022	15:09
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 2.00/20.0 ug/L, 5.0	28 Apr 2022	15:39
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 5.00/50.0 ug/L, 5.0	28 Apr 2022	16:09
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 10.0/100.0 ug/L, 5.0	28 Apr 2022	16:38
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 20.0/200.0 ug/L, 5.0	28 Apr 2022	17:08
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 30.0/300.0 ug/L, 5.0	28 Apr 2022	17:38
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 40.0/400.0 ug/L, 5.0	28 Apr 2022	18:08
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT9 80.0/800.0 ug/L, 5.0	28 Apr 2022	18:37
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	28 Apr 2022	19:37
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.0/300 ug/L, 5.0 m	28 Apr 2022	20:08
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK 5.0 mL DI H20 Purged	28 Apr 2022	21:36

8260 ISTD/SSTD 20ug/ml VOC0945
8260 BFB STD. 50ug/ml VOC0944
8260 ICV STD. 100ug/ml VOC0950
8260 CCV/CALIB. 100ug/ml VOC0951

FVO4-01 Data Review Checklist

FORM #: FVO4-01
Rev. #: 2.2
Effective Date: 08/05/19

INDEPENDENT DATA REVIEW CHECKLIST			Method: GCMS (EPA SW-846 8260C)					
Analysis Date	**LIMS Run #(s):**	**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved?**			**Instrument**
					Yes	No		
05/05/2022	211603	DGS	RLD	05/06/2022				VMS3

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF<or= specified limits (<15%D.)see SOP)	Yes		Yes		
Was a second-source ICV(s) analyzed (for Quadratic Curve)?	Required before sample analyses.	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits	Yes		Yes		
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		
Was a second CCV (CCV2) for compounds calibrated using quadratic curves analyzed after every 12 hour tune check?	Required before analyses of WI samples (above the inflection point of the curve).					
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
If necessary, were the results for outlying compounds qualified?						

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)	Yes		Yes		
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?						
V. Laboratory Control Spike (LCS)						
Was a LCS (and LCSD if needed) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the LCS (LCSD) recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?						
Is the relative percent difference (RPD) for each analyte between the LCS and LSCD (if applicable) acceptable?	Default 20%, or see internally generated limits, or client specific limits.					
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	Default 20%, or see internally generated limits, or client specific limits.	Yes		Yes		
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.	Yes		Yes		
If possible, were the affected samples reanalyzed?						
**Were reported sample results with failing surrogate recoveries qualified?						
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.					
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)	Yes		Yes		
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		
Were all data, calculations, and values verified in LIMS (including removal of non-detections) upon completion of data capture?		Yes		Yes		
Were manual integrations performed correctly?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms.	Yes		Yes		
Was the rational for the manual integration verified?		Yes		Yes		
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

ᵏNon-Applicable Yes/No Cells Are Left Blank*

Comments:

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0956	8260 BFB Std.	75uL of 2,000 ug/mL 4-Bromofluorobenzene Std. V0984 into 2925uL of MeOH.	MeOH / B&J / DZ880-U	50 ug/mL	05/09/2022	06/09/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0957	8260 ISTD/SSTD	200uL of 2,500 ug/mL 8260 Istd./Sstd. Mix V0997 and 250uL of 2000 ug/mL 1,2-Dichlorobenzene-$_{d4}$ Std. V0978 into 25mL of MeOH.	MeOH / B&J / DZ880-U	20 ug/mL	05/09/2022	06/09/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0958	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V1008, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1015, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1012 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	05/09/2022	05/16/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC959	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V1003, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1016, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1013 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	05/09/2022	05/16/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0950	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V1008, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1015, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1012 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	04/26/2022	05/03/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0951	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V1003, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1016, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1013 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	04/26/2022	05/03/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0948	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V1008, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1015, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1012 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	04/14/2022	04/22/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0949	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V1003, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1016, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1013 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	04/14/2022	04/22/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0944	8260 BFB Std.	75uL of 2,000 ug/mL 4-Bromofluorobenzene Std. V0984 into 2925uL of MeOH.	MeOH / B&J / DZ880-U	50 ug/mL	04/05/2022	05/05/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0945	8260 ISTD/SSTD	200uL of 2,500 ug/mL 8260 Istd./Sstd. Mix V0991 and 250uL of 2000 ug/mL 1,2-Dichlorobenzene-$_{d4}$ Std. V0978 into 25mL of MeOH.	MeOH / B&J / DZ880-U	20 ug/mL	04/05/2022	05/05/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0946	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V1008, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1015, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1012 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	04/05/2022	04/12/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0947	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V1003, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1016, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1013 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	04/05/2022	04/12/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0942	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V1008, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1015, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1012 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	03/27/2022	04/01/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0943	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V1003, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1016, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1013 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	03/27/2022	04/01/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0940	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V1008, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1006, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1004 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	03/17/2022	03/24/2022	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0941	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V1003, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V1007, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V1005 into 2250uL of MeOH.	MeOH / B&J / DZ880-U	100 ug/mL	03/17/2022	03/24/2022	RLD

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V1015	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA220214013
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	05/15/2022	03/22/2022	RLD
# of Ampules/Units:	2	Comments:	Used to prepare 8260 ICV/Spiking standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V1016	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	06/09/2022	03/25/2022	RLD
# of Ampules/Units:	2	Comments:	Used to prepare 8260 CCV/Calib. standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V1012	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	MP220215014
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	08/14/2022	02/25/2022	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V1013	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	SM220222017
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	08/21/2022	02/25/2022	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V1008	8260 VOC Mix	AccuStandard	M-502-10X-PAK	221071133
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	07/13/2024	12/14/2021	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 ICV/Spking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V1002	4-Bromofluorobenzene	Agilent	STS-110N	0006629793
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	09/30/2028	11/05/2021	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 BFB Std. and PVOC/GRO SSTD. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V1003	8260 VOC Mix	Agilent	DWM-588-1	0006602588
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	05/31/2024	11/05/2021	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0991	8260 ISTD/SSTD Mix	Agilent	STM-540	0006595713
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,500 ug/mL	MeOH	04/30/2024	05/24/2021	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 IS/SS standard mix preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0984	4-Bromofluorobenzene	Agilent	STS-110N	0006476760
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	07/31/2022	03/18/2021	RLD
# of Ampules/Units:	4	Comments:	Used to prepare 8260 tuning standard and 8021 surrogate standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0978	1,2-Dichlorobenzene-$_{d4}$	Agilent	STS-210-1	0006552847
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	09/30/2024	01/14/2021	RLD
# of Ampules/Units:	4	Comments:	Used for 8015/8260 SSTD preparation.	

V METH, ETH, ETHENE QSM 5.0 Analytical Run
211667 on 5/4/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138464						V METH, ETH, ETHENE QSM 5.0				
				CCV				0			
	1138361						METH,ETH,ETHE QSM 5.0				
				LCSW				95280			
	1138360						METH,ETH,ETHE QSM 5.0				
				MBW				95280			
169156	1136203		4/26/2022 08:21		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		13MW5		Designated MS/MSD				95280			
	1138358		4/26/2022 08:21				METH,ETH,ETHE QSM 5.0				
		13MW5		MSW 1136203				95280			
	1138359		4/26/2022 08:21				METH,ETH,ETHE QSM 5.0				
		13MW5		MSDW 1138359				95280			
169156	1136204		4/26/2022 09:25		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		13MW4						95280			
169156	1136205		4/26/2022 10:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		13MW3						95280			
169156	1136206		4/26/2022 11:46		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		49MW04						95280			
169156	1136207		4/26/2022 11:46		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		49TW04						95280			
169156	1136208		4/26/2022 12:47		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		13MW2						95280			
169156	1136213		4/27/2022 08:32		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		49MW05						95280			
169156	1136214		4/27/2022 11:32		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		49MW02						95280			
169156	1136215		4/27/2022 12:52		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		48MW3						95280			
169156	1136216		4/27/2022 14:04		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		48MW2						95280			
	1138465						V METH, ETH, ETHENE QSM 5.0				
				CCV				0			

Page 459

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution:

V METH, ETH, ETHENE QSM 5.0 Analytical Run
211667 on 5/4/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169156	1136217		4/27/2022 15:37		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		48MW6						95280			
169199	1136588		4/28/2022 09:48		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		50MW2						95280			
169199	1136671		4/28/2022 09:48		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		50TW2						95280			
169199	1136672		4/28/2022 12:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		49MW01						95280			
169199	1136673		4/28/2022 13:56		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		49MW03						95280			
169199	1136674		4/28/2022 15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		48MW7						95280			
169227	1137438		4/29/2022 08:50		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	METH,ETH,ETHE QSM 5.0		GW	4	
		48MW1						95280			
	1138466						V METH, ETH, ETHENE QSM 5.0				
				CCV				0			

24 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

PrepWrkSht
on 5/4/2022

Prep Batch **95,280** Date Prepped: 5/4/2022 Prepped By:: DGS

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	1138360	MBW		METH,ETH,ETHE QSM 5.0	LIQUID	22.5				
	1138361	LCSW		METH,ETH,ETHE QSM 5.0	LIQUID	22.5				
169156	1136203	sample designated for QC		METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136204			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136205			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136206			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136207			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136208			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136213			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136214			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136215			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136216			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136217			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
169199	1136588			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136671			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136672			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136673			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1136674			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
169227	1137438			METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5			4	
	1138358	MSW	1136203	METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5				
	1138359	MSDW	1138358	METH,ETH,ETHE QSM 5.0	GROUND WATER	22.5				

Notes:_____

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 5/4/2022 **Instrument:** PVOC 4

Calibration Date: 7/01/2022 **Analyst:** DGS

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PS	1.0	43	22.5	/
2	CCV	0.25	43	22.5	/
3	LCS	1.0	43	22.5	/
4	MB	1.0	43	22.5	/
5	1136203	1.0	43	22.5	<2
6	MS1136203	1.0	43	22.5	<2
7	MS1136203	1.0	43	22.5	<2
8	MSD1136203	1.0	43	22.5	<2
9	1136204	1.0	43	22.5	<2
10	1136205	1.0	43	22.5	<2
11	1136206	1.0	43	22.5	<2
12	1136207	1.0	43	22.5	<2
13	1136208	1.0	43	22.5	<2
14	1136213	1.0	43	22.5	<2
15	1136214	1.0	43	22.5	<2
16	1136215	1.0	43	22.5	<2
17	1136216	1.0	43	22.5	<2
18	CCV	0.25	43	22.5	/
19	CCB	1.0	43	22.5	/
20	1136217	1.0	43	22.5	<2
21	1136588	1.0	43	22.5	<2
22	1136671	1.0	43	22.5	<2
23	1136672	1.0	43	22.5	<2
24	1136673	1.0	43	22.5	<2
25	1136674	1.0	43	22.5	<2

Calibration Standard Ref. #: VOC0845

Second Source Ref. #: VOC0846

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 5/4/2022 **Instrument:** AVOC4

Calibration Date: 7/01/2022 **Analyst:** DGS

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
26	1137438	1.0	43	22.5	<2
27	CCV	0.25	43	22.5	/
28			43		
29			43		
30			43		
31			43		
32			43		
33			43		
34			43		
35			43		
36			43		
37			43		
38			43		
39			43		
40			43		
41			43		
42			43		
43			43		
44			43		
45			43		
46			43		
47			43		
48			43		
49			43		
50			43		

Calibration Standard Ref. #: VOC0845

Second Source Ref. #: VOC0846

Page 1

Sequence Summary Report

Sequence Filename: C:\INSTARCH\PVOC4\Sequence\050422 - 211667.seq
Instrument: PVOC4
Processing Date: May 04, 2022 11:06:18

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
2	211667,CCV,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 08:47:08
3	211667,LCSW,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 08:57:22
4	211667,MBW,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:02:23
5	211667,1136203,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:05:58
6	211667,MSW1136203,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:11:04
7	211667,MSW1136203,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:15:58
8	211667,MSDW1136203,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:22:28
9	211667,1136204,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:26:30
10	211667,1136205,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:30:19
11	211667,1136206,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:42:02
12	211667,1136207,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:46:01
13	211667,1136208,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:50:55
14	211667,1136213,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:55:20
15	211667,1136214,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 09:58:57
16	211667,1136215,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:03:20
17	211667,1136216,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:07:14
18	199558,CCV,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:10:58
19	211667,CCB,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:14:39
20	211667,1136217,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:38:20
21	211667,1136588,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:42:14
22	211667,1136671,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:46:26
23	211667,1136672,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:50:59
24	211667,1136673,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:55:11
25	211667,1136674,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 10:59:00
26	211667,1137438,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 11:02:32
27	211667,CCV,	C:\InStarch\PVOC4\Data\050422 ...	C:\Instarch\PVOC4\Methods\P4...	May 04, 2022 11:06:18

FVO1-01 Data Review Checklist

	FVO1-01 Method: Dissolved Gases (EPA SW-846 8015 / RSK 175 Modified)					
LIMS Run #(s)	**Analysis Date (s)**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**	**Instrument**
211667	05/04/2022	DGS	RLD	05/05/2022	Yes	PVOC4

Instructions: Complete one checklist per *analytical sequence*. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments**
1. INITIAL CALIBRATION (ICAL)		**Yes**	**No**	**Yes**	**No**	(Indicate reference to an attachment if necessary)
a. Was the initial calibration performed using a minimum of five concentration levels?	Lowest standard at or below RL	Yes		Yes		
b. For each analyte/component is the variation between calibration response factors for all concentration levels <20% RSD or is $r^2 \geq .99$ or $r \geq .995$ for the regression line?	RSD <20% or $r^2 \geq .99$ or $r \geq .995$ or program/project specific	Yes		Yes		
c. Are the identification and date of the ICAL listed on the printout (or PDF) of the analytical run and in the method file?	ID# and date of ICAL listed	Yes		Yes		
d. Was an Initial Calibration Verification (ICV) analyzed after the ICAL?	Analyzed prior to sample analyses	Yes		Yes		
e. Were the recoveries for each analyte in the ICV within required limits?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
f. Was an Initial Calibration Blank (ICB) analyzed?		Yes		Yes		
g. Were the ICB results for all target analytes/components less than the reporting limit (RL)?	<RL or < program/project specific	Yes		Yes		
2. CONTINUING CALIBRATION VERIFICATION (CCV)						
a . Was a CCV analyzed at the beginning and end of a sequential analysis run, as well as after ever 10 samples?		Yes		Yes		
b. Were the recoveries for each analyte/component in the CCV within acceptance criteria?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
3. METHOD BLANKS (MB)						
a. Was a method blank (MB) analyzed?	1 / 20 or program/project specific	Yes		Yes		
b. Were the MB results for all analytes/components less than reporting limit?	All target analytes/components <RL or within program/project specific limits (DoD-QSM: <1/2 the RL)	Yes		Yes		
4. LABORATORY CONTROL SAMPLE (LCS)						
a. Was a LCS analyzed at the required frequency?	1 / 20 or program/project specific	Yes		Yes		
b. Were LCS recoveries for all analytes within the acceptance criteria?	Default = 70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
c. If LCS recoveries exceed acceptance criteria, was the LCS reanalyzed in an effort to eliminate the possibility of a preparation error?		Yes		Yes		

5. MATRIX SPIKE (MS)/ MATRIX SPIKE DUPLICATES (MSD) and DUPLICATE						
a. Was a MS, MSD, and/or Duplicate (if valid) Vial analyzed with each batch of 20 samples (or program-specified frequency)?	1 / 20 or program/project specific frequency (QSM samples, duplicate only valid if sample result ≥ 5x the LOQ)	Yes		Yes		
b. Were MS/MSD recoveries for all analytes within acceptance criteria?	Default =70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
6. PRECISION						
a. Is the relative percent difference (RPD) for each analyte between duplicate QC samples (i.e. parent sample / Duplicate vial), or for each MS/MSD within the acceptance criteria?	Default = 20 % RPD, or within In-house generated or program/project specific limits	Yes		Yes		
7. SAMPLES (INCLUDING BLANKS, STANDARDS, AND QC SAMPLES)						
a. Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
b. Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed or reanalyzed using a smaller sample aliquot? Affected analyte detects should remain above the limit of quantitation (LOQ) after reanalysis.		Yes		Yes		
c. Was the correct ambient temperature recorded on sample spreadsheets?		Yes		Yes		
d. Were all samples adequately preserved and analyzed within holding time?	CO_2 samples received unpreserved (analyze within 7 days or program/project specific) Methane, Ethene, Ethane samples received preserved to <2 (analyze within 14 days or program/project specific)	Yes		Yes		
8. RECORDS AND REPORTING						
a. Is a sequence run file present in the raw data file?		Yes		Yes		
b. Is the data initialed and dated by analyst?	Analysis Run sheet is initialed & dated by the analyst processing the raw data.	Yes		Yes		
c. Do all values, units, etc. listed match the raw data and associated calculations and records?		Yes		Yes		
e. Has the data been electronically transferred to the LIMS and were the applicable qualifiers assigned?		Yes		Yes		
f. Were manual integrations addressed properly and were the audit trails turned on (where applicable)?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms. Audit trail must be on (if available).	Yes		Yes		
g. Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier in LIMS and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

* Non-Applicable Yes/No Cells Are Left Blank*

Comments:

Sequence Summary Report

Sequence Filename: C:\INSTARCH\PVOC4\Sequence\070121 - MEE ICAL.seq
Instrument: PVOC4
Processing Date: Jul 01, 2021 11:06:20

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
1	MEE PT1 - 2 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:09:22
2	MEE PT2 - 5 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:19:07
3	MEE PT3 - 10 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:24:05
4	MEE PT4 - 20 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:38:00
5	MEE PT5 - 50 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:41:21
6	MEE PT6 - 100 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:45:28
7	MEE PT7 - 200 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\INSTARCH\PVOC4\Method...	Jul 01, 2021 09:48:59
8	MEE PT4 - 20 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:59:16
9	MEE PT7 - 200 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 10:04:41
10	ICV - 50 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 10:24:08
11	ICB	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 10:29:15
12	ICB	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 11:06:20

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 7/1/2021 **Instrument:** PVOC4

Calibration Date: 7/1/2021 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PT 1	0.01	43		
2	PT 2	0.025	43		
3	PT 3	0.05	43		
4	PT 4	0.1	43		
5	PT 5	0.25	43		
6	PT 6	0.5	43		
7	PT 7	1.0	43		
8	PT 4	0.1	43		
9	PT 7	1.0	43		
10	ICV	0.25	43		
11	ICB	1.0	43	20.1	
12	ICB	1.0	43	20.1	
13			43	~~20.1~~ KMT 7/1/21	
14			43		
15			43		
16			43		
17			43		
18			43		
19			43		
20			43		
21			43		
22			43		
23			43		
24			43		
25			43		

N/A KMT 7/1/21

Calibration Standard Ref. #: VOC 0845

Second Source Ref. #: VOC 0846

① N/A KMT 7/1/21

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 5/19/2021 **Instrument:** PVOC4

Calibration Date: 5/19/2021 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PS	0.25	43	①	
2	CCV	0.25	43		
3	LCSW	1	43	23.6	①
4	MBW	1	43	23.6	
5	RECERT 1	0.25	43		
6	RECERT 2	0.25	43		
7	RECERT 3	0.25	43	①	
8	RECERT 4	0.25	43		
9	CCV	0.25	43		
10			43		
11			43		
12			43		
13			43		
14			43		
15		①	43		
16			43		
17			43		
18			43		
19			43		
20			43		
21			43		
22			43		
23			43		
24			43		
25			43		

Calibration Standard Ref. #: VOC0845

Second Source Ref. #: VOC0846

① N/A KMT 5/19/21

Page 1

LSVO1-01
Volatiles Standards Logbook
Logbook Created: 12/08/2015

NOTEBOOK VIEW: LTN_LSVO1_01_VOC_Default, NOTEBOOK: LSVO1_01_VOC, PAGE: 64
Page is Locked
Author: rdigmann on: 5/25/2018 7:47:52 AM
Witness: akurth on: 7/31/2018 9:54:19 AM
Project: Unassigned
Page Title: 05/24/18

Standard Log #:	VO886	Standard/Reagent:	Methane Ethene Ethane STI
Analyst:	AGK	Final Concentration:	200.0 PPM
Prep Date:	05/24/18	Expiration Date:	05/17/21
Prep:	Airgas Methane, Ethene, Ethane Standard Received 05/24/18 LOT# 54-401204472-1 REF# 54-401204472-1 Cylinder # P180959		

Standard Log #:	VOC0845	Standard/Reagent:	MEE GAS STANDARD
Analyst:	KMT	Final Concentration:	200 ppmV
Prep Date:	05/19/2021	Expiration Date:	04/14/2024
Prep:	AIRGAS PART: X04HE99C353Q80 LOT: 54-402075924-1		

Standard Log #:	VOC0846	Standard/Reagent:	MEE RECERTIFICATION O
Analyst:	KMT	Final Concentration:	N/A
Prep Date:	05/19/2021	Expiration Date:	05/19/2022
Prep:	Recertification of methane, ethane, ethane tank (V0886). Ran 4 consecutive CCV's with acceptable recoveries.		

Airgas
an Air Liquide company

Recert VOC0846 5/19/2022 EXP: 5/19/2022 KMT

Expires 5/17/21 VO 886 AGK 5/24/18

Airgas Specialty Gases
Airgas USA, LLC
12722 S. Wentworth Ave.
Chicago, IL 60628
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-401204472-1
Cylinder Number:	P180959	Cylinder Volume:	31.6 CF
Laboratory:	124 - Chicago (SAP) - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	May 17, 2018	Valve Outlet:	350
Lot Number:	54-401204472-1		

Expiration Date: May 17, 2021

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	198.9 PPM	+/- 2%
ETHYLENE	200.0 PPM	198.3 PPM	+/- 2%
METHANE	200.0 PPM	198.3 PPM	+/- 2%
HELIUM	Balance		

Approved for Release

VOC0845 Expires: 7/17/2024
KMT
5/19/2021

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA, LLC
12722 S. Wentworth Ave.
Chicago, IL 60628
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-402075924-1
Cylinder Number:	N698768	Cylinder Volume:	31.6 CF
Laboratory:	124 - Chicago (SAP) - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	Apr 14, 2021	Valve Outlet:	350
Lot Number:	54-402075924-1		

Expiration Date: Apr 14, 2024

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	199.8 PPM	+/- 2%
ETHYLENE	200.0 PPM	207.3 PPM	+/- 2%
METHANE	200.0 PPM	200.2 PPM	+/- 2%
HELIUM	Balance		

Approved for Release

METALS
CLP FORMS
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 7470A	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211699	Analysis Date/Time	05/04/2022 10:41
Analytical Prep Batch #:	95243	Prep. Date/Time:	05/03/2022 14:15
ICAL Calibration #:	05042022	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 6010C	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211628	Analysis Date/Time	05/09/2022 12:34
Analytical Prep Batch #:	95267	Prep. Date/Time:	05/02/2022 09:24
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-22-4	Total Silver	2.5	U	1.1	2.5	5.0	5.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 6010C	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211628	Analysis Date/Time	05/03/2022 22:11
Analytical Prep Batch #:	95267	Prep. Date/Time:	05/02/2022 09:24
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	329	Y	29	60	120	120
7440-36-0	Total Antimony	10	U	4.4	10	20	20
7440-38-2	Total Arsenic	20	U	7.7	20	40	40
7440-39-3	Total Barium	34.9		0.71	2.0	4.0	4.0
7440-41-7	Total Beryllium	3.0	U	0.95	3.0	8.0	8.0
7440-43-9	Total Cadmium	1.0	U	0.41	1.0	2.0	2.0
7440-70-2	Total Calcium	67800		17	50	100	100
7440-47-3	Total Chromium	3.4	J	1.1	2.5	5.0	5.0
7440-48-4	Total Cobalt	0.67	J	0.55	2.5	5.0	5.0
7440-50-8	Total Copper	5.3	J	5.2	20	40	40
7439-89-6	Total Iron	678		11	40	80	80
7439-92-1	Total Lead	3.1	J	1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	32800		10	25	40	40
7439-96-5	Total Manganese	81.2		1.4	3.0	5.0	5.0
7440-02-0	Total Nickel	3.0	U	1.5	3.0	5.0	5.0
7440-09-7	Total Potassium	1810		120	250	500	500
7782-49-2	Total Selenium	20	U	10	20	40	40
7440-23-5	Total Sodium	27100		200	500	700	700
7440-28-0	Total Thallium	20	U	6.8	20	40	40
7440-62-2	Total Vanadium	3.0	U	1.3	3.0	5.0	5.0
7440-66-6	Total Zinc	51.2		4.5	10	20	20

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 7470A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211699	Analysis Date/Time	05/04/2022 10:38
Analytical Prep Batch #:	95243	Prep. Date/Time:	05/03/2022 14:15
ICAL Calibration #:	05042022	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	M,Y	0.020	0.080	0.12	0.12

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 6010C	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211581	Analysis Date/Time	05/09/2022 13:18
Analytical Prep Batch #:	95236	Prep. Date/Time:	04/29/2022 10:19
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7782-49-2	Total Selenium	20	U	10	20	40	40
7440-22-4	Total Silver	2.5	U	1.1	2.5	5.0	5.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 6010C	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211581	Analysis Date/Time	05/03/2022 15:57
Analytical Prep Batch #:	95236	Prep. Date/Time:	04/29/2022 10:19
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	171		29	60	120	120
7440-36-0	Total Antimony	10	U	4.4	10	20	20
7440-38-2	Total Arsenic	20	U	7.7	20	40	40
7440-39-3	Total Barium	78.5		0.71	2.0	4.0	4.0
7440-41-7	Total Beryllium	3.0	U	0.95	3.0	8.0	8.0
7440-43-9	Total Cadmium	1.0	U	0.41	1.0	2.0	2.0
7440-70-2	Total Calcium	58700		17	50	100	100
7440-47-3	Total Chromium	3.1	J	1.1	2.5	5.0	5.0
7440-48-4	Total Cobalt	2.5	U	0.55	2.5	5.0	5.0
7440-50-8	Total Copper	8.7	J	5.2	20	40	40
7439-89-6	Total Iron	209		11	40	80	80
7439-92-1	Total Lead	2.0	U	1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	24500		10	25	40	40
7439-96-5	Total Manganese	8.6		1.4	3.0	5.0	5.0
7440-02-0	Total Nickel	3.0	U	1.5	3.0	5.0	5.0
7440-09-7	Total Potassium	828		120	250	500	500
7440-23-5	Total Sodium	25800		200	500	700	700
7440-28-0	Total Thallium	20	U	6.8	20	40	40
7440-62-2	Total Vanadium	3.0	U	1.3	3.0	5.0	5.0
7440-66-6	Total Zinc	51.6		4.5	10	20	20

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211699

Lab Sample ID: 1139472

ICAL Calibration #: 05042022

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	5/4/22	10:19	3.0	3.02	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211699

Lab Sample ID: 1139484

ICAL Calibration #: 05042022

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	5/4/22	12:22	3.0	3.13	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1138569

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	14:26	12000	12000	100	90	110
Antimony	5/3/22	14:26	500.0	510.0	102	90	110
Arsenic	5/3/22	14:26	2000	2050	102	90	110
Barium	5/3/22	14:26	2000	2040	102	90	110
Beryllium	5/3/22	14:26	50.0	49.80	100	90	110
Cadmium	5/3/22	14:26	50.0	47.60	95	90	110
Calcium	5/3/22	14:26	10000	10300	103	90	110
Chromium	5/3/22	14:26	200.0	202.0	101	90	110
Cobalt	5/3/22	14:26	500.0	516.0	103	90	110
Copper	5/3/22	14:26	250.0	246.0	98	90	110
Iron	5/3/22	14:26	5000	5170	103	90	110
Lead	5/3/22	14:26	500.0	474.0	95	90	110
Magnesium	5/3/22	14:26	10000	10400	104	90	110
Manganese	5/3/22	14:26	500.0	507.0	101	90	110
Nickel	5/3/22	14:26	500.0	512.0	102	90	110
Selenium	5/3/22	14:26	2000	1970	98	90	110
Silver	5/3/22	14:26	50.0	45.60	91	90	110
Thallium	5/3/22	14:26	2000	2010	100	90	110
Vanadium	5/3/22	14:26	500.0	487.0	97	90	110
Zinc	5/3/22	14:26	500.0	503.0	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1138570

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)	
Aluminum	5/3/22	14:40	400.0	401.0	100	80	120	
Antimony	5/3/22	14:40	20.0	20.90	104	80	120	
Arsenic	5/3/22	14:40	20.0	20.70	104	80	120	
Barium	5/3/22	14:40	10.0	10.70	107	80	120	
Beryllium	5/3/22	14:40	4.0	4.06	102	80	120	
Cadmium	5/3/22	14:40	5.0	5.06	101	80	120	
Calcium	5/3/22	14:40	500.0	511.0	102	80	120	
Chromium	5/3/22	14:40	10.0	9.93	99	80	120	
Cobalt	5/3/22	14:40	10.0	10.60	106	80	120	
Copper	5/3/22	14:40	10.0	11.00	110	80	120	
Iron	5/3/22	14:40	300.0	307.0	102	80	120	
Lead	5/3/22	14:40	10.0	9.07	91	80	120	
Magnesium	5/3/22	14:40	500.0	548.0	110	80	120	
Manganese	5/3/22	14:40	10.0	10.30	103	80	120	
Nickel	5/3/22	14:40	10.0	10.40	104	80	120	
Selenium	5/3/22	14:40	20.0	25.00	125	80	120	FAIL
Silver	5/3/22	14:40	10.0	8.79	88	80	120	
Thallium	5/3/22	14:40	20.0	22.20	111	80	120	
Vanadium	5/3/22	14:40	10.0	9.53	95	80	120	
Zinc	5/3/22	14:40	10.0	10.30	103	80	120	

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581

Lab Sample ID: 1138574

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	5/3/22	15:34	10.0	8.04	80	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138666

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	14:26	12000	12000	100	90	110
Antimony	5/3/22	14:26	500.0	510.0	102	90	110
Arsenic	5/3/22	14:26	2000	2050	102	90	110
Barium	5/3/22	14:26	2000	2040	102	90	110
Beryllium	5/3/22	14:26	50.0	49.80	100	90	110
Cadmium	5/3/22	14:26	50.0	47.60	95	90	110
Calcium	5/3/22	14:26	10000	10300	103	90	110
Chromium	5/3/22	14:26	200.0	202.0	101	90	110
Cobalt	5/3/22	14:26	500.0	516.0	103	90	110
Copper	5/3/22	14:26	250.0	246.0	98	90	110
Iron	5/3/22	14:26	5000	5170	103	90	110
Lead	5/3/22	14:26	500.0	474.0	95	90	110
Magnesium	5/3/22	14:26	10000	10400	104	90	110
Manganese	5/3/22	14:26	500.0	507.0	101	90	110
Nickel	5/3/22	14:26	500.0	512.0	102	90	110
Selenium	5/3/22	14:26	2000	1970	98	90	110
Silver	5/3/22	14:26	50.0	45.60	91	90	110
Thallium	5/3/22	14:26	2000	2010	100	90	110
Vanadium	5/3/22	14:26	500.0	487.0	97	90	110
Zinc	5/3/22	14:26	500.0	503.0	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628

Lab Sample ID: 1138667

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	5/3/22	14:40	10.0	8.79	88	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628

Lab Sample ID: 1138671

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	5/3/22	15:34	10.0	8.04	80	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211629

Lab Sample ID: 1138680

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	14:26	100000	99100	99	90	110
Sodium	5/3/22	14:26	100000	98200	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211629

Lab Sample ID: 1138681

ICAL Calibration #:

Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	14:40	1000	1020	102	80	120
Sodium	5/3/22	14:40	2000	2020	101	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1140978

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	09:31	12000	12300	102	90	110
Antimony	5/9/22	09:31	500.0	524.0	105	90	110
Arsenic	5/9/22	09:31	2000	2110	106	90	110
Barium	5/9/22	09:31	2000	2050	102	90	110
Beryllium	5/9/22	09:31	50.0	51.60	103	90	110
Cadmium	5/9/22	09:31	50.0	48.50	97	90	110
Calcium	5/9/22	09:31	10000	9550	96	90	110
Chromium	5/9/22	09:31	200.0	208.0	104	90	110
Cobalt	5/9/22	09:31	500.0	520.0	104	90	110
Copper	5/9/22	09:31	250.0	248.0	99	90	110
Iron	5/9/22	09:31	5000	5320	106	90	110
Lead	5/9/22	09:31	500.0	478.0	96	90	110
Magnesium	5/9/22	09:31	10000	10700	107	90	110
Manganese	5/9/22	09:31	500.0	522.0	104	90	110
Nickel	5/9/22	09:31	500.0	514.0	103	90	110
Selenium	5/9/22	09:31	2000	1980	99	90	110
Silver	5/9/22	09:31	50.0	45.30	91	90	110
Thallium	5/9/22	09:31	2000	2010	100	90	110
Vanadium	5/9/22	09:31	500.0	516.0	103	90	110
Zinc	5/9/22	09:31	500.0	512.0	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1140979

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	09:46	1200	1330	111	80	120
Antimony	5/9/22	09:46	60.0	61.00	102	80	120
Arsenic	5/9/22	09:46	60.0	57.50	96	80	120
Barium	5/9/22	09:46	30.0	33.30	111	80	120
Beryllium	5/9/22	09:46	12.00	12.80	107	80	120
Cadmium	5/9/22	09:46	15.00	15.90	106	80	120
Calcium	5/9/22	09:46	1500	1590	106	80	120
Chromium	5/9/22	09:46	30.0	31.70	106	80	120
Cobalt	5/9/22	09:46	30.0	33.20	111	80	120
Copper	5/9/22	09:46	30.0	34.00	113	80	120
Iron	5/9/22	09:46	900.0	985.0	109	80	120
Lead	5/9/22	09:46	30.0	28.70	96	80	120
Magnesium	5/9/22	09:46	1500	1700	113	80	120
Manganese	5/9/22	09:46	30.0	32.70	109	80	120
Nickel	5/9/22	09:46	30.0	32.80	109	80	120
Selenium	5/9/22	09:46	60.0	67.40	112	80	120
Thallium	5/9/22	09:46	60.0	59.80	100	80	120
Vanadium	5/9/22	09:46	30.0	31.50	105	80	120
Zinc	5/9/22	09:46	30.0	32.80	109	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1140983

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	5/9/22	10:37	10.0	9.87	99	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1141002

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	09:31	12000	12300	102	90	110
Antimony	5/9/22	09:31	500.0	524.0	105	90	110
Arsenic	5/9/22	09:31	2000	2110	106	90	110
Barium	5/9/22	09:31	2000	2050	102	90	110
Beryllium	5/9/22	09:31	50.0	51.60	103	90	110
Cadmium	5/9/22	09:31	50.0	48.50	97	90	110
Calcium	5/9/22	09:31	10000	9550	96	90	110
Chromium	5/9/22	09:31	200.0	208.0	104	90	110
Cobalt	5/9/22	09:31	500.0	520.0	104	90	110
Copper	5/9/22	09:31	250.0	248.0	99	90	110
Iron	5/9/22	09:31	5000	5320	106	90	110
Lead	5/9/22	09:31	500.0	478.0	96	90	110
Magnesium	5/9/22	09:31	10000	10700	107	90	110
Manganese	5/9/22	09:31	500.0	522.0	104	90	110
Nickel	5/9/22	09:31	500.0	514.0	103	90	110
Selenium	5/9/22	09:31	2000	1980	99	90	110
Silver	5/9/22	09:31	50.0	45.30	91	90	110
Thallium	5/9/22	09:31	2000	2010	100	90	110
Vanadium	5/9/22	09:31	500.0	516.0	103	90	110
Zinc	5/9/22	09:31	500.0	512.0	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1141003

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	09:46	1200	1330	111	80	120
Antimony	5/9/22	09:46	60.0	61.00	102	80	120
Arsenic	5/9/22	09:46	60.0	57.50	96	80	120
Barium	5/9/22	09:46	30.0	33.30	111	80	120
Beryllium	5/9/22	09:46	12.00	12.80	107	80	120
Cadmium	5/9/22	09:46	15.00	15.90	106	80	120
Calcium	5/9/22	09:46	1500	1590	106	80	120
Chromium	5/9/22	09:46	30.0	31.70	106	80	120
Cobalt	5/9/22	09:46	30.0	33.20	111	80	120
Copper	5/9/22	09:46	30.0	34.00	113	80	120
Iron	5/9/22	09:46	900.0	985.0	109	80	120
Lead	5/9/22	09:46	30.0	28.70	96	80	120
Magnesium	5/9/22	09:46	1500	1700	113	80	120
Manganese	5/9/22	09:46	30.0	32.70	109	80	120
Nickel	5/9/22	09:46	30.0	32.80	109	80	120
Selenium	5/9/22	09:46	60.0	67.40	112	80	120
Thallium	5/9/22	09:46	60.0	59.80	100	80	120
Vanadium	5/9/22	09:46	30.0	31.50	105	80	120
Zinc	5/9/22	09:46	30.0	32.80	109	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1141007

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	5/9/22	10:37	10.0	9.87	99	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211582

Lab Sample ID: 1141417

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	14:26	100000	99100	99	90	110
Sodium	5/3/22	14:26	100000	98200	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211582

Lab Sample ID: 1141418

ICAL Calibration #:

Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	14:40	1000	1020	102	80	120
Sodium	5/3/22	14:40	2000	2020	101	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211629 Lab Sample ID: 1138686

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	21:42	100000	96300	96	90	110
Sodium	5/3/22	21:42	100000	93100	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211629 Lab Sample ID: 1138687

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	21:49	10000	9930	99	90	110
Sodium	5/3/22	21:49	10000	9660	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211629 Lab Sample ID: 1138691

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	23:19	100000	94500	94	90	110
Sodium	5/3/22	23:19	100000	91700	92	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211629 Lab Sample ID: 1138692

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	23:26	10000	9920	99	90	110
Sodium	5/3/22	23:26	10000	9740	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211629 Lab Sample ID: 1138697

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	20:03	100000	95700	96	90	110
Sodium	5/3/22	20:03	100000	95000	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211629 Lab Sample ID: 1138698

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	20:10	10000	9720	97	90	110
Sodium	5/3/22	20:10	10000	9630	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211582 Lab Sample ID: 1141425

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	16:49	100000	96100	96	90	110
Sodium	5/3/22	16:49	100000	94900	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211582 Lab Sample ID: 1141426

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	5/3/22	16:56	10000	9630	96	90	110
Sodium	5/3/22	16:56	10000	9630	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581

Lab Sample ID: 1138577

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	16:49	5000	4850	97	90	110
Antimony	5/3/22	16:49	5000	4690	94	90	110
Arsenic	5/3/22	16:49	5000	4900	98	90	110
Barium	5/3/22	16:49	5000	4760	95	90	110
Beryllium	5/3/22	16:49	500.0	475.0	95	90	110
Cadmium	5/3/22	16:49	500.0	468.0	94	90	110
Calcium	5/3/22	16:49	5000	4900	98	90	110
Chromium	5/3/22	16:49	5000	4600	92	90	110
Cobalt	5/3/22	16:49	5000	4800	96	90	110
Copper	5/3/22	16:49	5000	4860	97	90	110
Iron	5/3/22	16:49	5000	4760	95	90	110
Lead	5/3/22	16:49	5000	4730	95	90	110
Magnesium	5/3/22	16:49	5000	4990	100	90	110
Manganese	5/3/22	16:49	5000	4850	97	90	110
Nickel	5/3/22	16:49	5000	4820	96	90	110
Selenium	5/3/22	16:49	5000	4780	96	90	110
Silver	5/3/22	16:49	500.0	512.0	102	90	110
Thallium	5/3/22	16:49	5000	4830	97	90	110
Vanadium	5/3/22	16:49	5000	4780	96	90	110
Zinc	5/3/22	16:49	5000	5140	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1138578

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	16:56	500.0	484.0	97	90	110
Antimony	5/3/22	16:56	500.0	498.0	100	90	110
Arsenic	5/3/22	16:56	500.0	470.0	94	90	110
Barium	5/3/22	16:56	500.0	506.0	101	90	110
Beryllium	5/3/22	16:56	50.0	47.60	95	90	110
Cadmium	5/3/22	16:56	50.0	47.80	96	90	110
Calcium	5/3/22	16:56	500.0	500.0	100	90	110
Chromium	5/3/22	16:56	500.0	478.0	96	90	110
Cobalt	5/3/22	16:56	500.0	500.0	100	90	110
Copper	5/3/22	16:56	500.0	507.0	101	90	110
Iron	5/3/22	16:56	500.0	492.0	98	90	110
Lead	5/3/22	16:56	500.0	469.0	94	90	110
Magnesium	5/3/22	16:56	500.0	519.0	104	90	110
Manganese	5/3/22	16:56	500.0	493.0	99	90	110
Nickel	5/3/22	16:56	500.0	500.0	100	90	110
Selenium	5/3/22	16:56	500.0	506.0	101	90	110
Silver	5/3/22	16:56	50.0	45.00	90	90	110
Thallium	5/3/22	16:56	500.0	519.0	104	90	110
Vanadium	5/3/22	16:56	500.0	474.0	95	90	110
Zinc	5/3/22	16:56	500.0	478.0	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138672

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	21:42	5000	4630	93	90	110
Antimony	5/3/22	21:42	5000	4490	90	90	110
Arsenic	5/3/22	21:42	5000	4640	93	90	110
Barium	5/3/22	21:42	5000	4610	92	90	110
Beryllium	5/3/22	21:42	500.0	464.0	93	90	110
Cadmium	5/3/22	21:42	500.0	476.0	95	90	110
Calcium	5/3/22	21:42	5000	4860	97	90	110
Chromium	5/3/22	21:42	5000	4560	91	90	110
Cobalt	5/3/22	21:42	5000	4830	97	90	110
Copper	5/3/22	21:42	5000	4650	93	90	110
Iron	5/3/22	21:42	5000	4750	95	90	110
Lead	5/3/22	21:42	5000	4630	93	90	110
Magnesium	5/3/22	21:42	5000	4730	95	90	110
Manganese	5/3/22	21:42	5000	4620	92	90	110
Nickel	5/3/22	21:42	5000	4610	92	90	110
Selenium	5/3/22	21:42	5000	4710	94	90	110
Silver	5/3/22	21:42	500.0	508.0	102	90	110
Thallium	5/3/22	21:42	5000	4930	99	90	110
Vanadium	5/3/22	21:42	5000	4700	94	90	110
Zinc	5/3/22	21:42	5000	5300	106	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138673

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	21:49	500.0	479.0	96	90	110
Antimony	5/3/22	21:49	500.0	476.0	95	90	110
Arsenic	5/3/22	21:49	500.0	465.0	93	90	110
Barium	5/3/22	21:49	500.0	506.0	101	90	110
Beryllium	5/3/22	21:49	50.0	47.50	95	90	110
Cadmium	5/3/22	21:49	50.0	44.90	90	90	110
Calcium	5/3/22	21:49	500.0	471.0	94	90	110
Chromium	5/3/22	21:49	500.0	484.0	97	90	110
Cobalt	5/3/22	21:49	500.0	490.0	98	90	110
Copper	5/3/22	21:49	500.0	486.0	97	90	110
Iron	5/3/22	21:49	500.0	492.0	98	90	110
Lead	5/3/22	21:49	500.0	467.0	93	90	110
Magnesium	5/3/22	21:49	500.0	532.0	106	90	110
Manganese	5/3/22	21:49	500.0	494.0	99	90	110
Nickel	5/3/22	21:49	500.0	495.0	99	90	110
Selenium	5/3/22	21:49	500.0	491.0	98	90	110
Silver	5/3/22	21:49	50.0	45.10	90	90	110
Thallium	5/3/22	21:49	500.0	535.0	107	90	110
Vanadium	5/3/22	21:49	500.0	463.0	93	90	110
Zinc	5/3/22	21:49	500.0	462.0	92	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628

Lab Sample ID: 1138677

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	23:19	5000	4860	97	90	110
Antimony	5/3/22	23:19	5000	4570	91	90	110
Arsenic	5/3/22	23:19	5000	4760	95	90	110
Barium	5/3/22	23:19	5000	4630	93	90	110
Beryllium	5/3/22	23:19	500.0	470.0	94	90	110
Cadmium	5/3/22	23:19	500.0	470.0	94	90	110
Calcium	5/3/22	23:19	5000	4880	98	90	110
Chromium	5/3/22	23:19	5000	4570	91	90	110
Cobalt	5/3/22	23:19	5000	4750	95	90	110
Copper	5/3/22	23:19	5000	4750	95	90	110
Iron	5/3/22	23:19	5000	4910	98	90	110
Lead	5/3/22	23:19	5000	4650	93	90	110
Magnesium	5/3/22	23:19	5000	4890	98	90	110
Manganese	5/3/22	23:19	5000	4740	95	90	110
Nickel	5/3/22	23:19	5000	4720	94	90	110
Selenium	5/3/22	23:19	5000	4740	95	90	110
Silver	5/3/22	23:19	500.0	504.0	101	90	110
Thallium	5/3/22	23:19	5000	4860	97	90	110
Vanadium	5/3/22	23:19	5000	4700	94	90	110
Zinc	5/3/22	23:19	5000	5210	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138678

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	23:26	500.0	482.0	96	90	110
Antimony	5/3/22	23:26	500.0	483.0	97	90	110
Arsenic	5/3/22	23:26	500.0	465.0	93	90	110
Barium	5/3/22	23:26	500.0	502.0	100	90	110
Beryllium	5/3/22	23:26	50.0	47.50	95	90	110
Cadmium	5/3/22	23:26	50.0	45.80	92	90	110
Calcium	5/3/22	23:26	500.0	476.0	95	90	110
Chromium	5/3/22	23:26	500.0	483.0	97	90	110
Cobalt	5/3/22	23:26	500.0	490.0	98	90	110
Copper	5/3/22	23:26	500.0	493.0	99	90	110
Iron	5/3/22	23:26	500.0	491.0	98	90	110
Lead	5/3/22	23:26	500.0	465.0	93	90	110
Magnesium	5/3/22	23:26	500.0	527.0	105	90	110
Manganese	5/3/22	23:26	500.0	493.0	99	90	110
Nickel	5/3/22	23:26	500.0	492.0	98	90	110
Selenium	5/3/22	23:26	500.0	493.0	99	90	110
Silver	5/3/22	23:26	50.0	45.40	91	90	110
Thallium	5/3/22	23:26	500.0	521.0	104	90	110
Vanadium	5/3/22	23:26	500.0	468.0	94	90	110
Zinc	5/3/22	23:26	500.0	467.0	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138694

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	20:03	5000	4710	94	90	110
Antimony	5/3/22	20:03	5000	4510	90	90	110
Arsenic	5/3/22	20:03	5000	4680	94	90	110
Barium	5/3/22	20:03	5000	4640	93	90	110
Beryllium	5/3/22	20:03	500.0	467.0	93	90	110
Cadmium	5/3/22	20:03	500.0	474.0	95	90	110
Calcium	5/3/22	20:03	5000	4880	98	90	110
Chromium	5/3/22	20:03	5000	4570	91	90	110
Cobalt	5/3/22	20:03	5000	4820	96	90	110
Copper	5/3/22	20:03	5000	4680	94	90	110
Iron	5/3/22	20:03	5000	4780	96	90	110
Lead	5/3/22	20:03	5000	4650	93	90	110
Magnesium	5/3/22	20:03	5000	4770	95	90	110
Manganese	5/3/22	20:03	5000	4640	93	90	110
Nickel	5/3/22	20:03	5000	4640	93	90	110
Selenium	5/3/22	20:03	5000	4700	94	90	110
Silver	5/3/22	20:03	500.0	506.0	101	90	110
Thallium	5/3/22	20:03	5000	4920	98	90	110
Vanadium	5/3/22	20:03	5000	4710	94	90	110
Zinc	5/3/22	20:03	5000	5280	106	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138695

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/3/22	20:10	500.0	475.0	95	90	110
Antimony	5/3/22	20:10	500.0	480.0	96	90	110
Arsenic	5/3/22	20:10	500.0	465.0	93	90	110
Barium	5/3/22	20:10	500.0	505.0	101	90	110
Beryllium	5/3/22	20:10	50.0	47.50	95	90	110
Cadmium	5/3/22	20:10	50.0	45.30	91	90	110
Calcium	5/3/22	20:10	500.0	479.0	96	90	110
Chromium	5/3/22	20:10	500.0	485.0	97	90	110
Cobalt	5/3/22	20:10	500.0	490.0	98	90	110
Copper	5/3/22	20:10	500.0	490.0	98	90	110
Iron	5/3/22	20:10	500.0	491.0	98	90	110
Lead	5/3/22	20:10	500.0	467.0	93	90	110
Magnesium	5/3/22	20:10	500.0	529.0	106	90	110
Manganese	5/3/22	20:10	500.0	494.0	99	90	110
Nickel	5/3/22	20:10	500.0	495.0	99	90	110
Selenium	5/3/22	20:10	500.0	492.0	98	90	110
Silver	5/3/22	20:10	50.0	45.00	90	90	110
Thallium	5/3/22	20:10	500.0	526.0	105	90	110
Vanadium	5/3/22	20:10	500.0	467.0	93	90	110
Zinc	5/3/22	20:10	500.0	463.0	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211699 Lab Sample ID: 1139474

ICAL Calibration #: 05042022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	5/4/22	11:00	3.0	2.77	92	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211699

Lab Sample ID: 1139486

ICAL Calibration #: 05042022

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	5/4/22	13:03	3.0	3.06	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1140984

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	11:52	5000	5120	102	90	110
Antimony	5/9/22	11:52	5000	5140	103	90	110
Arsenic	5/9/22	11:52	5000	5210	104	90	110
Barium	5/9/22	11:52	5000	4930	99	90	110
Beryllium	5/9/22	11:52	500.0	460.0	92	90	110
Cadmium	5/9/22	11:52	500.0	481.0	96	90	110
Calcium	5/9/22	11:52	5000	4870	97	90	110
Chromium	5/9/22	11:52	5000	4950	99	90	110
Cobalt	5/9/22	11:52	5000	5090	102	90	110
Copper	5/9/22	11:52	5000	5100	102	90	110
Iron	5/9/22	11:52	5000	4920	98	90	110
Lead	5/9/22	11:52	5000	5030	101	90	110
Magnesium	5/9/22	11:52	5000	5070	101	90	110
Manganese	5/9/22	11:52	5000	5100	102	90	110
Nickel	5/9/22	11:52	5000	5130	103	90	110
Selenium	5/9/22	11:52	5000	5020	100	90	110
Silver	5/9/22	11:52	500.0	482.0	96	90	110
Thallium	5/9/22	11:52	5000	5000	100	90	110
Vanadium	5/9/22	11:52	5000	5160	103	90	110
Zinc	5/9/22	11:52	5000	5000	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1140985

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	11:58	500.0	506.0	101	90	110
Antimony	5/9/22	11:58	500.0	527.0	105	90	110
Arsenic	5/9/22	11:58	500.0	507.0	101	90	110
Barium	5/9/22	11:58	500.0	531.0	106	90	110
Beryllium	5/9/22	11:58	50.0	50.90	102	90	110
Cadmium	5/9/22	11:58	50.0	50.30	101	90	110
Calcium	5/9/22	11:58	500.0	504.0	101	90	110
Chromium	5/9/22	11:58	500.0	508.0	102	90	110
Cobalt	5/9/22	11:58	500.0	528.0	106	90	110
Copper	5/9/22	11:58	500.0	537.0	107	90	110
Iron	5/9/22	11:58	500.0	508.0	102	90	110
Lead	5/9/22	11:58	500.0	492.0	98	90	110
Magnesium	5/9/22	11:58	500.0	550.0	110	90	110
Manganese	5/9/22	11:58	500.0	527.0	105	90	110
Nickel	5/9/22	11:58	500.0	526.0	105	90	110
Selenium	5/9/22	11:58	500.0	526.0	105	90	110
Silver	5/9/22	11:58	50.0	46.20	92	90	110
Thallium	5/9/22	11:58	500.0	535.0	107	90	110
Vanadium	5/9/22	11:58	500.0	515.0	103	90	110
Zinc	5/9/22	11:58	500.0	510.0	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628

Lab Sample ID: 1140987

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	13:26	5000	5000	100	90	110
Antimony	5/9/22	13:26	5000	5150	103	90	110
Arsenic	5/9/22	13:26	5000	5190	104	90	110
Barium	5/9/22	13:26	5000	4940	99	90	110
Beryllium	5/9/22	13:26	500.0	495.0	99	90	110
Cadmium	5/9/22	13:26	500.0	492.0	98	90	110
Calcium	5/9/22	13:26	5000	4880	98	90	110
Chromium	5/9/22	13:26	5000	4990	100	90	110
Cobalt	5/9/22	13:26	5000	5020	100	90	110
Copper	5/9/22	13:26	5000	5090	102	90	110
Iron	5/9/22	13:26	5000	4800	96	90	110
Lead	5/9/22	13:26	5000	5090	102	90	110
Magnesium	5/9/22	13:26	5000	4890	98	90	110
Manganese	5/9/22	13:26	5000	5060	101	90	110
Nickel	5/9/22	13:26	5000	5060	101	90	110
Selenium	5/9/22	13:26	5000	5100	102	90	110
Silver	5/9/22	13:26	500.0	479.0	96	90	110
Thallium	5/9/22	13:26	5000	5100	102	90	110
Vanadium	5/9/22	13:26	5000	5080	102	90	110
Zinc	5/9/22	13:26	5000	5050	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1140988

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	13:32	500.0	489.0	98	90	110
Antimony	5/9/22	13:32	500.0	525.0	105	90	110
Arsenic	5/9/22	13:32	500.0	511.0	102	90	110
Barium	5/9/22	13:32	500.0	534.0	107	90	110
Beryllium	5/9/22	13:32	50.0	49.90	100	90	110
Cadmium	5/9/22	13:32	50.0	50.70	101	90	110
Calcium	5/9/22	13:32	500.0	499.0	100	90	110
Chromium	5/9/22	13:32	500.0	498.0	100	90	110
Cobalt	5/9/22	13:32	500.0	527.0	105	90	110
Copper	5/9/22	13:32	500.0	532.0	106	90	110
Iron	5/9/22	13:32	500.0	493.0	99	90	110
Lead	5/9/22	13:32	500.0	496.0	99	90	110
Magnesium	5/9/22	13:32	500.0	541.0	108	90	110
Manganese	5/9/22	13:32	500.0	516.0	103	90	110
Nickel	5/9/22	13:32	500.0	528.0	106	90	110
Selenium	5/9/22	13:32	500.0	531.0	106	90	110
Silver	5/9/22	13:32	50.0	45.60	91	90	110
Thallium	5/9/22	13:32	500.0	544.0	109	90	110
Vanadium	5/9/22	13:32	500.0	502.0	100	90	110
Zinc	5/9/22	13:32	500.0	508.0	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1141008

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	11:52	5000	5120	102	90	110
Antimony	5/9/22	11:52	5000	5140	103	90	110
Arsenic	5/9/22	11:52	5000	5210	104	90	110
Barium	5/9/22	11:52	5000	4930	99	90	110
Beryllium	5/9/22	11:52	500.0	460.0	92	90	110
Cadmium	5/9/22	11:52	500.0	481.0	96	90	110
Calcium	5/9/22	11:52	5000	4870	97	90	110
Chromium	5/9/22	11:52	5000	4950	99	90	110
Cobalt	5/9/22	11:52	5000	5090	102	90	110
Copper	5/9/22	11:52	5000	5100	102	90	110
Iron	5/9/22	11:52	5000	4920	98	90	110
Lead	5/9/22	11:52	5000	5030	101	90	110
Magnesium	5/9/22	11:52	5000	5070	101	90	110
Manganese	5/9/22	11:52	5000	5100	102	90	110
Nickel	5/9/22	11:52	5000	5130	103	90	110
Selenium	5/9/22	11:52	5000	5020	100	90	110
Silver	5/9/22	11:52	500.0	482.0	96	90	110
Thallium	5/9/22	11:52	5000	5000	100	90	110
Vanadium	5/9/22	11:52	5000	5160	103	90	110
Zinc	5/9/22	11:52	5000	5000	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1141009

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	11:58	500.0	506.0	101	90	110
Antimony	5/9/22	11:58	500.0	527.0	105	90	110
Arsenic	5/9/22	11:58	500.0	507.0	101	90	110
Barium	5/9/22	11:58	500.0	531.0	106	90	110
Beryllium	5/9/22	11:58	50.0	50.90	102	90	110
Cadmium	5/9/22	11:58	50.0	50.30	101	90	110
Calcium	5/9/22	11:58	500.0	504.0	101	90	110
Chromium	5/9/22	11:58	500.0	508.0	102	90	110
Cobalt	5/9/22	11:58	500.0	528.0	106	90	110
Copper	5/9/22	11:58	500.0	537.0	107	90	110
Iron	5/9/22	11:58	500.0	508.0	102	90	110
Lead	5/9/22	11:58	500.0	492.0	98	90	110
Magnesium	5/9/22	11:58	500.0	550.0	110	90	110
Manganese	5/9/22	11:58	500.0	527.0	105	90	110
Nickel	5/9/22	11:58	500.0	526.0	105	90	110
Selenium	5/9/22	11:58	500.0	526.0	105	90	110
Silver	5/9/22	11:58	50.0	46.20	92	90	110
Thallium	5/9/22	11:58	500.0	535.0	107	90	110
Vanadium	5/9/22	11:58	500.0	515.0	103	90	110
Zinc	5/9/22	11:58	500.0	510.0	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1141011

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	13:26	5000	5000	100	90	110
Antimony	5/9/22	13:26	5000	5150	103	90	110
Arsenic	5/9/22	13:26	5000	5190	104	90	110
Barium	5/9/22	13:26	5000	4940	99	90	110
Beryllium	5/9/22	13:26	500.0	495.0	99	90	110
Cadmium	5/9/22	13:26	500.0	492.0	98	90	110
Calcium	5/9/22	13:26	5000	5270	105	90	110
Chromium	5/9/22	13:26	5000	4990	100	90	110
Cobalt	5/9/22	13:26	5000	5020	100	90	110
Copper	5/9/22	13:26	5000	5090	102	90	110
Iron	5/9/22	13:26	5000	4800	96	90	110
Lead	5/9/22	13:26	5000	5090	102	90	110
Magnesium	5/9/22	13:26	5000	4890	98	90	110
Manganese	5/9/22	13:26	5000	5060	101	90	110
Nickel	5/9/22	13:26	5000	5060	101	90	110
Selenium	5/9/22	13:26	5000	5100	102	90	110
Silver	5/9/22	13:26	500.0	482.0	96	90	110
Thallium	5/9/22	13:26	5000	5100	102	90	110
Vanadium	5/9/22	13:26	5000	5080	102	90	110
Zinc	5/9/22	13:26	5000	5050	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1141012

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	5/9/22	13:32	500.0	489.0	98	90	110
Antimony	5/9/22	13:32	500.0	525.0	105	90	110
Arsenic	5/9/22	13:32	500.0	511.0	102	90	110
Barium	5/9/22	13:32	500.0	534.0	107	90	110
Beryllium	5/9/22	13:32	50.0	49.90	100	90	110
Cadmium	5/9/22	13:32	50.0	50.70	101	90	110
Calcium	5/9/22	13:32	500.0	499.0	100	90	110
Chromium	5/9/22	13:32	500.0	498.0	100	90	110
Cobalt	5/9/22	13:32	500.0	527.0	105	90	110
Copper	5/9/22	13:32	500.0	532.0	106	90	110
Iron	5/9/22	13:32	500.0	493.0	99	90	110
Lead	5/9/22	13:32	500.0	496.0	99	90	110
Magnesium	5/9/22	13:32	500.0	541.0	108	90	110
Manganese	5/9/22	13:32	500.0	516.0	103	90	110
Nickel	5/9/22	13:32	500.0	528.0	106	90	110
Selenium	5/9/22	13:32	500.0	531.0	106	90	110
Silver	5/9/22	13:32	50.0	45.60	91	90	110
Thallium	5/9/22	13:32	500.0	544.0	109	90	110
Vanadium	5/9/22	13:32	500.0	502.0	100	90	110
Zinc	5/9/22	13:32	500.0	508.0	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211699 Lab Sample ID: 1139473

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 05042022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	05/04/2022 10:25	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211699 Lab Sample ID: 1139485

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 05042022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	05/04/2022 12:29	0.003	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1138571

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/03/2022 14:56	-0.109	U	29	60
Antimony	05/03/2022 14:56	-2.65	U	4.4	10
Arsenic	05/03/2022 14:56	-0.569	U	7.7	20
Barium	05/03/2022 14:56	0.197	U	0.71	2.0
Beryllium	05/03/2022 14:56	0.002	U	0.95	4.0
Cadmium	05/03/2022 14:56	-0.064	U	0.41	1.0
Calcium	05/03/2022 14:56	0.083	U	17	50
Chromium	05/03/2022 14:56	0.016	U	1.1	2.5
Cobalt	05/03/2022 14:56	-0.073	U	0.55	2.5
Copper	05/03/2022 14:56	0.607	U	5.2	20
Iron	05/03/2022 14:56	0.617	U	11	40
Lead	05/03/2022 14:56	-0.331	U	1.4	2.0
Magnesium	05/03/2022 14:56	0.037	U	10	20
Manganese	05/03/2022 14:56	-0.066	U	1.4	2.5
Nickel	05/03/2022 14:56	-0.123	U	1.5	2.5
Selenium	05/03/2022 14:56	0.54	U	10	20
Silver	05/03/2022 14:56	0.209	U	1.1	2.5
Thallium	05/03/2022 14:56	-0.737	U	6.8	20
Vanadium	05/03/2022 14:56	-0.169	U	1.3	2.5
Zinc	05/03/2022 14:56	-0.027	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138668

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/03/2022 14:56	-0.109	U	29	60
Antimony	05/03/2022 14:56	-2.65	U	4.4	10
Arsenic	05/03/2022 14:56	-0.569	U	7.7	20
Barium	05/03/2022 14:56	0.197	U	0.71	2.0
Beryllium	05/03/2022 14:56	0.002	U	0.95	4.0
Cadmium	05/03/2022 14:56	-0.064	U	0.41	1.0
Calcium	05/03/2022 14:56	0.083	U	17	50
Chromium	05/03/2022 14:56	0.016	U	1.1	2.5
Cobalt	05/03/2022 14:56	-0.073	U	0.55	2.5
Copper	05/03/2022 14:56	0.607	U	5.2	20
Iron	05/03/2022 14:56	0.617	U	11	40
Lead	05/03/2022 14:56	-0.331	U	1.4	2.0
Magnesium	05/03/2022 14:56	0.037	U	10	20
Manganese	05/03/2022 14:56	-0.066	U	1.4	2.5
Nickel	05/03/2022 14:56	-0.123	U	1.5	2.5
Selenium	05/03/2022 14:56	0.54	U	10	20
Silver	05/03/2022 14:56	0.209	U	1.1	2.5
Thallium	05/03/2022 14:56	-0.737	U	6.8	20
Vanadium	05/03/2022 14:56	-0.169	U	1.3	2.5
Zinc	05/03/2022 14:56	-0.027	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211629

Lab Sample ID: 1138682

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	05/03/2022 14:56	-83.0	U	120	250
Sodium	05/03/2022 14:56	5.00	U	200	350

** Detection Limit only reported if value was less than the control limit.

***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1140980

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/09/2022 10:00	-0.325	U	29	60
Antimony	05/09/2022 10:00	-0.648	U	4.4	10
Arsenic	05/09/2022 10:00	-2.12	U	7.7	20
Barium	05/09/2022 10:00	0.015	U	0.71	2.0
Beryllium	05/09/2022 10:00	0.011	U	0.95	4.0
Cadmium	05/09/2022 10:00	0.09	U	0.41	1.0
Calcium	05/09/2022 10:00	0.75	U	17	50
Chromium	05/09/2022 10:00	0.236	U	1.1	2.5
Cobalt	05/09/2022 10:00	0.192	U	0.55	2.5
Copper	05/09/2022 10:00	-0.187	U	5.2	20
Iron	05/09/2022 10:00	0.879	U	11	40
Lead	05/09/2022 10:00	0.842	U	1.4	2.0
Magnesium	05/09/2022 10:00	0.248	U	10	20
Manganese	05/09/2022 10:00	0.001	U	1.4	2.5
Nickel	05/09/2022 10:00	0.04	U	1.5	2.5
Selenium	05/09/2022 10:00	1.28	U	10	20
Silver	05/09/2022 10:00	0.723	U	1.1	2.5
Thallium	05/09/2022 10:00	-2.37	U	6.8	20
Vanadium	05/09/2022 10:00	-0.061	U	1.3	2.5
Zinc	05/09/2022 10:00	0.34	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1141004

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/09/2022 10:00	-0.325	U	29	60
Antimony	05/09/2022 10:00	-0.648	U	4.4	10
Arsenic	05/09/2022 10:00	-2.12	U	7.7	20
Barium	05/09/2022 10:00	0.015	U	0.71	2.0
Beryllium	05/09/2022 10:00	0.011	U	0.95	4.0
Cadmium	05/09/2022 10:00	0.09	U	0.41	1.0
Calcium	05/09/2022 10:00	0.75	U	17	50
Chromium	05/09/2022 10:00	0.236	U	1.1	2.5
Cobalt	05/09/2022 10:00	0.192	U	0.55	2.5
Copper	05/09/2022 10:00	-0.187	U	5.2	20
Iron	05/09/2022 10:00	0.879	U	11	40
Lead	05/09/2022 10:00	0.842	U	1.4	2.0
Magnesium	05/09/2022 10:00	0.248	U	10	20
Manganese	05/09/2022 10:00	0.001	U	1.4	2.5
Nickel	05/09/2022 10:00	0.04	U	1.5	2.5
Selenium	05/09/2022 10:00	1.28	U	10	20
Silver	05/09/2022 10:00	0.723	U	1.1	2.5
Thallium	05/09/2022 10:00	-2.37	U	6.8	20
Vanadium	05/09/2022 10:00	-0.061	U	1.3	2.5
Zinc	05/09/2022 10:00	0.34	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211582

Lab Sample ID: 1141419

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	05/03/2022 14:56	-83.0	U	120	250
Sodium	05/03/2022 14:56	5.00	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211699 Lab Sample ID: 1139475

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 05042022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	05/04/2022 11:06	0.002	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211699 Lab Sample ID: 1139487

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 05042022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	05/04/2022 13:10	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1138579

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/03/2022 17:03	-0.185	U	29	60
Antimony	05/03/2022 17:03	-0.173	U	4.4	10
Arsenic	05/03/2022 17:03	0.252	U	7.7	20
Barium	05/03/2022 17:03	-0.073	U	0.71	2.0
Beryllium	05/03/2022 17:03	-0.011	U	0.95	4.0
Cadmium	05/03/2022 17:03	-0.064	U	0.41	1.0
Calcium	05/03/2022 17:03	1.72	U	17	50
Chromium	05/03/2022 17:03	-0.092	U	1.1	2.5
Cobalt	05/03/2022 17:03	-0.001	U	0.55	2.5
Copper	05/03/2022 17:03	1.52	U	5.2	20
Iron	05/03/2022 17:03	-0.422	U	11	40
Lead	05/03/2022 17:03	0.47	U	1.4	2.0
Magnesium	05/03/2022 17:03	0.522	U	10	20
Manganese	05/03/2022 17:03	0	U	1.4	2.5
Nickel	05/03/2022 17:03	-0.207	U	1.5	2.5
Selenium	05/03/2022 17:03	1.84	U	10	20
Silver	05/03/2022 17:03	-0.396	U	1.1	2.5
Thallium	05/03/2022 17:03	0.139	U	6.8	20
Vanadium	05/03/2022 17:03	-0.211	U	1.3	2.5
Zinc	05/03/2022 17:03	0.049	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138674

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/03/2022 21:56	-0.128	U	29	60
Antimony	05/03/2022 21:56	-2.12	U	4.4	10
Arsenic	05/03/2022 21:56	-1.50	U	7.7	20
Barium	05/03/2022 21:56	0.243	U	0.71	2.0
Beryllium	05/03/2022 21:56	0.035	U	0.95	4.0
Cadmium	05/03/2022 21:56	0.011	U	0.41	1.0
Calcium	05/03/2022 21:56	1.63	U	17	50
Chromium	05/03/2022 21:56	-0.264	U	1.1	2.5
Cobalt	05/03/2022 21:56	-0.008	U	0.55	2.5
Copper	05/03/2022 21:56	0.688	U	5.2	20
Iron	05/03/2022 21:56	0.702	U	11	40
Lead	05/03/2022 21:56	-0.706	U	1.4	2.0
Magnesium	05/03/2022 21:56	0.632	U	10	20
Manganese	05/03/2022 21:56	-0.01	U	1.4	2.5
Nickel	05/03/2022 21:56	0.178	U	1.5	2.5
Selenium	05/03/2022 21:56	0.144	U	10	20
Silver	05/03/2022 21:56	1.20		1.1	2.5
Thallium	05/03/2022 21:56	-0.435	U	6.8	20
Vanadium	05/03/2022 21:56	-0.09	U	1.3	2.5
Zinc	05/03/2022 21:56	0.141	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138679

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/03/2022 23:33	-0.099	U	29	60
Antimony	05/03/2022 23:33	-1.14	U	4.4	10
Arsenic	05/03/2022 23:33	1.45	U	7.7	20
Barium	05/03/2022 23:33	0.077	U	0.71	2.0
Beryllium	05/03/2022 23:33	0.001	U	0.95	4.0
Cadmium	05/03/2022 23:33	0.092	U	0.41	1.0
Calcium	05/03/2022 23:33	2.01	U	17	50
Chromium	05/03/2022 23:33	-0.025	U	1.1	2.5
Cobalt	05/03/2022 23:33	0.028	U	0.55	2.5
Copper	05/03/2022 23:33	0.595	U	5.2	20
Iron	05/03/2022 23:33	-0.60	U	11	40
Lead	05/03/2022 23:33	-0.024	U	1.4	2.0
Magnesium	05/03/2022 23:33	0.736	U	10	20
Manganese	05/03/2022 23:33	0.071	U	1.4	2.5
Nickel	05/03/2022 23:33	0.214	U	1.5	2.5
Selenium	05/03/2022 23:33	2.22	U	10	20
Silver	05/03/2022 23:33	0.286	U	1.1	2.5
Thallium	05/03/2022 23:33	-0.938	U	6.8	20
Vanadium	05/03/2022 23:33	0.01	U	1.3	2.5
Zinc	05/03/2022 23:33	1.52	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211629 Lab Sample ID: 1138688

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	05/03/2022 21:56	119.0	U	120	250
Sodium	05/03/2022 21:56	181.0	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211629 Lab Sample ID: 1138693

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	05/03/2022 23:33	57.00	U	120	250
Sodium	05/03/2022 23:33	125.0	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

3-2

CCB

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1138696

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/03/2022 20:17	-0.035	U	29	60
Antimony	05/03/2022 20:17	-2.35	U	4.4	10
Arsenic	05/03/2022 20:17	1.59	U	7.7	20
Barium	05/03/2022 20:17	-0.262	U	0.71	2.0
Beryllium	05/03/2022 20:17	0.031	U	0.95	4.0
Cadmium	05/03/2022 20:17	0.093	U	0.41	1.0
Calcium	05/03/2022 20:17	1.56	U	17	50
Chromium	05/03/2022 20:17	-0.056	U	1.1	2.5
Cobalt	05/03/2022 20:17	0.074	U	0.55	2.5
Copper	05/03/2022 20:17	0.939	U	5.2	20
Iron	05/03/2022 20:17	0.943	U	11	40
Lead	05/03/2022 20:17	1.21	U	1.4	2.0
Magnesium	05/03/2022 20:17	0.587	U	10	20
Manganese	05/03/2022 20:17	0.025	U	1.4	2.5
Nickel	05/03/2022 20:17	0.181	U	1.5	2.5
Selenium	05/03/2022 20:17	0.393	U	10	20
Silver	05/03/2022 20:17	0.948	U	1.1	2.5
Thallium	05/03/2022 20:17	-0.156	U	6.8	20
Vanadium	05/03/2022 20:17	-0.052	U	1.3	2.5
Zinc	05/03/2022 20:17	0.116	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211629

Lab Sample ID: 1138699

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	05/03/2022 20:17	-19.0	U	120	250
Sodium	05/03/2022 20:17	36.00	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1140986

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/09/2022 12:05	-0.337	U	29	60
Antimony	05/09/2022 12:05	-0.106	U	4.4	10
Arsenic	05/09/2022 12:05	-5.0	U	7.7	20
Barium	05/09/2022 12:05	0.20	U	0.71	2.0
Beryllium	05/09/2022 12:05	-0.003	U	0.95	4.0
Cadmium	05/09/2022 12:05	-0.012	U	0.41	1.0
Calcium	05/09/2022 12:05	-0.107	U	17	50
Chromium	05/09/2022 12:05	-0.031	U	1.1	2.5
Cobalt	05/09/2022 12:05	0.175	U	0.55	2.5
Copper	05/09/2022 12:05	-1.24	U	5.2	20
Iron	05/09/2022 12:05	-0.36	U	11	40
Lead	05/09/2022 12:05	-0.162	U	1.4	2.0
Magnesium	05/09/2022 12:05	-0.064	U	10	20
Manganese	05/09/2022 12:05	0.009	U	1.4	2.5
Nickel	05/09/2022 12:05	0.234	U	1.5	2.5
Selenium	05/09/2022 12:05	1.96	U	10	20
Silver	05/09/2022 12:05	-0.002	U	1.1	2.5
Thallium	05/09/2022 12:05	-1.35	U	6.8	20
Vanadium	05/09/2022 12:05	-0.079	U	1.3	2.5
Zinc	05/09/2022 12:05	0.217	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1140989

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/09/2022 13:39	-0.139	U	29	60
Antimony	05/09/2022 13:39	-2.64	U	4.4	10
Arsenic	05/09/2022 13:39	-3.42	U	7.7	20
Barium	05/09/2022 13:39	0.321	U	0.71	2.0
Beryllium	05/09/2022 13:39	0.007	U	0.95	4.0
Cadmium	05/09/2022 13:39	0.021	U	0.41	1.0
Calcium	05/09/2022 13:39	0.494	U	17	50
Chromium	05/09/2022 13:39	0.078	U	1.1	2.5
Cobalt	05/09/2022 13:39	0.219	U	0.55	2.5
Copper	05/09/2022 13:39	-0.227	U	5.2	20
Iron	05/09/2022 13:39	-0.12	U	11	40
Lead	05/09/2022 13:39	-0.76	U	1.4	2.0
Magnesium	05/09/2022 13:39	0.015	U	10	20
Manganese	05/09/2022 13:39	0.052	U	1.4	2.5
Nickel	05/09/2022 13:39	0.158	U	1.5	2.5
Selenium	05/09/2022 13:39	1.96	U	10	20
Silver	05/09/2022 13:39	0.096	U	1.1	2.5
Thallium	05/09/2022 13:39	-0.06	U	6.8	20
Vanadium	05/09/2022 13:39	-0.468	U	1.3	2.5
Zinc	05/09/2022 13:39	0.416	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211581

Lab Sample ID: 1141010

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/09/2022 12:05	-0.337	U	29	60
Antimony	05/09/2022 12:05	-0.106	U	4.4	10
Arsenic	05/09/2022 12:05	-5.0	U	7.7	20
Barium	05/09/2022 12:05	0.20	U	0.71	2.0
Beryllium	05/09/2022 12:05	-0.003	U	0.95	4.0
Cadmium	05/09/2022 12:05	-0.012	U	0.41	1.0
Calcium	05/09/2022 12:05	-0.107	U	17	50
Chromium	05/09/2022 12:05	-0.031	U	1.1	2.5
Cobalt	05/09/2022 12:05	0.175	U	0.55	2.5
Copper	05/09/2022 12:05	-1.24	U	5.2	20
Iron	05/09/2022 12:05	-0.36	U	11	40
Lead	05/09/2022 12:05	-0.162	U	1.4	2.0
Magnesium	05/09/2022 12:05	-0.064	U	10	20
Manganese	05/09/2022 12:05	0.009	U	1.4	2.5
Nickel	05/09/2022 12:05	0.234	U	1.5	2.5
Selenium	05/09/2022 12:05	1.96	U	10	20
Silver	05/09/2022 12:05	-0.002	U	1.1	2.5
Thallium	05/09/2022 12:05	-1.35	U	6.8	20
Vanadium	05/09/2022 12:05	-0.079	U	1.3	2.5
Zinc	05/09/2022 12:05	0.217	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1141013

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	05/09/2022 13:39	-0.139	U	29	60
Antimony	05/09/2022 13:39	-2.64	U	4.4	10
Arsenic	05/09/2022 13:39	-3.42	U	7.7	20
Barium	05/09/2022 13:39	0.321	U	0.71	2.0
Beryllium	05/09/2022 13:39	0.007	U	0.95	4.0
Cadmium	05/09/2022 13:39	0.021	U	0.41	1.0
Calcium	05/09/2022 13:39	0.494	U	17	50
Chromium	05/09/2022 13:39	0.078	U	1.1	2.5
Cobalt	05/09/2022 13:39	0.219	U	0.55	2.5
Copper	05/09/2022 13:39	-0.227	U	5.2	20
Iron	05/09/2022 13:39	-0.12	U	11	40
Lead	05/09/2022 13:39	-0.76	U	1.4	2.0
Magnesium	05/09/2022 13:39	0.015	U	10	20
Manganese	05/09/2022 13:39	0.052	U	1.4	2.5
Nickel	05/09/2022 13:39	0.158	U	1.5	2.5
Selenium	05/09/2022 13:39	1.96	U	10	20
Silver	05/09/2022 13:39	0.096	U	1.1	2.5
Thallium	05/09/2022 13:39	-0.06	U	6.8	20
Vanadium	05/09/2022 13:39	-0.468	U	1.3	2.5
Zinc	05/09/2022 13:39	0.416	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211582 Lab Sample ID: 1141427

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	05/03/2022 17:03	-100	U	120	250
Sodium	05/03/2022 17:03	11.00	U	200	350

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211699 Lab Sample ID: 1136565

Analytical Prep Batch # 95243 Preparation Date/Time: 05/03/2022 14:15

ICAL Calibration #: 05042022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Mercury	05/04/2022 10:35	0.00700	U	0.020	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1136455

Analytical Prep Batch # 95236 Preparation Date/Time: 04/29/2022 10:19

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Aluminum	05/03/2022 15:49	2.50	U	29	60
Total Antimony	05/03/2022 15:49	-1.88	U	4.4	10
Total Arsenic	05/03/2022 15:49	1.35	U	7.7	20
Total Barium	05/03/2022 15:49	0.0660	U	0.71	2.0
Total Beryllium	05/03/2022 15:49	0.00300	U	0.95	4.0
Total Cadmium	05/03/2022 15:49	0.138	U	0.41	1.0
Total Calcium	05/03/2022 15:49	10.80	U	19	50
Total Chromium	05/03/2022 15:49	0.144	U	1.1	2.5
Total Cobalt	05/03/2022 15:49	-0.0220	U	0.55	2.5
Total Copper	05/03/2022 15:49	2.07	U	5.2	20
Total Iron	05/03/2022 15:49	10.10	U	11	40
Total Lead	05/03/2022 15:49	-1.03	U	1.4	2.0
Total Magnesium	05/03/2022 15:49	1.68	U	10	20
Total Manganese	05/03/2022 15:49	-0.00400	U	1.4	2.5
Total Nickel	05/03/2022 15:49	-0.207	U	1.5	2.5
Total Potassium	05/03/2022 15:49	-0.0680	U	120	250
Total Sodium	05/03/2022 15:49	0.0240	U	200	350
Total Thallium	05/03/2022 15:49	-0.718	U	6.8	20
Total Vanadium	05/03/2022 15:49	-0.298	U	1.3	2.5
Total Zinc	05/03/2022 15:49	0.355	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1136455

Analytical Prep Batch # 95236 Preparation Date/Time: 04/29/2022 10:19

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Aluminum	05/03/2022 15:49	2.50	U	29	60
Total Antimony	05/03/2022 15:49	-1.88	U	4.4	10
Total Arsenic	05/03/2022 15:49	1.35	U	7.7	20
Total Barium	05/03/2022 15:49	0.0660	U	0.71	2.0
Total Beryllium	05/03/2022 15:49	0.00300	U	0.95	4.0
Total Cadmium	05/03/2022 15:49	0.138	U	0.41	1.0
Total Calcium	05/03/2022 15:49	10.80	U	19	50
Total Chromium	05/03/2022 15:49	0.144	U	1.1	2.5
Total Cobalt	05/03/2022 15:49	-0.0220	U	0.55	2.5
Total Copper	05/03/2022 15:49	2.07	U	5.2	20
Total Iron	05/03/2022 15:49	10.10	U	11	40
Total Lead	05/03/2022 15:49	-1.03	U	1.4	2.0
Total Magnesium	05/03/2022 15:49	1.68	U	10	20
Total Manganese	05/03/2022 15:49	-0.00400	U	1.4	2.5
Total Nickel	05/03/2022 15:49	-0.207	U	1.5	2.5
Total Potassium	05/03/2022 15:49	-0.0680	U	120	250
Total Sodium	05/03/2022 15:49	0.0240	U	200	350
Total Thallium	05/03/2022 15:49	-0.718	U	6.8	20
Total Vanadium	05/03/2022 15:49	-0.298	U	1.3	2.5
Total Zinc	05/03/2022 15:49	0.355	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1136455

Analytical Prep Batch # 95236 Preparation Date/Time: 04/29/2022 10:19

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: ReRun Re-Analysis #1

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Selenium	05/09/2022 13:11	0.325	U	10	20
Total Silver	05/09/2022 13:11	0.121	U	1.1	2.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211581 Lab Sample ID: 1136455

Analytical Prep Batch # 95236 Preparation Date/Time: 04/29/2022 10:19

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Aluminum	05/03/2022 15:49	2.50	U	29	60
Total Antimony	05/03/2022 15:49	-1.88	U	4.4	10
Total Arsenic	05/03/2022 15:49	1.35	U	7.7	20
Total Barium	05/03/2022 15:49	0.0660	U	0.71	2.0
Total Beryllium	05/03/2022 15:49	0.00300	U	0.95	4.0
Total Cadmium	05/03/2022 15:49	0.138	U	0.41	1.0
Total Calcium	05/03/2022 15:49	10.80	U	19	50
Total Chromium	05/03/2022 15:49	0.144	U	1.1	2.5
Total Cobalt	05/03/2022 15:49	-0.0220	U	0.55	2.5
Total Copper	05/03/2022 15:49	2.07	U	5.2	20
Total Iron	05/03/2022 15:49	10.10	U	11	40
Total Lead	05/03/2022 15:49	-1.03	U	1.4	2.0
Total Magnesium	05/03/2022 15:49	1.68	U	10	20
Total Manganese	05/03/2022 15:49	-0.00400	U	1.4	2.5
Total Nickel	05/03/2022 15:49	-0.207	U	1.5	2.5
Total Potassium	05/03/2022 15:49	-0.0680	U	120	250
Total Sodium	05/03/2022 15:49	0.0240	U	200	350
Total Thallium	05/03/2022 15:49	-0.718	U	6.8	20
Total Vanadium	05/03/2022 15:49	-0.298	U	1.3	2.5
Total Zinc	05/03/2022 15:49	0.355	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1137453

Analytical Prep Batch # 95267 Preparation Date/Time: 05/02/2022 09:24

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Aluminum	05/03/2022 22:04	2.23	U	29	60
Total Antimony	05/03/2022 22:04	-1.88	U	4.4	10
Total Arsenic	05/03/2022 22:04	-0.230	U	7.7	20
Total Barium	05/03/2022 22:04	-0.0590	U	0.71	2.0
Total Beryllium	05/03/2022 22:04	0.0370	U	0.95	4.0
Total Cadmium	05/03/2022 22:04	-0.0190	U	0.41	1.0
Total Calcium	05/03/2022 22:04	3.69	U	19	50
Total Chromium	05/03/2022 22:04	-0.0390	U	1.1	2.5
Total Cobalt	05/03/2022 22:04	-0.050	U	0.55	2.5
Total Copper	05/03/2022 22:04	2.21	U	5.2	20
Total Iron	05/03/2022 22:04	3.44	U	11	40
Total Lead	05/03/2022 22:04	-0.606	U	1.4	2.0
Total Magnesium	05/03/2022 22:04	0.616	U	10	20
Total Manganese	05/03/2022 22:04	0.0200	U	1.4	2.5
Total Nickel	05/03/2022 22:04	-0.169	U	1.5	2.5
Total Potassium	05/03/2022 22:04	0.0510	U	120	250
Total Selenium	05/03/2022 22:04	0.300	U	10	20
Total Sodium	05/03/2022 22:04	0.155	U	200	350
Total Thallium	05/03/2022 22:04	0.205	U	6.8	20
Total Vanadium	05/03/2022 22:04	-0.0180	U	1.3	2.5
Total Zinc	05/03/2022 22:04	0.376	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1137453

Analytical Prep Batch # 95267 Preparation Date/Time: 05/02/2022 09:24

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Aluminum	05/03/2022 22:04	2.23	U	29	60
Total Antimony	05/03/2022 22:04	-1.88	U	4.4	10
Total Arsenic	05/03/2022 22:04	-0.230	U	7.7	20
Total Barium	05/03/2022 22:04	-0.0590	U	0.71	2.0
Total Beryllium	05/03/2022 22:04	0.0370	U	0.95	4.0
Total Cadmium	05/03/2022 22:04	-0.0190	U	0.41	1.0
Total Calcium	05/03/2022 22:04	3.69	U	19	50
Total Chromium	05/03/2022 22:04	-0.0390	U	1.1	2.5
Total Cobalt	05/03/2022 22:04	-0.050	U	0.55	2.5
Total Copper	05/03/2022 22:04	2.21	U	5.2	20
Total Iron	05/03/2022 22:04	3.44	U	11	40
Total Lead	05/03/2022 22:04	-0.606	U	1.4	2.0
Total Magnesium	05/03/2022 22:04	0.616	U	10	20
Total Manganese	05/03/2022 22:04	0.0200	U	1.4	2.5
Total Nickel	05/03/2022 22:04	-0.169	U	1.5	2.5
Total Potassium	05/03/2022 22:04	0.0510	U	120	250
Total Selenium	05/03/2022 22:04	0.300	U	10	20
Total Sodium	05/03/2022 22:04	0.155	U	200	350
Total Thallium	05/03/2022 22:04	0.205	U	6.8	20
Total Vanadium	05/03/2022 22:04	-0.0180	U	1.3	2.5
Total Zinc	05/03/2022 22:04	0.376	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1137453

Analytical Prep Batch # 95267 Preparation Date/Time: 05/02/2022 09:24

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: ReRun Re-Analysis #1

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Silver	05/09/2022 12:27	0.100	U	1.1	2.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211628 Lab Sample ID: 1137453

Analytical Prep Batch # 95267 Preparation Date/Time: 05/02/2022 09:24

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Aluminum	05/03/2022 22:04	2.23	U	29	60
Total Antimony	05/03/2022 22:04	-1.88	U	4.4	10
Total Arsenic	05/03/2022 22:04	-0.230	U	7.7	20
Total Barium	05/03/2022 22:04	-0.0590	U	0.71	2.0
Total Beryllium	05/03/2022 22:04	0.0370	U	0.95	4.0
Total Cadmium	05/03/2022 22:04	-0.0190	U	0.41	1.0
Total Calcium	05/03/2022 22:04	3.69	U	19	50
Total Chromium	05/03/2022 22:04	-0.0390	U	1.1	2.5
Total Cobalt	05/03/2022 22:04	-0.050	U	0.55	2.5
Total Copper	05/03/2022 22:04	2.21	U	5.2	20
Total Iron	05/03/2022 22:04	3.44	U	11	40
Total Lead	05/03/2022 22:04	-0.606	U	1.4	2.0
Total Magnesium	05/03/2022 22:04	0.616	U	10	20
Total Manganese	05/03/2022 22:04	0.0200	U	1.4	2.5
Total Nickel	05/03/2022 22:04	-0.169	U	1.5	2.5
Total Potassium	05/03/2022 22:04	0.0510	U	120	250
Total Selenium	05/03/2022 22:04	0.300	U	10	20
Total Sodium	05/03/2022 22:04	0.155	U	200	350
Total Thallium	05/03/2022 22:04	0.205	U	6.8	20
Total Vanadium	05/03/2022 22:04	-0.0180	U	1.3	2.5
Total Zinc	05/03/2022 22:04	0.376	U	4.5	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX

Analytical Run #: 211581
Lab Sample ID: 1138572
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:11	500000	494000	99	80	120
Antimony	05/03/2022 15:11	0	0	0	-10	10
Arsenic	05/03/2022 15:11	0	-0.784	0	-20	20
Barium	05/03/2022 15:11	0	0.022	0	-1.7	1.7
Beryllium	05/03/2022 15:11	0	-0.14	0	-.7	.7
Cadmium	05/03/2022 15:11	0	0	0	-1.3	1.3
Calcium	05/03/2022 15:11	500000	487000	97	80	120
Chromium	05/03/2022 15:11	0	-7.72	0	-13	13
Cobalt	05/03/2022 15:11	0	0.376	0	-2	2
Copper	05/03/2022 15:11	0	2.31	0	-7	7
Iron	05/03/2022 15:11	500000	452000	90	80	120
Lead	05/03/2022 15:11	0	0	0	-4.7	4.7
Magnesium	05/03/2022 15:11	500000	522000	104	80	120
Manganese	05/03/2022 15:11	0	-0.877	0	-7.3	7.3
Nickel	05/03/2022 15:11	0	4.63	0	-7	7
Selenium	05/03/2022 15:11	0	-0.008	0	-13	13
Silver	05/03/2022 15:11	0	0	0	-7.3	7.3
Thallium	05/03/2022 15:11	0	-0.016	0	-7.3	7.3
Vanadium	05/03/2022 15:11	10000	9410	0	8000	12000
Zinc	05/03/2022 15:11	0	4.83	0	-20	20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX

Analytical Run #: 211628
Lab Sample ID: 1138669
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:11	500000	494000	99	80	120
Antimony	05/03/2022 15:11	0	0	0	-10	10
Arsenic	05/03/2022 15:11	0	-0.784	0	-20	20
Barium	05/03/2022 15:11	0	0.022	0	-1.7	1.7
Beryllium	05/03/2022 15:11	0	-0.14	0	-.7	.7
Cadmium	05/03/2022 15:11	0	0	0	-1.3	1.3
Calcium	05/03/2022 15:11	500000	487000	97	80	120
Chromium	05/03/2022 15:11	0	-7.72	0	-13	13
Cobalt	05/03/2022 15:11	0	0.376	0	-2	2
Copper	05/03/2022 15:11	0	2.31	0	-7	7
Iron	05/03/2022 15:11	500000	452000	90	80	120
Lead	05/03/2022 15:11	0	0	0	-4.7	4.7
Magnesium	05/03/2022 15:11	500000	522000	104	80	120
Manganese	05/03/2022 15:11	0	-0.877	0	-7.3	7.3
Nickel	05/03/2022 15:11	0	4.63	0	-7	7
Selenium	05/03/2022 15:11	0	-0.008	0	-13	13
Silver	05/03/2022 15:11	0	0	0	-7.3	7.3
Thallium	05/03/2022 15:11	0	-0.016	0	-7.3	7.3
Vanadium	05/03/2022 15:11	10000	9410	0	8000	12000
Zinc	05/03/2022 15:11	0	4.83	0	-20	20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX

Analytical Run #: 211629
Lab Sample ID: 1138683
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:11	500000	494000	99	80	120
Calcium	05/03/2022 15:11	500000	487000	97	80	120
Iron	05/03/2022 15:11	500000	452000	90	80	120
Magnesium	05/03/2022 15:11	500000	522000	104	80	120
Potassium	05/03/2022 15:11	0	-308	0	-500	500
Sodium	05/03/2022 15:11	0	-316	0	-500	500

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX

Analytical Run #: 211628
Lab Sample ID: 1140981
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/09/2022 10:15	500000	491000	98	80	120
Antimony	05/09/2022 10:15	0	-3.66	0	-10	10
Arsenic	05/09/2022 10:15	0	-0.026	0	-20	20
Barium	05/09/2022 10:15	0	0.627	0	-1.7	1.7
Beryllium	05/09/2022 10:15	0	0.201	0	-.7	.7
Cadmium	05/09/2022 10:15	0	0.998	0	-1.3	1.3
Calcium	05/09/2022 10:15	500000	528000	106	80	120
Chromium	05/09/2022 10:15	0	-8.45	0	-13	13
Cobalt	05/09/2022 10:15	0	-0.329	0	-2	2
Copper	05/09/2022 10:15	0	-1.43	0	-7	7
Iron	05/09/2022 10:15	500000	479000	96	80	120
Lead	05/09/2022 10:15	0	0	0	-4.7	4.7
Magnesium	05/09/2022 10:15	500000	527000	105	80	120
Manganese	05/09/2022 10:15	0	-5.06	0	-7.3	7.3
Nickel	05/09/2022 10:15	0	5.40	0	-7	7
Selenium	05/09/2022 10:15	0	-2.63	0	-13	13
Silver	05/09/2022 10:15	0	-0.093	0	-7.3	7.3
Thallium	05/09/2022 10:15	0	-0.733	0	-7.3	7.3
Vanadium	05/09/2022 10:15	10000	10000	0	8000	12000
Zinc	05/09/2022 10:15	0	-6.08	0	-20	20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX

Analytical Run #: 211581
Lab Sample ID: 1141005
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/09/2022 10:15	500000	491000	98	80	120
Antimony	05/09/2022 10:15	0	-3.66	0	-10	10
Arsenic	05/09/2022 10:15	0	-0.026	0	-20	20
Barium	05/09/2022 10:15	0	0.627	0	-1.7	1.7
Beryllium	05/09/2022 10:15	0	0.201	0	-.7	.7
Cadmium	05/09/2022 10:15	0	0.998	0	-1.3	1.3
Calcium	05/09/2022 10:15	500000	528000	106	80	120
Chromium	05/09/2022 10:15	0	-8.45	0	-13	13
Cobalt	05/09/2022 10:15	0	-0.329	0	-2	2
Copper	05/09/2022 10:15	0	-1.43	0	-7	7
Iron	05/09/2022 10:15	500000	479000	96	80	120
Lead	05/09/2022 10:15	0	0	0	-4.7	4.7
Magnesium	05/09/2022 10:15	500000	527000	105	80	120
Manganese	05/09/2022 10:15	0	-5.06	0	-7.3	7.3
Nickel	05/09/2022 10:15	0	5.40	0	-7	7
Selenium	05/09/2022 10:15	0	-2.63	0	-13	13
Silver	05/09/2022 10:15	0	-0.093	0	-7.3	7.3
Thallium	05/09/2022 10:15	0	-0.733	0	-7.3	7.3
Vanadium	05/09/2022 10:15	10000	10000	0	8000	12000
Zinc	05/09/2022 10:15	0	-6.08	0	-20	20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX

Analytical Run #: 211582
Lab Sample ID: 1141420
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:11	500000	494000	99	80	120
Calcium	05/03/2022 15:11	500000	487000	97	80	120
Iron	05/03/2022 15:11	500000	452000	90	80	120
Magnesium	05/03/2022 15:11	500000	522000	104	80	120
Potassium	05/03/2022 15:11	0	-308	0	-500	500
Sodium	05/03/2022 15:11	0	-316	0	-500	500

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX, Ultra

Analytical Run #: 211581
Lab Sample ID: 1138573
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:19	500000	502000	100	80	120
Antimony	05/03/2022 15:19	500.0	510.0	102	80	120
Arsenic	05/03/2022 15:19	500.0	504.0	101	80	120
Barium	05/03/2022 15:19	500.0	528.0	106	80	120
Beryllium	05/03/2022 15:19	500.0	502.0	100	80	120
Cadmium	05/03/2022 15:19	500.0	510.0	102	80	120
Calcium	05/03/2022 15:19	500000	495000	99	80	120
Chromium	05/03/2022 15:19	500.0	482.0	96	80	120
Cobalt	05/03/2022 15:19	500.0	496.0	99	80	120
Copper	05/03/2022 15:19	500.0	538.0	108	80	120
Iron	05/03/2022 15:19	500000	458000	92	80	120
Lead	05/03/2022 15:19	500.0	443.0	89	80	120
Magnesium	05/03/2022 15:19	500000	527000	105	80	120
Manganese	05/03/2022 15:19	500.0	499.0	100	80	120
Nickel	05/03/2022 15:19	500.0	491.0	98	80	120
Selenium	05/03/2022 15:19	500.0	507.0	101	80	120
Silver	05/03/2022 15:19	500.0	453.0	91	80	120
Thallium	05/03/2022 15:19	500.0	526.0	105	80	120
Vanadium	05/03/2022 15:19	500.0	478.0	96	80	120
Zinc	05/03/2022 15:19	500.0	508.0	102	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX, Ultra

Analytical Run #: 211628
Lab Sample ID: 1138670
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:19	500000	502000	100	80	120
Antimony	05/03/2022 15:19	500.0	510.0	102	80	120
Arsenic	05/03/2022 15:19	500.0	504.0	101	80	120
Barium	05/03/2022 15:19	500.0	528.0	106	80	120
Beryllium	05/03/2022 15:19	500.0	502.0	100	80	120
Cadmium	05/03/2022 15:19	500.0	510.0	102	80	120
Calcium	05/03/2022 15:19	500000	495000	99	80	120
Chromium	05/03/2022 15:19	500.0	482.0	96	80	120
Cobalt	05/03/2022 15:19	500.0	496.0	99	80	120
Copper	05/03/2022 15:19	500.0	538.0	108	80	120
Iron	05/03/2022 15:19	500000	458000	92	80	120
Lead	05/03/2022 15:19	500.0	443.0	89	80	120
Magnesium	05/03/2022 15:19	500000	527000	105	80	120
Manganese	05/03/2022 15:19	500.0	499.0	100	80	120
Nickel	05/03/2022 15:19	500.0	491.0	98	80	120
Selenium	05/03/2022 15:19	500.0	507.0	101	80	120
Silver	05/03/2022 15:19	500.0	453.0	91	80	120
Thallium	05/03/2022 15:19	500.0	526.0	105	80	120
Vanadium	05/03/2022 15:19	500.0	478.0	96	80	120
Zinc	05/03/2022 15:19	500.0	508.0	102	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

ICP ID Number: TJA 6000

SDG No.: 169098

ICS Source: SPEX, Ultra

Analytical Run #: 211629

Lab Sample ID: 1138684

Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:19	500000	502000	100	80	120
Calcium	05/03/2022 15:19	500000	495000	99	80	120
Iron	05/03/2022 15:19	500000	458000	92	80	120
Magnesium	05/03/2022 15:19	500000	527000	105	80	120
Potassium	05/03/2022 15:19	50000	51100	102	80	120
Sodium	05/03/2022 15:19	50000	49900	100	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX, Ultra

Analytical Run #: 211629
Lab Sample ID: 1138684
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:19	500000	502000	100	80	120
Calcium	05/03/2022 15:19	500000	495000	99	80	120
Iron	05/03/2022 15:19	500000	458000	92	80	120
Magnesium	05/03/2022 15:19	500000	527000	105	80	120
Potassium	05/03/2022 15:19	50000	51100	102	80	120
Sodium	05/03/2022 15:19	50000	49900	100	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX, Ultra

Analytical Run #: 211628
Lab Sample ID: 1140982
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/09/2022 10:22	500000	486000	97	80	120
Antimony	05/09/2022 10:22	500.0	507.0	101	80	120
Arsenic	05/09/2022 10:22	500.0	524.0	105	80	120
Barium	05/09/2022 10:22	500.0	527.0	105	80	120
Beryllium	05/09/2022 10:22	500.0	486.0	97	80	120
Cadmium	05/09/2022 10:22	500.0	504.0	101	80	120
Calcium	05/09/2022 10:22	500000	530000	106	80	120
Chromium	05/09/2022 10:22	500.0	490.0	98	80	120
Cobalt	05/09/2022 10:22	500.0	504.0	101	80	120
Copper	05/09/2022 10:22	500.0	538.0	108	80	120
Iron	05/09/2022 10:22	500000	480000	96	80	120
Lead	05/09/2022 10:22	500.0	450.0	90	80	120
Magnesium	05/09/2022 10:22	500000	524000	105	80	120
Manganese	05/09/2022 10:22	500.0	509.0	102	80	120
Nickel	05/09/2022 10:22	500.0	497.0	99	80	120
Selenium	05/09/2022 10:22	500.0	516.0	103	80	120
Silver	05/09/2022 10:22	500.0	456.0	91	80	120
Thallium	05/09/2022 10:22	500.0	494.0	99	80	120
Vanadium	05/09/2022 10:22	500.0	504.0	101	80	120
Zinc	05/09/2022 10:22	500.0	507.0	101	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX, Ultra

Analytical Run #: 211581
Lab Sample ID: 1141006
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/09/2022 10:22	500000	486000	97	80	120
Antimony	05/09/2022 10:22	500.0	507.0	101	80	120
Arsenic	05/09/2022 10:22	500.0	524.0	105	80	120
Barium	05/09/2022 10:22	500.0	527.0	105	80	120
Beryllium	05/09/2022 10:22	500.0	486.0	97	80	120
Cadmium	05/09/2022 10:22	500.0	504.0	101	80	120
Calcium	05/09/2022 10:22	500000	530000	106	80	120
Chromium	05/09/2022 10:22	500.0	490.0	98	80	120
Cobalt	05/09/2022 10:22	500.0	504.0	101	80	120
Copper	05/09/2022 10:22	500.0	538.0	108	80	120
Iron	05/09/2022 10:22	500000	480000	96	80	120
Lead	05/09/2022 10:22	500.0	450.0	90	80	120
Magnesium	05/09/2022 10:22	500000	524000	105	80	120
Manganese	05/09/2022 10:22	500.0	509.0	102	80	120
Nickel	05/09/2022 10:22	500.0	497.0	99	80	120
Selenium	05/09/2022 10:22	500.0	516.0	103	80	120
Silver	05/09/2022 10:22	500.0	456.0	91	80	120
Thallium	05/09/2022 10:22	500.0	494.0	99	80	120
Vanadium	05/09/2022 10:22	500.0	504.0	101	80	120
Zinc	05/09/2022 10:22	500.0	507.0	101	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX, Ultra

Analytical Run #: 211582
Lab Sample ID: 1141421
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:19	500000	502000	100	80	120
Calcium	05/03/2022 15:19	500000	495000	99	80	120
Iron	05/03/2022 15:19	500000	458000	92	80	120
Magnesium	05/03/2022 15:19	500000	527000	105	80	120
Potassium	05/03/2022 15:19	50000	51100	102	80	120
Sodium	05/03/2022 15:19	50000	49900	100	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
ICP ID Number: TJA 6000
SDG No.: 169098
ICS Source: SPEX, Ultra

Analytical Run #: 211582
Lab Sample ID: 1141421
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	05/03/2022 15:19	500000	502000	100	80	120
Calcium	05/03/2022 15:19	500000	495000	99	80	120
Iron	05/03/2022 15:19	500000	458000	92	80	120
Magnesium	05/03/2022 15:19	500000	527000	105	80	120
Potassium	05/03/2022 15:19	50000	51100	102	80	120
Sodium	05/03/2022 15:19	50000	49900	100	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1136568	Parent Sample No.:	1136212
Analytical Prep Batch #	95243	Analytical Preparation Date/Time:	05/03/2022 14:15
Analytical Run #:	211699	ICAL Calibration #:	05042022

Analysis Type	*Initial Analysis*	Analysis Date: -----	05/04/2022	Analysis Time: --------	12:54

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Mercury	82-119	0.095	J	BDL	U	2.0	5		CV	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description: **54IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1136458
Parent Sample No.: 1136212
Analytical Prep Batch #: 95236
Analytical Preparation Date/Time: 04/29/2022 10:19
Analytical Run #: 211581
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 16:21

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Aluminum	86-115	962		171		800	99		P
Total Antimony	88-113	222		BDL	U	200	111		P
Total Arsenic	87-113	845		BDL	U	800	106		P
Total Barium	88-113	932		78.5		800	107		P
Total Beryllium	89-112	20.8		BDL	U	20.0	104		P
Total Cadmium	88-113	19.7		BDL	U	20.0	98		P
Total Calcium	87-113	267000		58700		200000	104		P
Total Chromium	90-113	86.7		3.1	J	80.0	104		P
Total Cobalt	89-114	208		BDL	U	200	104		P
Total Copper	86-114	113		8.7	J	100	104		P
Total Iron	87-115	626		209		400	104		P
Total Lead	86-113	195		BDL	U	200	98		P
Total Magnesium	85-113	131000		24500		100000	106		P
Total Manganese	90-114	216		8.6		200	104		P
Total Nickel	88-113	209		BDL	U	200	104		P
Total Selenium	83-114	872		BDL	U	800	109		P
Total Silver	84-115	18.0		BDL	U	20.0	90		P
Total Thallium	85-114	810		BDL	U	800	101		P
Total Vanadium	90-111	204		BDL	U	200	102		P
Total Zinc	87-115	263		51.6		200	106		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1136458	Parent Sample No.:	1136212
Analytical Prep Batch #	95236	Analytical Preparation Date/Time:	04/29/2022 10:19
Analytical Run #:	211582	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	05/03/2022	Analysis Time: --------	16:21

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	101000		828		100000	100		P
Total Sodium	87-115	124000		25800		100000	98		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description: **49IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1137456
Parent Sample No.: 1137439
Analytical Prep Batch #: 95267
Analytical Preparation Date/Time: 05/02/2022 09:24
Analytical Run #: 211628
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 22:35

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	2110		329		800	223		P	*FAIL*
Total Antimony	88-113	209		BDL	U	200	104		P	
Total Arsenic	87-113	826		BDL	U	800	103		P	
Total Barium	88-113	884		34.9		800	106		P	
Total Beryllium	89-112	20.7		BDL	U	20.0	104		P	
Total Cadmium	88-113	18.5		BDL	U	20.0	92		P	
Total Calcium	87-113	267000		67800		200000	100		P	
Total Chromium	90-113	87.0		3.4	J	80.0	104		P	
Total Cobalt	89-114	204		0.67	J	200	102		P	
Total Copper	86-114	107		5.3	J	100	102		P	
Total Iron	87-115	1480		678		400	200		P	*FAIL*
Total Lead	86-113	194		3.1	J	200	95		P	
Total Magnesium	85-113	132000		32800		100000	99		P	
Total Manganese	90-114	289		81.2		200	104		P	
Total Nickel	88-113	205		BDL	U	200	102		P	
Total Selenium	83-114	845		BDL	U	800	106		P	
Total Silver	84-115	19.9		BDL	U	20.0	100		P	
Total Thallium	85-114	824		BDL	U	800	103		P	
Total Vanadium	90-111	201		BDL	U	200	100		P	
Total Zinc	87-115	258		51.2		200	103		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1137456	Parent Sample No.:	1137439
Analytical Prep Batch #	95267	Analytical Preparation Date/Time:	05/02/2022 09:24
Analytical Run #:	211629	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 22:35

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	103000		1810		100000	101		P
Total Sodium	87-115	124000		27100		100000	97		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **49IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1138676
Parent Sample No.: 1137439
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 211628
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 22:49

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Aluminum	80-120	4420		329		4000	102		P
Iron	80-120	2420		678		2000	87		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **49IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1141391
Parent Sample No.: 1137439
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 211629
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 22:49

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Potassium	80-120	186000		1810		200000	92		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **49IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1141392
Parent Sample No.: 1137439
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 211629
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 22:49

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Sodium	80-120	200000		27100		200000	86		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **54IDW**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1136569	Parent Sample No.:	1136568
Analytical Prep Batch #	95243	Analytical Preparation Date/Time:	05/03/2022 14:15
Analytical Run #:	211699	ICAL Calibration #:	05042022

Analysis Type *Initial Analysis* Analysis Date: ----- 05/04/2022 Analysis Time: -------- 12:57

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Mercury	82-119	0.51		BDL	U	2.0	26		CV	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **54IDW**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1136459	Parent Sample No.:	1136458
Analytical Prep Batch #	95236	Analytical Preparation Date/Time:	04/29/2022 10:19
Analytical Run #:	211581	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 16:28

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Aluminum	86-115	978		171		800	101		P
Total Antimony	88-113	221		BDL	U	200	110		P
Total Arsenic	87-113	852		BDL	U	800	106		P
Total Barium	88-113	946		78.5		800	108		P
Total Beryllium	89-112	20.9		BDL	U	20.0	104		P
Total Cadmium	88-113	19.9		BDL	U	20.0	100		P
Total Calcium	87-113	268000		58700		200000	105		P
Total Chromium	90-113	87.4		3.1	J	80.0	105		P
Total Cobalt	89-114	211		BDL	U	200	106		P
Total Copper	86-114	116		8.7	J	100	107		P
Total Iron	87-115	648		209		400	110		P
Total Lead	86-113	196		BDL	U	200	98		P
Total Magnesium	85-113	131000		24500		100000	106		P
Total Manganese	90-114	218		8.6		200	105		P
Total Nickel	88-113	211		BDL	U	200	106		P
Total Selenium	83-114	884		BDL	U	800	110		P
Total Silver	84-115	18.6		BDL	U	20.0	93		P
Total Thallium	85-114	824		BDL	U	800	103		P
Total Vanadium	90-111	206		BDL	U	200	103		P
Total Zinc	87-115	266		51.6		200	107		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1136459	Parent Sample No.:	1136458
Analytical Prep Batch #	95236	Analytical Preparation Date/Time:	04/29/2022 10:19
Analytical Run #:	211582	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	05/03/2022	Analysis Time: --------	16:28

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	102000		828		100000	101		P
Total Sodium	87-115	125000		25800		100000	99		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **49IDW**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1137457	Parent Sample No.:	1137456
Analytical Prep Batch #	95267	Analytical Preparation Date/Time:	05/02/2022 09:24
Analytical Run #:	211628	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 22:42

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	3130		329		800	350		P	*FAIL*
Total Antimony	88-113	207		BDL	U	200	104		P	
Total Arsenic	87-113	814		BDL	U	800	102		P	
Total Barium	88-113	886		34.9		800	106		P	
Total Beryllium	89-112	20.5		BDL	U	20.0	102		P	
Total Cadmium	88-113	18.6		BDL	U	20.0	93		P	
Total Calcium	87-113	267000		67800		200000	100		P	
Total Chromium	90-113	86.5		3.4	J	80.0	104		P	
Total Cobalt	89-114	203		0.67	J	200	101		P	
Total Copper	86-114	109		5.3	J	100	104		P	
Total Iron	87-115	2130		678		400	363		P	*FAIL*
Total Lead	86-113	193		3.1	J	200	95		P	
Total Magnesium	85-113	133000		32800		100000	100		P	
Total Manganese	90-114	291		81.2		200	105		P	
Total Nickel	88-113	205		BDL	U	200	102		P	
Total Selenium	83-114	839		BDL	U	800	105		P	
Total Silver	84-115	19.3		BDL	U	20.0	96		P	
Total Thallium	85-114	817		BDL	U	800	102		P	
Total Vanadium	90-111	200		BDL	U	200	100		P	
Total Zinc	87-115	262		51.2		200	105		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1137457	Parent Sample No.:	1137456
Analytical Prep Batch #	95267	Analytical Preparation Date/Time:	05/02/2022 09:24
Analytical Run #:	211629	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	05/03/2022	Analysis Time: --------	22:42

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	101000		1810		100000	99		P
Total Sodium	87-115	122000		27100		100000	95		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 95243

Analytical Run #: 211699

ICAL Calibration #: 05042022

Sample #: 1136567

Parent Sample #: 1136212

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Mercury	05/04/2022	12:48	20	0.020	U	0.020	U	0		CV

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 95236

Analytical Run #: 211581

ICAL Calibration #:

Sample #: 1136457

Parent Sample #: 1136212

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M	
Total Aluminum	05/03/2022	16:13	20	171		172		1		P	
Total Antimony	05/03/2022	16:13	20	4.4	U	4.4	U	0		P	
Total Arsenic	05/03/2022	16:13	20	7.7	U	7.7	U	0		P	
Total Barium	05/03/2022	16:13	20	78.5		78.4		0		P	
Total Beryllium	05/03/2022	16:13	20	0.95	U	0.95	U	0		P	
Total Cadmium	05/03/2022	16:13	20	0.41	U	0.41	U	0		P	
Total Calcium	05/03/2022	16:13	20	58700		59600		2		P	
Total Chromium	05/03/2022	16:13	20	3.1	J	3.4	J	9		P	
Total Cobalt	05/03/2022	16:13	20	0.55	U	0.55	U	0		P	
Total Copper	05/03/2022	16:13	20	8.7	J	6.7	J	26		P	*FAIL*
Total Iron	05/03/2022	16:13	20	209		211		1		P	
Total Lead	05/03/2022	16:13	20	1.4	U	1.4	U	0		P	
Total Magnesium	05/03/2022	16:13	20	24500		24800		1		P	
Total Manganese	05/03/2022	16:13	20	8.6		8.5		1		P	
Total Nickel	05/03/2022	16:13	20	1.5	U	1.5	U	0		P	
Total Selenium	05/03/2022	16:13	20	10	U	10	U	0		P	
Total Silver	05/03/2022	16:13	20	1.1	U	1.1	U	0		P	
Total Thallium	05/03/2022	16:13	20	6.8	U	6.8	U	0		P	
Total Vanadium	05/03/2022	16:13	20	1.3	U	1.3	U	0		P	
Total Zinc	05/03/2022	16:13	20	51.6		51.5		0		P	

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 95236

Analytical Run #: 211582

ICAL Calibration #:

Sample #: 1136457

Parent Sample #: 1136212

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	05/03/2022	16:13	20	828		777		6		P
Total Sodium	05/03/2022	16:13	20	25800		25600		1		P

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

49IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 95267

Analytical Run #: 211628

ICAL Calibration #:

Sample #: 1137455

Parent Sample #: 1137439

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M	
Total Aluminum	05/03/2022	22:27	20	329		351		6		P	
Total Antimony	05/03/2022	22:27	20	4.4	U	4.4	U	0		P	
Total Arsenic	05/03/2022	22:27	20	7.7	U	7.7	U	0		P	
Total Barium	05/03/2022	22:27	20	34.9		35.7		2		P	
Total Beryllium	05/03/2022	22:27	20	0.95	U	0.95	U	0		P	
Total Cadmium	05/03/2022	22:27	20	0.41	U	0.41	U	0		P	
Total Calcium	05/03/2022	22:27	20	67800		68500		1		P	
Total Chromium	05/03/2022	22:27	20	3.4	J	3.5	J	3		P	
Total Cobalt	05/03/2022	22:27	20	0.67	J	0.87	J	26		P	*FAIL*
Total Copper	05/03/2022	22:27	20	5.3	J	6.3	J	17		P	
Total Iron	05/03/2022	22:27	20	678		699		3		P	
Total Lead	05/03/2022	22:27	20	3.1	J	2.0	J	43		P	*FAIL*
Total Magnesium	05/03/2022	22:27	20	32800		33400		2		P	
Total Manganese	05/03/2022	22:27	20	81.2		82.1		1		P	
Total Nickel	05/03/2022	22:27	20	1.5	U	1.5	U	0		P	
Total Selenium	05/03/2022	22:27	20	10	U	10	U	0		P	
Total Silver	05/03/2022	22:27	20	1.1	U	1.1	J	200		P	*FAIL*
Total Thallium	05/03/2022	22:27	20	6.8	U	6.8	U	0		P	
Total Vanadium	05/03/2022	22:27	20	1.3	U	1.3	U	0		P	
Total Zinc	05/03/2022	22:27	20	51.2		52.6		3		P	

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

49IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 95267

Analytical Run #: 211629

ICAL Calibration #:

Sample #: 1137455

Parent Sample #: 1137439

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	05/03/2022	22:27	20	1810		1720		5		P
Total Sodium	05/03/2022	22:27	20	27100		27100		0		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **54IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 95243
Analytical Preparation Date/Time: 05/03/2022 14:15
Analytical Run #: 211699
ICAL Calibration #: 05042022
Sample #: 1136569
Parent Sample #: 1136568

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M	
Total Mercury	05/04/2022	12:57	20	0.095	J	0.51		137		CV	*FAIL*

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **54IDW**

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID | SDG No.: 169098

% Solid for Sample: | Concentration Units: ug/L

Analytical Prep Batch #: 95236 | Analytical Preparation Date/Time: 04/29/2022 10:19

Analytical Run #: 211581 | ICAL Calibration #:

Sample #: 1136459 | Parent Sample #: 1136458

Analysis Type: *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Aluminum	05/03/2022	16:28	20	962		978		2		P
Total Antimony	05/03/2022	16:28	20	222		221		0		P
Total Arsenic	05/03/2022	16:28	20	845		852		1		P
Total Barium	05/03/2022	16:28	20	932		946		1		P
Total Beryllium	05/03/2022	16:28	20	20.8		20.9		0		P
Total Cadmium	05/03/2022	16:28	20	19.7		19.9		1		P
Total Calcium	05/03/2022	16:28	20	267000		268000		0		P
Total Chromium	05/03/2022	16:28	20	86.7		87.4		1		P
Total Cobalt	05/03/2022	16:28	20	208		211		1		P
Total Copper	05/03/2022	16:28	20	113		116		3		P
Total Iron	05/03/2022	16:28	20	626		648		3		P
Total Lead	05/03/2022	16:28	20	195		196		1		P
Total Magnesium	05/03/2022	16:28	20	131000		131000		0		P
Total Manganese	05/03/2022	16:28	20	216		218		1		P
Total Nickel	05/03/2022	16:28	20	209		211		1		P
Total Selenium	05/03/2022	16:28	20	872		884		1		P
Total Silver	05/03/2022	16:28	20	18.0		18.6		3		P
Total Thallium	05/03/2022	16:28	20	810		824		2		P
Total Vanadium	05/03/2022	16:28	20	204		206		1		P
Total Zinc	05/03/2022	16:28	20	263		266		1		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description

54IDW

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID
SDG No.: 169098

% Solid for Sample:
Concentration Units: ug/L

Analytical Prep Batch # 95236
Analytical Preparation Date/Time 04/29/2022 10:19

Analytical Run #: 211582
ICAL Calibration #:

Sample #: 1136459
Parent Sample #: 1136458

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	05/03/2022	16:28	20	101000		102000		1		P
Total Sodium	05/03/2022	16:28	20	124000		125000		1		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **49IDW**

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID | SDG No.: 169098

% Solid for Sample: | Concentration Units: ug/L

Analytical Prep Batch #: 95267 | Analytical Preparation Date/Time: 05/02/2022 09:24

Analytical Run #: 211628 | ICAL Calibration #:

Sample #: 1137457 | Parent Sample #: 1137456

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M	
Total Aluminum	05/03/2022	22:42	20	2110		3130		39		P	*FAIL*
Total Antimony	05/03/2022	22:42	20	209		207		1		P	
Total Arsenic	05/03/2022	22:42	20	826		814		1		P	
Total Barium	05/03/2022	22:42	20	884		886		0		P	
Total Beryllium	05/03/2022	22:42	20	20.7		20.5		1		P	
Total Cadmium	05/03/2022	22:42	20	18.5		18.6		1		P	
Total Calcium	05/03/2022	22:42	20	267000		267000		0		P	
Total Chromium	05/03/2022	22:42	20	87.0		86.5		1		P	
Total Cobalt	05/03/2022	22:42	20	204		203		0		P	
Total Copper	05/03/2022	22:42	20	107		109		2		P	
Total Iron	05/03/2022	22:42	20	1480		2130		36		P	*FAIL*
Total Lead	05/03/2022	22:42	20	194		193		1		P	
Total Magnesium	05/03/2022	22:42	20	132000		133000		1		P	
Total Manganese	05/03/2022	22:42	20	289		291		1		P	
Total Nickel	05/03/2022	22:42	20	205		205		0		P	
Total Selenium	05/03/2022	22:42	20	845		839		1		P	
Total Silver	05/03/2022	22:42	20	19.9		19.3		3		P	
Total Thallium	05/03/2022	22:42	20	824		817		1		P	
Total Vanadium	05/03/2022	22:42	20	201		200		0		P	
Total Zinc	05/03/2022	22:42	20	258		262		2		P	

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **49IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 95267
Analytical Preparation Date/Time: 05/02/2022 09:24
Analytical Run #: 211629
ICAL Calibration #:
Sample #: 1137457
Parent Sample #: 1137456

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	05/03/2022	22:42	20	103000		101000		2		P
Total Sodium	05/03/2022	22:42	20	124000		122000		2		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: ug/L

Analytical Run #: 211699

Sample No.:#: 1136566

Analytical Prep Batch #: 95243

Preparation Date/Time: 05/03/2022 14:15

ICAL Calibration #: 05042022

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Mercury	05/04/2022 10:28	82-119	1.91		2.00	96		CV

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra SDG No.: 169098

Concentration Units: ug/L

Analytical Run #: 211581 Sample No.:#: 1136456

Analytical Prep Batch #: 95236 Preparation Date/Time: 04/29/2022 10:19

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Aluminum	05/03/2022 15:42	86-115	793.0		800.0	99		P
Total Antimony	05/03/2022 15:42	88-113	218.0		200.0	109		P
Total Arsenic	05/03/2022 15:42	87-113	835.0		800.0	104		P
Total Barium	05/03/2022 15:42	88-113	855.0		800.0	107		P
Total Beryllium	05/03/2022 15:42	89-112	20.60		20.0	103		P
Total Cadmium	05/03/2022 15:42	88-113	19.60		20.0	98		P
Total Calcium	05/03/2022 15:42	87-113	204000		200000	102		P
Total Chromium	05/03/2022 15:42	90-113	83.60		80.0	104		P
Total Cobalt	05/03/2022 15:42	89-114	209.0		200.0	104		P
Total Copper	05/03/2022 15:42	86-114	108.0		100.0	108		P
Total Iron	05/03/2022 15:42	87-115	420.0		400.0	105		P
Total Lead	05/03/2022 15:42	86-113	195.0		200.0	98		P
Total Magnesium	05/03/2022 15:42	85-113	104000		100000	104		P
Total Manganese	05/03/2022 15:42	90-114	209.0		200.0	104		P
Total Nickel	05/03/2022 15:42	88-113	210.0		200.0	105		P
Total Potassium	05/03/2022 15:42	86-114	100.0		100.0	100		P
Total Sodium	05/03/2022 15:42	87-115	98.20		100.0	98		P
Total Thallium	05/03/2022 15:42	85-114	814.0		800.0	102		P
Total Vanadium	05/03/2022 15:42	90-111	204.0		200.0	102		P
Total Zinc	05/03/2022 15:42	87-115	211.0		200.0	106		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra SDG No.: 169098

Concentration Units: ug/L

Analytical Run #: 211581 Sample No.:#: 1136456

Analytical Prep Batch #: 95236 Preparation Date/Time: 04/29/2022 10:19

ICAL Calibration #:

ReRun Re-Analysis #1

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Selenium	05/09/2022 13:04	83-114	916.0		800.0	114		P
Total Silver	05/09/2022 13:04	84-115	19.80		20.0	99		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra SDG No.: 169098

Concentration Units: ug/L

Analytical Run #: 211628 Sample No.:#: 1137454

Analytical Prep Batch #: 95267 Preparation Date/Time: 05/02/2022 09:24

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Aluminum	05/03/2022 21:35	86-115	752.0		800.0	94		P
Total Antimony	05/03/2022 21:35	88-113	200.0		200.0	100		P
Total Arsenic	05/03/2022 21:35	87-113	799.0		800.0	100		P
Total Barium	05/03/2022 21:35	88-113	825.0		800.0	103		P
Total Beryllium	05/03/2022 21:35	89-112	19.70		20.0	98		P
Total Cadmium	05/03/2022 21:35	88-113	17.70		20.0	88		P
Total Calcium	05/03/2022 21:35	87-113	196000		200000	98		P
Total Chromium	05/03/2022 21:35	90-113	81.30		80.0	102		P
Total Cobalt	05/03/2022 21:35	89-114	198.0		200.0	99		P
Total Copper	05/03/2022 21:35	86-114	97.20		100.0	97		P
Total Iron	05/03/2022 21:35	87-115	403.0		400.0	101		P
Total Lead	05/03/2022 21:35	86-113	188.0		200.0	94		P
Total Magnesium	05/03/2022 21:35	85-113	95400		100000	95		P
Total Manganese	05/03/2022 21:35	90-114	201.0		200.0	100		P
Total Nickel	05/03/2022 21:35	88-113	201.0		200.0	100		P
Total Potassium	05/03/2022 21:35	86-114	96.20		100.0	96		P
Total Selenium	05/03/2022 21:35	83-114	821.0		800.0	103		P
Total Sodium	05/03/2022 21:35	87-115	91.50		100.0	92		P
Total Thallium	05/03/2022 21:35	85-114	820.0		800.0	102		P
Total Vanadium	05/03/2022 21:35	90-111	193.0		200.0	96		P
Total Zinc	05/03/2022 21:35	87-115	197.0		200.0	98		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: ug/L

Analytical Run #: 211628

Sample No.:#: 1137454

Analytical Prep Batch #: 95267

Preparation Date/Time: 05/02/2022 09:24

ICAL Calibration #:

ReRun Re-Analysis #1

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Silver	05/09/2022 12:20	84-115	19.00		20.0	95		P

CT LABORATORIES
delivering more than data from your environmental analyses

9

ICP SERIAL DILUTION

Sample Description

49IDW

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID SDG No.: 169098

Concentration Units: ug/L

Sample No.: 1138675 Parent Sample No.: 1137439

LIMS Run #: 211628 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time		Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Aluminum	05/03/2022	22:19	329	J	258.5	J	21		P	*INVALID*
Iron	05/03/2022	22:19	678		725		7		P	*INVALID*

CT LABORATORIES
delivering more than data from your environmental analyses

9

ICP SERIAL DILUTION

Sample Description

49IDW

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID SDG No.: 169098

Concentration Units: mg/L

Sample No.: 1141389 Parent Sample No.: 1137439

LIMS Run #: 211629 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Potassium	05/03/2022 22:19	1.81	U	600	U	100		P	*INVALID*

CT LABORATORIES
delivering more than data from your environmental analyses

9

ICP SERIAL DILUTION

Sample Description

49IDW

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID SDG No.: 169098

Concentration Units: mg/L

Sample No.: 1141390 Parent Sample No.: 1137439

LIMS Run #: 211629 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Sodium	05/03/2022 22:19	27.1	U	1000	U	100		P	*INVALID*

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	Fe	0.000006	0.000000	No
			Ce	0.000000	0.000000	No
Ag 338.289 {100}	☒	1	Fe	0.000906	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001713	0.000000	No
As 197.262 {471}	☒	1	Al	-0.000113	0.000000	No
Ba 233.527 {445}	☒	3	Fe	-0.000038	0.000000	No
			V	0.000180	0.000000	No
			Al	0.000000	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000029	0.000000	No
Be 313.042 {108}	☒	1	Fe	0.000000	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000016	0.000000	No
Ca 315.887 {107}	☒	None				
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	1	Cu	0.000000	0.000000	No
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	2	Fe	0.000090	0.000000	No
			Al	0.000000	0.000000	No
Cd 228.802 {147}	☒	None				
Co 228.616 {447}	☒	5	Fe	0.000009	0.000000	No
			Ti	0.003000	0.000000	No
			Ba	-0.001300	0.000000	No
			Ni	0.000040	0.000000	No
			Al	0.000001	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000188	0.000000	No
Cr 205.560 {464}	☒	1	Fe	-0.000004	0.000000	No
Cr 267.716 {126}	☒	1	Fe	-0.000014	0.000000	No
Cu 224.700 {450}	☒	5	Fe	0.000274	0.000000	No
			Mo	0.001320	0.000000	No
			Ni	-0.006000	0.000000	No
			Pb	0.003030	0.000000	No
			Al	0.000000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000136	0.000000	No
Cu 327.396 {103}	☒	1	Fe	0.000069	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000086	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mn 259.373 {130}	☒	1	Mg	0.001339	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000011	0.000000	No
Mo 203.844 {465}	☒	1	Fe	-0.000020	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000036	0.000000	No
Ni 221.647 {452}	☒	1	Ca	0.000021	0.000000	No
Ni 231.604 {445}	☒	3	Fe	0.000012	0.000000	No
			Co	0.000000	0.000000	No
			Mo	0.000000	0.000000	No
Pb 216.999 {455}	☒	2	Al	0.001241	0.000000	No
			Na	0.000000	0.000000	No
Pb 220.353 {453}	☒	3	Si	0.000000	0.000000	No
			Al	0.000001	0.000000	No
			Fe	0.000018	0.000000	No
Pb 220.353 {153}	☒	1	Al	-0.000040	0.000000	No
Sb 206.833 {463}	☒	1	Fe	0.000009	0.000000	No
Sb 217.581 {455}	☒	3	Fe	-0.000069	0.000000	No
			V	0.002070	0.000000	No
			Pb	-0.001040	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000360	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.001308	0.000000	No
Tl 190.856 {476}	☒	5	Fe	0.000024	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000050	0.000000	No
			Cr	0.000251	0.000000	No
			V	-0.003800	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000048	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000073	0.000000	No
V 292.402 {115}	☒	3	Fe	0.000020	0.000000	No
			Cr	-0.000400	0.000000	No
			Al	0.000000	0.000000	No
Zn 202.548 {466}	☒	1	Fe	-0.000239	0.000000	No
Zn 206.200 {463}	☒	1	Fe	-0.000003	0.000000	No
Zn 213.856 {457}	☒	2	Fe	0.000167	0.000000	No
			Cu	0.007413	0.000000	No
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	0.000106	0.000000	No
Si 251.611 {134}	☒	2	Fe	-0.000105	0.000000	No
			Mo	0.005400	0.000000	No
Ti 323.452 {104}	☒	1	Fe	0.000036	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000052	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000014	0.000000	No
Sr 421.552 { 80}	☒	1	Fe	0.000014	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Sn 189.989 {477}	☒	1	Fe	0.000013	0.000000	No
B 249.678 {135}	☒	2	Fe	0.000001	0.000000	No
			Co	0.003970	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000357	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000216	0.000000	No
P 213.618 {457}	☒	1	Fe	-0.000079	0.000000	No
S 182.034 {485}	☒	1	Mg	0.000100	0.000000	No
Hg 184.950 {482}	☒	1	Fe	0.000001	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

ICP LINEAR RANGES (QUARTERLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

ICP ID Number: TA SDG No.: 169098

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	15.00	1000000	P
Antimony	15.00	10000	P
Arsenic	15.00	10000	P
Barium	15.00	10000	P
Beryllium	15.00	1000	P
Boron	15.00	1000	P
Cadmium	15.00	1000	P
Calcium	15.00	1000000	P
Chromium	15.00	100000	P
Cobalt	15.00	10000	P
Copper	15.00	100000	P
Iron	15.00	1000000	P
Lead	15.00	100000	P
Lithium	15.00	10000	P
Magnesium	15.00	1000000	P
Manganese	15.00	100000	P
Molybdenum	15.00	10000	P
Nickel	15.00	10000	P
Potassium	15.00	200000	P
Selenium	15.00	10000	P
Silicon	15.00	1000	P
Silver	15.00	100	P
Sodium	15.00	200000	P
Strontium	15.00	10000	P
Thallium	15.00	10000	P
Tin	15.00	10000	P
Titanium	15.00	1000	P
Tungsten	15.00	10000	P
Vanadium	15.00	10000	P
Zinc	15.00	100000	P

CT LABORATORIES
delivering more than data from your environmental analyses

13

PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Method: EPA 3010A

SDG No.: 169098

Preparation Batch #: 95236

Preparation Date/Time: 04/29/2022 / 10:19

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1136212	Normal Sample	54IDW	GROUND WATER	
1136455	Method Blank		LIQUID	
1136456	Lab Control Spike		LIQUID	50.0
1136457	Lab Duplicate	54IDW	GROUND WATER	50
1136458	Matrix Spike	54IDW	GROUND WATER	
1136459	Matrix Spike Duplicate	54IDW	GROUND WATER	

CT LABORATORIES
delivering more than data from your environmental analyses

13

PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Method: EPA 7470A

SDG No.: 169098

Preparation Batch #: 95243

Preparation Date/Time: 05/03/2022 / 14:15

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1136212	Normal Sample	54IDW	GROUND WATER	
1136565	Method Blank		LIQUID	
1136566	Lab Control Spike		LIQUID	
1136567	Lab Duplicate	54IDW	GROUND WATER	
1136568	Matrix Spike	54IDW	GROUND WATER	
1136569	Matrix Spike Duplicate	54IDW	GROUND WATER	
1137439	Normal Sample	49IDW	GROUND WATER	

CT LABORATORIES
delivering more than data from your environmental analyses

13

PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Method: EPA 3010A

SDG No.: 169098

Preparation Batch #: 95267

Preparation Date/Time: 05/02/2022 / 09:24

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1137439	Normal Sample	49IDW	GROUND WATER	
1137453	Method Blank		LIQUID	50.0
1137454	Lab Control Spike		LIQUID	50.0
1137455	Lab Duplicate	49IDW	GROUND WATER	
1137456	Matrix Spike	49IDW	GROUND WATER	
1137457	Matrix Spike Duplicate	49IDW	GROUND WATER	

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Lab Code: CTL

SDG No.: 169098

Instrument ID Number: CETAC

Method Number: CV

Start & End Date: 05/04/2022 to 05/04/2022

Analytical Run #: 211699

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1139472	ICV	1	5/04 10:19																X													
1139473	ICB	1	5/04 10:25																X													
1136566	LCSW	1	5/04 10:28																X													
1136565	MBW	1	5/04 10:35																X													
1136212	Initial	1	5/04 10:38																X													
1137439	Initial	1	5/04 10:41																X													
1139474	CCV	1	5/04 11:00																X													
1139475	CCB	1	5/04 11:06																X													
1139484	ICV	1	5/04 12:22																X													
1139485	ICB	1	5/04 12:29																X													
1136567	DUP	1	5/04 12:48																X													
1136568	MSW	1	5/04 12:54																X													
1136569	MSDW	1	5/04 12:57																X													
1139486	CCV	1	5/04 13:03																X													
1139487	CCB	1	5/04 13:10																X													

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Lab Code: CTL

SDG No.: 169098

Instrument ID Number: TJA

Method Number: P

Start & End Date: 05/03/2022 to 05/09/2022

Analytical Run #: 211581

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1138569	ICV	1	5/03 14:26	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138570	ICVLL	1	5/03 14:40	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138571	ICB	1	5/03 14:56	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138572	ICSA	1	5/03 15:11	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138573	ICSAB	1	5/03 15:19	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138574	ICV	1	5/03 15:34																							X							
1136456	LCSW	1	5/03 15:42	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X				X		X			X	X
1136455	MBW	1	5/03 15:49	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X				X		X			X	X
1136212	Initial	1	5/03 15:57	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X							X			X	X
1138575	L	5	5/03 16:05	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1136457	DUP	1	5/03 16:13	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1136458	MSW	1	5/03 16:21	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1136459	MSDW	1	5/03 16:28	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138576	PDSW	1	5/03 16:35	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138577	CCV1	1	5/03 16:49	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138578	CCV2	1	5/03 16:56	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138579	CCB	1	5/03 17:03	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1141002	ICV	1	5/09 09:31	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1141003	ICVLL	1	5/09 09:46	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
1141004	ICB	1	5/09 10:00	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1141005	ICSA	1	5/09 10:15	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1141006	ICSAB	1	5/09 10:22	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1141007	ICVLL	1	5/09 10:37																							X							
1141008	CCV1	1	5/09 11:52	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1141009	CCV2	1	5/09 11:58	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1141010	CCB	1	5/09 12:05	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1136456	LCSW	1	5/09 13:04																					X		X							
1136455	MBW	1	5/09 13:11																					X		X							

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Lab Code: CTL

SDG No.: 169098

Instrument ID Number: TJA

Method Number: P

Start & End Date: 05/03/2022 to 05/09/2022

Analytical Run #: 211581

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1136212	Re-Analysis	1	5/09 13:18																					X		X							
1141011	CCV1	1	5/09 13:26	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1141012	CCV2	1	5/09 13:32	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1141013	CCB	1	5/09 13:39	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Lab Code: CTL

SDG No.: 169098

Instrument ID Number: TJA

Method Number: P

Start & End Date: 05/03/2022 to 05/03/2022

Analytical Run #: 211582

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1141417	ICV	1	5/03 14:26																				X				X						
1141418	ICVLL	1	5/03 14:40																				X				X						
1141419	ICB	1	5/03 14:56																				X				X						
1141420	ICSA	1	5/03 15:11	X							X				X		X						X				X						
1141421	ICSAB	1	5/03 15:19	X							X				X		X						X				X						
1136212	Initial	1	5/03 15:57																				X				X						
1141432	L	5	5/03 16:05																				X										
1141433	L	5	5/03 16:05																								X						
1136457	DUP	1	5/03 16:13																				X				X						
1136458	MSW	1	5/03 16:21																				X				X						
1136459	MSDW	1	5/03 16:28																				X				X						
1141434	PDSW	1	5/03 16:35																				X										
1141435	PDSW	1	5/03 16:35																								X						
1141425	CCV1	1	5/03 16:49																				X				X						
1141426	CCV2	1	5/03 16:56																				X				X						
1141427	CCB	1	5/03 17:03																				X				X						

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Lab Code: CTL

SDG No.: 169098

Instrument ID Number: TJA

Method Number: P

Start & End Date: 05/03/2022 to 05/09/2022

Analytical Run #: 211628

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1138666	ICV	1	5/03 14:26	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138667	ICVLL	1	5/03 14:40																							X							
1138668	ICB	1	5/03 14:56	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138669	ICSA	1	5/03 15:11	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138670	ICSAB	1	5/03 15:19	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138671	ICV	1	5/03 15:34																							X							
1138694	CCV1	1	5/03 20:03	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138695	CCV2	1	5/03 20:10	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138696	CCB	1	5/03 20:17	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1137454	LCSW	1	5/03 21:35	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X			X		X			X	X
1138672	CCV1	1	5/03 21:42	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138673	CCV2	1	5/03 21:49	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138674	CCB	1	5/03 21:56	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1137453	MBW	1	5/03 22:04	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X			X		X			X	X
1137439	Initial	1	5/03 22:11	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
1138675	L	5	5/03 22:19	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1137455	DUP	1	5/03 22:27	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1137456	MSW	1	5/03 22:35	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1137457	MSDW	1	5/03 22:42	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138676	PDSW	1	5/03 22:49	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138677	CCV1	1	5/03 23:19	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138678	CCV2	1	5/03 23:26	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1138679	CCB	1	5/03 23:33	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1140978	ICV	1	5/09 09:31	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1140979	ICVLL	1	5/09 09:46	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
1140980	ICB	1	5/09 10:00	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1140981	ICSA	1	5/09 10:15	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1140982	ICSAB	1	5/09 10:22	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Lab Code: CTL

SDG No.: 169098

Instrument ID Number: TJA

Method Number: P

Start & End Date: 05/03/2022 to 05/09/2022

Analytical Run #: 211628

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1140983	ICVLL	1	5/09 10:37																							X							
1140984	CCV1	1	5/09 11:52	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1140985	CCV2	1	5/09 11:58	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1140986	CCB	1	5/09 12:05	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1137454	LCSW	1	5/09 12:20																							X							
1137453	MBW	1	5/09 12:27																							X							
1137439	Re-Analysis	1	5/09 12:34																							X							
1140987	CCV1	1	5/09 13:26	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1140988	CCV2	1	5/09 13:32	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1140989	CCB	1	5/09 13:39	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X

CT LABORATORIES
delivering more than data from your environmental analyses

14

ANALYSIS RUN LOG

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Lab Code: CTL | SDG No.: 169098

Instrument ID Number: TJA | Method Number: P

Start & End Date: 05/03/2022 to 05/03/2022 | Analytical Run #: 211629

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1138680	ICV	1	5/03 14:26																				X				X						
1138681	ICVLL	1	5/03 14:40																				X				X						
1138682	ICB	1	5/03 14:56																				X				X						
1138683	ICSA	1	5/03 15:11	X							X				X		X						X				X						
1138684	ICSAB	1	5/03 15:19	X							X				X		X						X				X						
1138697	CCV1	1	5/03 20:03																				X				X						
1138698	CCV2	1	5/03 20:10																				X				X						
1138699	CCB	1	5/03 20:17																				X				X						
1138686	CCV1	1	5/03 21:42																				X				X						
1138687	CCV2	1	5/03 21:49																				X				X						
1138688	CCB	1	5/03 21:56																				X				X						
1137439	Initial	1	5/03 22:11																				X				X						
1141389	L	5	5/03 22:19																				X										
1141390	L	5	5/03 22:19																								X						
1137455	DUP	1	5/03 22:27																				X				X						
1137456	MSW	1	5/03 22:35																				X				X						
1137457	MSDW	1	5/03 22:42																				X				X						
1141391	PDSW	1	5/03 22:49																				X										
1141392	PDSW	1	5/03 22:49																								X						
1138691	CCV1	1	5/03 23:19																				X				X						
1138692	CCV2	1	5/03 23:26																				X				X						
1138693	CCB	1	5/03 23:33																				X				X						

METALS
RAW DATA
DOCUMENTS

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Ag 328.068 {103}	05/04/2022 13:08:43	05/03/2022 14:18:32	Linear	1/Conc	-0.000021	0.000003	0.000000	1.000000	0.998983	0.000000	0.371569	1.238562
Ag 338.289 {100}	05/04/2022 13:08:43	05/03/2022 14:18:32	Linear	1/Conc	43.685570	5.279786	0.000000	1.000000	0.999489	0.795114	0.642150	2.140500
Al 167.079 {501}	05/04/2022 13:08:43	05/03/2022 13:30:00	Linear	1/Conc	0.000005	0.000003	0.000000	1.000000	0.999858	0.000000	0.352665	1.175551
Al 309.271 {109}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	0.000210	0.000001	0.000000	1.000000	0.999901	0.000001	12.773111	42.577038
Al 396.152 { 85}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Var	0.000008	0.000002	0.000000	1.000000	0.999732	0.000047	7.351281	24.504272
As 193.759 {474}	05/04/2022 13:08:43	05/03/2022 13:30:00	Linear	1/Conc	0.000005	0.000001	0.000000	1.000000	0.999730	0.000000	3.381583	11.271944
As 197.262 {471}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000002	0.000000	0.000000	1.000000	0.999806	0.000000	4.997884	16.659613
Ba 233.527 {445}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000000	0.000009	0.000000	1.000000	0.999662	0.000001	0.237141	0.790472
Ba 455.403 { 74}	05/04/2022 13:08:43	05/03/2022 13:37:53	Curvili	1/Conc	0.000110	0.000046	-0.000000	1.000000	0.999996	0.000001	0.204637	0.682123
Ba 493.409 { 68}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Var	0.000525	0.000044	0.000000	1.000000	0.999664	0.000149	0.793794	2.645981
Be 234.861 {144}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	-0.000000	0.000008	0.000000	1.000000	0.999779	0.000000	0.213609	0.712029
Be 313.042 {108}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	0.000025	0.000083	0.000000	1.000000	0.999985	0.000000	0.013526	0.045086
Be 313.107 {108}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	0.000013	0.000036	0.000000	1.000000	0.999976	0.000000	0.165969	0.553231
Ca 184.006 {483}	05/04/2022 13:08:43	05/03/2022 13:53:45	Linear	1/Conc	-0.000029	0.000002	0.000000	1.000000	0.999947	0.000009	1.009319	3.364395
Ca 315.887 {107}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Var	0.000049	0.000001	0.000000	1.000000	0.999296	0.000028	5.389620	17.965400
Ca 317.933 {106}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	0.002519	0.000001	0.000000	1.000000	0.998893	0.000108	2.591979	8.639929
Ca 393.366 { 86}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	0.000075	0.000198	0.000000	1.000000	0.999239	0.000083	0.042980	0.143265
Ca 396.847 { 85}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	0.000013	0.000084	0.000000	1.000000	0.999806	0.000078	0.094920	0.316401
Cd 226.502 {449}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	-0.000001	0.000021	0.000000	1.000000	0.999983	0.000000	0.156342	0.521141
Cd 228.802 {448}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	0.000002	0.000005	0.000000	1.000000	0.999920	0.000000	0.413006	1.376688
Co 228.616 {447}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000003	0.000020	0.000000	1.000000	0.999793	0.000002	0.193332	0.644439
Co 238.892 {141}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	0.000001	0.000002	0.000000	1.000000	0.999974	0.000001	0.306626	1.022088
Cr 205.560 {464}	05/04/2022 13:08:43	05/03/2022 13:46:19	Linear	1/Var	-0.000004	0.000015	0.000000	1.000000	0.999496	0.000006	0.175844	0.586148
Cr 267.716 {126}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000002	0.000003	0.000000	1.000000	0.999987	0.000000	0.334828	1.116094
Cu 223.008 {451}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000001	0.000004	0.000000	1.000000	0.999643	0.000001	0.956266	3.187553
Cu 324.754 {104}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	1/Conc	0.000329	0.000003	0.000000	1.000000	0.999813	0.000007	2.428330	8.094435
Cu 327.396 {103}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	1/Conc	0.000048	0.000002	0.000000	1.000000	0.999800	0.000001	4.575577	15.251924
Fe 234.349 {144}	05/04/2022 13:08:43	05/03/2022 13:53:45	Linear	1/Var	0.000015	0.000001	0.000000	1.000000	0.999984	0.000003	0.699558	2.331860
Fe 239.562 {140}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	0.000006	0.000001	0.000000	1.000000	0.997783	0.000082	3.836041	12.786804
Fe 259.940 {129}	05/04/2022 13:08:43	05/03/2022 14:10:52	Curvili	1/Var	0.000005	0.000003	0.000000	1.000000	0.999726	0.000036	1.513870	5.046235
Mg 202.582 {466}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Var	0.000015	0.000001	0.000000	1.000000	0.998853	0.000161	2.449654	8.165513
Mg 279.079 {121}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.999685	0.000003	25.559133	85.197111
Mg 280.270 {120}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000062	0.000048	0.000000	1.000000	0.999348	0.000081	0.013981	0.046604
Mn 257.610 {131}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	-0.000001	0.000012	0.000000	1.000000	0.999851	0.000002	0.047765	0.159218
Mn 259.373 {130}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	None	-0.000140	0.000010	0.000000	1.000000	0.999999	0.000737	0.364684	1.215613
Mo 202.030 {466}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Var	0.000004	0.000006	0.000000	1.000000	0.999955	0.000009	0.365364	1.217882
Mo 204.598 {464}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000002	0.000003	0.000000	1.000000	0.999825	0.000001	0.736140	2.453799
Ni 221.647 {452}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	-0.000002	0.000012	0.000000	1.000000	0.999779	0.000012	0.367243	1.224142
Ni 231.604 {445}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	-0.000001	0.000011	0.000000	1.000000	0.999786	0.000001	0.366247	1.220824
Pb 216.999 {455}	05/04/2022 13:08:43	05/03/2022 13:46:20	Curvili	1/Conc	0.000002	0.000001	0.000000	1.000000	0.999971	0.000000	4.698486	15.661621
Pb 220.353 {153}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999986	0.000000	1.717821	5.726069
Pb 220.353 {453}	05/04/2022 13:08:43	05/03/2022 13:30:02	Linear	1/Conc	0.000014	0.000003	0.000000	1.000000	0.999972	0.000000	1.426759	4.755862
Sb 206.833 {463}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Var	-0.000001	0.000001	0.000000	1.000000	0.999811	0.000008	1.941046	6.470152
Sb 217.581 {455}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000010	0.000001	0.000000	1.000000	0.999816	0.000000	2.305353	7.684509

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 309.271 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 234.861 {144}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 313.107 {108}	OK.	1.000000	0.000000	1	0
	Ca 184.006 {483}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {448}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0

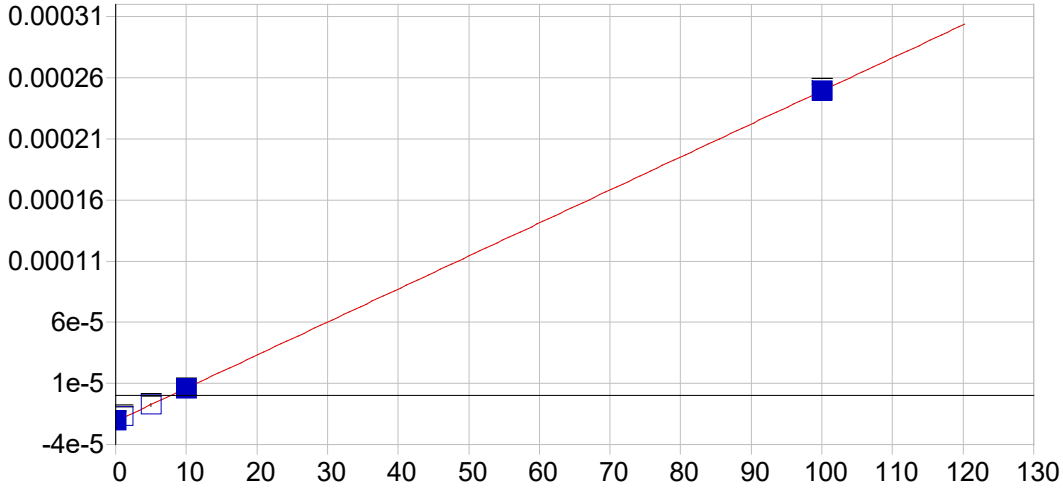
Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Se 196.090 {472}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000003	0.000001	0.000000	1.000000	0.999776	0.000000	2.889846	9.632820
Se 206.279 {463}	05/04/2022 13:08:43	05/03/2022 13:37:54	Curvili	1/Conc	0.000004	0.000000	0.000000	1.000000	0.999844	0.000000	14.818017	49.393390
Tl 190.856 {476}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000000	0.000002	0.000000	1.000000	0.999670	0.000001	1.703755	5.679182
Tl 190.856 {477}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Var	0.000004	0.000001	0.000000	1.000000	0.999439	0.000011	2.759172	9.197239
V 290.882 {116}	05/04/2022 13:08:43	05/03/2022 13:37:54	Curvili	1/Var	0.000013	0.000001	-0.000000	1.000000	0.999991	0.000001	4.338762	14.462541
V 292.402 {115}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000012	0.000008	0.000000	1.000000	0.999997	0.000000	0.280078	0.933592
Zn 206.200 {463}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	1/Var	0.000013	0.000013	0.000000	1.000000	0.996634	0.000037	0.200498	0.668325
Zn 213.856 {457}	05/04/2022 13:08:43	05/03/2022 13:30:02	Linear	1/Conc	0.000009	0.000036	0.000000	1.000000	0.999985	0.000001	0.090243	0.300810
Y 224.306 {450}*	05/04/2022 13:08:43	05/03/2022 12:29:47	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Y 324.228 {104}*	05/04/2022 13:08:43	05/03/2022 12:29:47	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Y 371.030 { 91}*	05/04/2022 13:08:43	05/03/2022 12:29:47	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Na 330.237 {102}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	-0.000000	0.000007	0.000000	1.000000	0.999847	0.000002	1.078491	3.594970
Na 588.995 { 57}	05/04/2022 13:08:43	05/03/2022 13:53:46	Linear	1/Conc	2219.4181	1611.6123	0.000000	1.000000	0.999985	4.223921	0.006709	0.022363
Na 589.592 { 57}	05/04/2022 13:08:43	05/03/2022 13:53:46	Linear	1/Conc	51.809383	702.06957	0.000000	1.000000	0.999993	1.198180	0.008962	0.029873
Si 212.412 {458}	05/04/2022 13:08:43	05/03/2022 14:10:53	Linear	1/Var	0.000045	0.000003	0.000000	1.000000	0.997384	0.000167	1.075564	3.585212
Si 251.611 {134}	05/04/2022 13:08:43	05/03/2022 14:10:53	Linear	1/Conc	0.000005	0.000001	0.000000	1.000000	0.998752	0.000012	6.992742	23.309141
Ti 323.452 {104}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000272	0.000007	0.000000	1.000000	0.999875	0.000001	1.242070	4.140234
Sr 407.771 { 83}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000095	0.000071	0.000000	1.000000	0.999847	0.000005	0.139140	0.463801
Sr 421.552 { 80}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000036	0.000097	0.000000	1.000000	0.999889	0.000006	0.108229	0.360762
Sn 189.989 {477}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Var	0.000004	0.000004	0.000000	1.000000	0.999850	0.000008	0.522706	1.742355
Sn 189.989 {478}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Var	0.000002	0.000001	0.000000	1.000000	0.999405	0.000005	1.442288	4.807625
B 249.678 {135}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	0.000001	0.000002	0.000000	1.000000	0.999999	0.000000	0.769694	2.565646
B 249.773 {135}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	0.000007	0.000003	0.000000	1.000000	0.999999	0.000000	0.403725	1.345751
Li 610.353 { 55}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	-0.000474	0.000001	0.000000	1.000000	0.994993	0.000002	23.843010	79.476700
Li 670.776 { 50}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	-30.799338	5.065816	0.000000	1.000000	0.999892	1.014185	1.271588	4.238626
K 766.490 { 44}	05/04/2022 13:08:43	05/03/2022 13:53:46	Linear	1/Var	32.267543	211.13077	0.000000	1.000000	0.999998	5.883864	0.032208	0.107360
K 769.896 { 44}	05/04/2022 13:08:43	05/03/2022 14:10:53	Linear	1/Var	3.540317	111.37843	0.000000	1.000000	0.999561	58.298796	0.054157	0.180523
P 177.495 {489}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	-0.000003	0.000001	0.000000	1.000000	0.999994	0.000000	2.036108	6.787028
S 182.034 {485}	05/04/2022 13:08:43	05/03/2022 14:10:53	Linear	1/Var	0.000060	0.000000	0.000000	1.000000	0.998222	0.000071	3.771207	12.570692
Hg 184.950 {482}	05/04/2022 13:08:43	05/03/2022 13:30:03	Linear	1/Conc	0.000005	0.000003	0.000000	1.000000	1.000000	0.000000	0.567355	1.891182
Ce 404.076 { 83}	05/04/2022 13:08:43	05/03/2022 13:30:03	Linear	1/Conc	0.000047	0.000001	0.000000	1.000000	1.000000	0.000000	17.718102	59.060340

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	Warnin	1.000000	0.000000	1	0
	Na 330.237 {102}	OK.	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 212.412 {458}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {478}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 610.353 { 55}	OK.	1.000000	0.000000	1	0
	Li 670.776 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 177.495 {489}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	Ce	0.000000	0.000000	No
			Al	-0.000018	0.000000	No
Ag 338.289 {100}	☒	2	Fe	0.000038	0.000000	No
			Na	0.100000	0.000000	No
Al 167.079 {501}	☒	None				
Al 309.271 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001396	0.000000	No
As 197.262 {471}	☒	1	Al	0.000027	0.000000	No
Ba 233.527 {445}	☒	1	Fe	-0.000003	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000006	0.000000	No
Ba 493.409 { 68}	☒	1	S	-0.005000	0.000000	No
Be 234.861 {144}	☒	None				
Be 313.042 {108}	☒	1	Fe	0.000004	0.000000	No
Be 313.107 {108}	☒	1	Fe	0.000002	0.000000	No
Ca 184.006 {483}	☒	None				
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	None				
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000165	0.000000	No
Cd 228.802 {448}	☒	1	Fe	-0.000007	0.000000	No
Co 228.616 {447}	☒	3	Fe	-0.000001	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.002165	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 223.008 {451}	☒	3	Fe	-0.000018	0.000000	No
			Mo	0.008000	0.000000	No
			Ni	0.006000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	0.000308	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000009	0.000000	No
			Mo	-0.000319	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000031	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mn 259.373 {130}	☒	1	Fe	0.001120	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000014	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000021	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	5	Fe	-0.000074	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.001918	0.000000	No
Pb 216.999 {455}	☒	3	Al	0.001866	0.000000	No
			Na	0.000000	0.000000	No
			Fe	0.002996	0.000000	No
Pb 220.353 {153}	☒	2	Fe	0.000002	0.000000	No
			Al	-0.000020	0.000000	No
Pb 220.353 {453}	☒	2	Si	0.000000	0.000000	No
			Al	-0.000020	0.000000	No
Sb 206.833 {463}	☒	3	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
			Ce	0.005500	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000049	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000332	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	1	Fe	-0.000126	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000083	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	6	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No
			Al	0.000000	0.000000	No
			Ti	0.000420	0.000000	No
			Mo	-0.000481	0.000000	No
			Cu	-0.003767	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	5	Fe	0.000115	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mo	0.000034	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Na 330.237 {102}	☒	1	Sr	-0.002100	0.000000	No
Na 588.995 { 57}	☒	1	Fe	0.000000	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Na 589.592 { 57}	☒	1	Fe	0.000001	0.000000	No
Si 212.412 {458}	☒	1	Fe	-0.000007	0.000000	No
Si 251.611 {134}	☒	1	Fe	-0.000177	0.000000	No
Ti 323.452 {104}	☒	2	Fe	0.000034	0.000000	No
			Ce	0.000123	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000036	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000012	0.000000	No
Sn 189.989 {478}	☒	1	Fe	-0.000008	0.000000	No
B 249.678 {135}	☒	1	Fe	0.000018	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000401	0.000000	No
Li 610.353 { 55}	☒	1	Fe	-0.000109	0.000000	No
Li 670.776 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000003	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000001	0.000000	No
P 177.495 {489}	☒	None				
S 182.034 {485}	☒	None				
Hg 184.950 {482}	☒	1	Fe	-0.000000	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

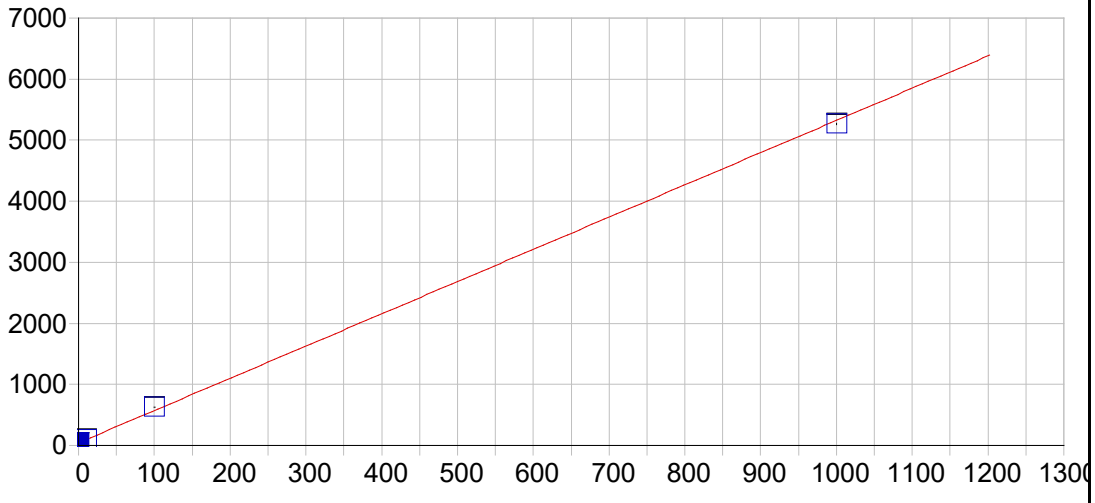


Ag 328.068 {103}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000021	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998983	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.371569		
Predicted MQL:	1.238562		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00042	-.000	.000	-.00002	.000	1
CalStd8=100	100.00	99.908	-.092	-.092	.00025	.000	1
CalStd4=5	5.0000	4.8638	-.136	-2.72	-.00001	.000	1
CalStd5=10	10.000	9.7528	-.247	-2.47	.00001	.000	1
CalStd3=1	1.0000	1.4757	.476	47.6	-.00002	.000	1

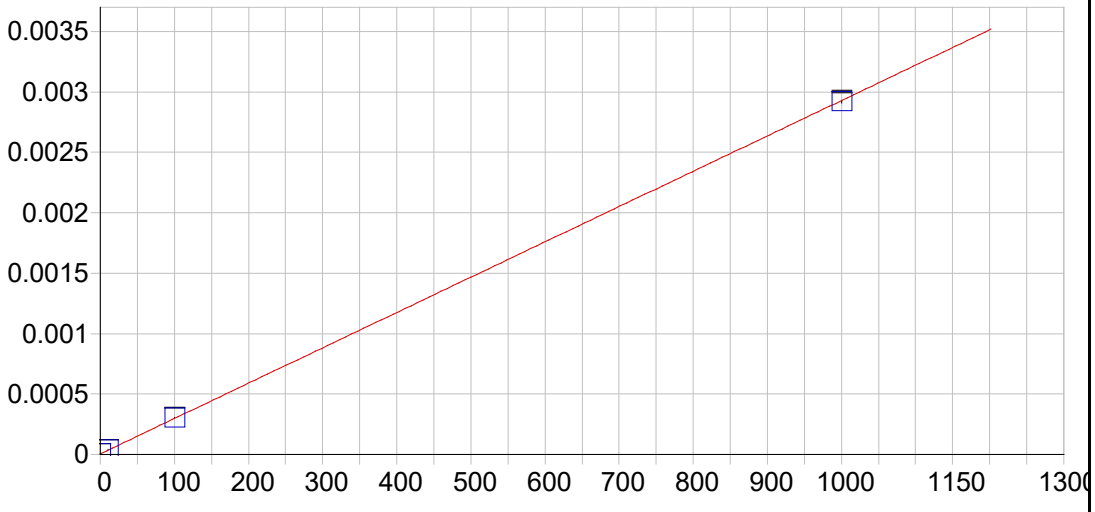


Ag 338.289 {100}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	43.685570	Re-Slope:	1.000000
A1 (Gain):	5.279786	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999489	Status:	OK.
Std Error of Est:	0.795114		
Predicted MDL:	0.642150		
Predicted MQL:	2.140500		

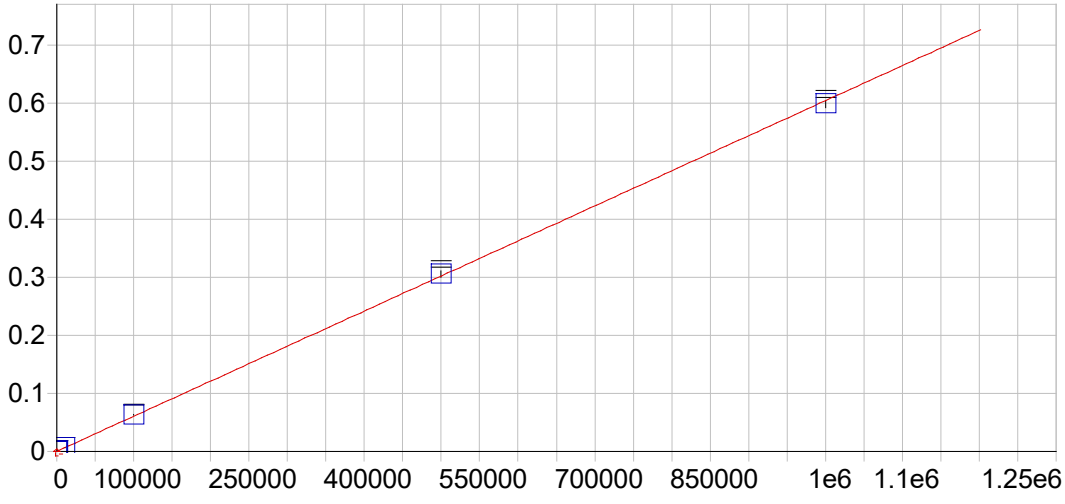
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00111	-.001	.000	43.680	1.02	1
Ag 1000	1000.0	989.68	-10.3	-1.03	5269.0	10.5	1
CalStd5=10	10.000	10.202	.202	2.02	97.552	2.07	1
CalStd8=100	100.00	110.12	10.1	10.1	625.10	1.83	1



Al 167.079 {501}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999858		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.352665				
Predicted MQL:	1.175551				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00179	-.002	.000	.00001	.000	1
CalStd9=100	1000.0	996.54	-3.46	-.346	.00292	.000	1
CalStd5=10	10.000	11.647	1.65	16.5	.00004	.000	1
CalStd8=100	100.00	101.81	1.81	1.81	.00030	.000	1

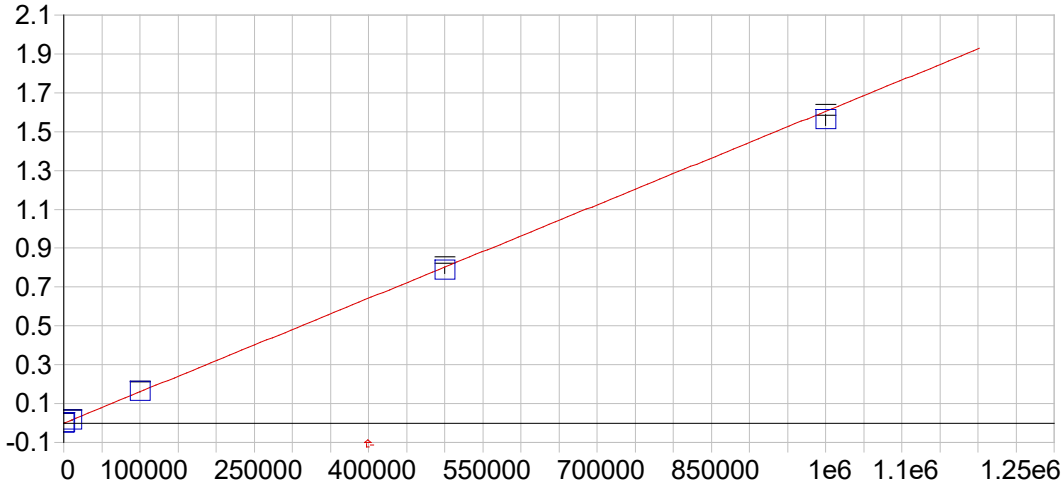


Al 309.271 {109}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000210	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999901	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	12.773111		
Predicted MQL:	42.577038		

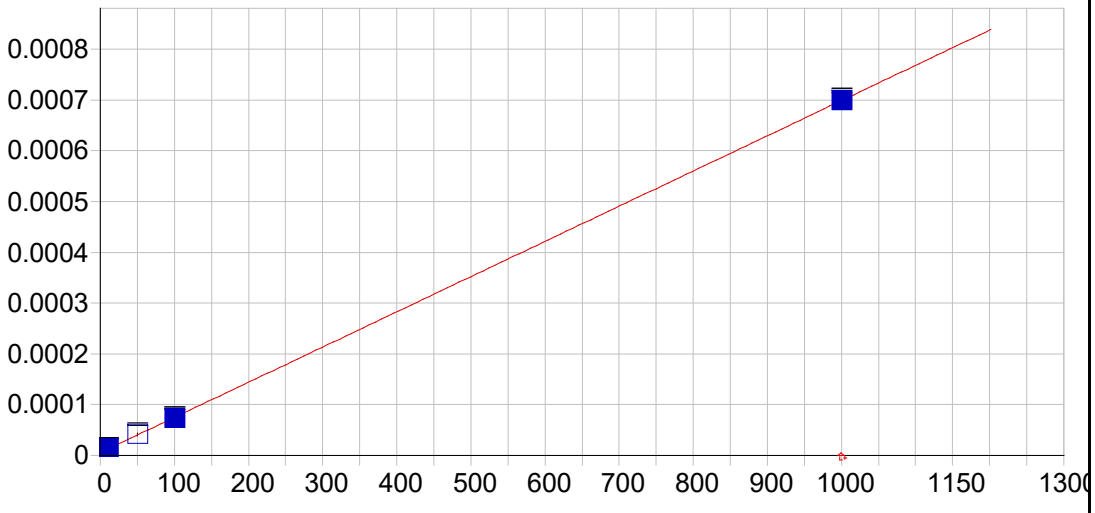
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01227	-.012	.000	.00021	.000	1
CalStd9=100	1000.0	1055.1	55.1	5.51	.00085	.000	1
CalStd5=10	10.000	19.299	9.30	93.0	.00022	.000	1
CalStd8=100	100.00	120.38	20.4	20.4	.00028	.000	1
CalStd10=10	10000.	9960.4	-39.6	-.396	.00622	.000	1
CalStd13=10	100000.	104080.	4080.	4.08	.06306	.001	1
CalStd14=50	500000.	505110.	5110.	1.02	.30522	.005	1
CalibStd15=	1000000.	990770.	-9230.	-.923	.59849	.006	1



Al 396.152 { 85}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000008		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999732		Status:	OK.	
Std Error of Est:	0.000047				
Predicted MDL:	7.351281				
Predicted MQL:	24.504272				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.8752	-5.88	.000	-.00000	.000	1
CalStd14=50	500000.	490530.	-9470.	-1.89	.78714	.017	1
CalStd13=10	100000.	100740.	739.	.739	.16166	.001	1
CalStd10=10	10000.	9788.6	-211.	-2.11	.01572	.000	1
CalStd9=100	1000.0	1051.1	51.1	5.11	.00169	.000	1
CalibStd15=	1000000.	972590.	-27400.	-2.74	1.5607	.027	1

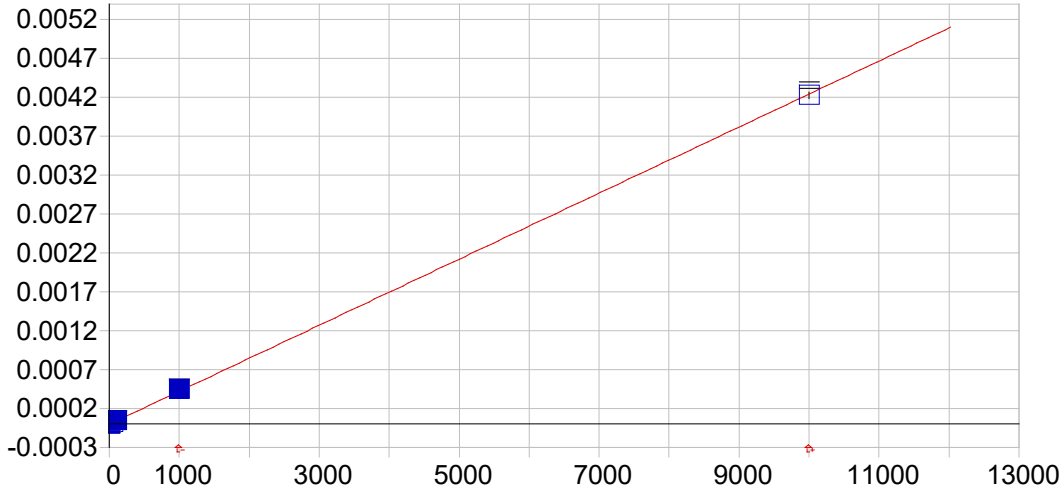


As 193.759 {474}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999730	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.381583		
Predicted MQL:	11.271944		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00227	-.002	.000	.00001	.000	1
CalStd9=100	1000.0	998.95	-1.05	-.105	.00070	.000	1
CalStd7=50	50.000	51.543	1.54	3.09	.00004	.000	1
CalStd5=10	10.000	12.244	2.24	22.4	.00001	.000	1
CalStd8=100	100.00	97.268	-2.73	-2.73	.00007	.000	1

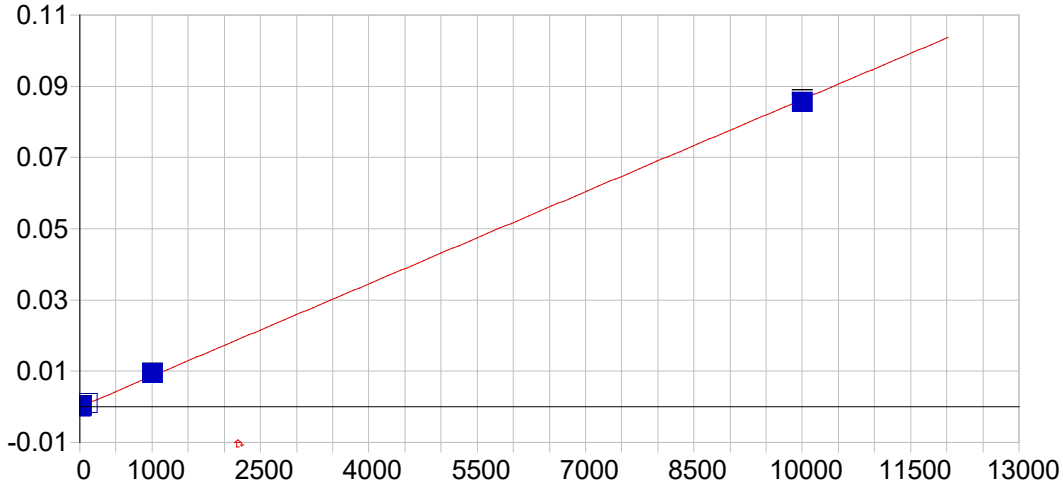


As 197.262 {471}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999806	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	4.997884		
Predicted MQL:	16.659613		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00384	.004	.000	-.00000	.000	1
CalStd9=100	1000.0	1049.0	49.0	4.90	.00044	.000	1
CalStd7=50	50.000	48.498	-1.50	-3.00	.00002	.000	1
CalStd5=10	10.000	5.9129	-4.09	-40.9	.00000	.000	1
CalStd8=100	100.00	101.03	1.03	1.03	.00004	.000	1
CalStd10=10	10000.	9955.6	-44.4	-.444	.00422	.000	1

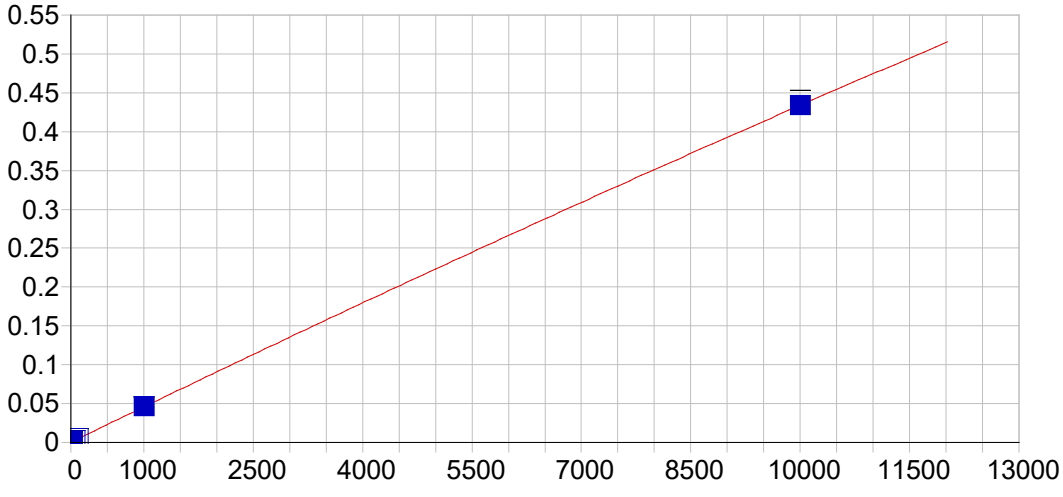


Ba 233.527 {445}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000009	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999662	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.237141		
Predicted MQL:	0.790472		

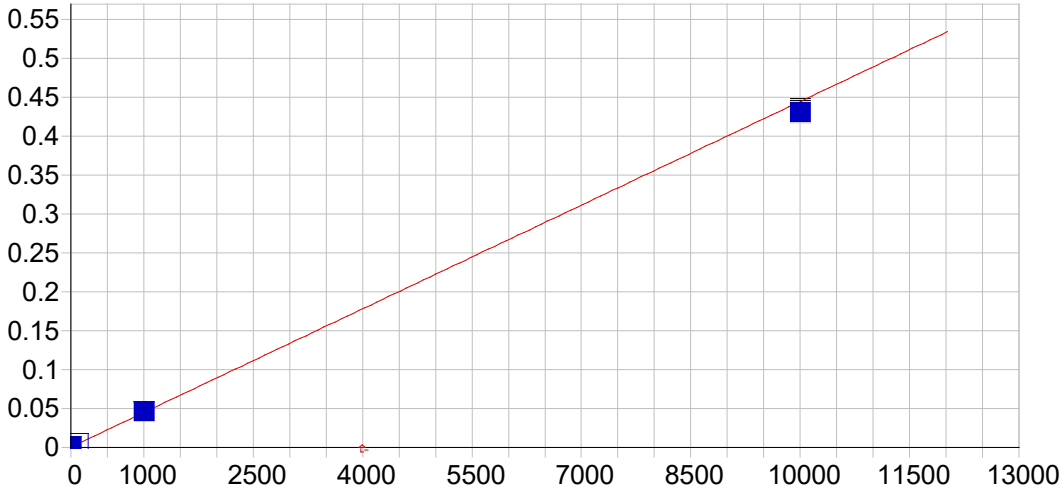
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00049	-.000	.000	-.00000	.000	1
CalStd5=10	10.000	10.624	.624	6.24	.00009	.000	1
CalStd6=20	20.000	22.189	2.19	10.9	.00019	.000	1
CalStd8=100	100.00	106.68	6.68	6.68	.00092	.000	1
CalStd4=5	5.0000	5.4754	.475	9.51	.00005	.000	1
CalStd9=100	1000.0	1077.4	77.4	7.74	.00930	.000	1
CalStd3=1	1.0000	1.0887	.089	8.87	.00001	.000	1
CalStd10=10	10000.	9912.5	-87.5	-.875	.08554	.001	1



Ba 455.403 { 74}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	0.000110		Re-Slope:	1.000000	
A1 (Gain):	0.000046		Y-int:	0.000000	
A2 (Curvature):	-0.000000				
n (Exponent):	1.000000				
Correlation:	0.999996		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.204637				
Predicted MQL:	0.682123				

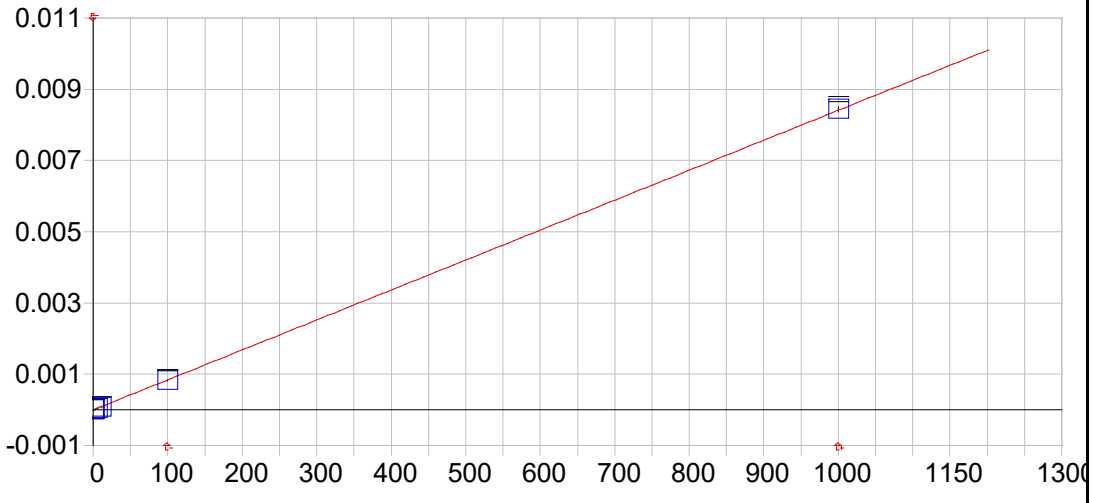
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00013	-.000	.000	.00011	.000	1
CalStd7=50	50.000	50.889	.889	1.78	.00244	.000	1
CalStd5=10	10.000	10.064	.064	.640	.00057	.000	1
CalStd6=20	20.000	20.632	.632	3.16	.00106	.000	1
CalStd8=100	100.00	98.733	-1.27	-1.27	.00464	.000	1
CalStd4=5	5.0000	5.4076	.408	8.15	.00036	.000	1
CalStd9=100	1000.0	999.17	-.828	-.083	.04568	.000	1
CalStd3=1	1.0000	1.0042	.004	.416	.00016	.000	1
CalStd10=10	10000.	10000.	.099	.001	.43383	.006	1



Ba 493.409 { 68}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000525		Re-Slope:	1.000000	
A1 (Gain):	0.000044		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999664		Status:	OK.	
Std Error of Est:	0.000149				
Predicted MDL:	0.793794				
Predicted MQL:	2.645981				

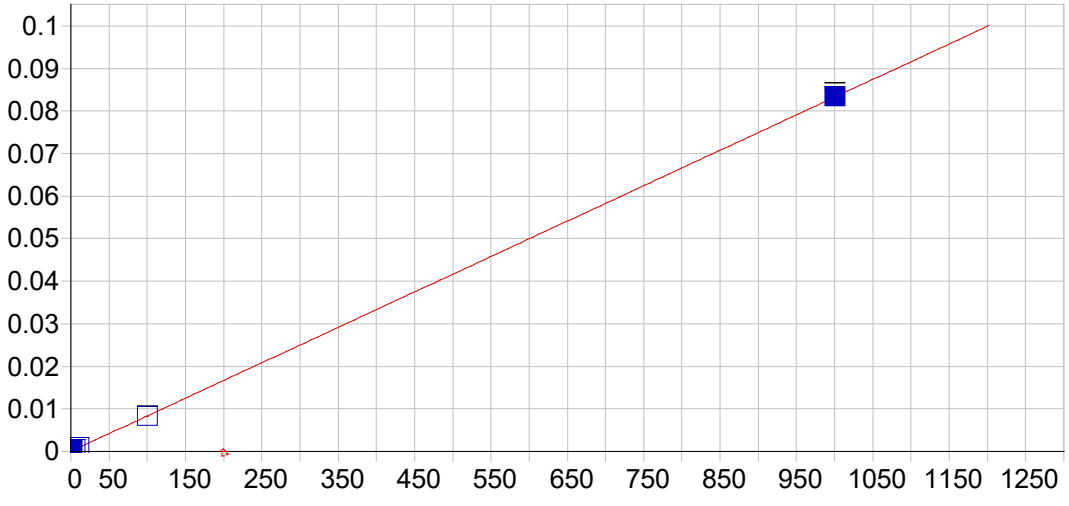
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.07721	-.077	.000	.00052	.000	1
CalStd9=100	1000.0	1022.0	22.0	2.20	.04571	.000	1
CalStd8=100	100.00	99.355	-.645	-.645	.00494	.000	1
CalStd10=10	10000.	9688.1	-312.	-3.12	.42873	.004	1



Be 234.861 {144}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000008		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999779		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.213609				
Predicted MQL:	0.712029				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00059	.001	.000	-.00000	.000	1
CalStd5=10	10.000	9.5951	-.405	-4.05	.00008	.000	1
CalStd8=100	100.00	98.155	-1.85	-1.85	.00083	.000	1
CalStd2=0.5	.50000	.18593	-.314	-62.8	.00000	.000	1
CalStd4=5	5.0000	4.9148	-.085	-1.70	.00004	.000	1
CalStd9=100	1000.0	1003.1	3.13	.313	.00844	.000	1
CalStd3=1	1.0000	.51617	-.484	-48.4	.00000	.000	1

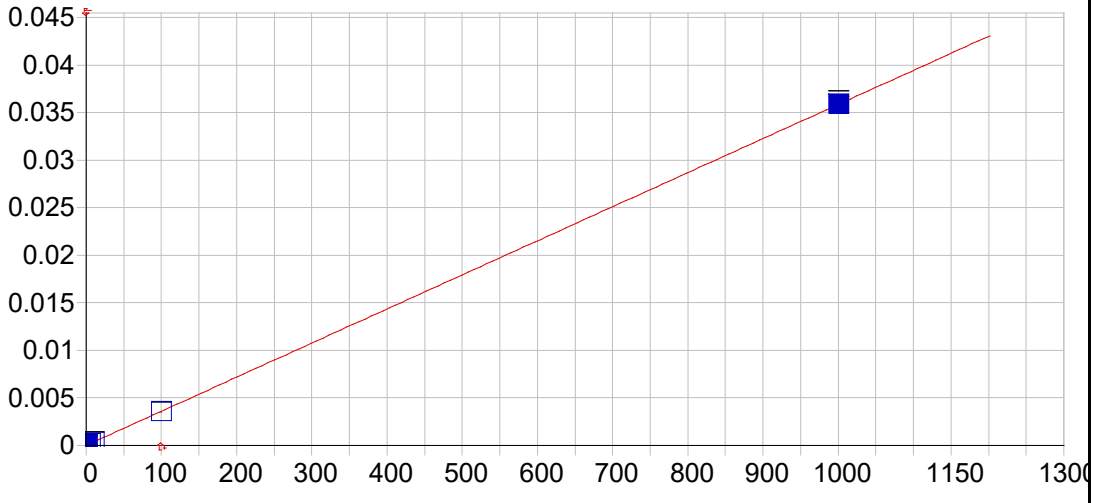


Be 313.042 {108}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000025	Re-Slope:	1.000000
A1 (Gain):	0.000083	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.013526		
Predicted MQL:	0.045086		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00002	-.000	.000	.00002	.000	1
CalStd5=10	10.000	10.064	.064	.635	.00086	.000	1
CalStd8=100	100.00	98.311	-1.69	-1.69	.00821	.000	1
CalStd2=0.5	.50000	.51733	.017	3.47	.00007	.000	1
CalStd4=5	5.0000	4.9972	-.003	-.056	.00044	.000	1
CalStd9=100	1000.0	1001.6	1.59	.159	.08339	.001	1
CalStd3=1	1.0000	1.0200	.020	2.00	.00011	.000	1

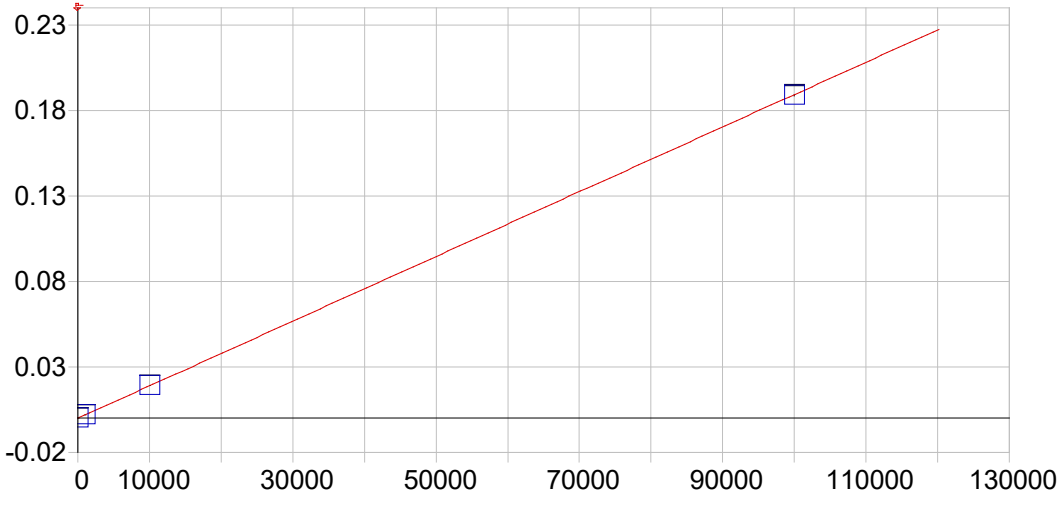


Be 313.107 {108}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000036	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999976	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.165969		
Predicted MQL:	0.553231		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00007	.000	.000	.00001	.000	1
CalStd5=10	10.000	9.9118	-.088	-.882	.00037	.000	1
CalStd2=0.5	.50000	.38391	-.116	-23.2	.00003	.000	1
CalStd4=5	5.0000	5.0810	.081	1.62	.00019	.000	1
CalStd9=100	1000.0	1001.3	1.29	.129	.03592	.000	1
CalStd3=1	1.0000	1.0875	.088	8.75	.00005	.000	1
CalStd8=100	100.00	98.744	-1.26	-1.26	.00355	.000	1

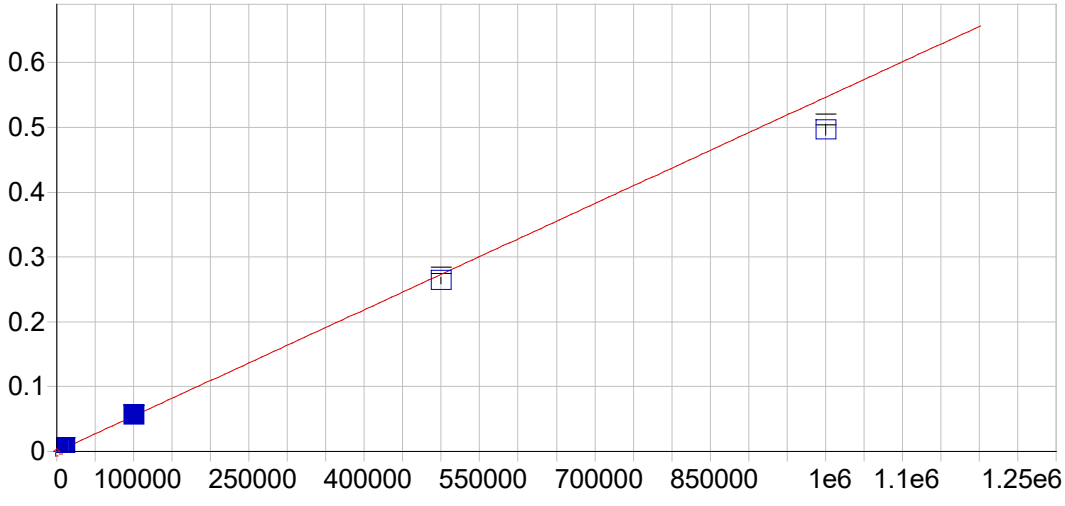


Ca 184.006 {483}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000029	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999947	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	1.009319		
Predicted MQL:	3.364395		

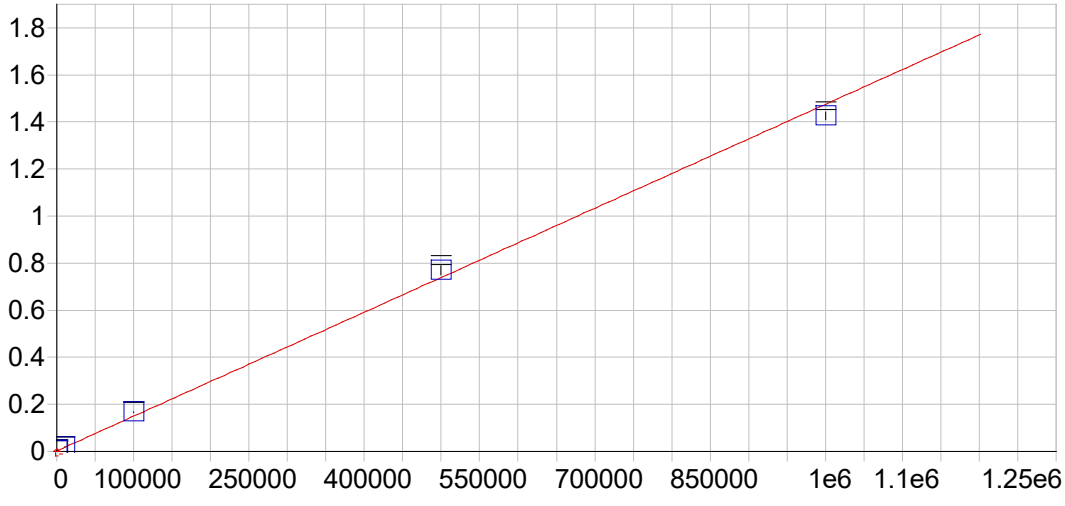
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.10969	-.110	.000	-.00003	.000	1
CalStd10=10	10000.	10115.	115.	1.15	.01912	.000	1
CalStd13=10	100000.	99784.	-216.	-.216	.18887	.000	1
CalStd9=100	1000.0	1100.3	100.	10.0	.00205	.000	1



Ca 315.887 {107}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000049		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999296		Status:	OK.	
Std Error of Est:	0.000028				
Predicted MDL:	5.389620				
Predicted MQL:	17.965400				

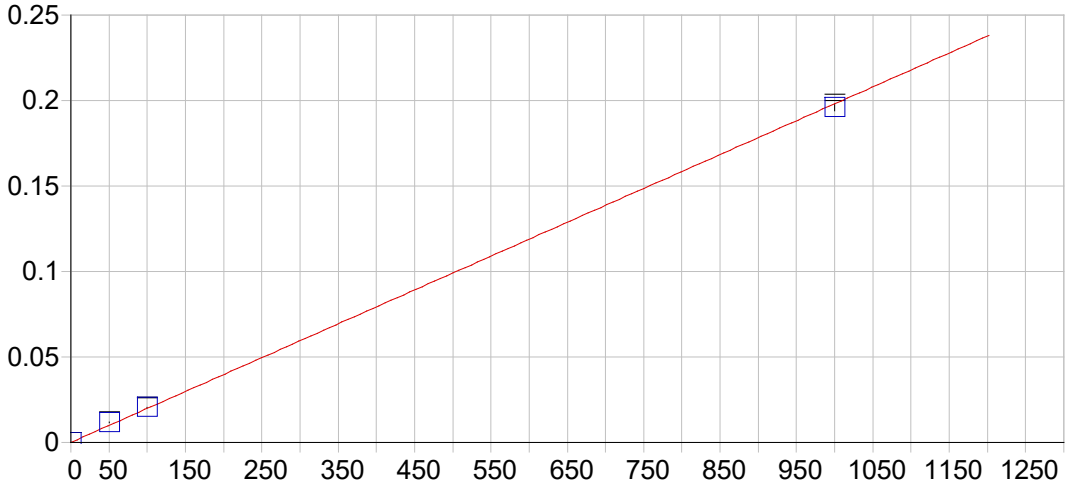
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-9.5808	-9.58	.000	.00004	.000	1
CalStd10=10	10000.	9897.5	-103.	-1.03	.00546	.000	1
CalStd13=10	100000.	102430.	2430.	2.43	.05602	.000	1
CalStd14=50	500000.	482500.	-17500.	-3.50	.26372	.005	1
CalStd9=100	1000.0	1037.5	37.5	3.75	.00062	.000	1
CalibStd15=	1000000.	908560.	-91400.	-9.14	.49656	.008	1



Ca 317.933 {106}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.002519		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998893		Status:	OK.	
Std Error of Est:	0.000108				
Predicted MDL:	2.591979				
Predicted MQL:	8.639929				

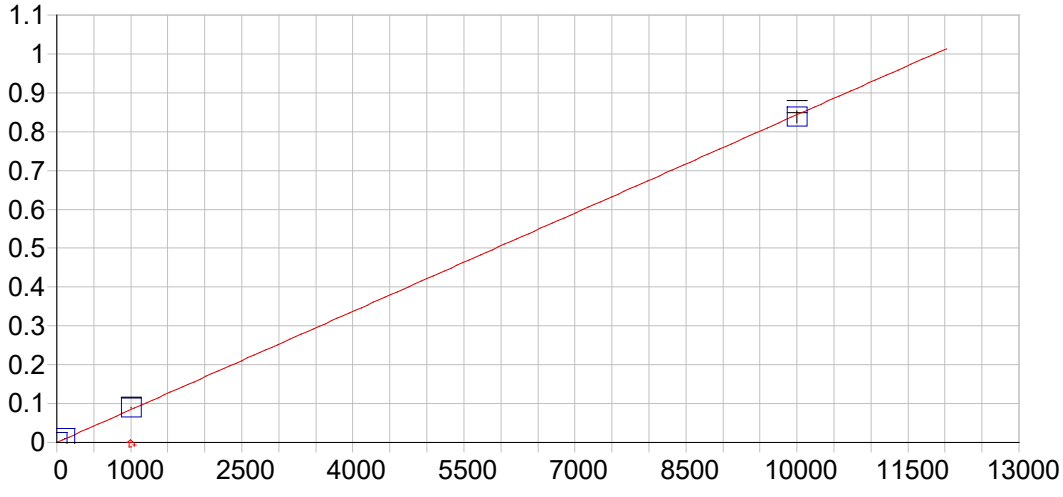
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.36371	-.364	.000	.00252	.000	1
CalStd10=10	10000.	10821.	821.	8.21	.01846	.000	1
CalStd13=10	100000.	112050.	12000.	12.0	.16754	.001	1
CalStd14=50	500000.	520940.	20900.	4.19	.76973	.018	1
CalStd9=100	1000.0	1153.2	153.	15.3	.00422	.000	1
CalibStd15=	1000000.	966040.	-34000.	-3.40	1.4253	.015	1



Ca 393.366 { 86}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000075		Re-Slope:	1.000000	
A1 (Gain):	0.000198		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999239		Status:	OK.	
Std Error of Est:	0.000083				
Predicted MDL:	0.042980				
Predicted MQL:	0.143265				

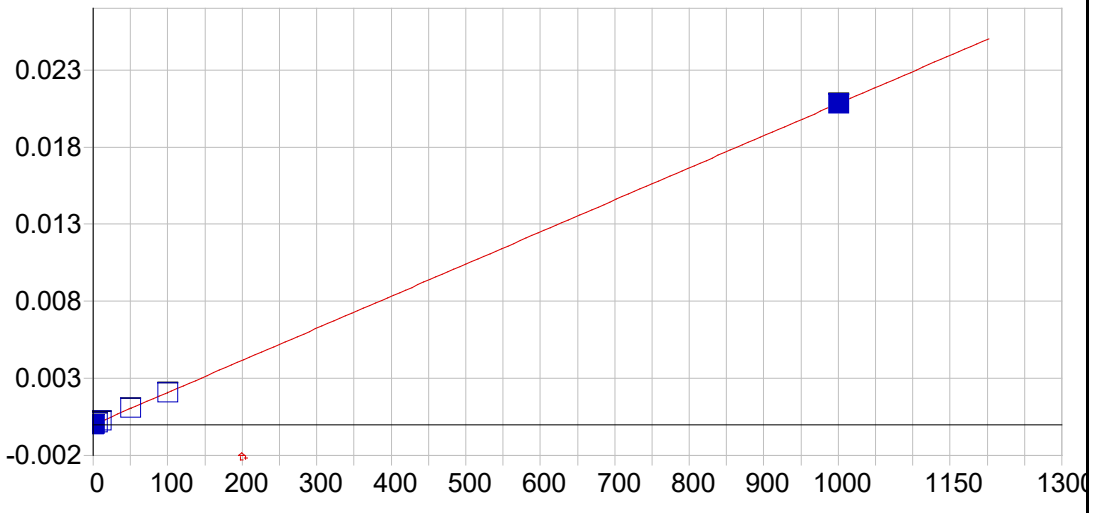
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00957	-.010	.000	.00007	.000	1
CalStd9=100	1000.0	988.48	-11.5	-1.15	.19583	.002	1
CalStd8=100	100.00	102.74	2.74	2.74	.02042	.000	1
CalStd7=50	50.000	58.780	8.78	17.6	.01172	.000	1



Ca 396.847 { 85}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000013		Re-Slope:	1.000000	
A1 (Gain):	0.000084		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999806		Status:	OK.	
Std Error of Est:	0.000078				
Predicted MDL:	0.094920				
Predicted MQL:	0.316401				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01448	-.014	.000	.00001	.000	1
CalStd10=10	10000.	9935.9	-64.1	-.641	.83792	.015	1
CalStd8=100	100.00	109.68	9.68	9.68	.00926	.000	1
CalStd9=100	1000.0	1054.4	54.4	5.44	.08893	.001	1

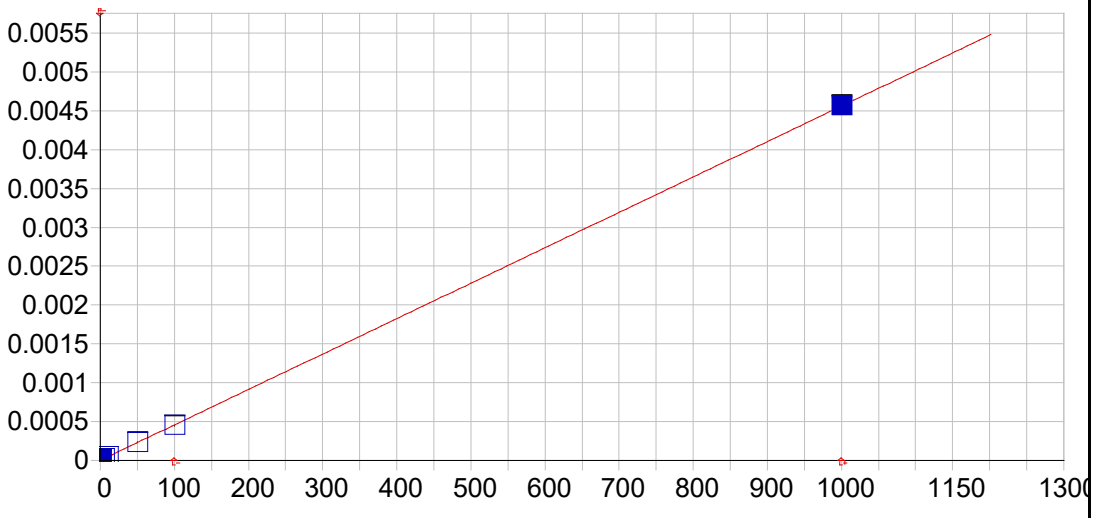


Cd 226.502 {449}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000021	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.156342		
Predicted MQL:	0.521141		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00011	-.000	.000	-.00000	.000	1
CalStd3=1	1.0000	1.0218	.022	2.18	.00002	.000	1
CalStd2=0.5	.50000	.57478	.075	15.0	.00001	.000	1
CalStd4=5	5.0000	5.0126	.013	.253	.00010	.000	1
CalStd5=10	10.000	10.306	.306	3.06	.00021	.000	1
CalStd9=100	1000.0	999.12	-.884	-.088	.02080	.000	1
CalStd8=100	100.00	99.597	-.403	-.403	.00207	.000	1
CalStd7=50	50.000	50.871	.871	1.74	.00106	.000	1

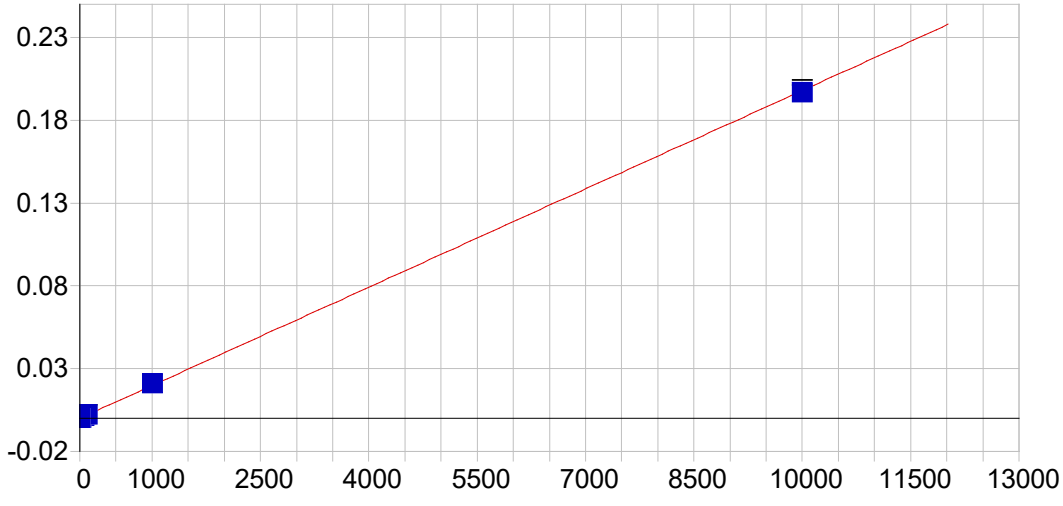


Cd 228.802 {448}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.413006		
Predicted MQL:	1.376688		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00033	-.000	.000	.00000	.000	1
CalStd3=1	1.0000	1.1236	.124	12.4	.00001	.000	1
CalStd2=0.5	.50000	.73209	.232	46.4	.00001	.000	1
CalStd4=5	5.0000	5.1708	.171	3.42	.00003	.000	1
CalStd5=10	10.000	10.512	.512	5.12	.00005	.000	1
CalStd9=100	1000.0	1000.2	.223	.022	.00456	.000	1
CalStd8=100	100.00	98.320	-1.68	-1.68	.00045	.000	1
CalStd7=50	50.000	50.419	.419	.838	.00023	.000	1

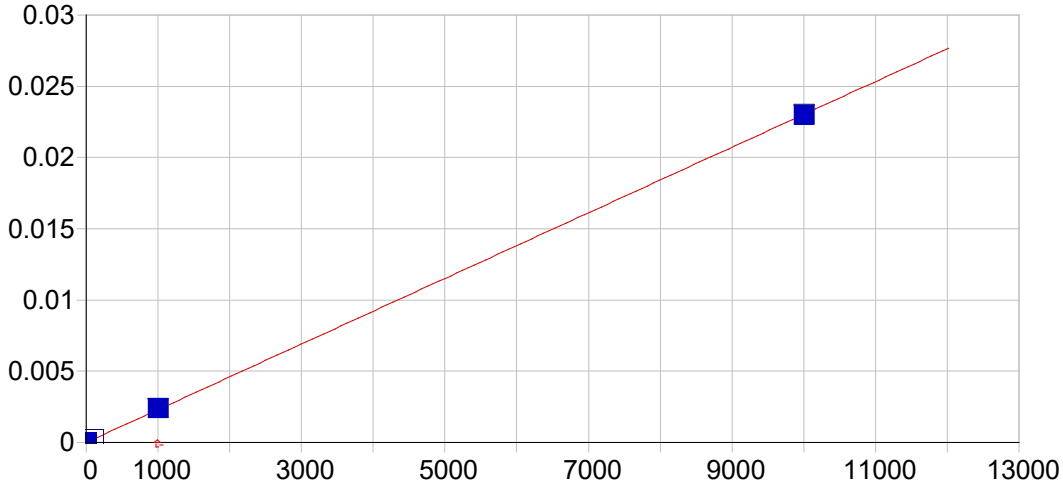


Co 228.616 {447}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999793	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.193332		
Predicted MQL:	0.644439		

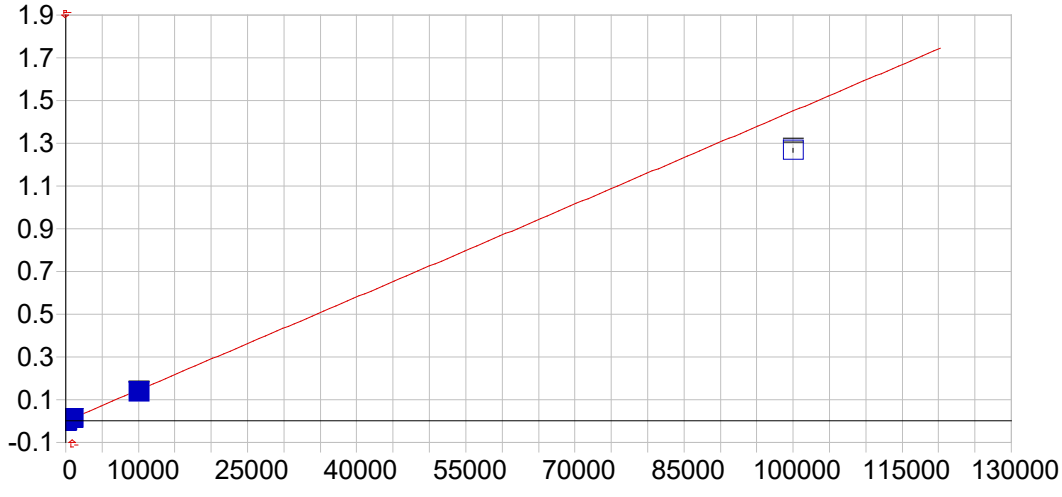
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00050	-.000	.000	-.00000	.000	1
CalStd7=50	50.000	53.802	3.80	7.60	.00106	.000	1
CalStd5=10	10.000	10.953	.953	9.53	.00021	.000	1
CalStd4=5	5.0000	5.3970	.397	7.94	.00010	.000	1
CalStd8=100	100.00	105.31	5.31	5.31	.00208	.000	1
CalStd9=100	1000.0	1058.7	58.7	5.87	.02097	.000	1
CalStd3=1	1.0000	1.1413	.141	14.1	.00002	.000	1
CalStd10=10	10000.	9930.7	-69.3	-.693	.19675	.002	1



Co 238.892 {141}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999974		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.306626				
Predicted MQL:	1.022088				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00439	-.004	.000	.00000	.000	1
CalStd9=100	1000.0	1021.4	21.4	2.14	.00235	.000	1
CalStd10=10	10000.	9976.1	-23.9	-.239	.02298	.000	1
CalStd8=100	100.00	102.49	2.49	2.49	.00024	.000	1

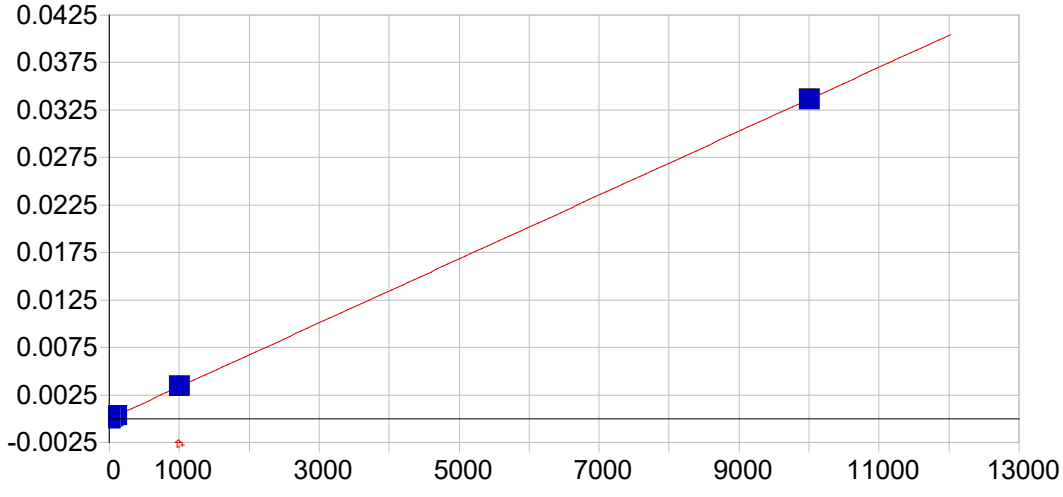


Cr 205.560 {464}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000015	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999496	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.175844		
Predicted MQL:	0.586148		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.09250	-.092	.000	-.00000	.000	1
CalStd5=10	10.000	10.130	.130	1.30	.00014	.000	1
CalStd7=50	50.000	50.825	.825	1.65	.00073	.000	1
CalStd9=100	1000.0	1004.7	4.67	.467	.01457	.000	1
CalStd8=100	100.00	99.125	-.875	-.875	.00143	.000	1
CalStd4=5	5.0000	5.0953	.095	1.91	.00007	.000	1
CalStd3=1	1.0000	1.0474	.047	4.74	.00001	.000	1
CalStd10=10	10000.	9401.4	-599.	-5.99	.13639	.001	1
CalStd12=10	100000.	87328.	-12700.	-12.7	1.2669	.008	1

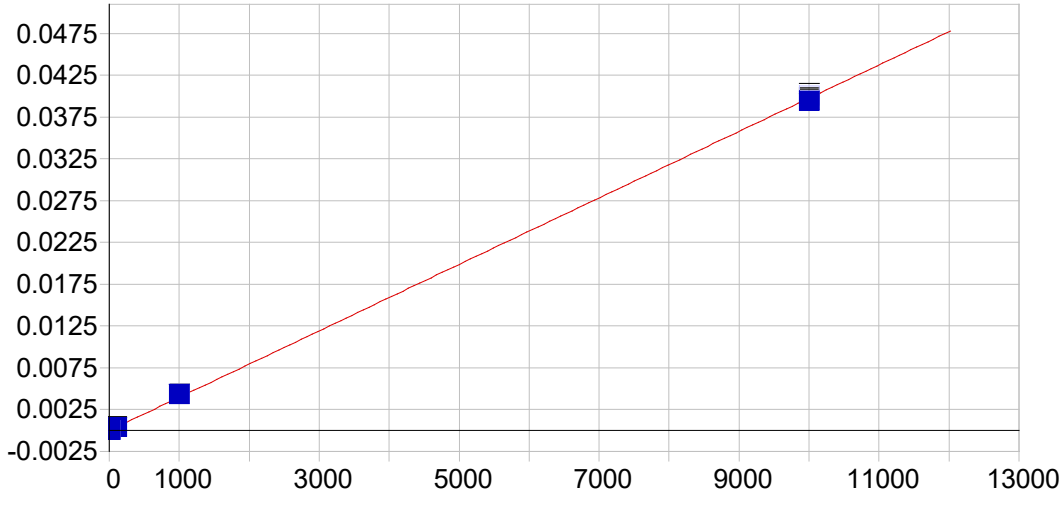


Cr 267.716 {126}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999987	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.334828		
Predicted MQL:	1.116094		

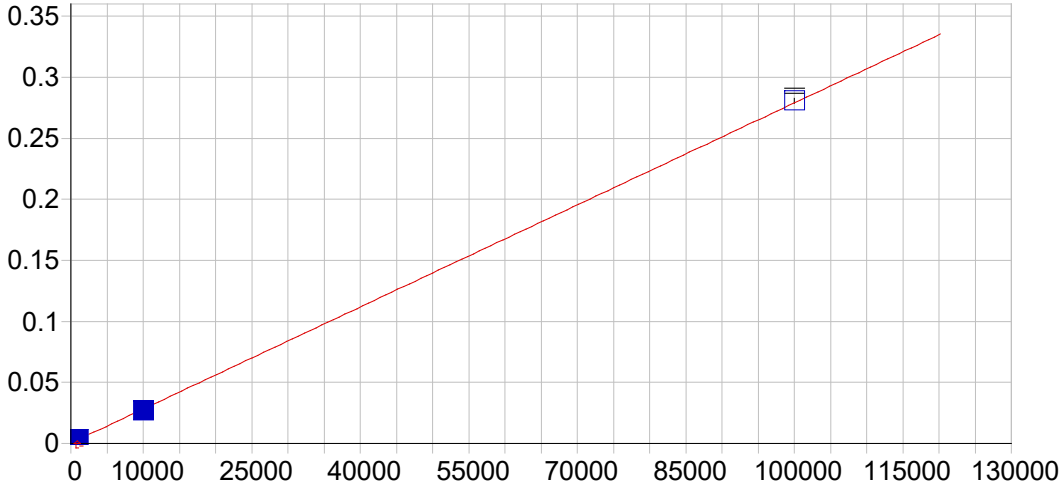
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00052	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	10.352	.352	3.52	.00003	.000	1
CalStd7=50	50.000	51.108	1.11	2.22	.00017	.000	1
CalStd9=100	1000.0	1013.8	13.8	1.38	.00341	.000	1
CalStd8=100	100.00	101.78	1.78	1.78	.00034	.000	1
CalStd4=5	5.0000	5.0856	.086	1.71	.00001	.000	1
CalStd10=10	10000.	9982.8	-17.2	-.172	.03359	.000	1



Cu 223.008 {451}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000004		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999643		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.956266				
Predicted MQL:	3.187553				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00463	-.005	.000	-.00000	.000	1
CalStd9=100	1000.0	1075.5	75.5	7.55	.00433	.000	1
CalStd8=100	100.00	108.48	8.48	8.48	.00044	.000	1
CalStd5=10	10.000	13.114	3.11	31.1	.00005	.000	1
CalStd10=10	10000.	9912.9	-87.1	-.871	.03998	.000	1

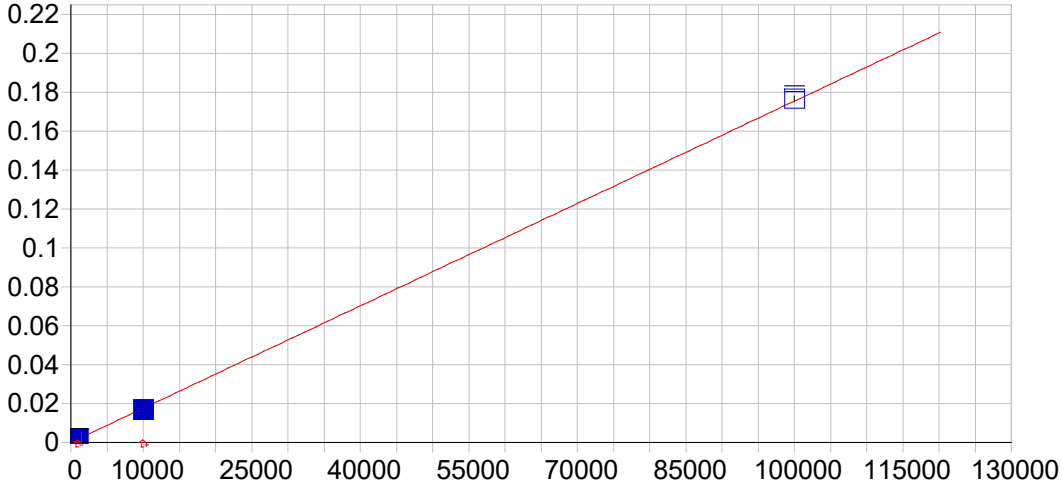


Cu 324.754 {104}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000329	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999813	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	2.428330		
Predicted MQL:	8.094435		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00922	.009	.000	.00033	.000	1
CalStd9=100	1000.0	988.66	-11.3	-1.13	.00308	.000	1
CalStd8=100	100.00	97.413	-2.59	-2.59	.00060	.000	1
CalStd10=10	10000.	9387.9	-612.	-6.12	.02649	.000	1
CalStd12=10	100000.	100630.	626.	.626	.28068	.002	1

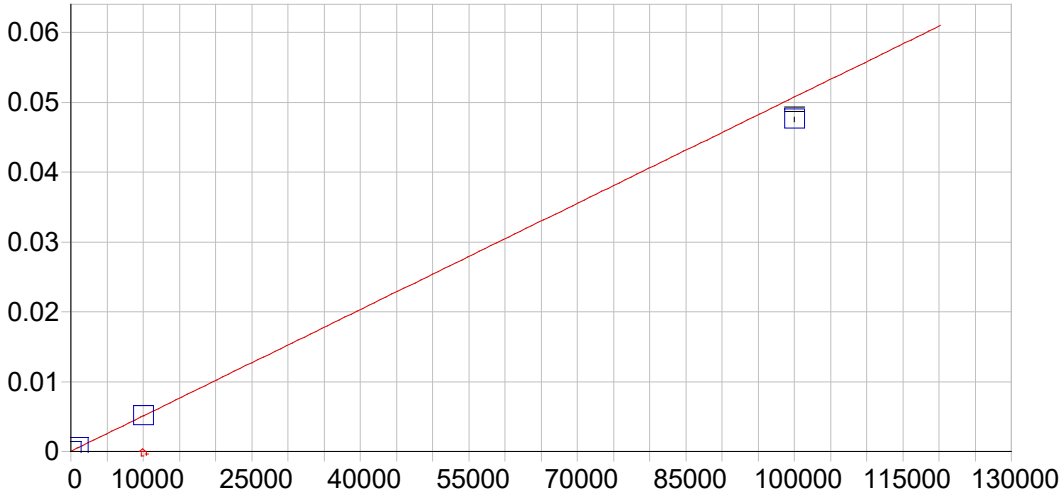


Cu 327.396 {103}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000048	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999800	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	4.575577		
Predicted MQL:	15.251924		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00002	.000	.000	.00005	.000	1
CalStd6=20	20.000	22.830	2.83	14.2	.00009	.000	1
CalStd7=50	50.000	47.140	-2.86	-5.72	.00013	.000	1
CalStd8=100	100.00	97.308	-2.69	-2.69	.00022	.000	1
CalStd9=100	1000.0	996.06	-3.94	-.394	.00179	.000	1
CalStd10=10	10000.	9370.1	-630.	-6.30	.01648	.000	1
CalStd4=5	5.0000	5.5646	.565	11.3	.00006	.000	1
CalStd5=10	10.000	8.8686	-1.13	-11.3	.00006	.000	1
CalStd12=10	100000.	100640.	637.	.637	.17659	.001	1

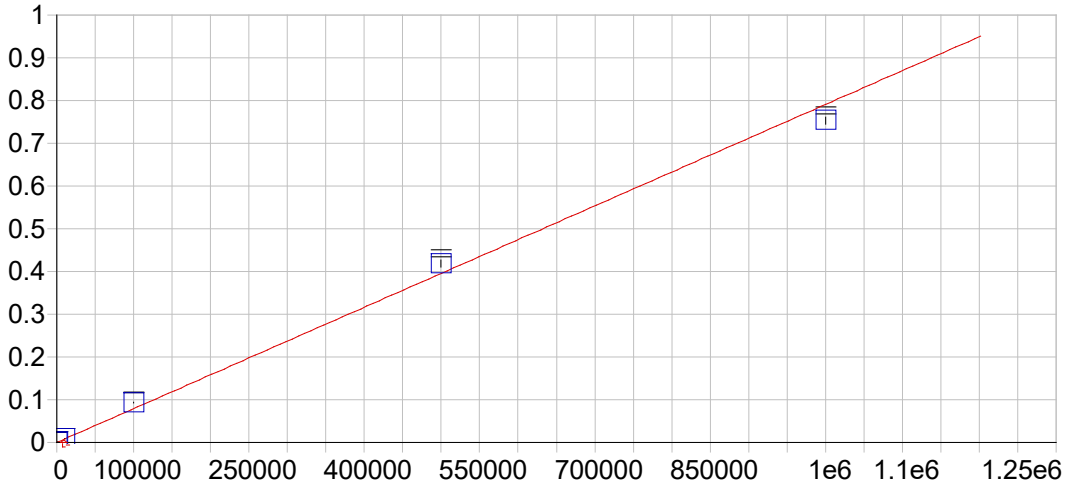


Fe 234.349 {144}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999984	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.699558		
Predicted MQL:	2.331860		

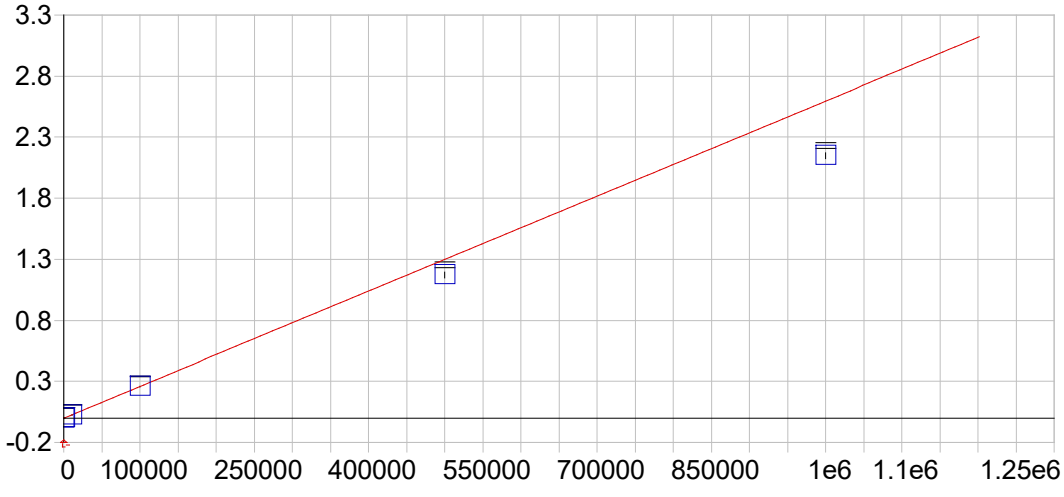
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.08524	-.085	.000	.00001	.000	1
CalStd10=10	10000.	10003.	3.28	.033	.00509	.000	1
CalStd13=10	100000.	93708.	-6290.	-6.29	.04756	.000	1
CalStd9=100	1000.0	1037.1	37.1	3.71	.00054	.000	1



Fe 239.562 {140}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000006		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.997783		Status:	OK.	
Std Error of Est:	0.000082				
Predicted MDL:	3.836041				
Predicted MQL:	12.786804				

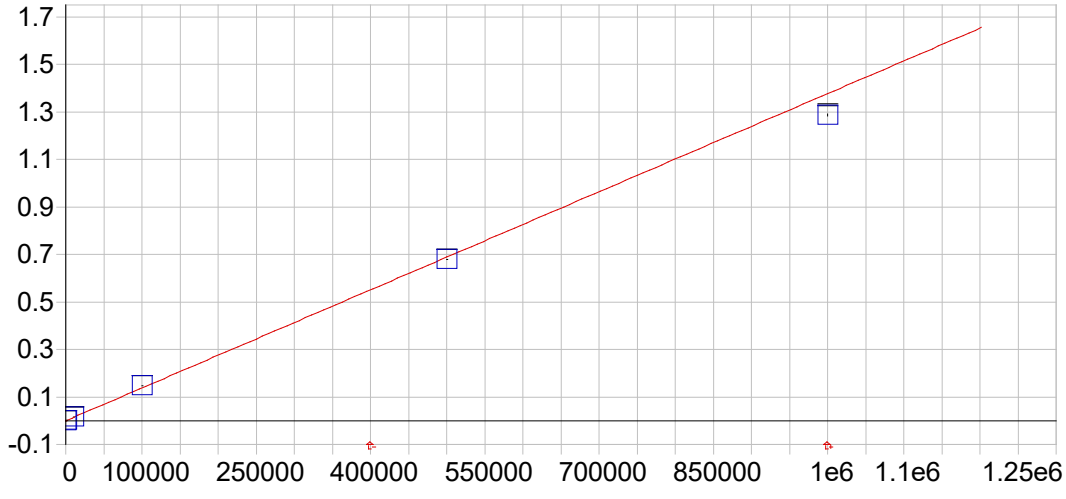
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.53247	-.532	.000	.00001	.000	1
CalStd10=10	10000.	11398.	1400.	14.0	.00902	.000	1
CalStd13=10	100000.	117180.	17200.	17.2	.09268	.001	1
CalStd14=50	500000.	529050.	29100.	5.81	.41843	.008	1
CalStd9=100	1000.0	1210.7	211.	21.1	.00096	.000	1
CalibStd15=	1000000.	952170.	-47800.	-4.78	.75306	.008	1



Fe 259.940 {129}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Var
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999726		Status:	OK.	
Std Error of Est:	0.000036				
Predicted MDL:	1.513870				
Predicted MQL:	5.046235				

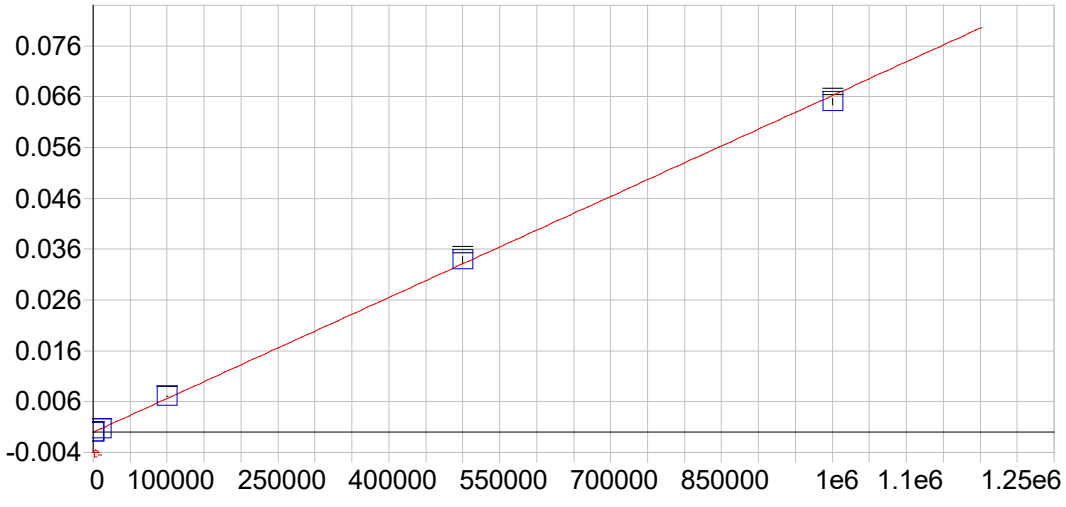
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.90767	-.908	.000	.00000	.000	1
CalStd10=10	10000.	9639.3	-361.	-3.61	.02503	.000	1
CalStd13=10	100000.	99481.	-519.	-.519	.25830	.002	1
CalStd14=50	500000.	451150.	-48900.	-9.77	1.1714	.025	1
CalStd9=100	1000.0	1027.5	27.5	2.75	.00267	.000	1
CalibStd15=	1000000.	827900.	-172000.	-17.2	2.1496	.023	1



Mg 202.582 {466}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000015		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998853		Status:	OK.	
Std Error of Est:	0.000161				
Predicted MDL:	2.449654				
Predicted MQL:	8.165513				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-16.218	-16.2	.000	-.00001	.000	1
CalStd13=10	100000.	107450.	7450.	7.45	.14794	.000	1
CalStd10=10	10000.	10588.	588.	5.88	.01459	.000	1
CalStd14=50	500000.	492960.	-7040.	-1.41	.67867	.001	1
CalStd9=100	1000.0	1160.9	161.	16.1	.00161	.000	1
CalibStd15=	1000000.	934200.	-65800.	-6.58	1.2861	.004	1

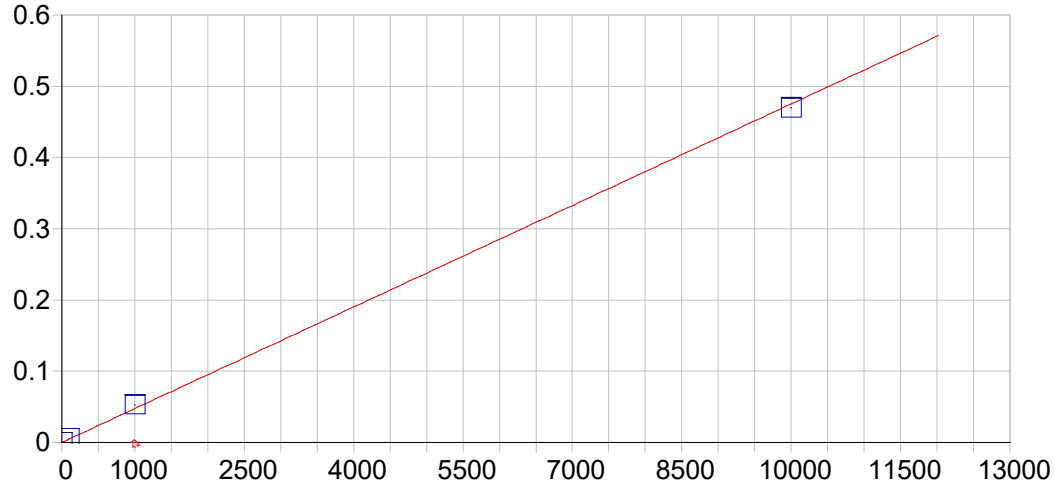


Mg 279.079 {121}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999685	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	25.559133		
Predicted MQL:	85.197111		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.19406	-.194	.000	.00000	.000	1
CalStd13=10	100000.	106270.	6270.	6.27	.00704	.000	1
CalStd10=10	10000.	10287.	287.	2.87	.00068	.000	1
CalStd14=50	500000.	511650.	11600.	2.33	.03390	.001	1
CalStd9=100	1000.0	1097.7	97.7	9.77	.00007	.000	1
CalibStd15=	1000000.	981700.	-18300.	-1.83	.06504	.001	1

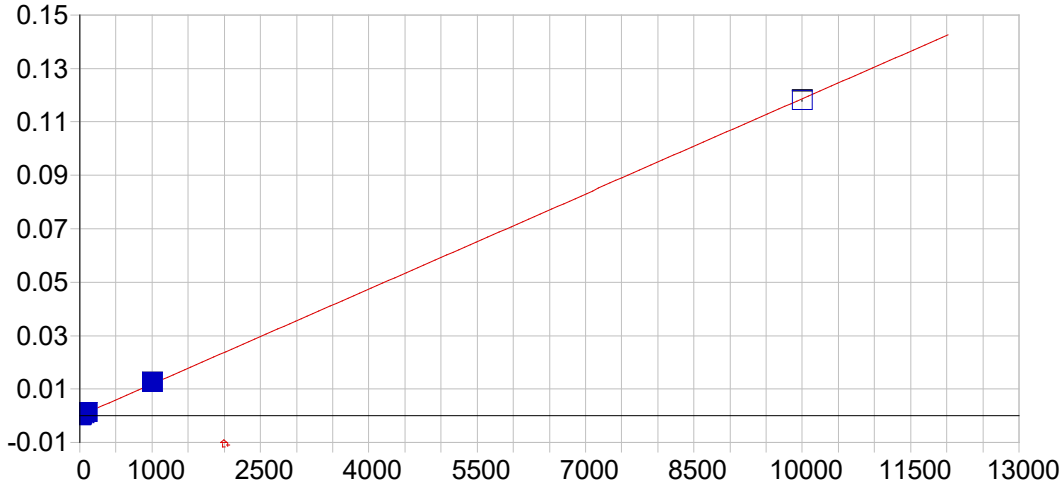


Mg 280.270 {120}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000062	Re-Slope:	1.000000
A1 (Gain):	0.000048	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999348	Status:	OK.
Std Error of Est:	0.000081		
Predicted MDL:	0.013981		
Predicted MQL:	0.046604		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.02085	-.021	.000	.00006	.000	1
CalStd9=100	1000.0	1108.6	109.	10.9	.05274	.000	1
CalStd10=10	10000.	9880.2	-120.	-1.20	.46956	.001	1
CalStd8=100	100.00	111.18	11.2	11.2	.00535	.000	1

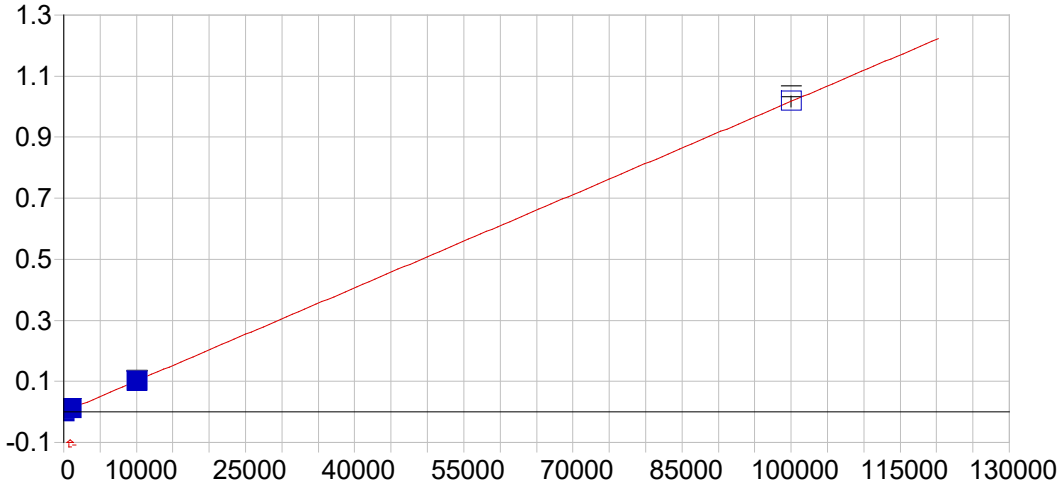


Mn 257.610 {131}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999851	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.047765		
Predicted MQL:	0.159218		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00206	-.002	.000	-.00000	.000	1
CalStd5=10	10.000	10.767	.767	7.67	.00013	.000	1
CalStd7=50	50.000	53.411	3.41	6.82	.00063	.000	1
CalStd6=20	20.000	21.744	1.74	8.72	.00026	.000	1
CalStd8=100	100.00	104.87	4.87	4.87	.00124	.000	1
CalStd4=5	5.0000	5.4442	.444	8.88	.00006	.000	1
CalStd9=100	1000.0	1047.6	47.6	4.76	.01243	.000	1
CalStd10=10	10000.	9941.1	-58.9	-.589	.11793	.000	1

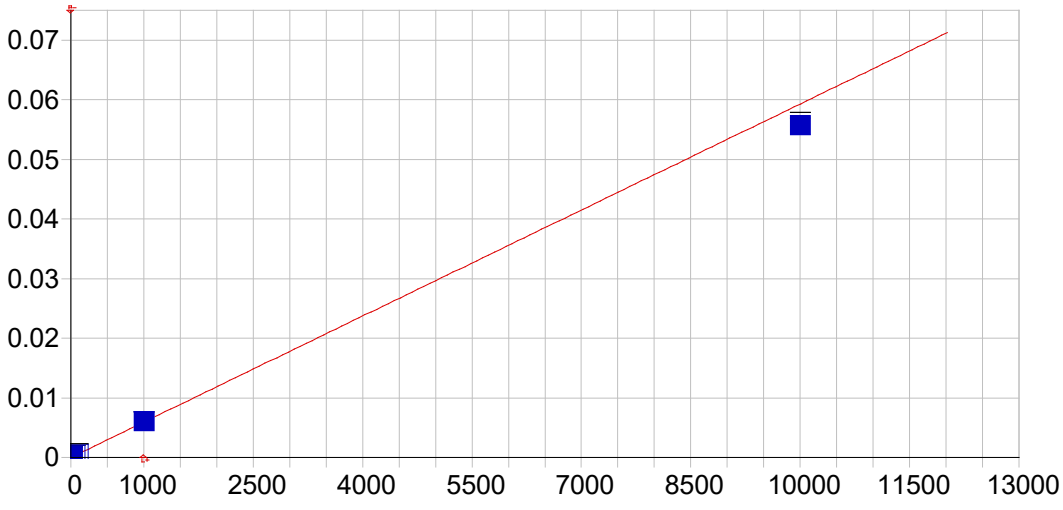


Mn 259.373 {130}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000140	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000737		
Predicted MDL:	0.364684		
Predicted MQL:	1.215613		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	13.801	13.8	.000	.00000	.000	1
CalStd10=10	10000.	9918.5	-81.5	-.815	.10086	.001	1
CalStd9=100	1000.0	1060.1	60.1	6.01	.01065	.000	1
CalStd12=10	100000.	100010.	7.56	.008	1.0171	.018	1

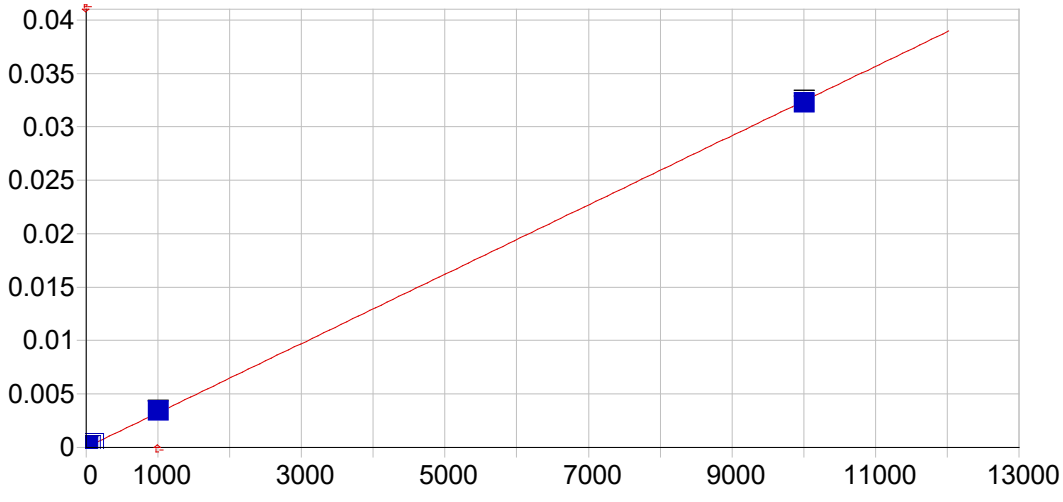


Mo 202.030 {466}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	0.365364		
Predicted MQL:	1.217882		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.02246	.022	.000	.00000	.000	1
CalStd7=50	50.000	50.522	.522	1.04	.00030	.000	1
CalStd6=20	20.000	20.314	.314	1.57	.00012	.000	1
CalStd5=10	10.000	10.342	.342	3.42	.00006	.000	1
CalStd8=100	100.00	98.465	-1.54	-1.54	.00059	.000	1
CalStd4=5	5.0000	5.0329	.033	.657	.00003	.000	1
CalStd9=100	1000.0	1001.9	1.93	.193	.00594	.000	1
CalStd10=10	10000.	9392.9	-607.	-6.07	.05568	.000	1

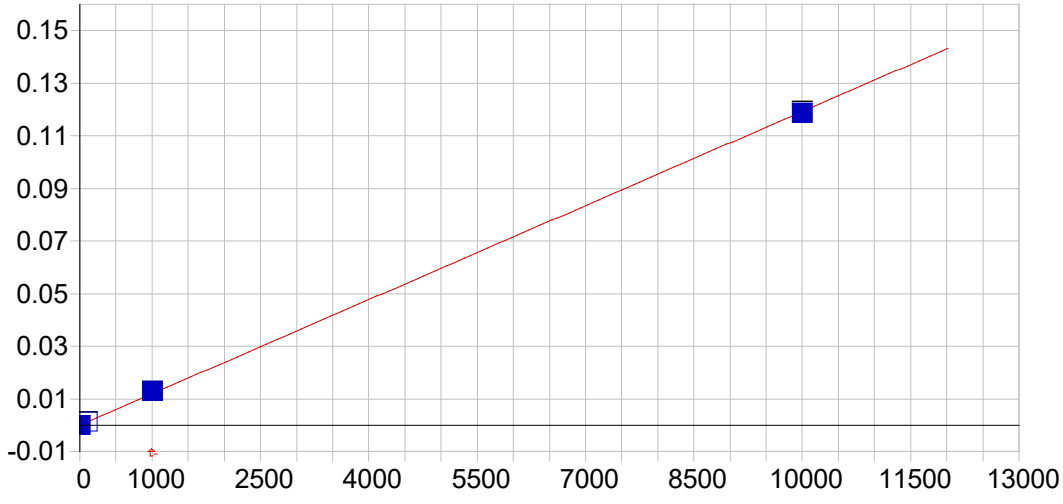


Mo 204.598 {464}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999825	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.736140		
Predicted MQL:	2.453799		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00135	-.001	.000	.00000	.000	1
CalStd7=50	50.000	52.949	2.95	5.90	.00017	.000	1
CalStd6=20	20.000	20.675	.675	3.38	.00007	.000	1
CalStd5=10	10.000	10.427	.427	4.27	.00004	.000	1
CalStd8=100	100.00	103.30	3.30	3.30	.00034	.000	1
CalStd4=5	5.0000	5.2573	.257	5.15	.00002	.000	1
CalStd9=100	1000.0	1056.3	56.3	5.63	.00343	.000	1
CalStd10=10	10000.	9936.1	-63.9	-.639	.03220	.000	1

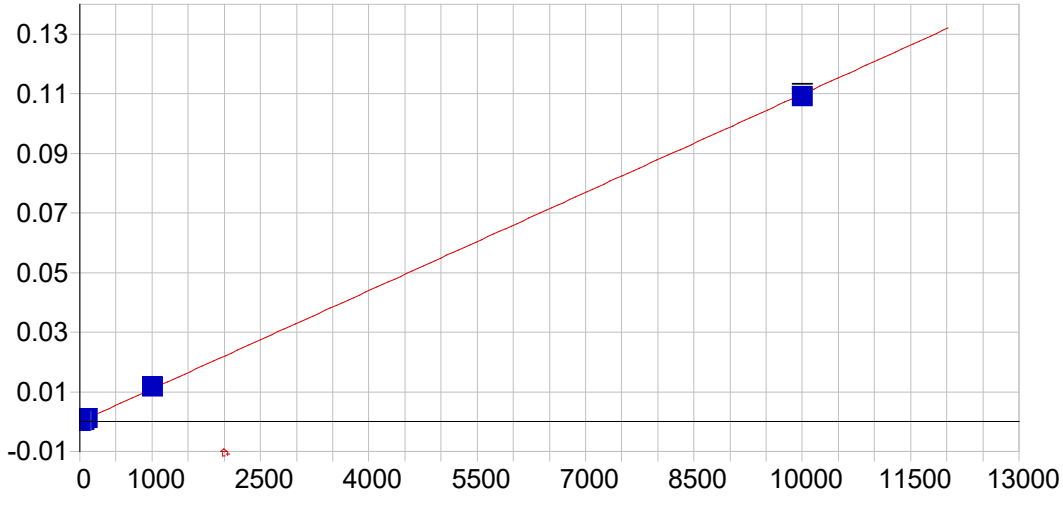


Ni 221.647 {452}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999779	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.367243		
Predicted MQL:	1.224142		

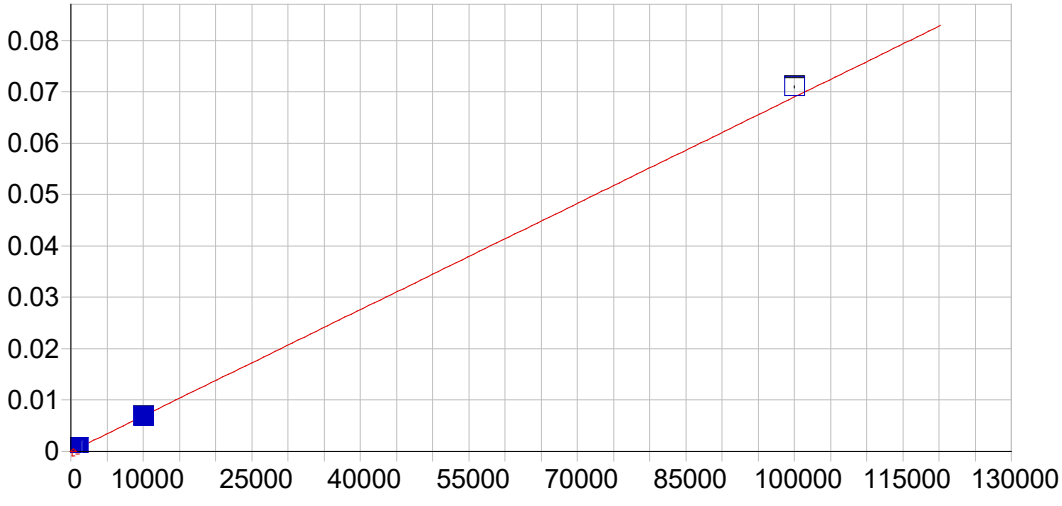
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01148	-.011	.000	-.00000	.000	1
CalStd10=10	10000.	9930.2	-69.8	-.698	.11841	.001	1
CalStd8=100	100.00	105.78	5.78	5.78	.00126	.000	1
CalStd9=100	1000.0	1064.0	64.0	6.40	.01269	.000	1



Ni 231.604 {445}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000011		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999786		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.366247				
Predicted MQL:	1.220824				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00014	-.000	.000	-.00000	.000	1
CalStd7=50	50.000	53.884	3.88	7.77	.00059	.000	1
CalStd5=10	10.000	10.866	.866	8.66	.00012	.000	1
CalStd8=100	100.00	105.09	5.09	5.09	.00115	.000	1
CalStd4=5	5.0000	5.0760	.076	1.52	.00005	.000	1
CalStd9=100	1000.0	1060.2	60.2	6.02	.01163	.000	1
CalStd3=1	1.0000	.85773	-.142	-14.2	.00001	.000	1
CalStd10=10	10000.	9930.1	-69.9	-.699	.10914	.001	1

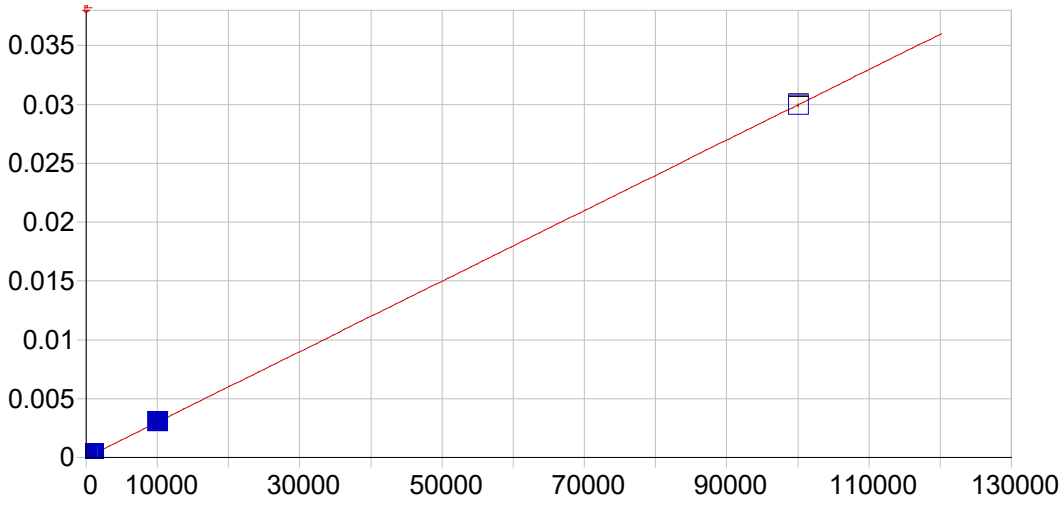


Pb 216.999 {455}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999971	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	4.698486		
Predicted MQL:	15.661621		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00142	-.001	.000	.00000	.000	1
CalStd9=100	1000.0	1075.6	75.6	7.56	.00075	.000	1
CalStd10=10	10000.	9939.8	-60.2	-.602	.00688	.000	1
CalStd8=100	100.00	105.34	5.34	5.34	.00007	.000	1
CalStd5=10	10.000	10.218	.218	2.18	.00001	.000	1
CalStd12=10	100000.	102900.	2900.	2.90	.07099	.000	1

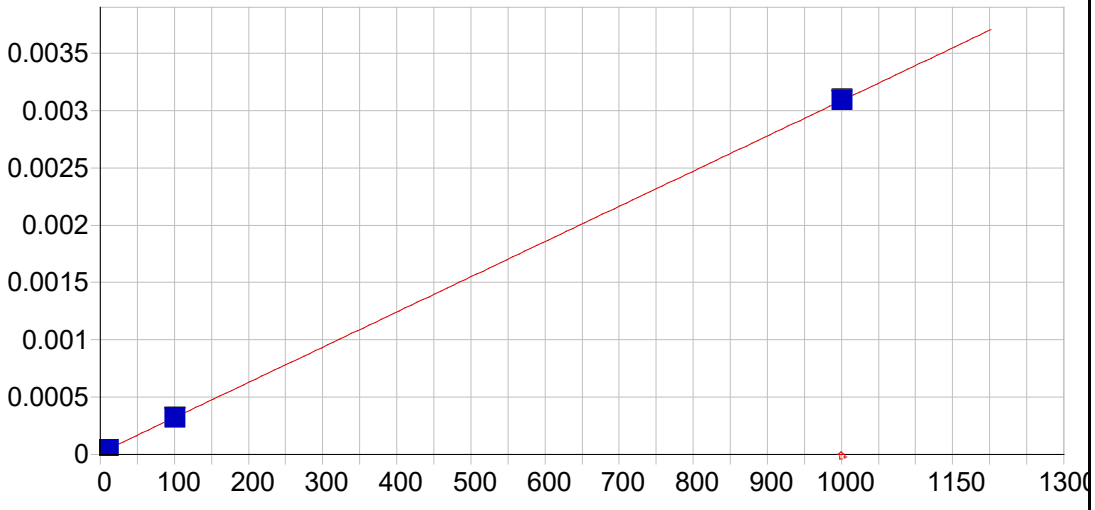


Pb 220.353 {153}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.717821		
Predicted MQL:	5.726069		

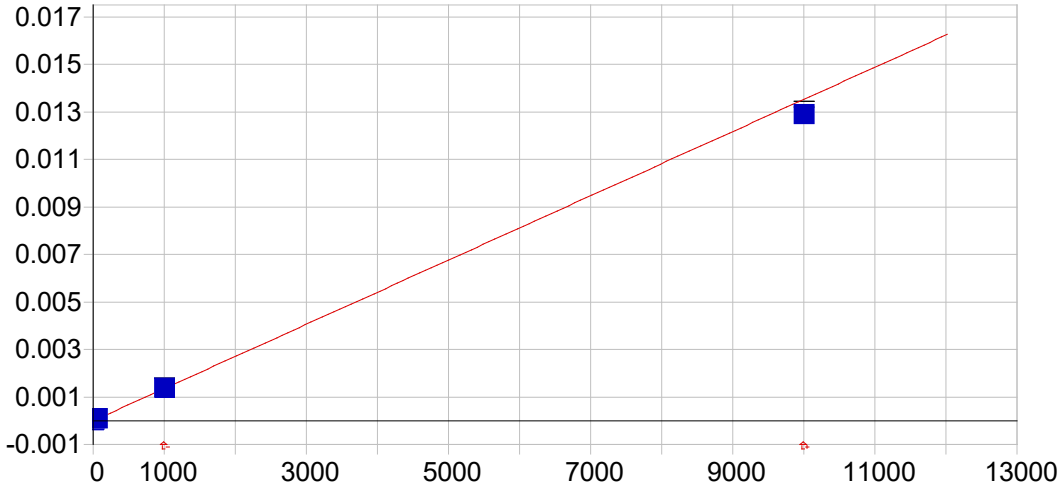
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00945	-.009	.000	.00000	.000	1
CalStd9=100	1000.0	1047.9	47.9	4.79	.00032	.000	1
CalStd10=10	10000.	10064.	63.6	.636	.00302	.000	1
CalStd8=100	100.00	104.14	4.14	4.14	.00003	.000	1
CalStd12=10	100000.	99884.	-116.	-.116	.02993	.000	1



Pb 220.353 {453}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000014		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999972		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	1.426759				
Predicted MQL:	4.755862				

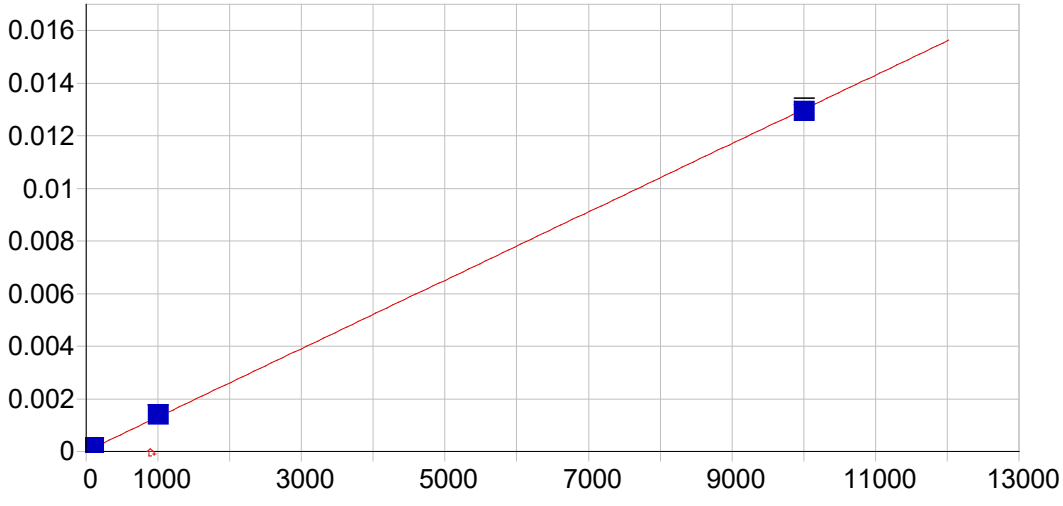
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00056	.001	.000	.00001	.000	1
CalStd5=10	10.000	10.002	.002	.021	.00004	.000	1
CalStd8=100	100.00	99.373	-.627	-.627	.00032	.000	1
CalStd4=5	5.0000	4.4673	-.533	-10.7	.00003	.000	1
CalStd9=100	1000.0	1001.2	1.16	.116	.00309	.000	1



Sb 206.833 {463}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999811		Status:	OK.	
Std Error of Est:	0.000008				
Predicted MDL:	1.941046				
Predicted MQL:	6.470152				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.08232	.082	.000	-.00000	.000	1
CalStd9=100	1000.0	1007.2	7.20	.720	.00137	.000	1
CalStd5=10	10.000	8.6007	-1.40	-14.0	.00001	.000	1
CalStd7=50	50.000	50.235	.235	.470	.00007	.000	1
CalStd10=10	10000.	9532.2	-468.	-4.68	.01289	.000	1

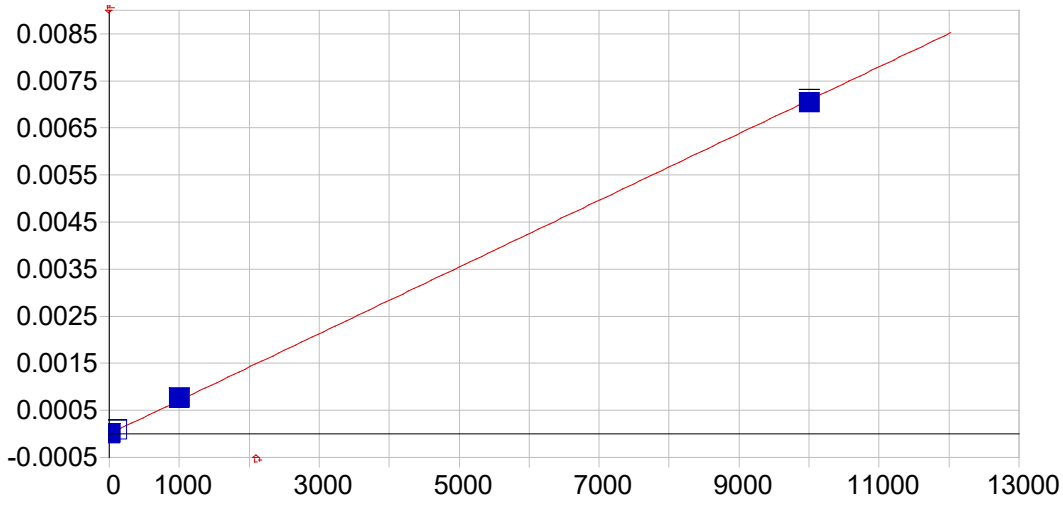


Sb 217.581 {455}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000010	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999816	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.305353		
Predicted MQL:	7.684509		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00146	.001	.000	.00001	.000	1
CalStd9=100	1000.0	1056.5	56.5	5.65	.00138	.000	1
CalStd6=20	20.000	19.047	-.953	-4.76	.00004	.000	1
CalStd5=10	10.000	9.3468	-.653	-6.53	.00002	.000	1
CalStd8=100	100.00	103.57	3.57	3.57	.00014	.000	1
CalStd4=5	5.0000	3.6767	-1.32	-26.5	.00002	.000	1
CalStd10=10	10000.	9942.8	-57.2	-.572	.01293	.000	1

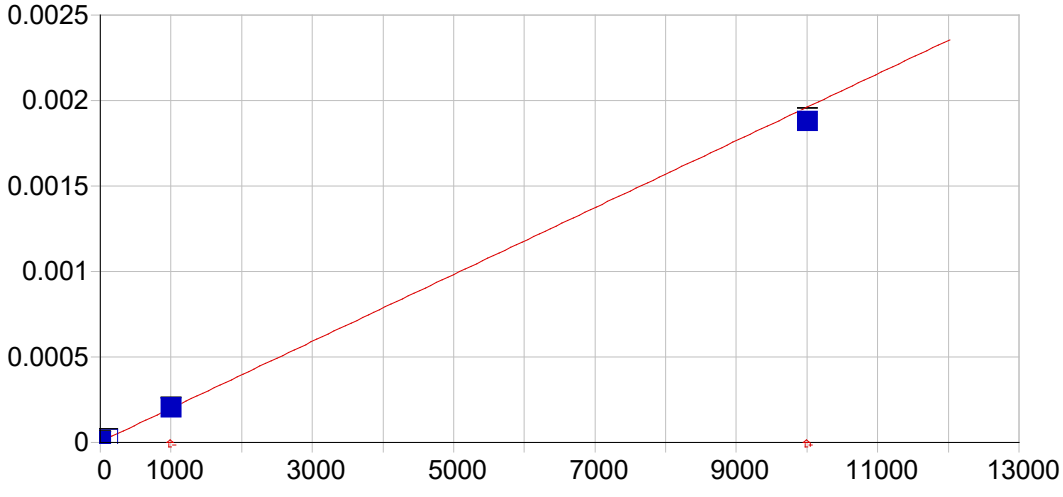


Se 196.090 {472}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999776	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.889846		
Predicted MQL:	9.632820		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00283	-.003	.000	.00000	.000	1
CalStd9=100	1000.0	1062.6	62.6	6.26	.00076	.000	1
CalStd5=10	10.000	11.757	1.76	17.6	.00001	.000	1
CalStd8=100	100.00	105.15	5.15	5.15	.00008	.000	1
CalStd10=10	10000.	9930.5	-69.5	-.695	.00704	.000	1

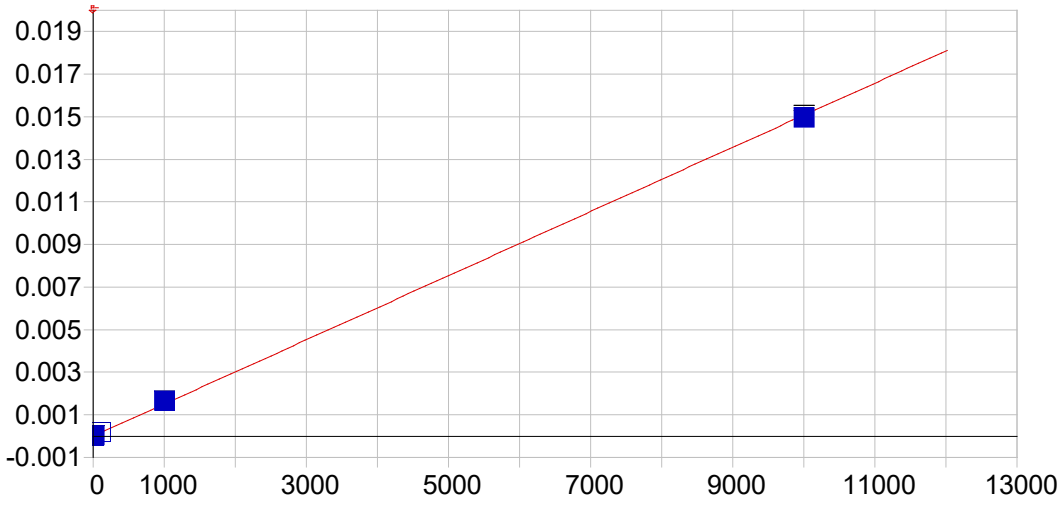


Se 206.279 {463}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999844	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	14.818017		
Predicted MQL:	49.393390		

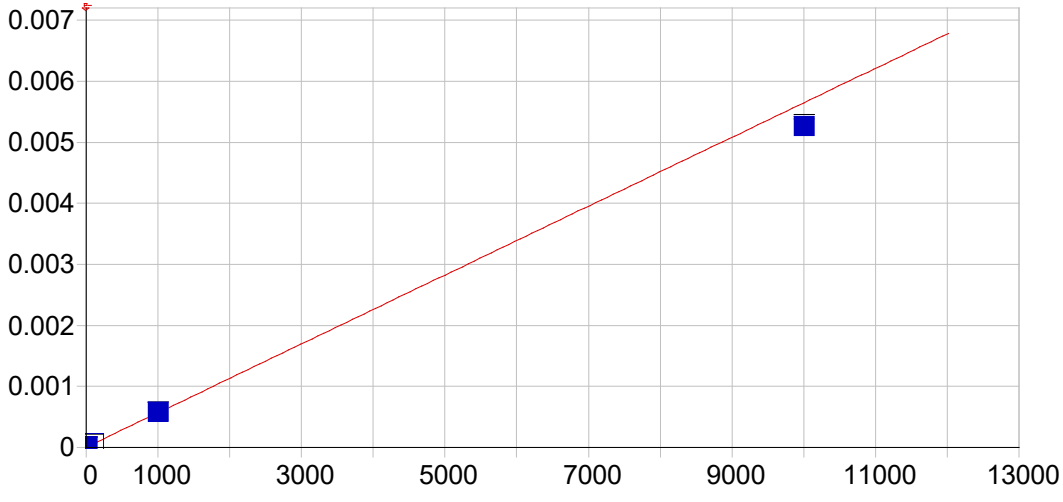
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01509	.015	.000	.00000	.000	1
CalStd9=100	1000.0	1014.4	14.4	1.44	.00020	.000	1
CalStd10=10	10000.	9573.8	-426.	-4.26	.00188	.000	1
CalStd8=100	100.00	83.023	-17.0	-17.0	.00002	.000	1



Tl 190.856 {476}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999670		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	1.703755				
Predicted MQL:	5.679182				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00192	-.002	.000	.00000	.000	1
CalStd9=100	1000.0	1079.4	79.4	7.94	.00163	.000	1
CalStd8=100	100.00	105.07	5.07	5.07	.00016	.000	1
CalStd5=10	10.000	10.704	.704	7.04	.00002	.000	1
CalStd10=10	10000.	9914.8	-85.2	-.852	.01494	.000	1

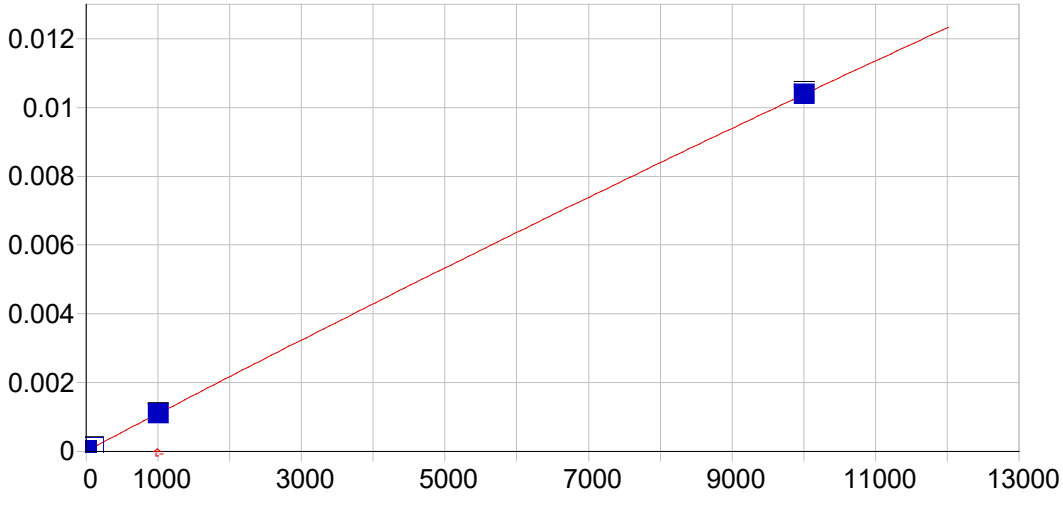


Tl 190.856 {477}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999439	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	2.759172		
Predicted MQL:	9.197239		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.6353	-2.64	.000	.00000	.000	1
CalStd9=100	1000.0	1012.8	12.8	1.28	.00058	.000	1
CalStd8=100	100.00	96.011	-3.99	-3.99	.00006	.000	1
CalStd5=10	10.000	5.8832	-4.12	-41.2	.00001	.000	1
CalStd10=10	10000.	9307.5	-693.	-6.93	.00525	.000	1

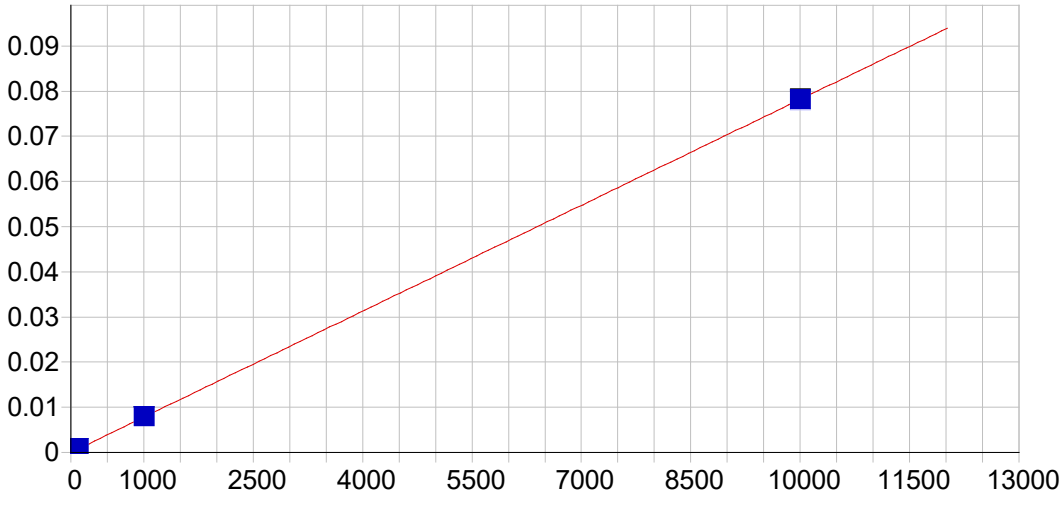


V 290.882 {116}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999991	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	4.338762		
Predicted MQL:	14.462541		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.20827	.208	.000	.00001	.000	1
CalStd9=100	1000.0	1002.9	2.91	.291	.00110	.000	1
CalStd10=10	10000.	9998.8	-1.17	-.012	.01038	.000	1
CalStd8=100	100.00	98.295	-1.70	-1.70	.00012	.000	1

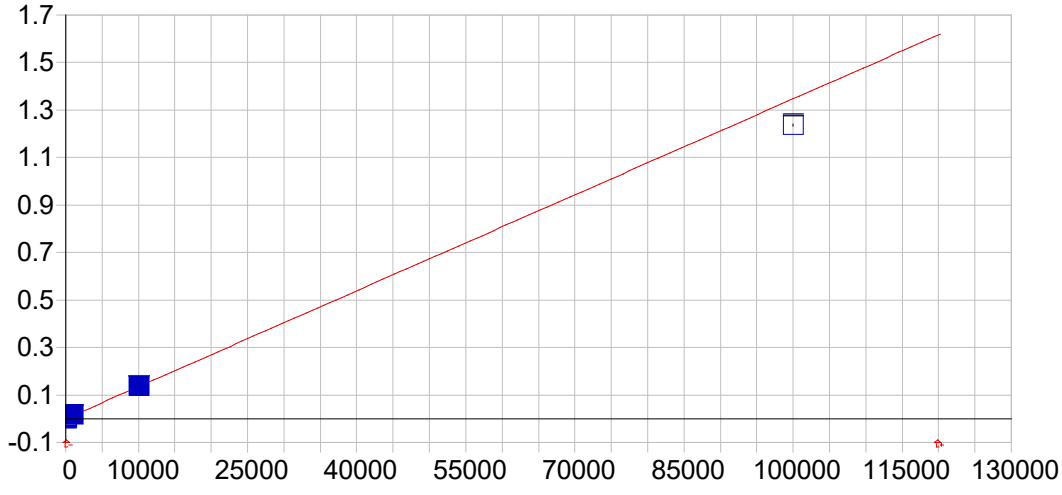


V 292.402 {115}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000012	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.280078		
Predicted MQL:	0.933592		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00002	-.000	.000	.00001	.000	1
CalStd7=50	50.000	50.197	.197	.394	.00040	.000	1
CalStd9=100	1000.0	1007.7	7.72	.772	.00786	.000	1
CalStd6=20	20.000	20.236	.236	1.18	.00017	.000	1
CalStd5=10	10.000	9.8149	-.185	-1.85	.00009	.000	1
CalStd8=100	100.00	99.833	-.167	-.167	.00079	.000	1
CalStd10=10	10000.	9992.2	-7.80	-.078	.07781	.000	1

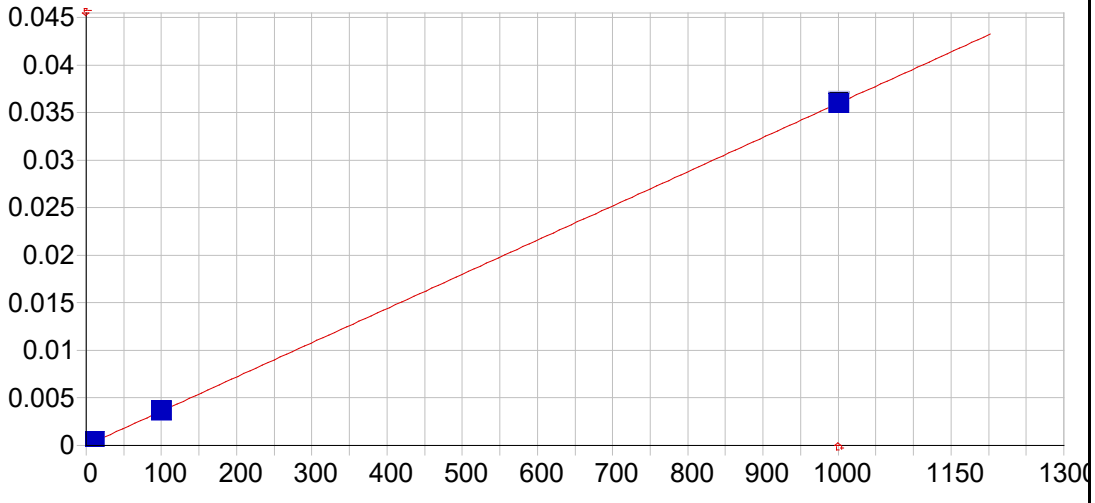


Zn 206.200 {463}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000013	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996634	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.200498		
Predicted MQL:	0.668325		

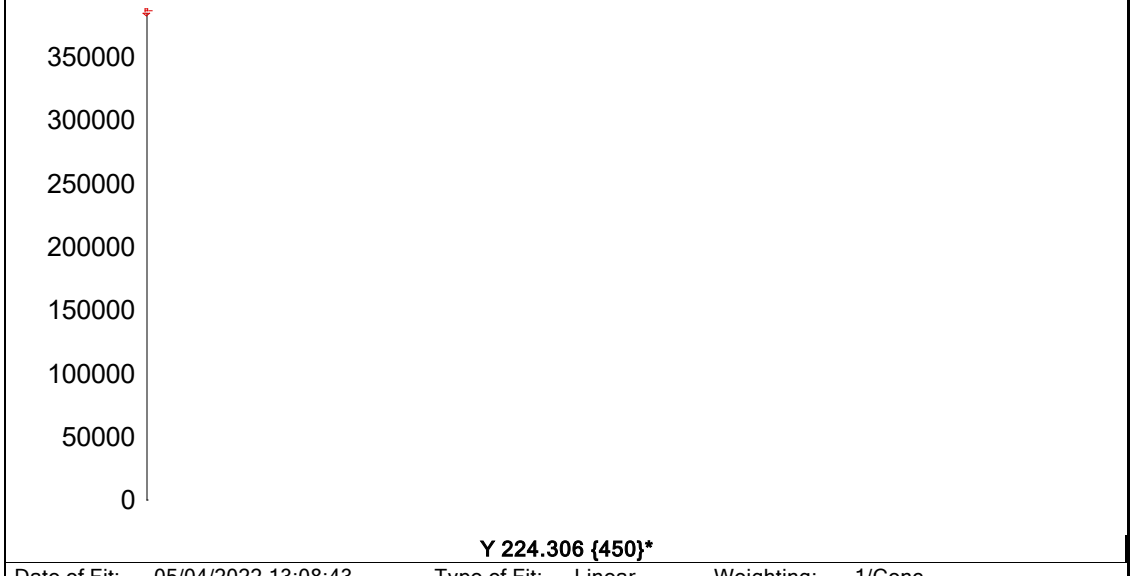
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	10215.	215.	2.15	.13762	.001	1
Blank	.00000	-.94328	-.943	.000	.00000	.000	1
CalStd9=100	1000.0	1090.0	90.0	9.00	.01470	.000	1
CalStd12=10	100000.	91760.	-8240.	-8.24	1.2361	.004	1
CalStd5=10	10.000	10.365	.365	3.65	.00015	.000	1
CalStd8=100	100.00	107.78	7.78	7.78	.00146	.000	1



Zn 213.856 {457}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000009		Re-Slope:	1.000000	
A1 (Gain):	0.000036		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999985		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.090243				
Predicted MQL:	0.300810				

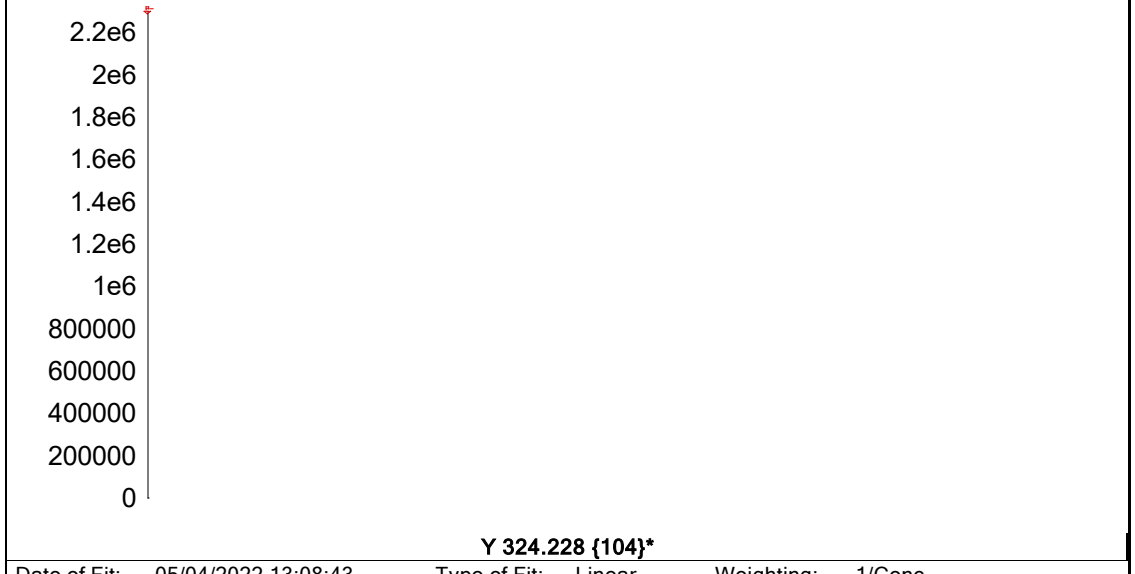
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00053	-.001	.000	.00001	.000	1
CalStd9=100	1000.0	999.82	-.180	-.018	.03615	.000	1
CalStd5=10	10.000	10.568	.568	5.68	.00039	.000	1
CalStd8=100	100.00	99.614	-.386	-.386	.00361	.000	1



Y 224.306 {450}*

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

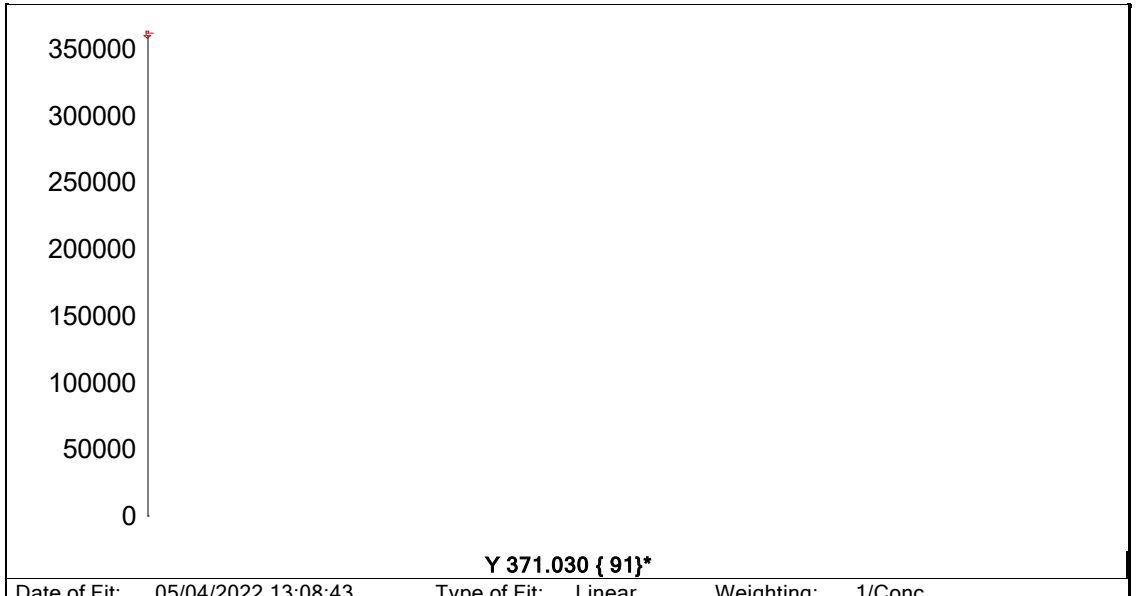
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	362680.	3580.	1



Y 324.228 {104}*

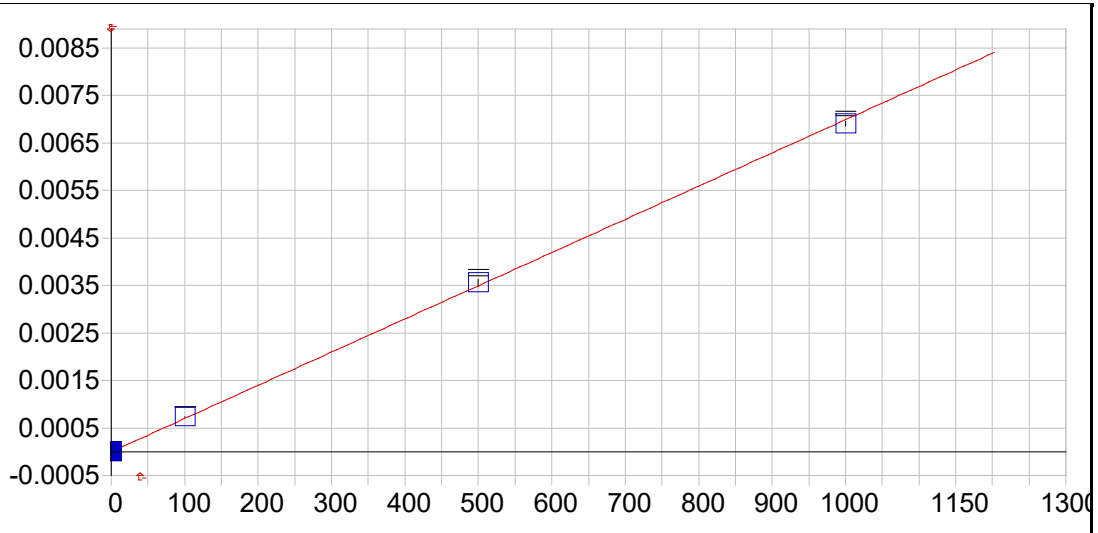
Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	2169900.	11400.	1



Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	334670.	7010.	1

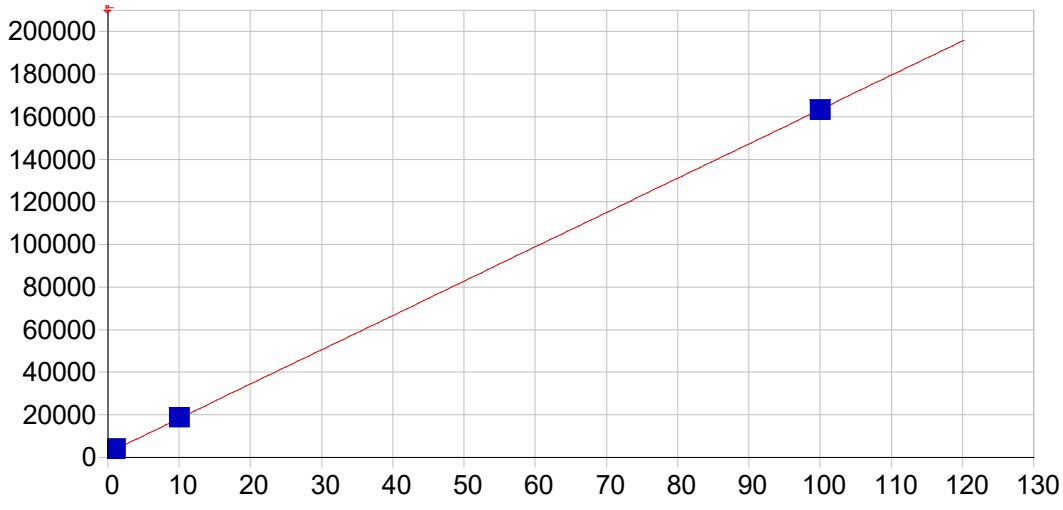


Na 330.237 {102}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999847	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	1.078491		
Predicted MQL:	3.594970		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00492	-.005	.000	-.00000	.000	1
CalStd13=10	100.00	104.59	4.59	4.59	.00073	.000	1
CalibStd15=	1000.0	987.54	-12.5	-1.25	.00690	.000	1
CalStd14=50	500.00	507.87	7.87	1.57	.00355	.000	1

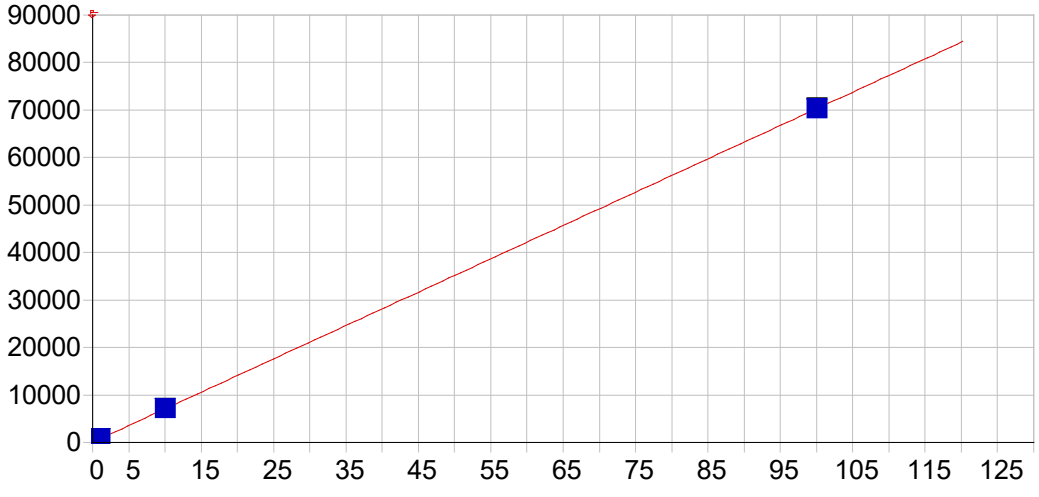


Na 588.995 { 57}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	2219.418161	Re-Slope:	1.000000
A1 (Gain):	1611.612360	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	4.223921		
Predicted MDL:	0.006709		
Predicted MQL:	0.022363		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00003	-.000	.000	2219.4	15.0	1
CalStd9=100	1.0000	1.0160	.016	1.60	3857.1	15.0	1
CalStd10=10	10.000	10.169	.169	1.69	18610.	57.1	1
CalStd13=10	100.00	99.815	-.185	-.185	163110.	265.	1

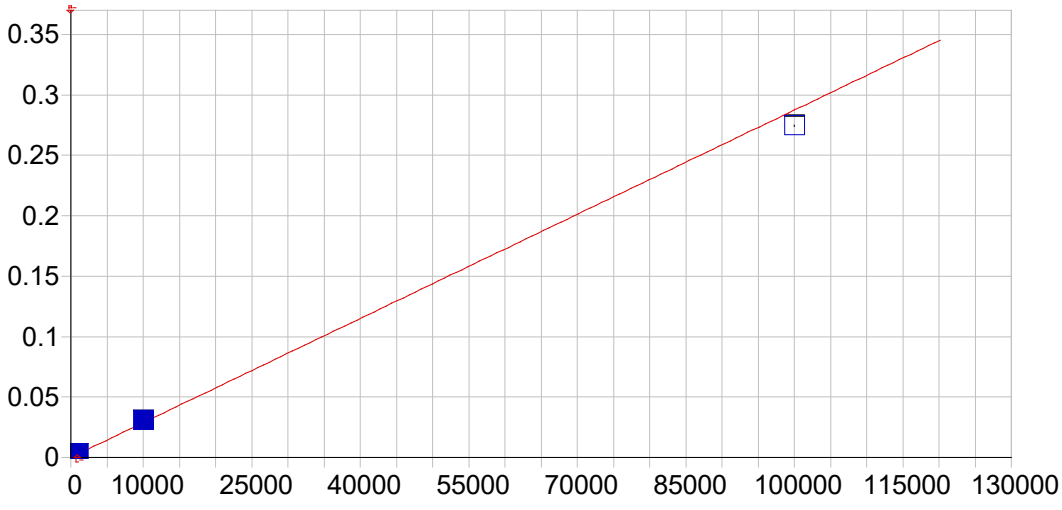


Na 589.592 { 57}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	51.809383	Re-Slope:	1.000000
A1 (Gain):	702.069574	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	1.198180		
Predicted MDL:	0.008962		
Predicted MQL:	0.029873		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00004	-.000	.000	51.782	2.21	1
CalStd9=100	1.0000	1.0375	.037	3.75	780.76	7.87	1
CalStd10=10	10.000	10.016	.016	.155	7089.1	25.2	1
CalStd13=10	100.00	99.947	-.053	-.053	70279.	134.	1

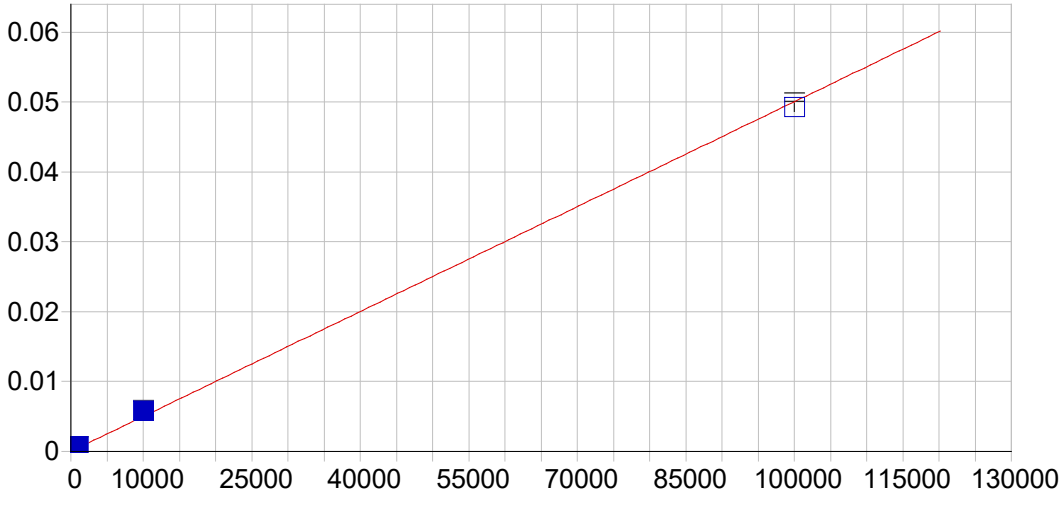


Si 212.412 {458}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000045	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997384	Status:	OK.
Std Error of Est:	0.000167		
Predicted MDL:	1.075564		
Predicted MQL:	3.585212		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-11.063	-11.1	.000	.00001	.000	1
CalStd9=100	1000.0	1108.0	108.	10.8	.00323	.000	1
CalibStd15=	100000.	95483.	-4520.	-4.52	.27442	.000	1
CalStd10=10	10000.	10587.	587.	5.87	.03047	.000	1

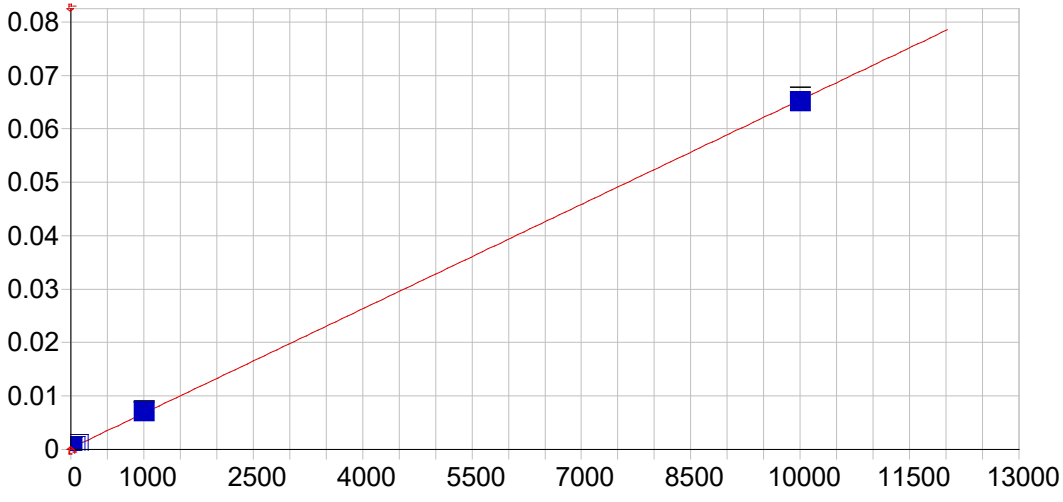


Si 251.611 {134}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998752	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	6.992742		
Predicted MQL:	23.309141		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.32470	-.325	.000	.00000	.000	1
CalStd9=100	1000.0	1195.6	196.	19.6	.00060	.000	1
CalibStd15=	100000.	98349.	-1650.	-1.65	.04923	.001	1
CalStd10=10	10000.	11456.	1460.	14.6	.00574	.000	1

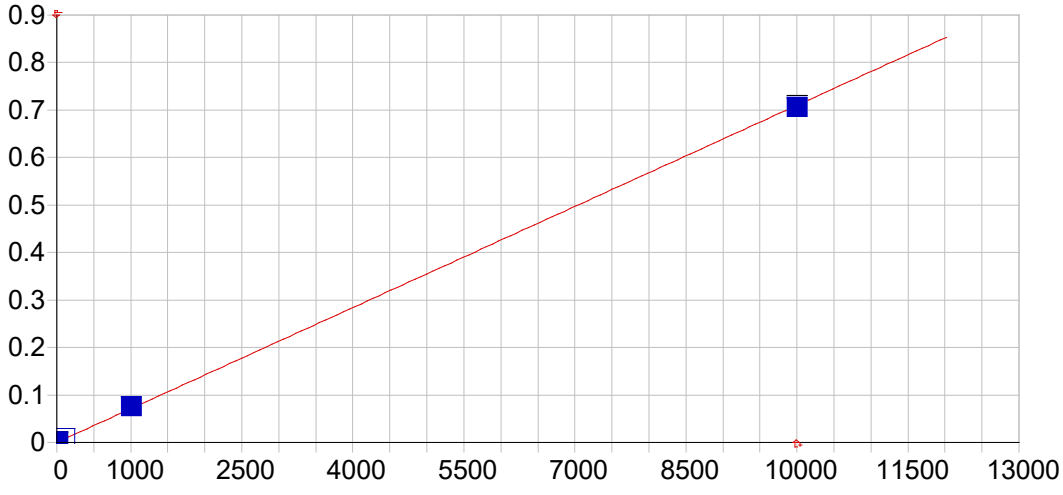


Ti 323.452 {104}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000272	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999875	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.242070		
Predicted MQL:	4.140234		

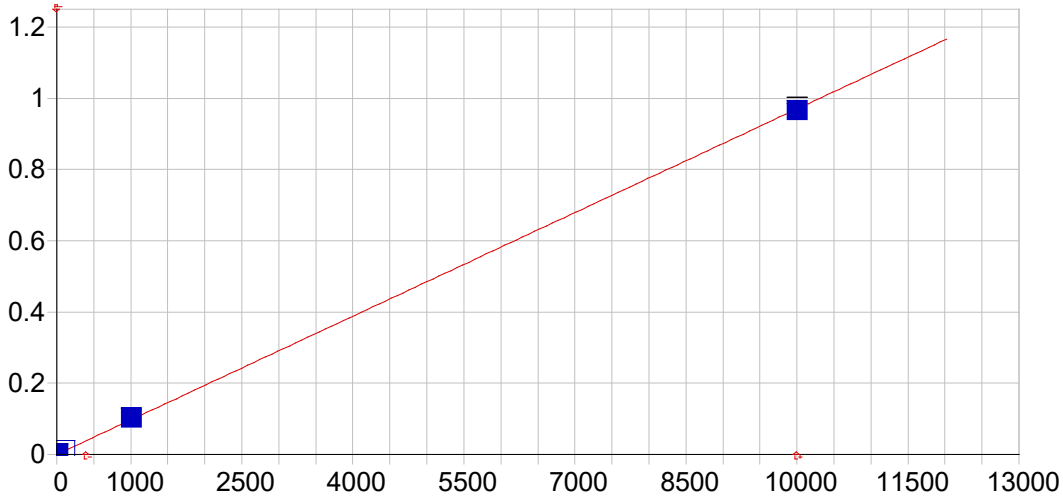
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00181	-.002	.000	.00027	.000	1
CalStd5=10	10.000	11.383	1.38	13.8	.00035	.000	1
CalStd8=100	100.00	105.08	5.08	5.08	.00096	.000	1
CalStd9=100	1000.0	1041.4	41.4	4.14	.00706	.000	1
CalStd10=10	10000.	9947.7	-52.3	-.523	.06506	.001	1
CalStd7=50	50.000	54.170	4.17	8.34	.00063	.000	1
CalStd4=5	5.0000	5.2650	.265	5.30	.00031	.000	1



Sr 407.771 { 83}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000095		Re-Slope:	1.000000	
A1 (Gain):	0.000071		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999847		Status:	OK.	
Std Error of Est:	0.000005				
Predicted MDL:	0.139140				
Predicted MQL:	0.463801				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00044	-.000	.000	.00009	.000	1
CalStd3=1	1.0000	1.2115	.212	21.2	.00018	.000	1
CalStd4=5	5.0000	5.3761	.376	7.52	.00048	.000	1
CalStd5=10	10.000	10.627	.627	6.27	.00085	.000	1
CalStd8=100	100.00	104.30	4.30	4.30	.00750	.000	1
CalStd9=100	1000.0	1052.5	52.5	5.25	.07482	.001	1
CalStd10=10	10000.	9941.9	-58.1	-.581	.70590	.003	1

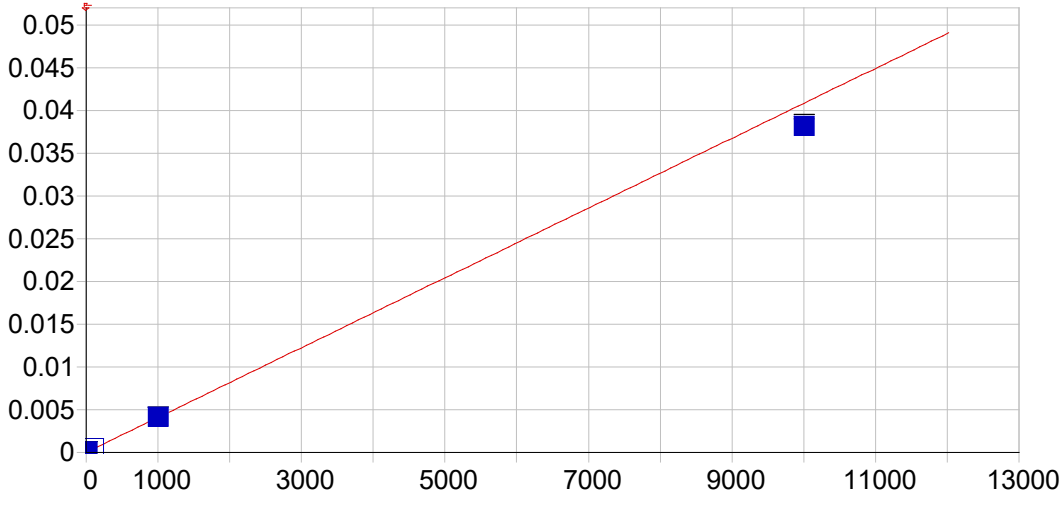


Sr 421.552 { 80}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000036	Re-Slope:	1.000000
A1 (Gain):	0.000097	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999889	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.108229		
Predicted MQL:	0.360762		

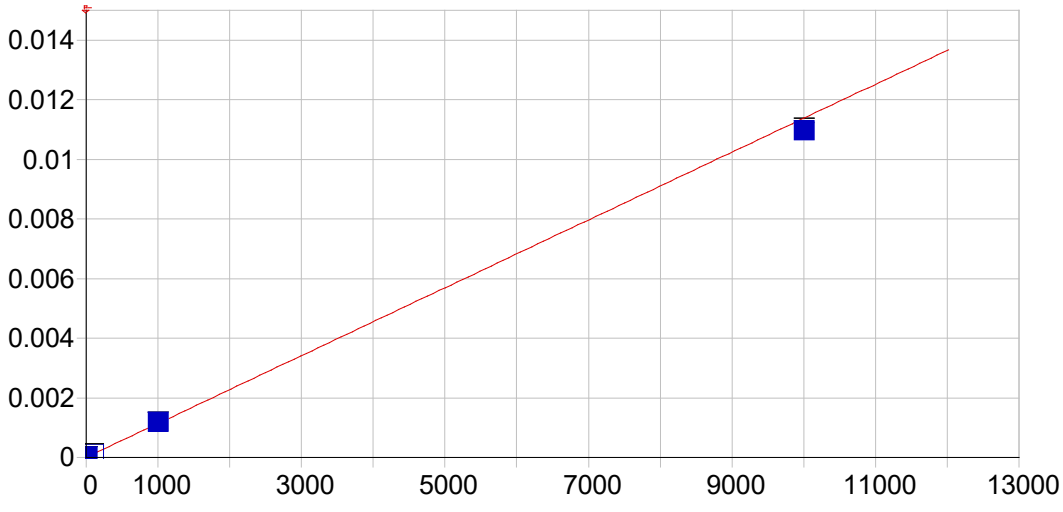
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00029	-.000	.000	.00004	.000	1
CalStd3=1	1.0000	1.1010	.101	10.1	.00014	.000	1
CalStd4=5	5.0000	5.2705	.270	5.41	.00055	.000	1
CalStd5=10	10.000	10.508	.508	5.08	.00105	.000	1
CalStd8=100	100.00	103.97	3.97	3.97	.01012	.000	1
CalStd9=100	1000.0	1044.8	44.8	4.48	.10137	.001	1
CalStd10=10	10000.	9950.4	-49.6	-.496	.96512	.009	1



Sn 189.989 {477}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000004		Re-Slope:	1.000000	
A1 (Gain):	0.000004		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999850		Status:	OK.	
Std Error of Est:	0.000008				
Predicted MDL:	0.522706				
Predicted MQL:	1.742355				

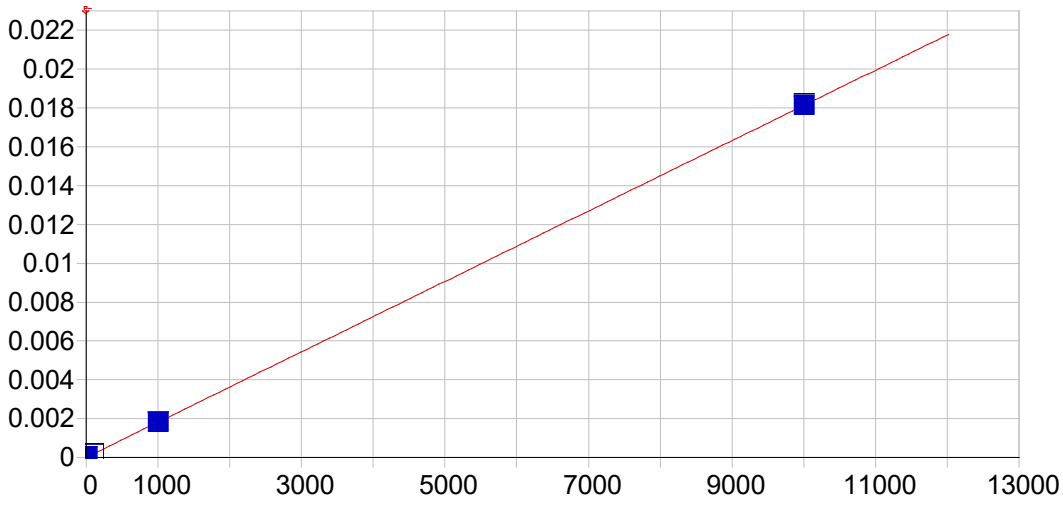
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.42227	-.422	.000	.00000	.000	1
CalStd10=10	10000.	9328.0	-672.	-6.72	.03809	.000	1
CalStd9=100	1000.0	1003.7	3.69	.369	.00410	.000	1
CalStd8=100	100.00	100.10	.100	.100	.00041	.000	1
CalStd5=10	10.000	11.030	1.03	10.3	.00005	.000	1



Sn 189.989 {478}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999405		Status:	OK.	
Std Error of Est:	0.000005				
Predicted MDL:	1.442288				
Predicted MQL:	4.807625				

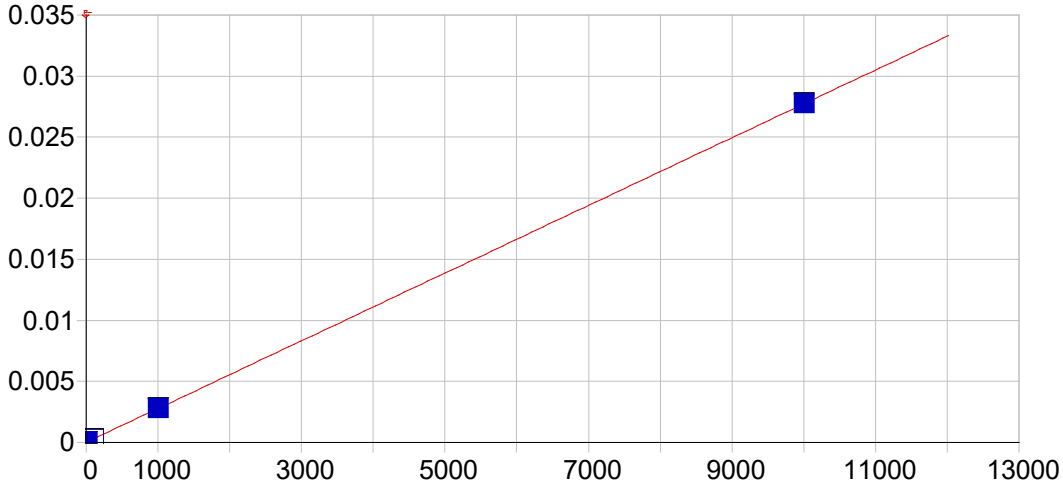
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.30797	-.308	.000	.00000	.000	1
CalStd10=10	10000.	9629.9	-370.	-3.70	.01096	.000	1
CalStd9=100	1000.0	1032.5	32.5	3.25	.00118	.000	1
CalStd8=100	100.00	101.15	1.15	1.15	.00012	.000	1
CalStd5=10	10.000	10.092	.092	.916	.00001	.000	1



B 249.678 {135}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999999		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.769694				
Predicted MQL:	2.565646				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00017	-.000	.000	.00000	.000	1
CalStd8=100	100.00	98.672	-1.33	-1.33	.00018	.000	1
CalStd5=10	10.000	10.293	.293	2.93	.00002	.000	1
CalStd9=100	1000.0	1000.7	.677	.068	.00182	.000	1
CalStd10=10	10000.	10000.	.358	.004	.01814	.000	1

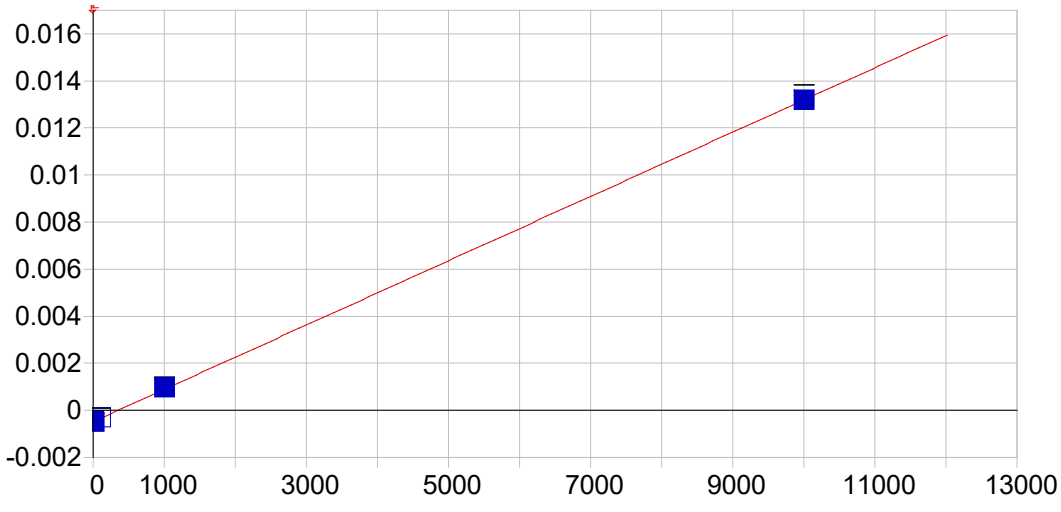


B 249.773 {135}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.403725		
Predicted MQL:	1.345751		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00048	-.000	.000	.00001	.000	1
CalStd8=100	100.00	100.13	.135	.135	.00029	.000	1
CalStd5=10	10.000	10.483	.483	4.83	.00004	.000	1
CalStd9=100	1000.0	998.24	-1.76	-.176	.00278	.000	1
CalStd10=10	10000.	10001.	1.14	.011	.02774	.000	1

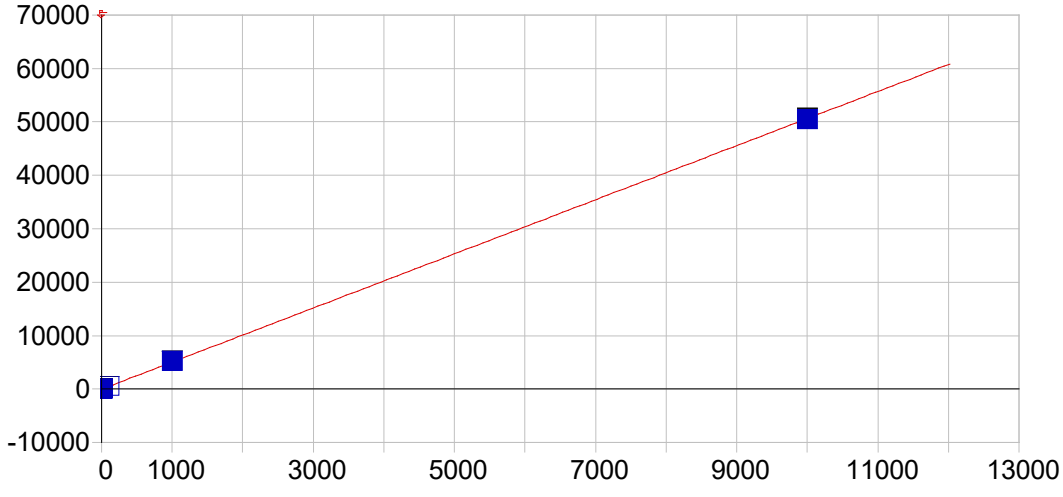


Li 610.353 { 55}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000474	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.994993	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	23.843010		
Predicted MQL:	79.476700		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.03204	.032	.000	-.00047	.000	1
CalStd5=10	10.000	-23.123	-33.1	-331.	-.00051	.000	1
CalStd8=100	100.00	106.77	6.77	6.77	-.00033	.000	1
CalStd9=100	1000.0	1042.0	42.0	4.20	.00095	.000	1
CalStd10=10	10000.	9984.3	-15.7	-.157	.01317	.000	1

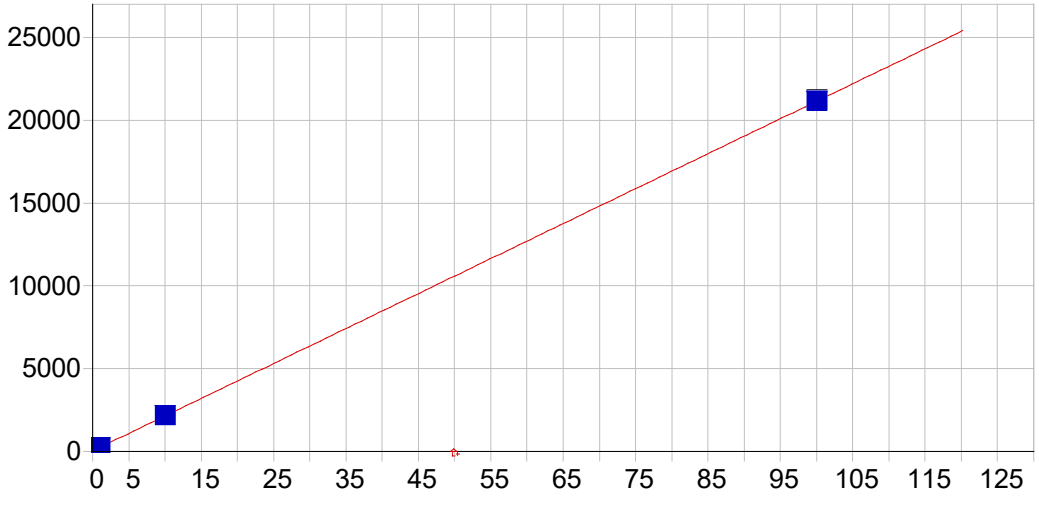


Li 670.776 { 50}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-30.799338	Re-Slope:	1.000000
A1 (Gain):	5.065816	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999892	Status:	OK.
Std Error of Est:	1.014185		
Predicted MDL:	1.271588		
Predicted MQL:	4.238626		

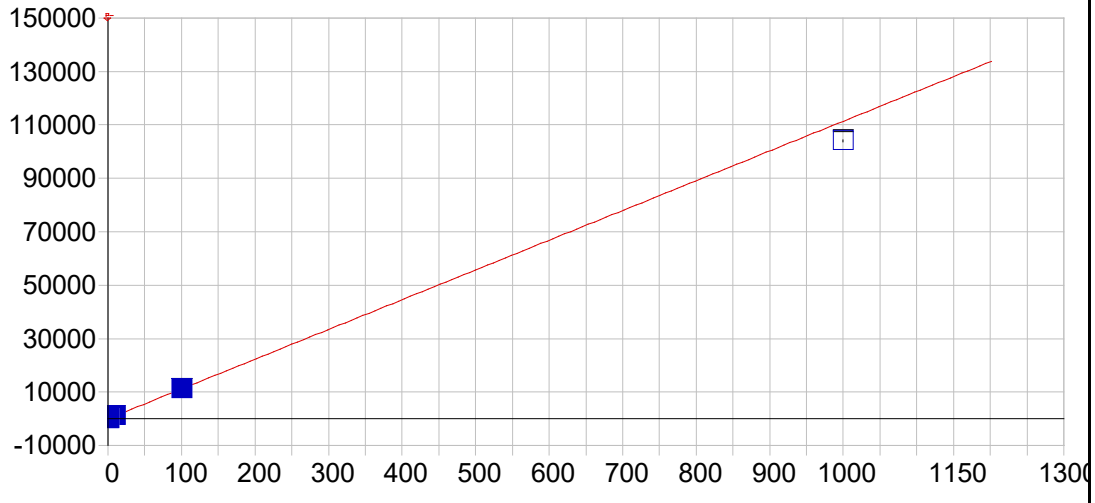
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00375	-.004	.000	-30.818	6.07	1
CalStd5=10	10.000	12.921	2.92	29.2	34.656	4.61	1
CalStd8=100	100.00	105.42	5.42	5.42	503.22	5.45	1
CalStd9=100	1000.0	1033.0	33.0	3.30	5202.2	8.79	1
CalStd10=10	10000.	9958.7	-41.3	-.413	50419.	224.	1



K 766.490 { 44}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	32.267543		Re-Slope:	1.000000	
A1 (Gain):	211.130773		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999998		Status:	OK.	
Std Error of Est:	5.883864				
Predicted MDL:	0.032208				
Predicted MQL:	0.107360				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00022	.000	.000	32.315	3.58	1
CalStd9=100	1.0000	.97175	-.028	-2.83	238.07	6.41	1
CalStd10=10	10.000	10.033	.033	.329	2156.8	6.67	1
CalStd13=10	100.00	99.923	-.077	-.077	21192.	34.0	1

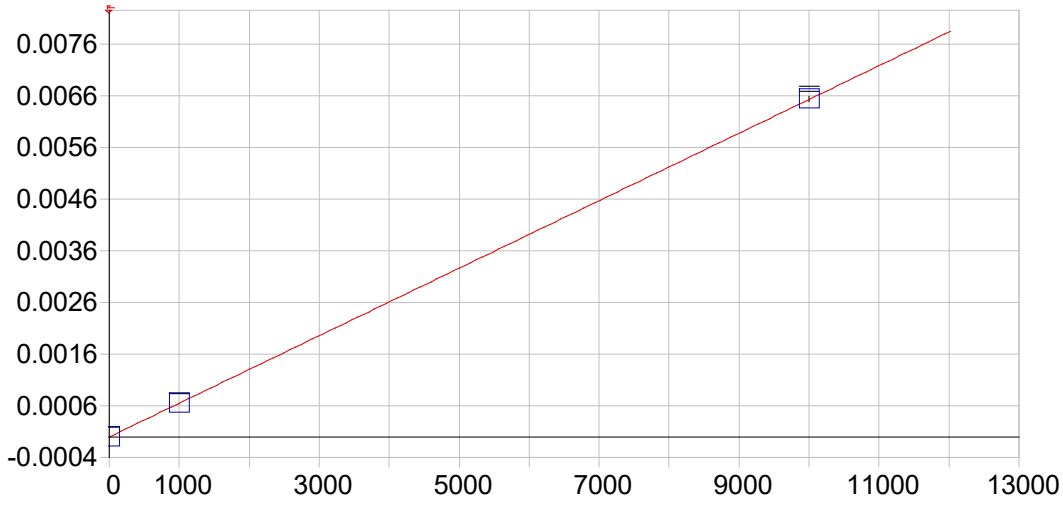


K 769.896 { 44}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	3.540317	Re-Slope:	1.000000
A1 (Gain):	111.378434	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999561	Status:	OK.
Std Error of Est:	58.298796		
Predicted MDL:	0.054157		
Predicted MQL:	0.180523		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.07676	-.077	.000	-5.0090	3.02	1
CalStd10=10	10.000	10.026	.026	.262	1121.4	3.26	1
CalibStd15=	1000.0	934.09	-65.9	-6.59	104040.	323.	1
CalStd13=10	100.00	101.33	1.33	1.33	11301.	14.8	1
CalStd9=100	1.0000	1.0053	.005	.525	115.62	3.18	1

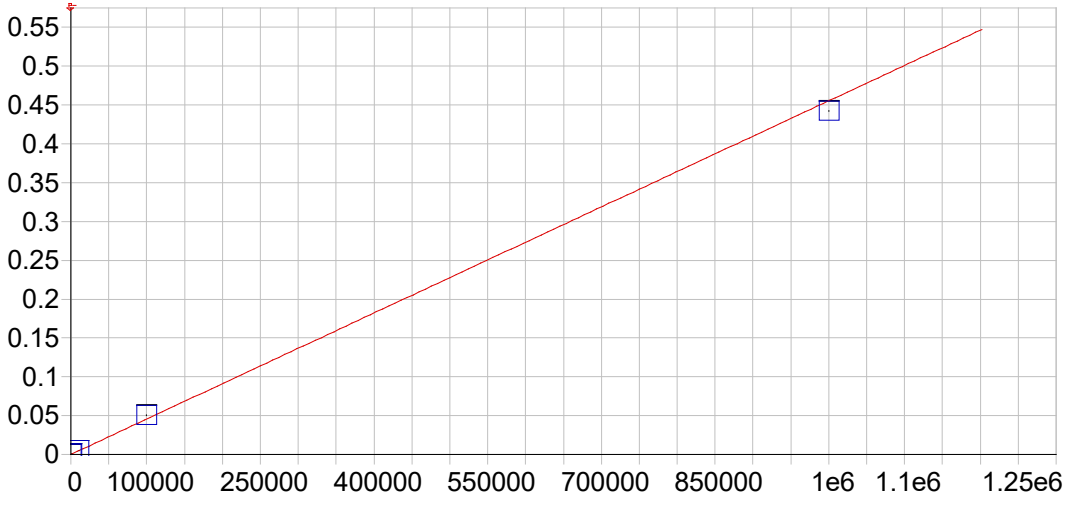


P 177.495 {489}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.036108		
Predicted MQL:	6.787028		

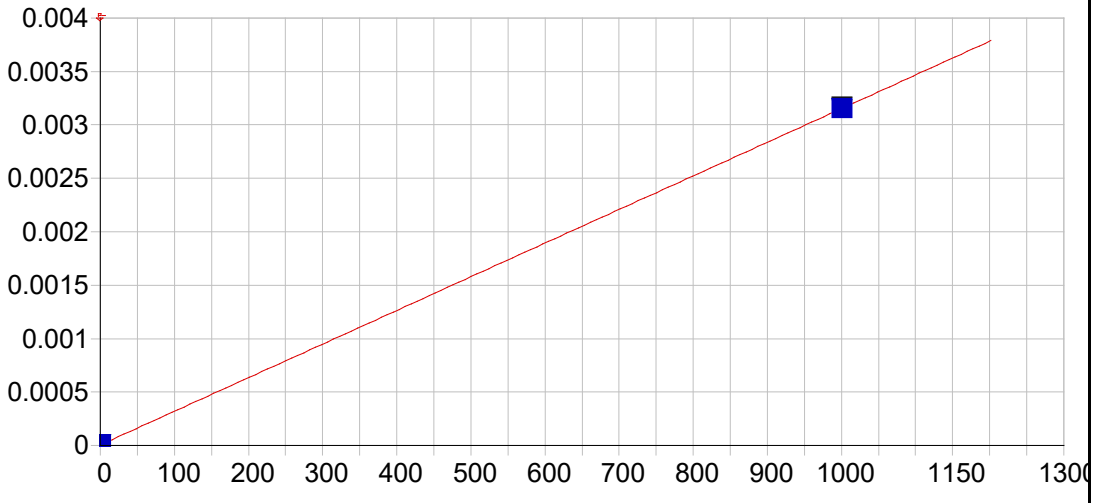
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00956	.010	.000	-.00000	.000	1
CalStd10=10	10000.	10011.	10.6	.106	.00653	.000	1
CalStd9=100	1000.0	989.37	-10.6	-1.06	.00064	.000	1



S 182.034 {485}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000060		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998222		Status:	OK.	
Std Error of Est:	0.000071				
Predicted MDL:	3.771207				
Predicted MQL:	12.570692				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-77.064	-77.1	.000	.00002	.000	1
CalStd9=100	1000.0	1068.5	68.5	6.85	.00055	.000	1
CalStd10=10	10000.	11119.	1120.	11.2	.00512	.000	1
CalibStd15=	1000000.	970890.	-29100.	-2.91	.44213	.000	1
CalStd13=10	100000.	110810.	10800.	10.8	.05051	.000	1

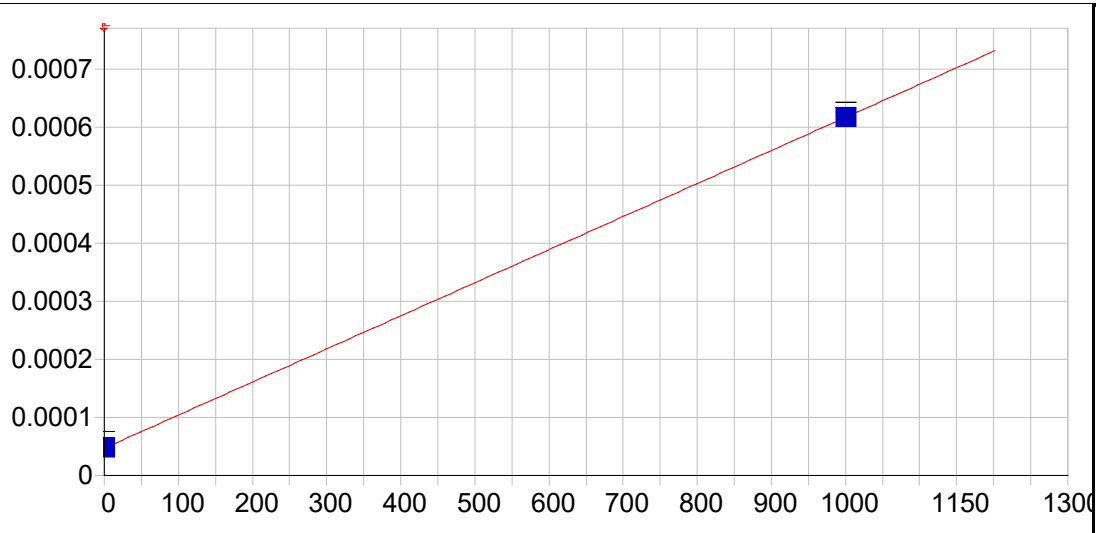


Hg 184.950 {482}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.567355		
Predicted MQL:	1.891182		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00000	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00315	.000	1



Ce 404.076 { 83}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000047	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	17.718102		
Predicted MQL:	59.060340		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00005	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00062	.000	1

Sample Name: Blank Acquired: 05/03/2022 12:22:10 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3158	Ca3968
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**43.7**	**.000**	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**.001**	**-.000**	**.000**	**.000**	**.000**
Stddev	.000	1.0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.29	2.34	11.5	3.49	870.	18.9	69.6	388.	4.77	540.	2.50	7.44	38.9

Elem	Cd2265	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**-.000**	**.000**	**.000**	**.000**	**-.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	140.	70.7	169.	80.0	5.17	54.1	942.	1.34	46.7	210.	39.6	2960.	.337

Elem	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	47.5	780.	41.6	65.1	139.	213.	81.1	22.1	281.	17.1	111.	46.8	169.

Elem	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**-.000**	**51.8**	**32.3**	**-5.01**
Stddev	.000	.000	.000	.000	2.2	3.6	3.02
%RSD	20.2	299.	12.4	1530.	4.26	11.1	60.3

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**362680.**	**2169900.**	**334670.**
Stddev	3580.	11425.	7008.
%RSD	.98723	.52651	2.0939

Sample Name: CalStd2=0.5 Acquired: 05/03/2022 12:29:50 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Be2348	Be3130	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000
%RSD	149.	2.20	3.65	39.3

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**355660.**	**2155900.**	**329450.**
Stddev	1350.	11907.	2371.
%RSD	.37950	.55230	.71953

Sample Name: CalStd3=1 Acquired: 05/03/2022 12:37:31 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	3.91	8.54	32.3	1.71	20.2	14.2	8.88	15.5	48.2

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**357200.**	**2147100.**	**326520.**
Stddev	1226.	15868.	2849.
%RSD	.34331	.73903	.87258

Sample Name: CalStd4=5 Acquired: 05/03/2022 12:45:12 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	12.0	3.16	3.02	.677	4.76	5.55	.982	1.30	4.66	1.42	8.77	8.58	3.43

Elem	Pb2203	Sb2175
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	10.6	19.4

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**356280.**	**2160400.**	**326990.**
Stddev	1534.	7141.	2091.
%RSD	.43059	.33052	.63951

Sample Name: CalStd5=10 Acquired: 05/03/2022 12:52:53 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**97.6**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	2.1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	9.27	2.12	1.41	3.49	9.46	163.	1.54	1.99	.909	1.26	5.43	.477	.224

Elem	Cr2677	Cu2230	Mn2576	Mo2020	Mo2045	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.40	1.87	.984	3.28	5.19	2.73	32.6	4.70	17.4	9.82	12.0	5.25	1.06

Elem	Zn2062	Zn2138
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	.576	1.01

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**355960.**	**2142200.**	**326890.**
Stddev	1498.	17011.	1672.
%RSD	.42077	.79407	.51158

Sample Name: CalStd6=20 Acquired: 05/03/2022 13:00:34 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ba2335	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000
%RSD	.694	.481	1.96	3.59	2.59	.654

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**354930.**	**2142700.**	**324860.**
Stddev	1281.	11847.	1290.
%RSD	.36097	.55292	.39720

Sample Name: CalStd7=50 Acquired: 05/03/2022 13:08:13 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	As1937	As1972	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316	Sb2068	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.001**	**.000**	**.001**	**.001**	**.000**	**.001**	**.000**	**.000**	**.001**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	6.67	6.04	.686	1.10	.365	.533	.933	.918	.673	.354	.775	2.34	1.16

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**354690.**	**2148400.**	**325370.**
Stddev	1327.	20652.	2874.
%RSD	.37410	.96125	.88327

Sample Name: CalStd8=100 Acquired: 05/03/2022 13:15:39 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3968	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**625.**	**.000**	**.000**	**.000**	**.000**	**.001**	**.005**	**.001**	**.008**	**.009**	**.002**	**.000**
Stddev	.000	2.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.935	.294	.533	1.90	3.01	4.72	.518	2.70	1.35	.465	1.20	.195	.740

Elem	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Mg2802	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.002**	**.000**	**.001**	**.000**	**.000**	**.005**	**.001**	**.001**	**.000**	**.001**	**.001**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.466	.388	.615	.571	1.08	.545	.467	.374	.587	.327	.525	3.05	.593

Elem	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.001**	**.001**	**.004**
Stddev	.000	.000	.000	.000	.000	.000	.000
%RSD	1.75	1.26	10.2	.883	.573	.450	.369

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**353700.**	**2119700.**	**324580.**
Stddev	1133.	9111.	4548.
%RSD	.32036	.42983	1.4012

Sample Name: CalStd9=1000 Acquired: 05/03/2022 13:22:59 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3158	Ca3968	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.003**	**.001**	**.002**	**.001**	**.000**	**.009**	**.046**	**.008**	**.083**	**.001**	**.089**	**.021**	**.005**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.001	.000	.000
%RSD	.391	.699	1.44	.564	.324	.253	.767	.899	.974	1.01	.945	.162	.263

Elem	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576	Mn2593
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.021**	**.002**	**.015**	**.003**	**.004**	**.001**	**.001**	**.003**	**.002**	**.000**	**.053**	**.012**	**.011**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.129	.752	.153	.927	.186	.862	1.06	.858	.544	1.96	.841	.807	.968

Elem	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.006**	**.003**	**.013**	**.012**	**.001**	**.003**	**.001**	**.001**	**.001**	**.000**	**.002**	**.008**	**.015**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.100	.418	.090	.189	.385	.244	.337	.122	.374	1.17	.489	.796	.354

Elem	Zn2138	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.036**	**781.**	**238.**	**116.**
Stddev	.000	8.	6.	3.
%RSD	.101	1.01	2.69	2.75

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**355080.**	**2141200.**	**326860.**
Stddev	479.	18504.	2893.
%RSD	.13483	.86417	.88493

Sample Name: CalStd10=10000 Acquired: 05/03/2022 13:30:07 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	As1972	Ba2335	Ba4934	Ca3158	Ca3968	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.006**	**.016**	**.004**	**.086**	**.429**	**.005**	**.838**	**.197**	**.023**	**.136**	**.034**	**.040**	**.005**
Stddev	.000	.000	.000	.001	.004	.000	.015	.002	.000	.001	.000	.000	.000
%RSD	1.18	.972	.954	.799	.984	.768	1.84	.800	.099	.785	.148	.894	.048

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.009**	**.025**	**.015**	**.001**	**.470**	**.118**	**.101**	**.056**	**.032**	**.118**	**.109**	**.007**	**.013**
Stddev	.000	.000	.000	.000	.001	.000	.001	.000	.000	.001	.001	.000	.000
%RSD	1.23	.803	.910	1.07	.159	.180	1.08	.802	.774	.749	.734	.862	.910

Elem	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.013**	**.007**	**.002**	**.015**	**.078**	**.138**	**7090.**	**2160.**	**1120.**
Stddev	.000	.000	.000	.000	.000	.001	25.	7.	3.
%RSD	.932	.887	1.04	.764	.154	.552	.356	.309	.291

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**350980.**	**2042100.**	**327470.**
Stddev	2811.	3127.	2513.
%RSD	.80078	.15312	.76726

Sample Name: CalStd12=100K Acquired: 05/03/2022 13:37:59 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Cr2055	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.27**	**1.02**	**.071**	**1.24**
Stddev	.01	.02	.000	.00
%RSD	.646	1.73	.295	.301

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**352890.**	**2129200.**	**325570.**
Stddev	976.	6237.	1581.
%RSD	.27656	.29294	.48564

Sample Name: CalStd13=100000 Acquired: 05/03/2022 13:46:24 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	Na5895	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.063**	**.162**	**.056**	**.048**	**.093**	**.258**	**.148**	**.007**	**.001**	**70300.**	**21200.**
Stddev	.001	.001	.000	.000	.001	.002	.000	.000	.000	134.	34.
%RSD	.877	.694	.760	.624	.739	.691	.210	.789	.586	.191	.161

Elem	K_7698
Units	Cts/S
Avg	**11300.**
Stddev	15.
%RSD	.131

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**341040.**	**2077300.**	**323980.**
Stddev	383.	11507.	2514.
%RSD	.11239	.55395	.77598

Sample Name: CalStd14=500000 Acquired: 05/03/2022 13:53:50 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.305**	**.787**	**.264**	**.418**	**1.17**	**.679**	**.034**	**.004**
Stddev	.005	.017	.005	.008	.03	.001	.001	.000
%RSD	1.79	2.13	1.81	1.87	2.12	.117	1.79	1.89

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**311830.**	**311670.**
Stddev	472.	4947.
%RSD	.15135	1.5871

Sample Name: CalibStd15=1000k Acquired: 05/03/2022 14:02:15 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.598**	**1.56**	**.497**	**.753**	**2.15**	**1.29**	**.065**	**.007**	**104000.**
Stddev	.006	.03	.008	.008	.02	.00	.001	.000	323.
%RSD	1.01	1.75	1.67	1.08	1.06	.294	1.03	.703	.310

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**290490.**	**305250.**
Stddev	197.	3552.
%RSD	.06798	1.1635

Sample Name: Ag 1000 Acquired: 05/03/2022 14:10:56 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382
Units	Cts/S
Avg	**5270.**
Stddev	11.
%RSD	.200

Sample Name: icv Acquired: 05/03/2022 14:26:16 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	As1972	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.6**	**50.4**	**12000.**	**2050.**	**2040.**	**49.8**	**10300.**	**47.6**	**516.**	**202.**	**246.**	**5020.**
Stddev	.3	.6	180.	12.	4.	.4	107.	.2	1.	2.	2.	40.
%RSD	.596	1.24	1.50	.577	.201	.902	1.03	.496	.220	.940	.620	.799
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Se2062	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5170.**	**10400.**	**507.**	**505.**	**512.**	**493.**	**474.**	**510.**	**2070.**	**1970.**	**2010.**	**487.**
Stddev	89.	87.	5.	1.	2.	3.	1.	2.	7.	10.	4.	5.
%RSD	1.71	.834	.932	.206	.322	.671	.164	.361	.354	.500	.174	.970
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Zn2062	Zn2138	Na3302	Na5895	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**556.**	**503.**	**106.**	**98.2**	**99.1**
Stddev	.	1.	1.	.6	.4
%RSD	.059	.201	.704	.618	.411
Check ?	None	None	None	None	None
Value					
Range					

Sample Name: icv Acquired: 05/03/2022 14:26:16 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**346090.**	**2067400.**	**321090.**
Stddev	731.	17946.	2826.
%RSD	.21132	.86803	.88015

Sample Name: ICVLL Acquired: 05/03/2022 14:40:51 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**8.79**	**9.17**	**401.**	**20.7**	**10.7**	**4.06**	**511.**	**5.06**	**10.6**	**9.93**	**11.0**	**307.**	**548.**
Stddev	.53	1.13	2.	4.4	.2	.02	2.	.11	.1	.16	1.1	3.	2.
%RSD	6.07	12.3	.485	21.4	2.19	.386	.367	2.19	1.06	1.59	10.4	.859	.429
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**10.3**	**9.95**	**10.4**	**9.07**	**20.9**	**25.0**	**22.2**	**9.53**	**10.3**	**2.02**	**1.15**	**1.02**
Stddev	.0	.62	.2	1.36	2.6	1.6	1.3	.12	.1	.02	.03	.03
%RSD	.432	6.22	1.96	15.0	12.3	6.34	5.67	1.30	1.02	.781	2.42	2.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**358640.**	**2159200.**	**333450.**
Stddev	1359.	9331.	2213.
%RSD	.37894	.43213	.66376

Sample Name: icb Acquired: 05/03/2022 14:56:07 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.209**	**.150**	**-.109**	**-.569**	**.197**	**.002**	**.083**	**-.064**	**-.073**	**.016**	**.607**	**.617**	**.037**
Stddev	.312	.414	.494	3.44	.166	.005	.039	.176	.171	.210	.576	.414	.069
%RSD	150.	277.	453.	606.	84.3	247.	47.1	274.	234.	1300.	94.9	67.1	186.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**-.066**	**-.025**	**-.123**	**-.331**	**-2.65**	**.540**	**-.737**	**-.169**	**-.027**	**.005**	**.004**	**-.083**
Stddev	.021	.304	.360	.874	2.04	1.16	1.12	.267	.075	.007	.035	.023
%RSD	31.8	1190.	292.	264.	76.9	215.	152.	158.	272.	149.	825.	27.4
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**362960.**	**2175700.**	**334280.**
Stddev	2329.	25560.	2110.
%RSD	.64153	1.1748	.63134

Sample Name: MRL/LLOQ Acquired: 05/03/2022 15:03:49 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**7.88**	**7.79**	**407.**	**20.2**	**10.8**	**4.12**	**529.**	**5.14**	**10.7**	**9.98**	**12.8**	**346.**	**558.**
Stddev	.41	.84	3.	1.8	.1	.01	1.	.17	.2	.25	.7	3.	1.
%RSD	5.27	10.8	.796	9.03	1.31	.248	.221	3.31	2.18	2.49	5.61	.900	.267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**10.5**	**10.1**	**10.2**	**9.21**	**17.9**	**22.5**	**19.1**	**9.84**	**10.2**	**2.00**	**1.02**	**.930**
Stddev	.0	.4	.3	1.10	1.9	.9	1.2	.13	.2	.01	.05	.054
%RSD	.364	3.62	2.79	11.9	10.7	3.79	6.33	1.31	1.65	.394	4.70	5.80
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**354980.**	**2113900.**	**327460.**
Stddev	1974.	6113.	1432.
%RSD	.55614	.28919	.43730

Sample Name: ICSA Acquired: 05/03/2022 15:11:26 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.000**	**.023**	**511000.**	**494000.**	**-.784**	**.022**	**-.140**	**487000.**	**-.000**	**.376**	**-7.72**
Stddev	.310	.726	2670.	4910.	8.49	.217	.020	3400.	.330	.255	.44
%RSD	194000.	3220.	.522	.994	1080.	999.	14.2	.699	115000.	67.9	5.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Cu2230	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2.31**	**538000.**	**452000.**	**506000.**	**522000.**	**-.877**	**-1.91**	**4.63**	**.000**	**.000**	**-.008**
Stddev	.64	3630.	6160.	675.	2670.	.137	.17	.38	2.35	1.25	3.36
%RSD	27.6	.674	1.36	.133	.511	15.6	8.97	8.24	1130000.	257000.	42500.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**-.016**	**9410.**	**4.83**	**-.316**	**-1.25**	**-.308**
Stddev	2.02	71.	.52	.020	.02	.035
%RSD	12700.	.759	10.7	6.22	1.45	11.5
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA Acquired: 05/03/2022 15:11:26 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**320540.**	**1990500.**	**316800.**
Stddev	492.	16138.	1094.
%RSD	.15353	.81075	.34543

Sample Name: ICSAB Acquired: 05/03/2022 15:19:35 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al3092	Al3961	As1937	Ba2335	Be2348	Ca3158	Cd2288	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**453.**	**516000.**	**502000.**	**504.**	**528.**	**502.**	**495000.**	**510.**	**496.**	**482.**	**538.**
Stddev	1.	7620.	9920.	10.	3.	8.	7020.	2.	2.	2.	2.
%RSD	.225	1.48	1.98	2.01	.644	1.56	1.42	.400	.401	.315	.293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**553000.**	**458000.**	**510000.**	**527000.**	**499.**	**493.**	**491.**	**443.**	**510.**	**507.**	**526.**
Stddev	9350.	8510.	1700.	7690.	2.	3.	2.	2.	4.	7.	2.
%RSD	1.69	1.86	.334	1.46	.325	.575	.421	.482	.820	1.46	.411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**478.**	**493.**	**508.**	**52.5**	**49.9**	**49.7**	**51.1**
Stddev	2.	3.	2.	.6	.0	.0	.1
%RSD	.391	.559	.449	1.18	.067	.089	.189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB Acquired: 05/03/2022 15:19:35 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**321230.**	**1970800.**	**316790.**
Stddev	809.	6719.	4520.
%RSD	.25186	.34092	1.4269

Sample Name: ICV LL ag Acquired: 05/03/2022 15:34:55 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**8.04**	**8.79**	**3.50**	**1.89**	**.209**	**.007**	**5.80**	**.092**	**-.002**	**.063**	**1.83**	**39.6**	**3.01**
Stddev	.58	.27	.44	1.84	.129	.008	.04	.069	.073	.170	.60	6.2	.03
%RSD	7.19	3.09	12.6	97.2	61.9	120.	.716	75.1	4810.	273.	32.9	15.5	1.01

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.127**	**.319**	**-.128**	**-.144**	**-1.68**	**1.56**	**.346**	**-.140**	**.275**	**.024**	**-.016**	**-.033**
Stddev	.049	.230	.356	1.12	1.79	4.38	1.21	.220	.096	.012	.021	.029
%RSD	38.6	72.1	278.	774.	107.	281.	348.	157.	35.0	50.0	128.	88.0

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**357290.**	**2150100.**	**328290.**
Stddev	552.	12486.	1094.
%RSD	.15445	.58072	.33331

Sample Name: lcsw95236 Acquired: 05/03/2022 15:42:36 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**17.8**	**793.**	**1090.**	**835.**	**855.**	**20.6**	**204000.**	**19.6**	**209.**	**83.6**	**108.**
Stddev	.4	1.	12.	5.	1.	.1	1120.	.2	.	.7	1.
%RSD	2.47	.159	1.13	.649	.119	.584	.549	1.23	.170	.859	1.35

Elem	Fe2343	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**420.**	**104000.**	**209.**	**2060.**	**210.**	**195.**	**218.**	**869.**	**814.**	**204.**	**221.**
Stddev	4.	437.	1.	4.	.	2.	1.	7.	3.	1.	1.
%RSD	.949	.420	.643	.197	.178	.845	.280	.779	.359	.708	.372

Elem	Zn2138	Na3302	Na5895	K_7698
Units	ug/L	mg/L	mg/L	mg/L
Avg	**211.**	**103.**	**98.2**	**100.0**
Stddev	.	2.	.4	.51
%RSD	.147	1.54	.389	.514

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**336330.**	**2036600.**	**319620.**
Stddev	223.	11974.	1452.
%RSD	.06634	.58793	.45432

Sample Name: mbw95236 Acquired: 05/03/2022 15:49:51 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.329**	**-.996**	**2.50**	**1.35**	**.066**	**.003**	**10.8**	**.138**	**-.022**	**.144**	**2.07**	**10.1**	**1.68**
Stddev	.521	.655	.37	3.98	.275	.007	1.7	.088	.122	.200	.15	.7	.15
%RSD	158.	65.8	14.8	294.	415.	199.	15.3	64.0	556.	138.	7.39	7.29	8.81

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**-.004**	**1.85**	**-.207**	**-1.03**	**-1.88**	**1.58**	**-.718**	**-.298**	**.355**	**.024**	**-.014**	**-.068**
Stddev	.035	.38	.267	.77	2.80	2.41	1.82	.129	.024	.011	.032	.048
%RSD	887.	20.5	129.	74.1	149.	152.	253.	43.1	6.77	45.8	231.	69.6

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**360070.**	**2166600.**	**332310.**
Stddev	2261.	12809.	1748.
%RSD	.62788	.59119	.52587

Sample Name: 1136212 Acquired: 05/03/2022 15:57:30 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.429**	**16.2**	**171.**	**4.78**	**78.5**	**.026**	**58700.**	**.001**	**-.185**	**3.06**	**8.65**	**209.**
Stddev	.214	.2	1.	2.81	.2	.004	520.	.055	.105	.20	.48	1.
%RSD	49.8	1.26	.485	58.8	.315	13.7	.886	3900.	56.9	6.47	5.57	.701

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**24500.**	**8.55**	**4.17**	**.163**	**.114**	**-2.05**	**1.71**	**-1.97**	**.286**	**51.6**	**25.8**	**.828**
Stddev	168.	.08	.13	.242	1.53	2.52	1.23	.66	.079	.2	.2	.036
%RSD	.686	.962	3.16	148.	1350.	123.	71.8	33.4	27.7	.313	.700	4.39

Elem	K_7698
Units	mg/L
Avg	**.889**
Stddev	.077
%RSD	8.70

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**349980.**	**2122600.**	**329920.**
Stddev	1369.	4402.	2530.
%RSD	.39112	.20737	.76685

Sample Name: I1136212 Acquired: 05/03/2022 16:05:19 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.233**	**5.72**	**25.7**	**-.236**	**14.2**	**.006**	**12400.**	**-.043**	**.074**	**.407**	**2.81**	**38.3**
Stddev	.300	.90	1.9	2.44	3.4	.015	451.	.064	.225	.225	.97	2.3
%RSD	129.	15.8	7.23	1030.	23.8	267.	3.63	149.	303.	55.3	34.5	5.91

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**5150.**	**1.57**	**.645**	**.100**	**.209**	**-.415**	**3.04**	**-1.13**	**-.117**	**8.64**	**5.33**	**.129**
Stddev	180.	.07	.530	.381	1.02	2.06	2.07	1.70	.101	.47	.18	.018
%RSD	3.50	4.63	82.2	379.	490.	495.	68.0	151.	86.3	5.40	3.43	13.7

Elem	K_7698
Units	mg/L
Avg	**.083**
Stddev	.028
%RSD	33.9

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**356430.**	**2149100.**	**330370.**
Stddev	1744.	7477.	1330.
%RSD	.48925	.34789	.40251

Sample Name: dup1136212 Acquired: 05/03/2022 16:13:24 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.246**	**15.9**	**172.**	**1.38**	**78.4**	**.024**	**59600.**	**-.155**	**-.207**	**3.41**	**6.74**	**211.**
Stddev	.234	.6	2.	1.64	.3	.007	840.	.114	.300	.13	1.24	1.
%RSD	95.0	3.73	1.03	118.	.340	30.4	1.41	73.8	145.	3.93	18.4	.477

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**24800.**	**8.50**	**3.78**	**.411**	**1.32**	**-2.59**	**.259**	**.644**	**.247**	**51.5**	**25.6**	**.853**
Stddev	355.	.04	.29	.110	.58	2.22	1.16	.929	.157	.1	.1	.012
%RSD	1.43	.516	7.73	26.8	44.2	85.8	450.	144.	63.5	.181	.309	1.41

Elem	K_7698
Units	mg/L
Avg	**.777**
Stddev	.050
%RSD	6.46

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**351660.**	**2106300.**	**326890.**
Stddev	675.	7119.	5302.
%RSD	.19196	.33800	1.6220

Sample Name: msw1136212 Acquired: 05/03/2022 16:21:13 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**18.0**	**36.0**	**962.**	**1330.**	**845.**	**932.**	**20.8**	**267000.**	**19.7**	**208.**	**86.7**
Stddev	.3	.4	1.	21.	6.	1.	.1	1980.	.2	.	.6
%RSD	1.68	1.04	.114	1.59	.660	.065	.521	.738	1.07	.181	.707

Elem	Cu2230	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**113.**	**609.**	**626.**	**131000.**	**216.**	**2080.**	**209.**	**195.**	**222.**	**872.**	**810.**
Stddev	1.	4.	6.	1270.	1.	3.	.	1.	5.	6.	4.
%RSD	1.13	.720	1.02	.972	.649	.138	.235	.714	2.04	.636	.448

Elem	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7698
Units	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**204.**	**270.**	**263.**	**136.**	**124.**	**101.**
Stddev	2.	1.	1.	1.	.	.
%RSD	.943	.202	.222	.990	.153	.159

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**331480.**	**2016600.**	**316360.**
Stddev	395.	12051.	2328.
%RSD	.11927	.59760	.73581

Sample Name: msdw1136212 Acquired: 05/03/2022 16:28:17 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**18.6**	**36.3**	**978.**	**1340.**	**852.**	**946.**	**20.9**	**268000.**	**19.9**	**211.**	**87.4**
Stddev	.4	.9	2.	18.	4.	1.	.1	3350.	.1	.	1.2
%RSD	1.89	2.35	.252	1.38	.416	.158	.402	1.25	.311	.162	1.31

Elem	Cu2230	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**116.**	**629.**	**648.**	**131000.**	**218.**	**2110.**	**211.**	**196.**	**221.**	**884.**	**824.**
Stddev	1.	3.	8.	1890.	1.	2.	.	1.	2.	5.	2.
%RSD	.520	.514	1.24	1.44	.433	.112	.224	.461	.855	.583	.297

Elem	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7698
Units	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**206.**	**275.**	**266.**	**135.**	**125.**	**102.**
Stddev	1.	1.	.	3.	1.	1.
%RSD	.640	.194	.179	2.00	.417	.529

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**331670.**	**2023300.**	**315790.**
Stddev	967.	8603.	3691.
%RSD	.29169	.42518	1.1686

Sample Name: pdsw1136212 Acquired: 05/03/2022 16:35:21 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	As1972	Ba4934	Be2348	Be3130	Ca3158	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**79.4**	**90.0**	**4750.**	**4000.**	**4220.**	**102.**	**93.4**	**437000.**	**88.1**	**941.**	**378.**
Stddev	1.5	1.5	107.	10.	86.	2.	.8	8680.	.1	1.	4.
%RSD	1.93	1.68	2.25	.248	2.03	2.26	.821	1.98	.089	.153	1.09

Elem	Cu2230	Fe2343	Fe2599	Mg2790	Mn2576	Mn2593	Mo2045	Ni2316	Pb2169	Pb2203	Sb2068
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**476.**	**2010.**	**2160.**	**221000.**	**943.**	**1040.**	**1680.**	**929.**	**1000.**	**874.**	**956.**
Stddev	1.	19.	38.	4240.	9.	22.	5.	2.	10.	3.	4.
%RSD	.156	.946	1.76	1.92	.966	2.16	.307	.194	.960	.381	.421

Elem	Se2062	Tl1908	V_2924	Zn2062	Na3302	Na5895	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**3780.**	**3580.**	**928.**	**1030.**	**225.**	**206.**	**191.**
Stddev	31.	7.	10.	1.	4.	3.	3.
%RSD	.832	.189	1.06	.131	1.94	1.33	1.36

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**322970.**	**1985900.**	**314150.**
Stddev	815.	5306.	2450.
%RSD	.25241	.26720	.77999

Sample Name: ccv1 Acquired: 05/03/2022 16:49:37 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al3092	As1972	Ba4934	Be2348	Ca3158	Cd2288	Co2286	Co2388	Cr2055	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**512.**	**4850.**	**4900.**	**4760.**	**475.**	**4900.**	**468.**	**4840.**	**4800.**	**4600.**	**4860.**	**4820.**	**4760.**
Stddev	2.	37.	16.	34.	5.	55.	1.	19.	24.	20.	19.	25.	26.
%RSD	.328	.762	.319	.708	.991	1.13	.288	.400	.502	.423	.391	.513	.540
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2924	Zn2062	Na3302	Na5895	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**4990.**	**4850.**	**4910.**	**4820.**	**4730.**	**4690.**	**4780.**	**4830.**	**4780.**	**5140.**	**100.**	**94.9**	**96.1**
Stddev	12.	45.	22.	20.	22.	15.	18.	22.	26.	38.	2.	.4	.4
%RSD	.249	.923	.439	.412	.456	.315	.372	.462	.552	.746	1.90	.375	.378
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**347230.**	**2048100.**	**324950.**
Stddev	1012.	10172.	3310.
%RSD	.29140	.49663	1.0185

Sample Name: ccv2 Acquired: 05/03/2022 16:56:39 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.0**	**484.**	**470.**	**506.**	**47.6**	**500.**	**47.8**	**500.**	**478.**	**507.**	**495.**	**492.**	**519.**
Stddev	.7	2.	3.	4.	.5	3.	.3	2.	5.	3.	5.	5.	5.
%RSD	1.61	.504	.742	.692	.994	.660	.664	.493	1.09	.625	1.06	1.01	1.01
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**493.**	**474.**	**500.**	**503.**	**469.**	**498.**	**506.**	**519.**	**474.**	**520.**	**478.**	**9.63**	**9.63**
Stddev	5.	4.	3.	7.	3.	3.	3.	2.	4.	3.	3.	.01	.03
%RSD	1.03	.779	.578	1.38	.561	.670	.612	.412	.888	.655	.606	.125	.307
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7698
Units	mg/L
Avg	**9.63**
Stddev	.03
%RSD	.292
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv2 Acquired: 05/03/2022 16:56:39 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**356940.**	**2144100.**	**328330.**
Stddev	1656.	19161.	2357.
%RSD	.46393	.89363	.71801

Sample Name: ccb Acquired: 05/03/2022 17:03:37 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.396**	**-.870**	**-.185**	**.252**	**-.073**	**-.011**	**1.72**	**-.064**	**-.001**	**-.092**	**1.52**	**-.422**	**.522**
Stddev	.334	.261	.222	3.29	.122	.008	.32	.130	.141	.283	.52	.925	.020
%RSD	84.5	30.0	120.	1310.	167.	78.3	18.8	204.	18000.	308.	34.1	219.	3.91
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.000**	**1.58**	**-.207**	**.470**	**-.173**	**1.84**	**.139**	**-.211**	**.049**	**.011**	**-.019**	**-.100**
Stddev	.028	.09	.344	1.33	2.27	1.79	2.02	.109	.129	.008	.044	.047
%RSD	11300.	5.89	166.	283.	1310.	97.4	1450.	51.6	264.	75.8	234.	47.3
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**364660.**	**2179300.**	**337670.**
Stddev	7058.	14456.	3183.
%RSD	1.9354	.66336	.94251

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Ag 328.068 {103}	05/10/2022 09:24:21	05/09/2022 08:31:18	Linear	1/Conc	0.000009	0.000003	0.000000	1.000000	0.999312	0.000000	0.498998	1.663328
Ag 338.289 {100}	05/10/2022 09:24:21	05/09/2022 09:24:19	Linear	1/Var	53.689454	4.912444	0.000000	1.000000	0.999986	7.012702	1.027826	3.426088
Al 167.079 {501}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000005	0.000002	0.000000	1.000000	0.999976	0.000000	0.608026	2.026754
Al 309.271 {109}	05/10/2022 09:24:21	05/09/2022 09:16:56	Linear	1/Conc	0.000278	0.000001	0.000000	1.000000	0.999925	0.000001	21.814928	72.716427
Al 396.152 { 85}	05/10/2022 09:24:21	05/09/2022 09:16:56	Linear	1/Var	0.000023	0.000001	0.000000	1.000000	0.999958	0.000064	13.209600	44.032000
As 193.759 {474}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000010	0.000001	0.000000	1.000000	0.999788	0.000000	4.202968	14.009892
As 197.262 {471}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000004	0.000000	0.000000	1.000000	0.999950	0.000000	5.989099	19.963662
Ba 233.527 {445}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000002	0.000007	0.000000	1.000000	0.999766	0.000001	0.315022	1.050075
Ba 455.403 { 74}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	0.000249	0.000023	0.000000	1.000000	0.999880	0.000001	0.564814	1.882714
Ba 493.409 { 68}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Var	0.015858	0.000040	0.000000	1.000000	0.999772	0.000729	1.366082	4.553608
Be 234.861 {144}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	-0.000006	0.000007	0.000000	1.000000	0.999533	0.000000	0.405033	1.350110
Be 313.042 {108}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000018	0.000069	0.000000	1.000000	0.999935	0.000001	0.016140	0.053800
Be 313.107 {108}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000007	0.000028	0.000000	1.000000	0.999846	0.000000	0.315048	1.050161
Ca 184.006 {483}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Conc	-0.000039	0.000002	0.000000	1.000000	0.999980	0.000005	1.023422	3.411406
Ca 315.887 {107}	05/10/2022 09:24:21	05/09/2022 09:16:56	Linear	1/Var	0.000091	0.000001	0.000000	1.000000	0.999933	0.000066	8.561413	28.538044
Ca 317.933 {106}	05/10/2022 09:24:21	05/09/2022 09:16:56	Linear	1/Conc	0.002474	0.000001	0.000000	1.000000	0.999656	0.000056	4.207076	14.023585
Ca 393.366 { 86}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	-0.000015	0.000164	0.000000	1.000000	0.999663	0.000046	0.081542	0.271808
Ca 396.847 { 85}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000001	0.000071	0.000000	1.000000	0.999922	0.000042	0.171350	0.571167
Cd 226.502 {449}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	-0.000002	0.000008	0.000000	1.000000	0.704232	0.000007	0.446740	1.489134
Cd 228.802 {448}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000001	0.000003	0.000000	1.000000	0.999910	0.000000	0.559670	1.865565
Co 228.616 {447}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000010	0.000016	0.000000	1.000000	0.999880	0.000001	0.265048	0.883493
Co 238.892 {141}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	0.000001	0.000002	0.000000	1.000000	0.999956	0.000001	0.397661	1.325536
Cr 205.560 {464}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Var	-0.000003	0.000012	0.000000	1.000000	0.999777	0.000009	0.235704	0.785681
Cr 267.716 {126}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000003	0.000003	0.000000	1.000000	0.999990	0.000000	0.429477	1.431589
Cu 223.008 {451}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	0.000005	0.000003	0.000000	1.000000	0.999785	0.000001	1.233140	4.110467
Cu 324.754 {104}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Conc	0.000186	0.000002	0.000000	1.000000	0.999530	0.000010	4.045637	13.485456
Cu 327.396 {103}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Conc	0.000054	0.000002	0.000000	1.000000	0.999409	0.000001	7.806843	26.022811
Fe 234.349 {144}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Var	0.000011	0.000000	0.000000	1.000000	0.999679	0.000005	0.891672	2.972240
Fe 239.562 {140}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Conc	0.000008	0.000001	0.000000	1.000000	0.999417	0.000047	5.399645	17.998815
Fe 259.940 {129}	05/10/2022 09:24:21	05/09/2022 09:16:57	Curvili	1/Var	0.000003	0.000002	0.000000	1.000000	0.999797	0.000032	2.618579	8.728598
Mg 202.582 {466}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Var	-0.000007	0.000001	0.000000	1.000000	0.998925	0.000055	3.527247	11.757490
Mg 279.079 {121}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999945	0.000001	38.747087	129.15695
Mg 280.270 {120}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000053	0.000039	0.000000	1.000000	0.999420	0.000063	0.017302	0.057673
Mn 257.610 {131}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	-0.000002	0.000009	0.000000	1.000000	0.999873	0.000001	0.061677	0.205591
Mn 259.373 {130}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Conc	0.000002	0.000010	0.000000	1.000000	0.999724	0.000107	0.582115	1.940382
Mo 202.030 {466}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000004	0.000004	0.000000	1.000000	0.999892	0.000001	0.510949	1.703163
Mo 204.598 {464}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000001	0.000003	0.000000	1.000000	0.999882	0.000000	1.025727	3.419090
Ni 221.647 {452}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	-0.000006	0.000011	0.000000	1.000000	0.999866	0.000009	0.425359	1.417864
Ni 231.604 {445}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	-0.000002	0.000010	0.000000	1.000000	0.999837	0.000001	0.458507	1.528355
Pb 216.999 {455}	05/10/2022 09:24:21	05/09/2022 08:53:24	Curvili	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999970	0.000000	7.299745	24.332482
Pb 220.353 {153}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999818	0.000001	1.916183	6.387276
Pb 220.353 {453}	05/10/2022 09:24:21	05/09/2022 08:38:15	Linear	1/Conc	0.000017	0.000003	0.000000	1.000000	0.999598	0.000000	1.747476	5.824919
Sb 206.833 {463}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Var	-0.000001	0.000001	0.000000	1.000000	0.999835	0.000008	2.768049	9.226829
Sb 217.581 {455}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000012	0.000001	0.000000	1.000000	0.999908	0.000000	3.302099	11.006997

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 309.271 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 234.861 {144}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 313.107 {108}	OK.	1.000000	0.000000	1	0
	Ca 184.006 {483}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {448}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0

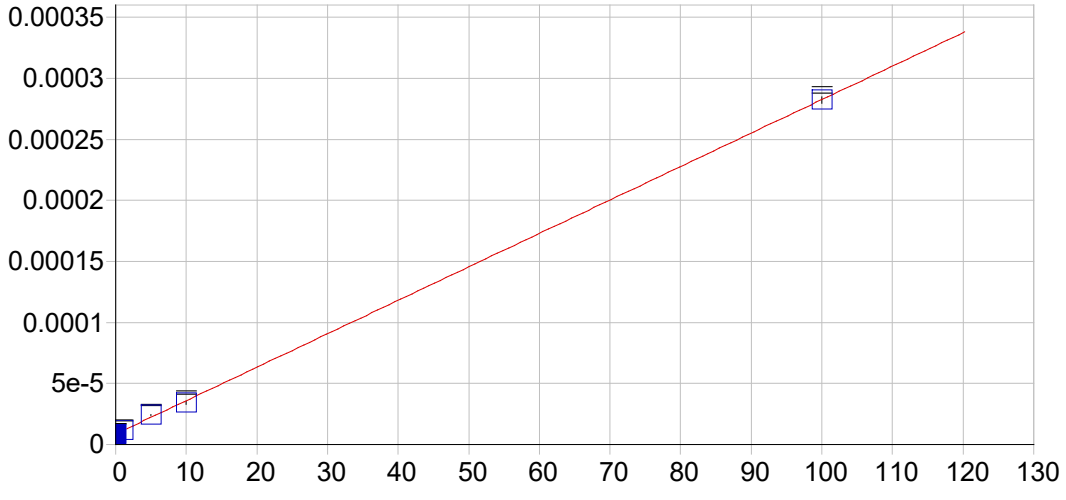
	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
	Se 196.090 {472}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000001	0.000001	0.000000	1.000000	0.999897	0.000000	3.546972	11.823242
	Se 206.279 {463}	05/10/2022 09:24:21	05/09/2022 08:45:27	Curvili	1/Conc	0.000001	0.000000	-0.000000	1.000000	0.999957	0.000000	17.995433	59.984775
	Tl 190.856 {476}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000004	0.000002	0.000000	1.000000	0.999700	0.000001	1.780647	5.935491
	Tl 190.856 {477}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Var	0.000003	0.000001	0.000000	1.000000	0.999500	0.000006	2.505970	8.353235
	V 290.882 {116}	05/10/2022 09:24:21	05/09/2022 08:45:27	Curvili	1/Var	0.000005	0.000001	-0.000000	1.000000	0.999999	0.000001	8.073617	26.912058
	V 292.402 {115}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000015	0.000006	0.000000	1.000000	0.999996	0.000000	0.374660	1.248866
	Zn 206.200 {463}	05/10/2022 09:24:21	05/09/2022 08:53:25	Linear	1/Var	0.000006	0.000021	0.000000	1.000000	0.999265	0.000036	0.152862	0.509541
	Zn 213.856 {457}	05/10/2022 09:24:21	05/09/2022 08:38:16	Linear	1/Conc	0.000001	0.000031	0.000000	1.000000	0.999979	0.000001	0.116684	0.388947
	Y 224.306 {450}*	05/10/2022 09:24:21	05/09/2022 07:40:15	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 324.228 {104}*	05/10/2022 09:24:21	05/09/2022 07:40:15	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 371.030 { 91}*	05/10/2022 09:24:21	05/09/2022 07:40:15	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Na 330.237 {102}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Conc	0.000003	0.000006	0.000000	1.000000	0.999997	0.000000	1.938494	6.461647
	Na 588.995 { 57}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Conc	3014.6983	1026.0369	0.000000	1.000000	0.999751	10.782376	0.011862	0.039538
	Na 589.592 { 57}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Conc	48.399591	527.45730	0.000000	1.000000	0.999977	1.689053	0.014526	0.048419
	Si 212.412 {458}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Var	0.000017	0.000002	0.000000	1.000000	0.999170	0.000081	1.445412	4.818039
	Si 251.611 {134}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Conc	0.000006	0.000001	0.000000	1.000000	0.999809	0.000005	10.348099	34.493665
	Ti 323.452 {104}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000275	0.000005	0.000000	1.000000	0.999609	0.000001	2.281533	7.605111
	Sr 407.771 { 83}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000128	0.000064	0.000000	1.000000	0.999897	0.000004	0.242595	0.808650
	Sr 421.552 { 80}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000075	0.000083	0.000000	1.000000	0.999949	0.000003	0.197430	0.658101
	Sn 189.989 {477}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Var	0.000009	0.000004	0.000000	1.000000	0.999704	0.000011	0.633440	2.111468
	Sn 189.989 {478}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Var	0.000001	0.000001	0.000000	1.000000	0.999695	0.000005	1.604221	5.347403
	B 249.678 {135}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000012	0.000001	0.000000	1.000000	0.999995	0.000000	1.100258	3.667527
	B 249.773 {135}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000008	0.000002	0.000000	1.000000	0.999999	0.000000	0.609186	2.030621
	Li 610.353 { 55}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	-0.001673	0.000001	0.000000	1.000000	0.887876	0.000008	49.685459	165.61819
	Li 670.776 { 50}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	-13.747537	2.889610	0.000000	1.000000	0.999871	0.630661	2.402288	8.007626
	K 766.490 { 44}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Conc	-25.225853	194.66872	0.000000	1.000000	0.999989	0.438948	0.040705	0.135685
	K 769.896 { 44}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Var	4.004528	75.355169	0.000000	1.000000	0.999742	37.298057	0.085581	0.285271
	P 177.495 {489}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	-0.000006	0.000001	0.000000	1.000000	0.999961	0.000001	2.251268	7.504227
	S 182.034 {485}	05/10/2022 09:24:21	05/09/2022 09:16:57	Curvili	1/Conc	0.000019	0.000000	0.000000	1.000000	0.999998	0.000001	3.717848	12.392827
	Hg 184.950 {482}	05/10/2022 09:24:21	05/09/2022 08:38:16	Linear	1/Conc	0.000008	0.000003	0.000000	1.000000	1.000000	0.000000	0.592781	1.975937
	Ce 404.076 { 83}	05/10/2022 09:24:21	05/09/2022 08:38:17	Linear	1/Conc	0.000064	0.000000	0.000000	1.000000	1.000000	0.000000	33.453712	111.51237

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	Warnin	1.000000	0.000000	1	0
	Na 330.237 {102}	OK.	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 212.412 {458}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {478}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 610.353 { 55}	OK.	1.000000	0.000000	1	0
	Li 670.776 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 177.495 {489}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	1	Ce	-0.000548	0.000000	No
Ag 338.289 {100}	☒	2	Fe	0.000030	0.000000	No
			Na	0.090000	0.000000	No
Al 167.079 {501}	☒	None				
Al 309.271 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001356	0.000000	No
As 197.262 {471}	☒	1	Al	0.000027	0.000000	No
Ba 233.527 {445}	☒	1	Fe	-0.000007	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000006	0.000000	No
Ba 493.409 { 68}	☒	1	Ce	0.000000	0.000000	No
Be 234.861 {144}	☒	None				
Be 313.042 {108}	☒	1	Fe	0.000004	0.000000	No
Be 313.107 {108}	☒	1	Fe	0.000002	0.000000	No
Ca 184.006 {483}	☒	None				
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	None				
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000048	0.000000	No
Cd 228.802 {448}	☒	1	Fe	-0.000007	0.000000	No
Co 228.616 {447}	☒	3	Fe	-0.000001	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.002165	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 223.008 {451}	☒	3	Fe	-0.000018	0.000000	No
			Mo	0.008000	0.000000	No
			Ni	0.006000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	0.000308	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000009	0.000000	No
			Mo	-0.000319	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000031	0.000000	No
Mn 259.373 {130}	☒	None				

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mo 202.030 {466}	☒	1	Fe	-0.000014	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000021	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	5	Fe	-0.000074	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.001918	0.000000	No
Pb 216.999 {455}	☒	3	Al	0.001866	0.000000	No
			Na	0.000000	0.000000	No
			Fe	0.002996	0.000000	No
Pb 220.353 {153}	☒	1	Fe	0.000002	0.000000	No
Pb 220.353 {453}	☒	2	Si	0.000000	0.000000	No
			Al	-0.000042	0.000000	No
Sb 206.833 {463}	☒	2	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000018	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000115	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	1	Fe	-0.000035	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000083	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	6	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No
			Al	0.000000	0.000000	No
			Ti	0.000420	0.000000	No
			Mo	-0.000481	0.000000	No
			Cu	-0.003767	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	5	Fe	0.000115	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mo	0.000034	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Na 330.237 {102}	☒	1	Sr	-0.002100	0.000000	No
Na 588.995 { 57}	☒	1	Fe	0.000000	0.000000	No
Na 589.592 { 57}	☒	1	Fe	0.000001	0.000000	No
Si 212.412 {458}	☒	1	Fe	-0.000007	0.000000	No
Si 251.611 {134}	☒	1	Fe	-0.000177	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ti 323.452 {104}	☒	2	Fe	0.000034	0.000000	No
			Ce	0.000123	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000036	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000012	0.000000	No
Sn 189.989 {478}	☒	1	Fe	-0.000008	0.000000	No
B 249.678 {135}	☒	1	Fe	0.000018	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000401	0.000000	No
Li 610.353 { 55}	☒	1	Fe	-0.000109	0.000000	No
Li 670.776 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000003	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000001	0.000000	No
P 177.495 {489}	☒	None				
S 182.034 {485}	☒	1	Mn	0.002145	0.000000	No
Hg 184.950 {482}	☒	1	Fe	-0.000000	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

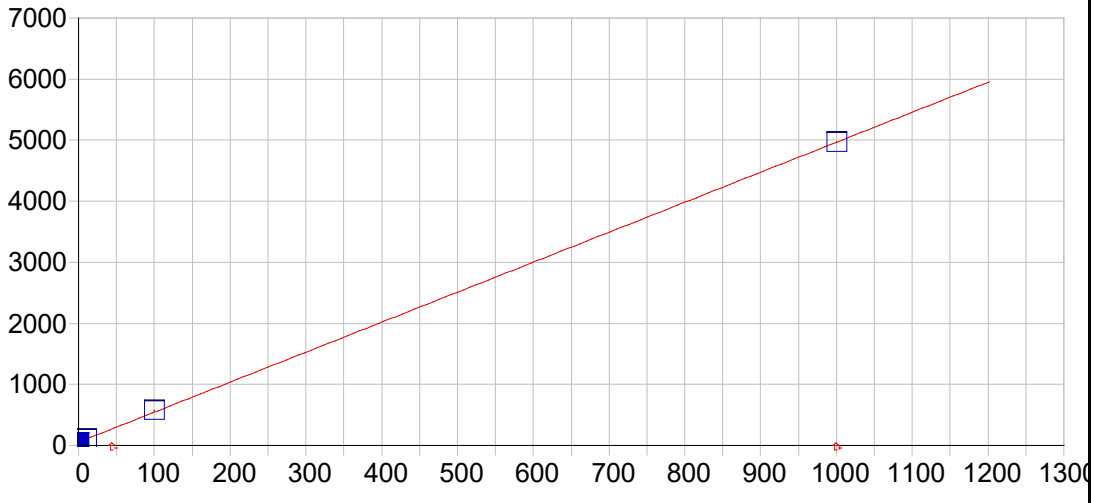


Ag 328.068 {103}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999312	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.498998		
Predicted MQL:	1.663328		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00021	-.000	.000	.00001	.000	1
CalStd8=100	100.00	99.885	-.115	-.115	.00028	.000	1
CalStd4=5	5.0000	5.6699	.670	13.4	.00002	.000	1
CalStd5=10	10.000	9.3005	-.700	-7.00	.00003	.000	1
CalStd3=1	1.0000	1.1449	.145	14.5	.00001	.000	1

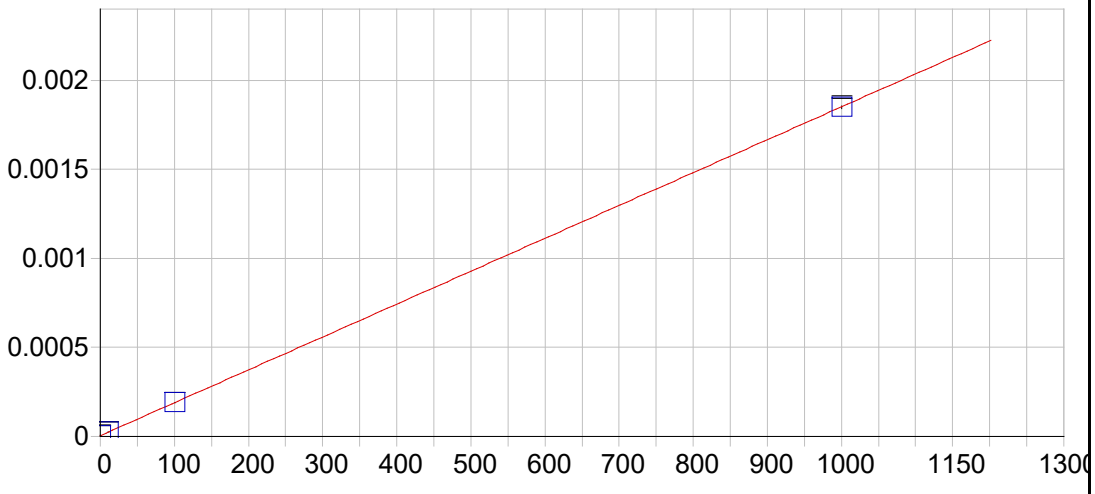


Ag 338.289 {100}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	53.689454	Re-Slope:	1.000000
A1 (Gain):	4.912444	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	7.012702		
Predicted MDL:	1.027826		
Predicted MQL:	3.426088		

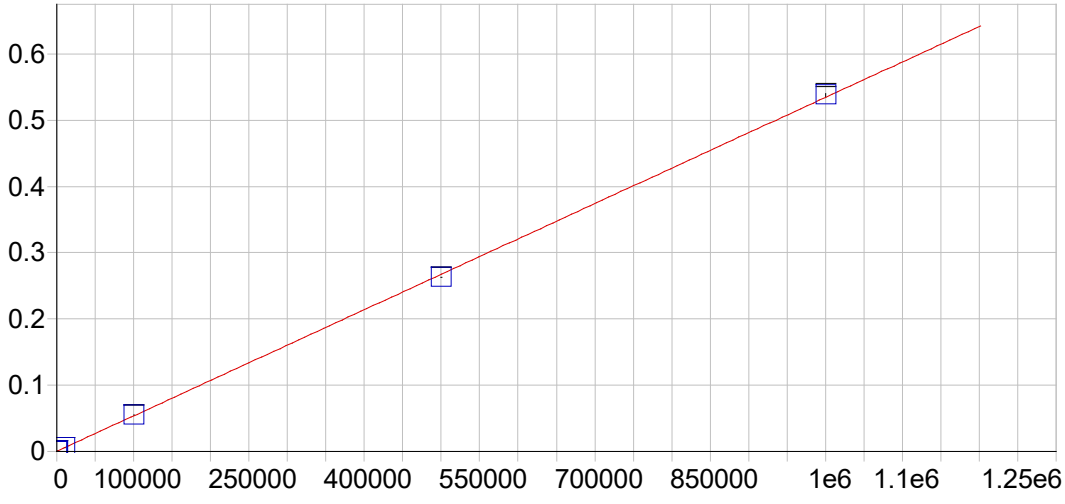
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.17463	-.175	.000	52.832	.977	1
Ag 1000	1000.0	999.51	-.487	-.049	4963.7	4.84	1
CalStd5=10	10.000	9.8563	-.144	-1.44	102.11	5.37	1
CalStd8=100	100.00	105.47	5.47	5.47	571.82	5.12	1



Al 167.079 {501}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999976		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.608026				
Predicted MQL:	2.026754				

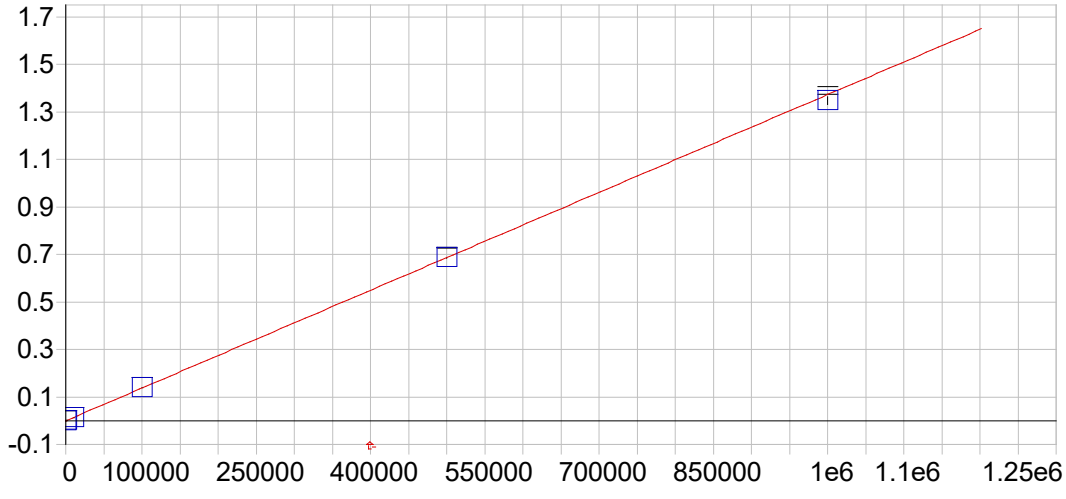
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00074	-.001	.000	.00000	.000	1
CalStd9=100	1000.0	998.92	-1.08	-.108	.00185	.000	1
CalStd5=10	10.000	10.718	.718	7.18	.00002	.000	1
CalStd8=100	100.00	100.36	.364	.364	.00019	.000	1



Al 309.271 {109}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000278		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999925		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	21.814928				
Predicted MQL:	72.716427				

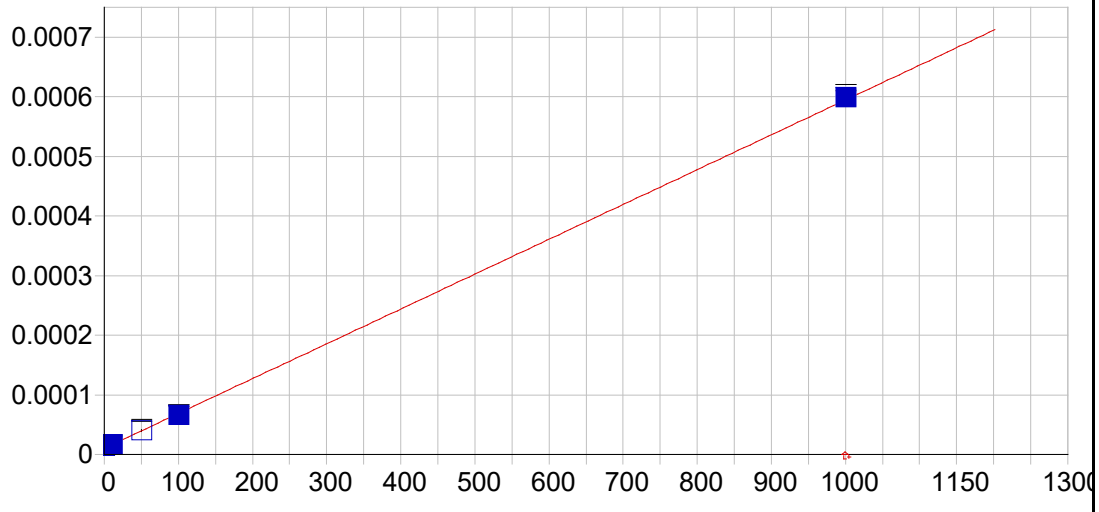
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00683	.007	.000	.00028	.000	1
CalStd9=100	1000.0	1011.9	11.9	1.19	.00082	.000	1
CalStd5=10	10.000	1.1063	-8.89	-88.9	.00028	.000	1
CalStd8=100	100.00	121.96	22.0	22.0	.00034	.000	1
CalStd10=10	10000.	9664.2	-336.	-3.36	.00544	.000	1
CalStd13=10	100000.	101860.	1860.	1.86	.05470	.000	1
CalStd14=50	500000.	491710.	-8290.	-1.66	.26297	.000	1
CalibStd15=	1000000.	1006700.	6730.	.673	.53812	.002	1



Al 396.152 { 85}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000023		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999958		Status:	OK.	
Std Error of Est:	0.000064				
Predicted MDL:	13.209600				
Predicted MQL:	44.032000				

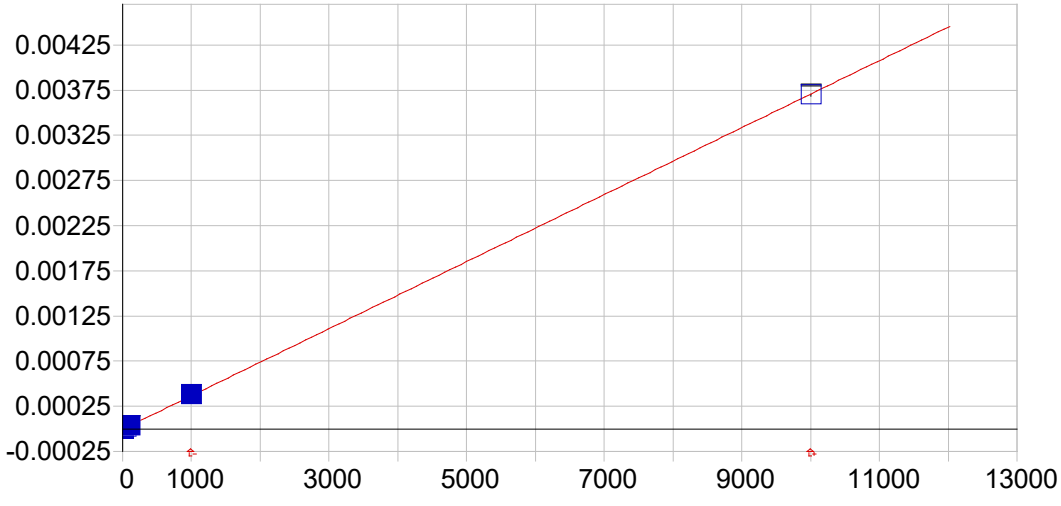
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-12.467	-12.5	.000	.00001	.000	1
CalStd14=50	500000.	499640.	-364.	-.073	.68587	.001	1
CalStd13=10	100000.	101480.	1480.	1.48	.13932	.001	1
CalStd10=10	10000.	9899.2	-101.	-1.01	.01361	.000	1
CalStd9=100	1000.0	1035.2	35.2	3.52	.00144	.000	1
CalibStd15=	1000000.	981570.	-18400.	-1.84	1.3474	.016	1



As 193.759 {474}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000010		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999788		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	4.202968				
Predicted MQL:	14.009892				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00094	.001	.000	.00001	.000	1
CalStd9=100	1000.0	1006.2	6.21	.621	.00060	.000	1
CalStd7=50	50.000	50.760	.760	1.52	.00004	.000	1
CalStd5=10	10.000	9.4865	-.513	-5.13	.00002	.000	1
CalStd8=100	100.00	93.549	-6.45	-6.45	.00007	.000	1

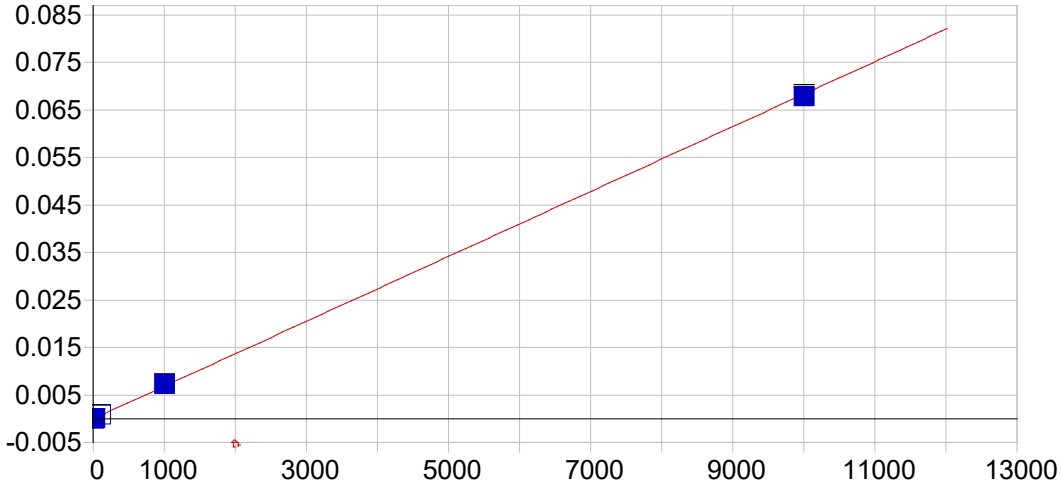


As 197.262 {471}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	5.989099		
Predicted MQL:	19.963662		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00011	-.000	.000	-.00000	.000	1
CalStd9=100	1000.0	1026.7	26.7	2.67	.00038	.000	1
CalStd7=50	50.000	53.306	3.31	6.61	.00002	.000	1
CalStd5=10	10.000	9.1066	-.893	-8.93	-.00000	.000	1
CalStd8=100	100.00	101.02	1.02	1.02	.00003	.000	1
CalStd10=10	10000.	9969.8	-30.2	-.302	.00369	.000	1

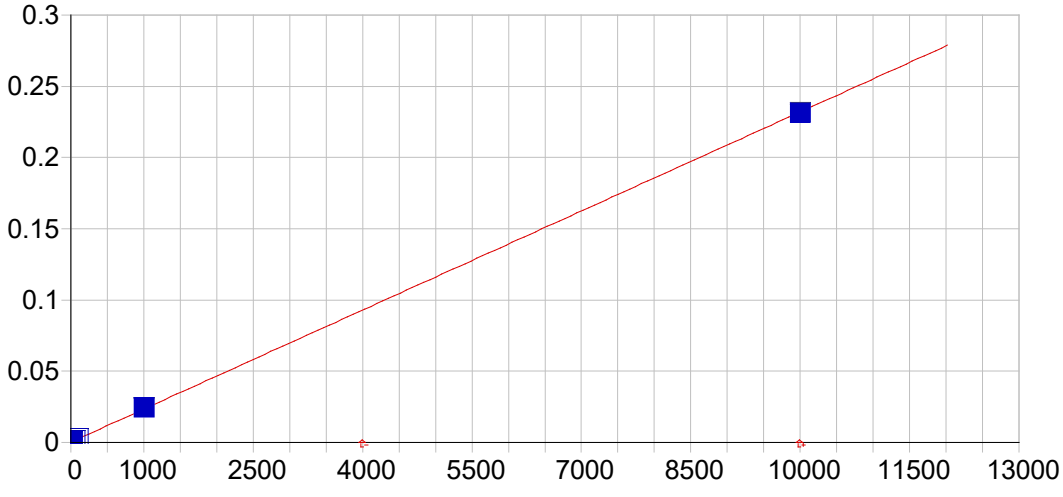


Ba 233.527 {445}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999766	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.315022		
Predicted MQL:	1.050075		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00075	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	11.144	1.14	11.4	.00007	.000	1
CalStd6=20	20.000	21.644	1.64	8.22	.00015	.000	1
CalStd8=100	100.00	105.09	5.09	5.09	.00072	.000	1
CalStd4=5	5.0000	5.7052	.705	14.1	.00004	.000	1
CalStd9=100	1000.0	1063.0	63.0	6.30	.00726	.000	1
CalStd3=1	1.0000	1.3094	.309	30.9	.00001	.000	1
CalStd10=10	10000.	9928.1	-71.9	-.719	.06785	.000	1

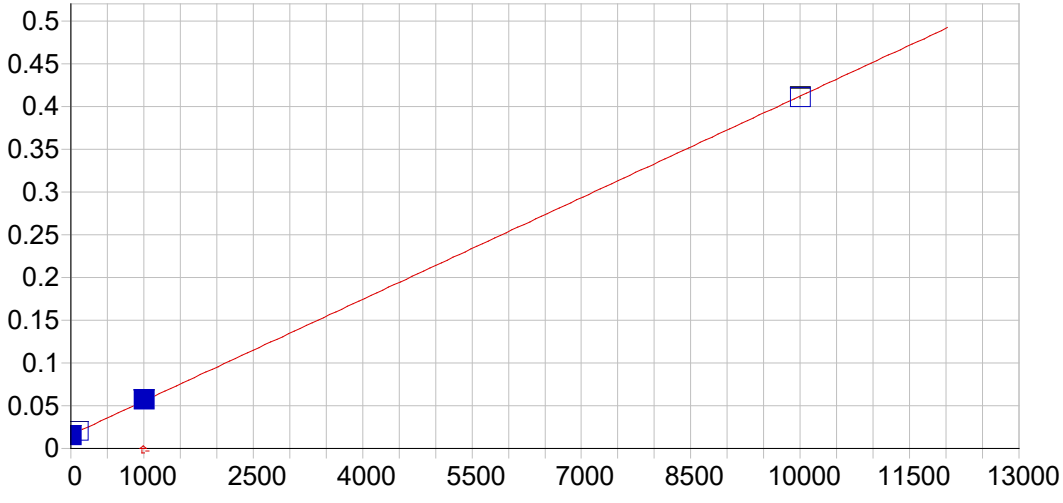


Ba 455.403 { 74}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000249	Re-Slope:	1.000000
A1 (Gain):	0.000023	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.564814		
Predicted MQL:	1.882714		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00094	-.001	.000	.00025	.000	1
CalStd7=50	50.000	53.316	3.32	6.63	.00148	.000	1
CalStd5=10	10.000	11.373	1.37	13.7	.00051	.000	1
CalStd6=20	20.000	21.729	1.73	8.65	.00075	.000	1
CalStd8=100	100.00	104.21	4.21	4.21	.00266	.000	1
CalStd4=5	5.0000	6.1261	1.13	22.5	.00039	.000	1
CalStd9=100	1000.0	1036.4	36.4	3.64	.02427	.000	1
CalStd3=1	1.0000	1.3559	.356	35.6	.00028	.000	1
CalStd10=10	10000.	9951.5	-48.5	-.485	.23086	.001	1

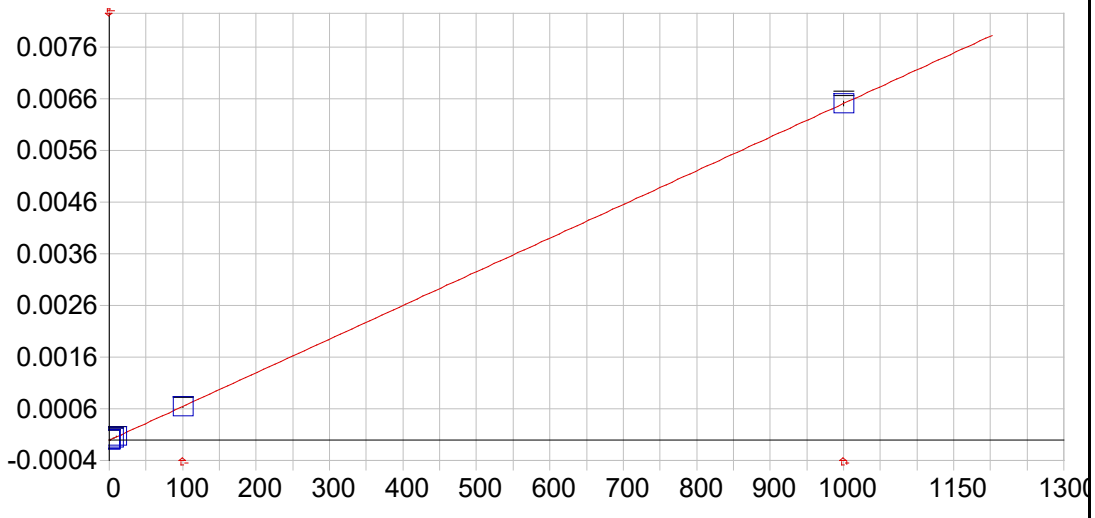


Ba 493.409 { 68}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.015858	Re-Slope:	1.000000
A1 (Gain):	0.000040	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999772	Status:	OK.
Std Error of Est:	0.000729		
Predicted MDL:	1.366082		
Predicted MQL:	4.553608		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-23.883	-23.9	.000	.01491	.000	1
CalStd9=100	1000.0	1029.4	29.4	2.94	.05665	.000	1
CalStd8=100	100.00	104.92	4.92	4.92	.02002	.000	1
CalStd10=10	10000.	9957.6	-42.4	-.424	.41043	.001	1

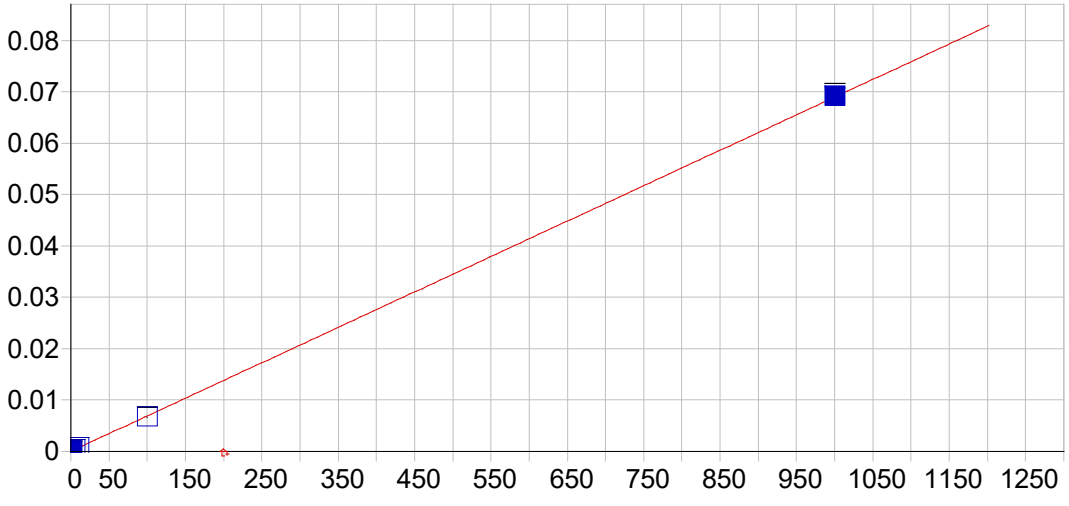


Be 234.861 {144}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999533	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.405033		
Predicted MQL:	1.350110		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00078	-.001	.000	-.00001	.000	1
CalStd5=10	10.000	11.162	1.16	11.6	.00007	.000	1
CalStd8=100	100.00	97.949	-2.05	-2.05	.00063	.000	1
CalStd2=0.5	.50000	.78721	.287	57.4	-.00000	.000	1
CalStd4=5	5.0000	5.3645	.364	7.29	.00003	.000	1
CalStd9=100	1000.0	999.42	-.583	-.058	.00650	.000	1
CalStd3=1	1.0000	1.8204	.820	82.0	.00001	.000	1

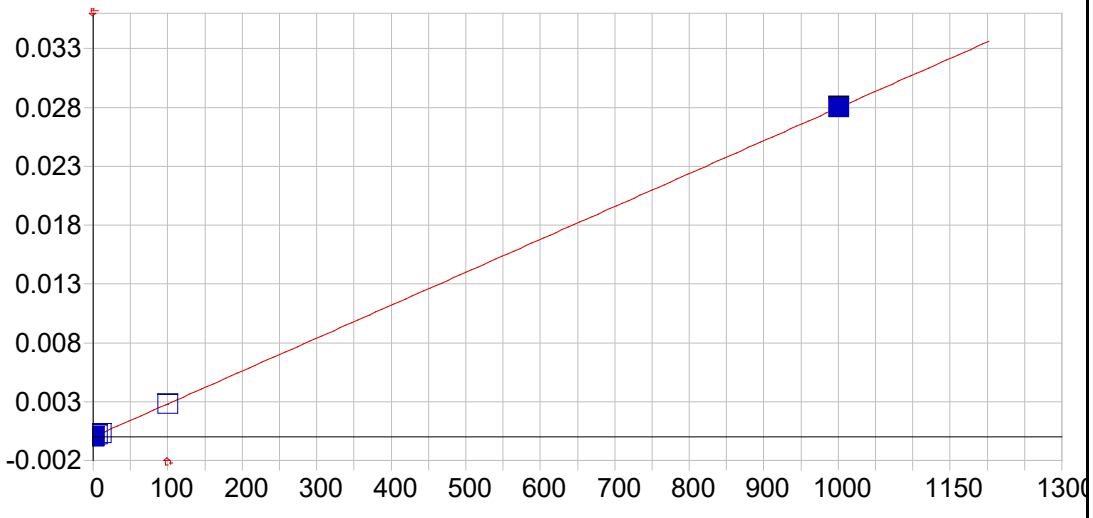


Be 313.042 {108}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000018	Re-Slope:	1.000000
A1 (Gain):	0.000069	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999935	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.016140		
Predicted MQL:	0.053800		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00004	-.000	.000	.00002	.000	1
CalStd5=10	10.000	9.9166	-.083	-.834	.00070	.000	1
CalStd8=100	100.00	96.549	-3.45	-3.45	.00667	.000	1
CalStd2=0.5	.50000	.53730	.037	7.46	.00005	.000	1
CalStd4=5	5.0000	5.2376	.238	4.75	.00038	.000	1
CalStd9=100	1000.0	1003.3	3.26	.326	.06919	.000	1
CalStd3=1	1.0000	.99661	-.003	-.339	.00009	.000	1

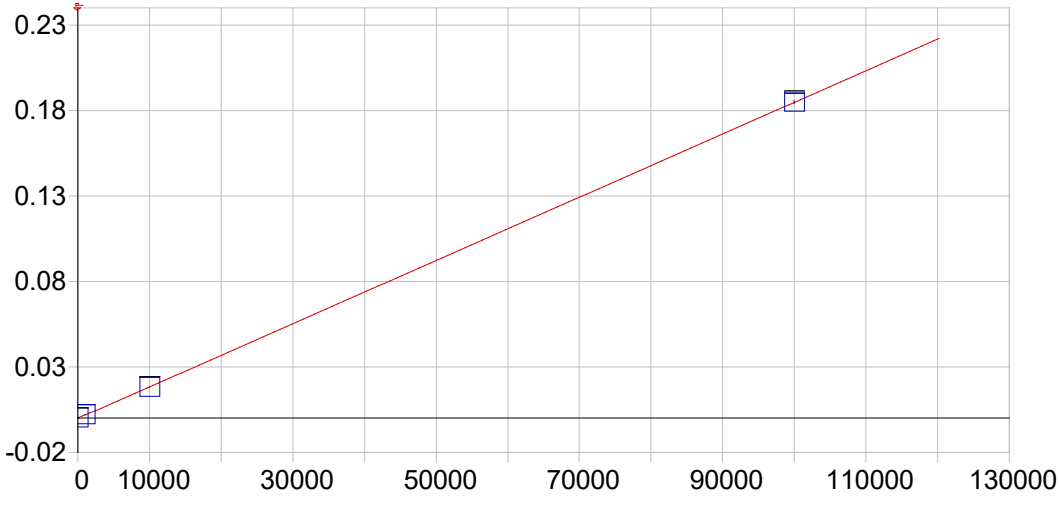


Be 313.107 {108}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000028	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999846	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.315048		
Predicted MQL:	1.050161		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00049	-.000	.000	.00001	.000	1
CalStd5=10	10.000	10.254	.254	2.54	.00029	.000	1
CalStd2=0.5	.50000	.81139	.311	62.3	.00003	.000	1
CalStd4=5	5.0000	5.5155	.516	10.3	.00016	.000	1
CalStd9=100	1000.0	1000.4	.391	.039	.02798	.000	1
CalStd3=1	1.0000	1.2440	.244	24.4	.00004	.000	1
CalStd8=100	100.00	98.285	-1.72	-1.72	.00275	.000	1

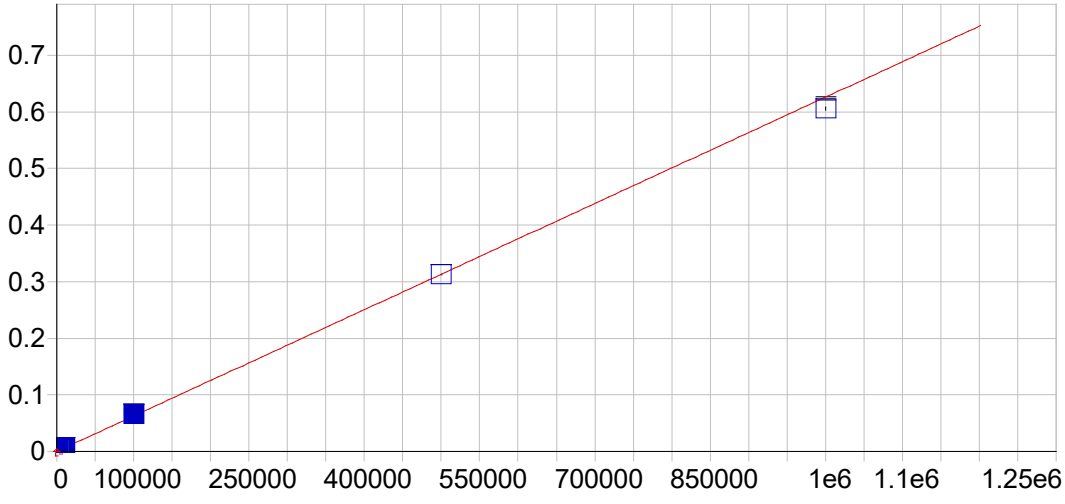


Ca 184.006 {483}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000039	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999980	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	1.023422		
Predicted MQL:	3.411406		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.04496	-.045	.000	-.00004	.000	1
CalStd10=10	10000.	9888.4	-112.	-1.12	.01823	.000	1
CalStd13=10	100000.	100060.	56.0	.056	.18481	.001	1
CalStd9=100	1000.0	1055.6	55.6	5.56	.00191	.000	1

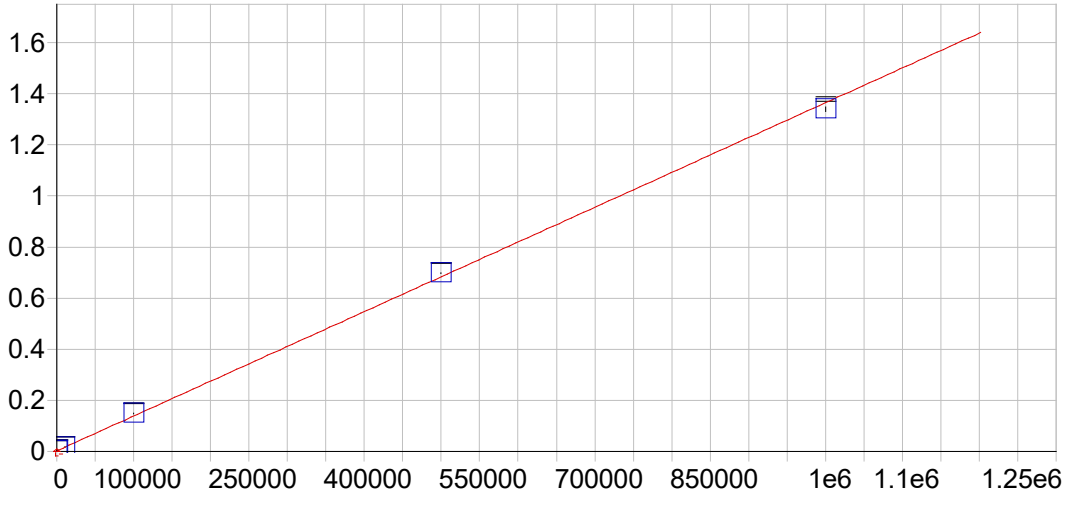


Ca 315.887 {107}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000091	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999933	Status:	OK.
Std Error of Est:	0.000066		
Predicted MDL:	8.561413		
Predicted MQL:	28.538044		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-14.926	-14.9	.000	.00008	.000	1
CalStd10=10	10000.	10119.	119.	1.19	.00642	.000	1
CalStd13=10	100000.	104560.	4560.	4.56	.06553	.000	1
CalStd14=50	500000.	499120.	-876.	-.175	.31245	.000	1
CalStd9=100	1000.0	1041.2	41.2	4.12	.00074	.000	1
CalibStd15=	1000000.	967640.	-32400.	-3.24	.60566	.003	1

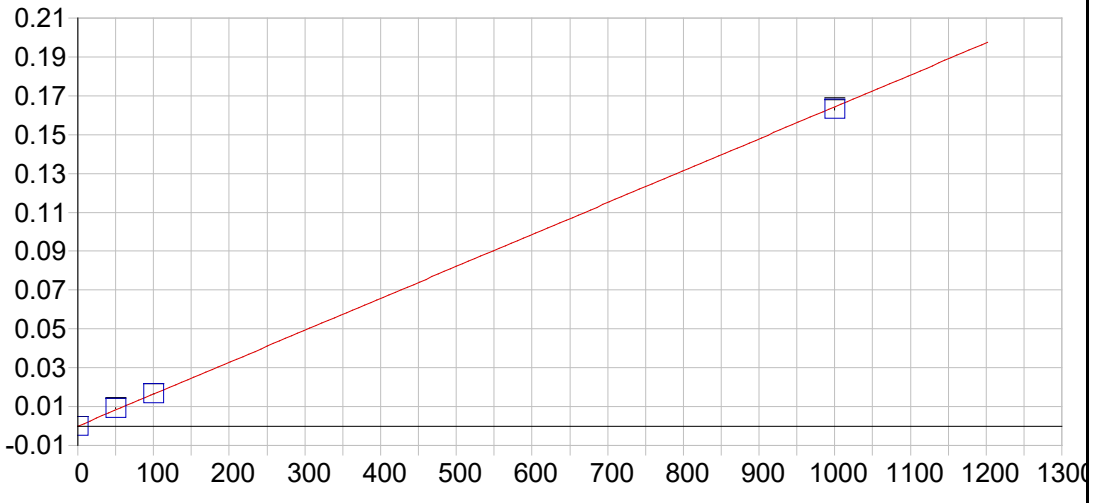


Ca 317.933 {106}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002474	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999656	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	4.207076		
Predicted MQL:	14.023585		

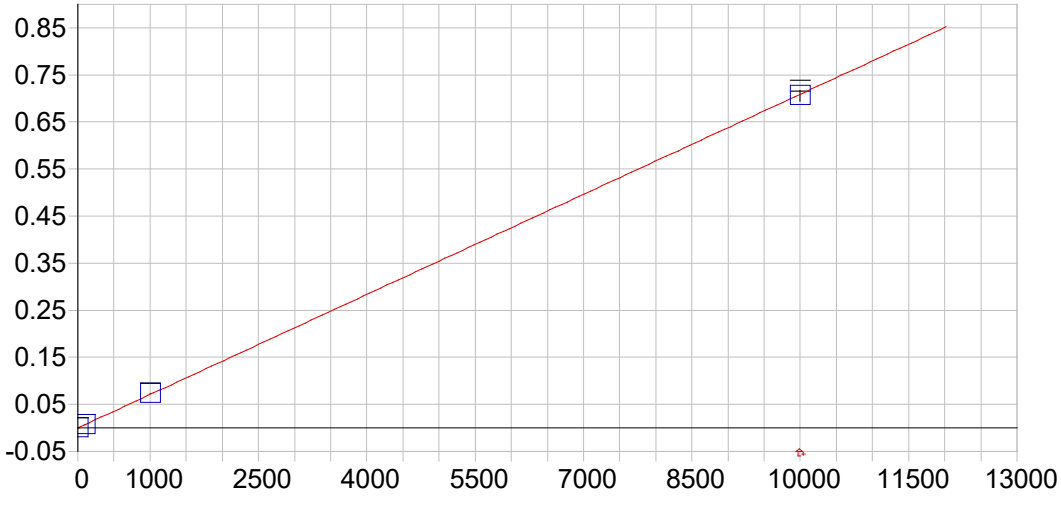
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.18475	-.185	.000	.00247	.000	1
CalStd10=10	10000.	10356.	356.	3.56	.01658	.000	1
CalStd13=10	100000.	107280.	7280.	7.28	.14859	.001	1
CalStd14=50	500000.	510620.	10600.	2.12	.69795	.001	1
CalStd9=100	1000.0	1073.4	73.4	7.34	.00394	.000	1
CalibStd15=	1000000.	981670.	-18300.	-1.83	1.3395	.010	1



Ca 393.366 { 86}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000015		Re-Slope:	1.000000	
A1 (Gain):	0.000164		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999663		Status:	OK.	
Std Error of Est:	0.000046				
Predicted MDL:	0.081542				
Predicted MQL:	0.271808				

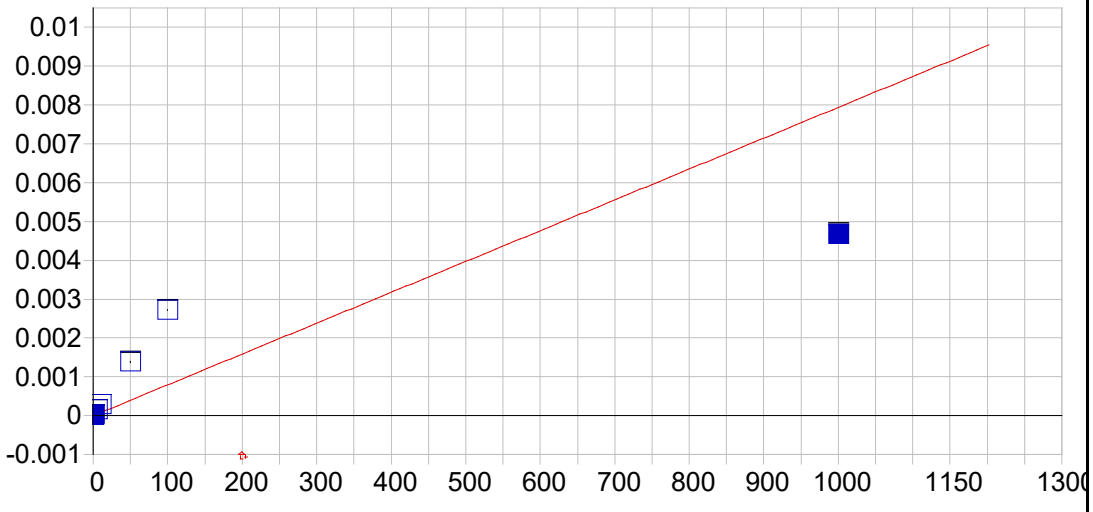
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00606	-.006	.000	-.00002	.000	1
CalStd9=100	1000.0	993.20	-6.80	-.680	.16316	.001	1
CalStd8=100	100.00	100.79	.794	.794	.01655	.000	1
CalStd7=50	50.000	56.006	6.01	12.0	.00919	.000	1



Ca 396.847 { 85}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000071		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999922		Status:	OK.	
Std Error of Est:	0.000042				
Predicted MDL:	0.171350				
Predicted MQL:	0.571167				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00895	-.009	.000	-.00000	.000	1
CalStd10=10	10000.	9959.1	-40.9	-.409	.70594	.012	1
CalStd8=100	100.00	105.85	5.85	5.85	.00750	.000	1
CalStd9=100	1000.0	1035.1	35.1	3.51	.07337	.000	1

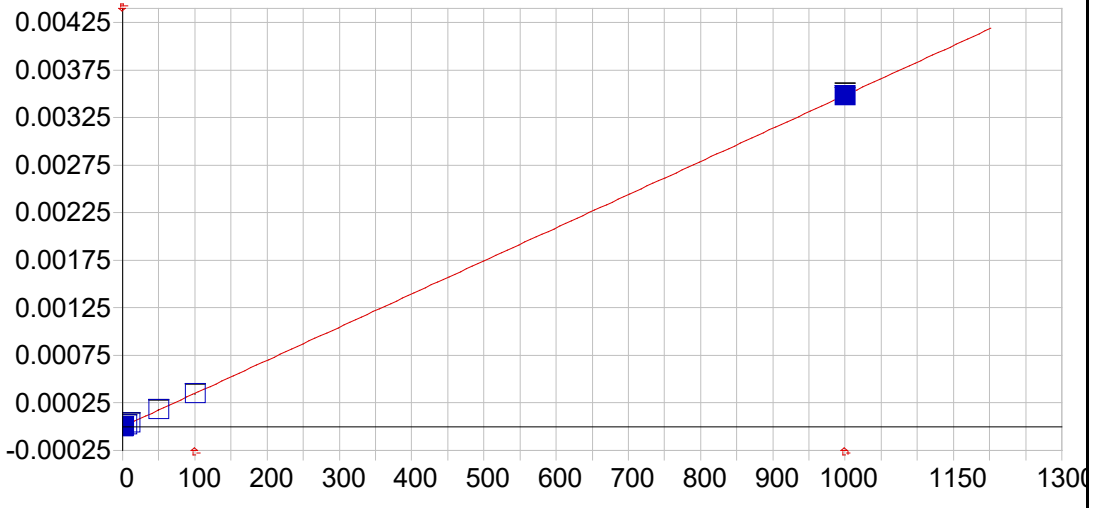


Cd 226.502 {449}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.704232	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.446740		
Predicted MQL:	1.489134		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00764	-.008	.000	-.00000	.000	1
CalStd3=1	1.0000	3.6622	2.66	266.	.00003	.000	1
CalStd2=0.5	.50000	1.9162	1.42	283.	.00001	.000	1
CalStd4=5	5.0000	18.497	13.5	270.	.00015	.000	1
CalStd5=10	10.000	35.649	25.6	256.	.00028	.000	1
CalStd9=100	1000.0	588.78	-411.	-41.1	.00467	.000	1
CalStd8=100	100.00	342.83	243.	243.	.00272	.000	1
CalStd7=50	50.000	175.19	125.	250.	.00139	.000	1

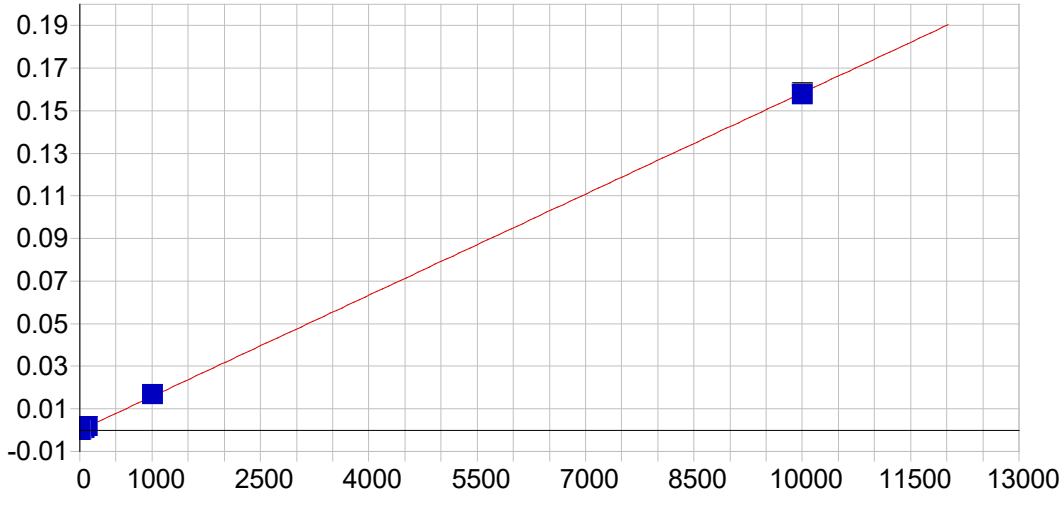


Cd 228.802 {448}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999910	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.559670		
Predicted MQL:	1.865565		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00023	-.000	.000	.00000	.000	1
CalStd3=1	1.0000	1.3069	.307	30.7	.00001	.000	1
CalStd2=0.5	.50000	.49554	-.004	-.892	.00000	.000	1
CalStd4=5	5.0000	5.6278	.628	12.6	.00002	.000	1
CalStd5=10	10.000	10.457	.457	4.57	.00004	.000	1
CalStd9=100	1000.0	999.00	-1.00	-.100	.00348	.000	1
CalStd8=100	100.00	99.075	-.925	-.925	.00035	.000	1
CalStd7=50	50.000	50.539	.539	1.08	.00018	.000	1

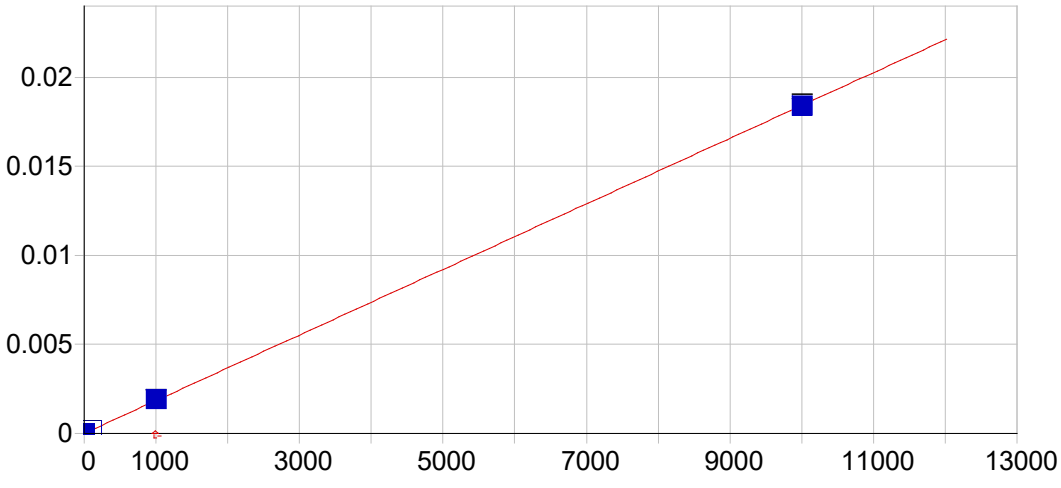


Co 228.616 {447}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000010	Re-Slope:	1.000000
A1 (Gain):	0.000016	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.265048		
Predicted MQL:	0.883493		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00046	-.000	.000	-.00001	.000	1
CalStd7=50	50.000	52.960	2.96	5.92	.00083	.000	1
CalStd5=10	10.000	10.789	.789	7.89	.00016	.000	1
CalStd4=5	5.0000	5.6185	.618	12.4	.00008	.000	1
CalStd8=100	100.00	103.85	3.85	3.85	.00164	.000	1
CalStd9=100	1000.0	1043.9	43.9	4.39	.01654	.000	1
CalStd3=1	1.0000	1.1213	.121	12.1	.00001	.000	1
CalStd10=10	10000.	9947.8	-52.2	-.522	.15771	.001	1

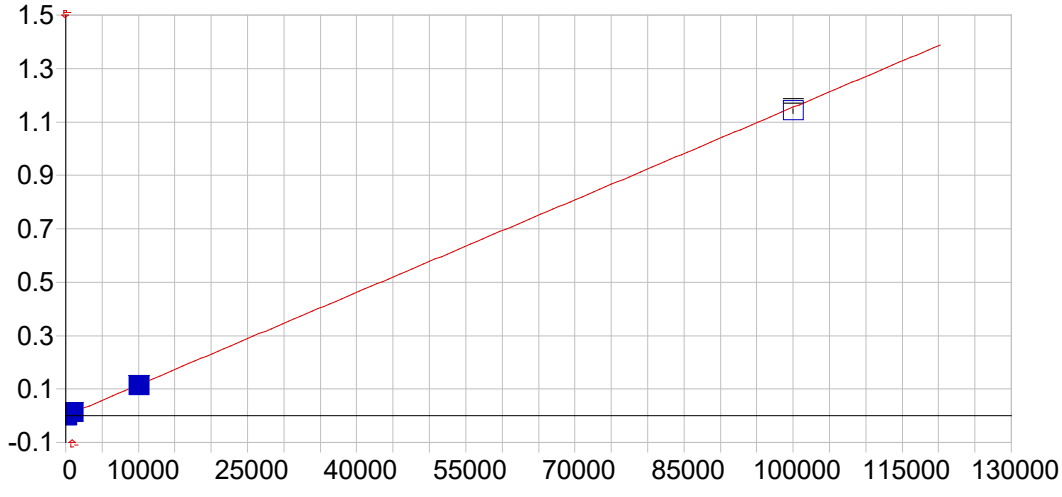


Co 238.892 {141}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999956	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.397661		
Predicted MQL:	1.325536		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00452	-.005	.000	.00000	.000	1
CalStd9=100	1000.0	1029.1	29.1	2.91	.00190	.000	1
CalStd10=10	10000.	9969.0	-31.0	-.310	.01836	.000	1
CalStd8=100	100.00	101.92	1.92	1.92	.00019	.000	1

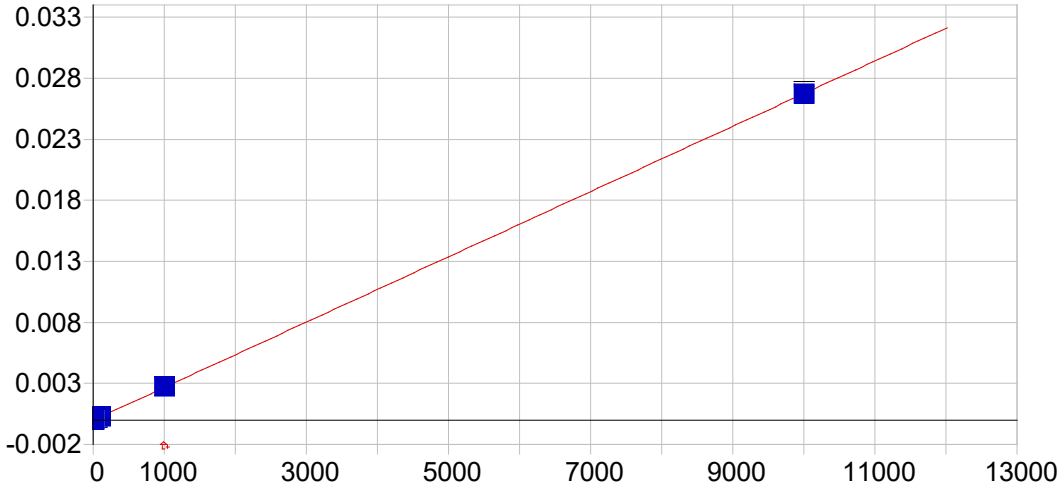


Cr 205.560 {464}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999777	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	0.235704		
Predicted MQL:	0.785681		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.27241	-.272	.000	-.00001	.000	1
CalStd5=10	10.000	10.332	.332	3.32	.00012	.000	1
CalStd7=50	50.000	51.373	1.37	2.75	.00059	.000	1
CalStd9=100	1000.0	1025.2	25.2	2.52	.01183	.000	1
CalStd8=100	100.00	101.06	1.06	1.06	.00116	.000	1
CalStd4=5	5.0000	5.3213	.321	6.43	.00006	.000	1
CalStd3=1	1.0000	.98723	-.013	-1.28	.00001	.000	1
CalStd10=10	10000.	9735.8	-264.	-2.64	.11241	.001	1
CalStd12=10	100000.	98804.	-1200.	-1.20	1.1409	.008	1

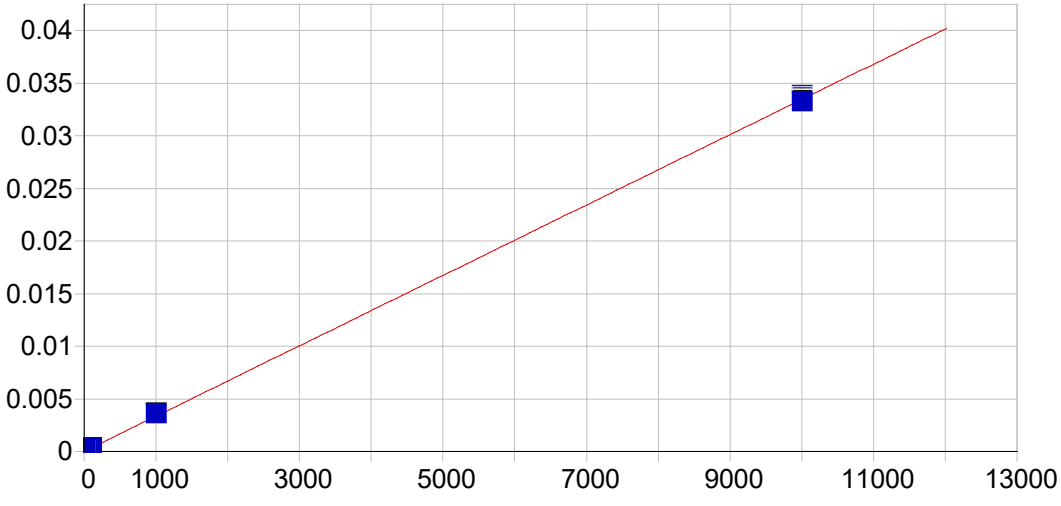


Cr 267.716 {126}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999990	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.429477		
Predicted MQL:	1.431589		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00082	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	10.173	.173	1.73	.00002	.000	1
CalStd7=50	50.000	51.051	1.05	2.10	.00013	.000	1
CalStd9=100	1000.0	1010.8	10.8	1.08	.00270	.000	1
CalStd8=100	100.00	100.16	.158	.158	.00026	.000	1
CalStd4=5	5.0000	5.5723	.572	11.4	.00001	.000	1
CalStd10=10	10000.	9987.3	-12.7	-.127	.02671	.000	1

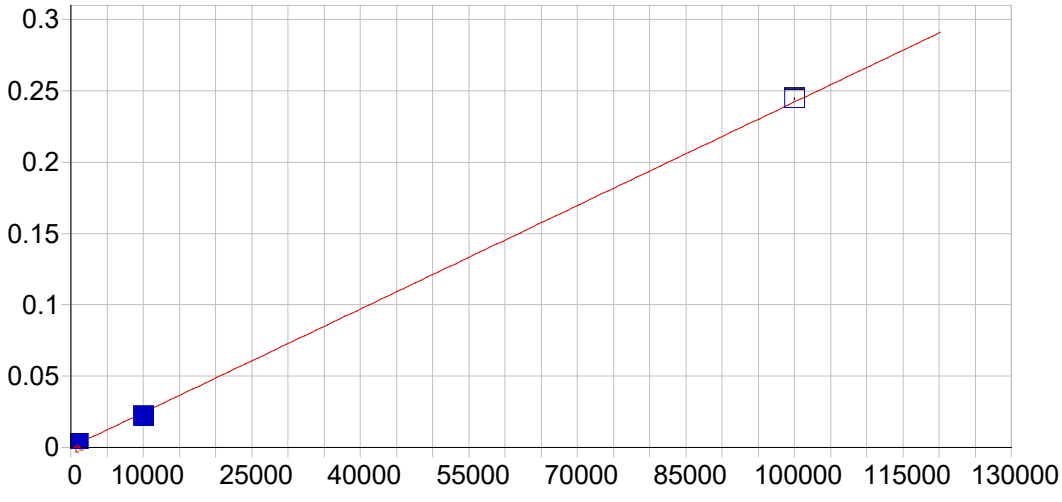


Cu 223.008 {451}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999785	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.233140		
Predicted MQL:	4.110467		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00237	-.002	.000	.00001	.000	1
CalStd9=100	1000.0	1062.0	62.0	6.20	.00360	.000	1
CalStd8=100	100.00	106.71	6.71	6.71	.00037	.000	1
CalStd5=10	10.000	11.149	1.15	11.5	.00004	.000	1
CalStd10=10	10000.	9930.1	-69.9	-.699	.03369	.000	1

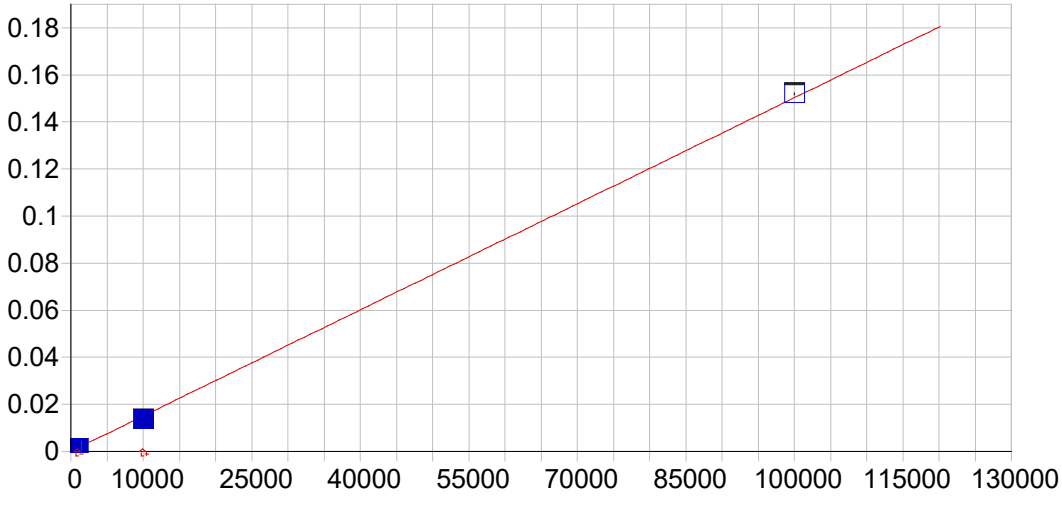


Cu 324.754 {104}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000186	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999530	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	4.045637		
Predicted MQL:	13.485456		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00359	.004	.000	.00019	.000	1
CalStd9=100	1000.0	955.73	-44.3	-4.43	.00250	.000	1
CalStd8=100	100.00	109.42	9.42	9.42	.00045	.000	1
CalStd10=10	10000.	9041.5	-959.	-9.59	.02207	.000	1
CalStd12=10	100000.	100990.	994.	.994	.24458	.001	1

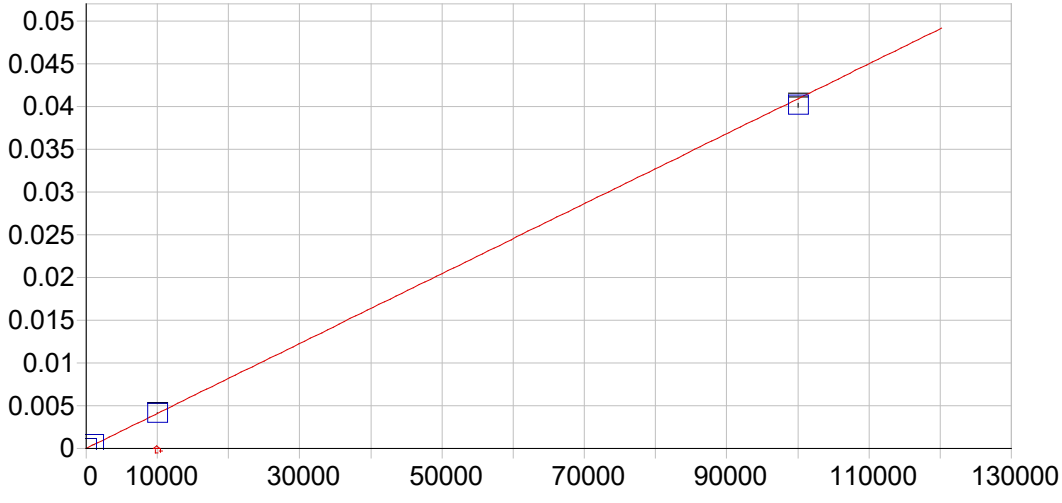


Cu 327.396 {103}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000054	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999409	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	7.806843		
Predicted MQL:	26.022811		

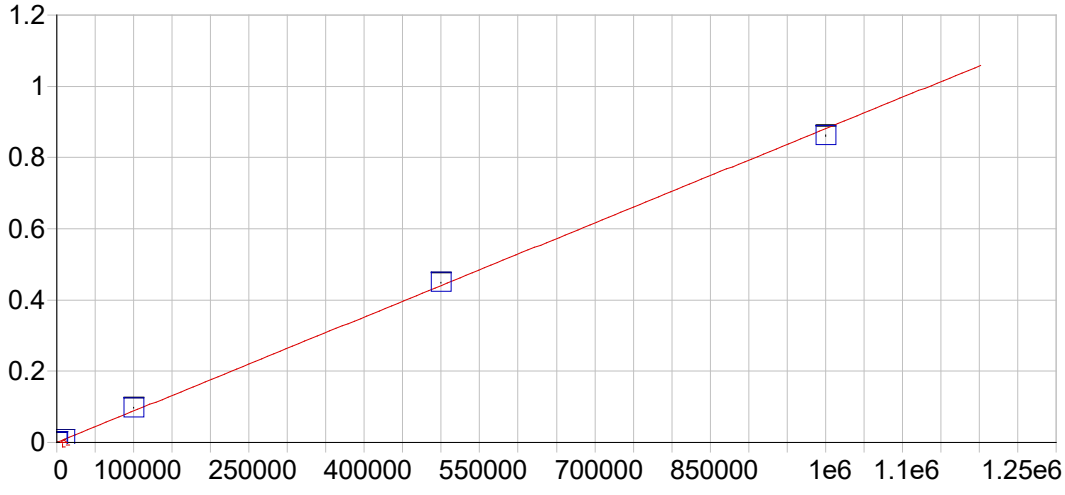
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00190	.002	.000	.00005	.000	1
CalStd6=20	20.000	20.011	.011	.055	.00008	.000	1
CalStd7=50	50.000	46.255	-3.75	-7.49	.00012	.000	1
CalStd8=100	100.00	94.876	-5.12	-5.12	.00020	.000	1
CalStd9=100	1000.0	934.38	-65.6	-6.56	.00146	.000	1
CalStd10=10	10000.	8951.5	-1050.	-10.5	.01350	.000	1
CalStd4=5	5.0000	7.2545	2.25	45.1	.00007	.000	1
CalStd5=10	10.000	4.5364	-5.46	-54.6	.00006	.000	1
CalStd12=10	100000.	101130.	1130.	1.13	.15197	.000	1



Fe 234.349 {144}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000011		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999679		Status:	OK.	
Std Error of Est:	0.000005				
Predicted MDL:	0.891672				
Predicted MQL:	2.972240				

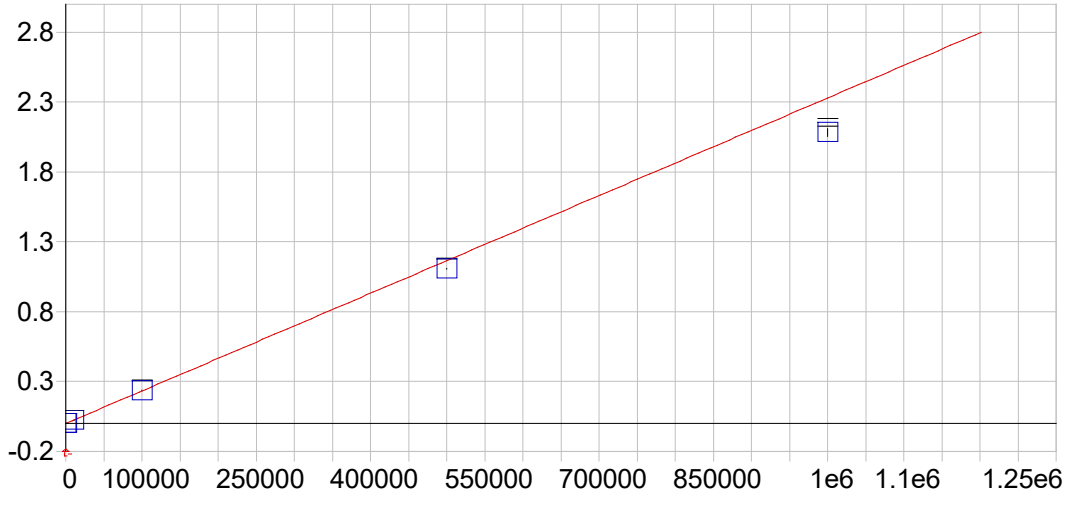
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.94712	-.947	.000	.00001	.000	1
CalStd10=10	10000.	10099.	99.3	.993	.00414	.000	1
CalStd13=10	100000.	98141.	-1860.	-1.86	.04014	.000	1
CalStd9=100	1000.0	1048.8	48.8	4.88	.00044	.000	1



Fe 239.562 {140}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000008		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999417		Status:	OK.	
Std Error of Est:	0.000047				
Predicted MDL:	5.399645				
Predicted MQL:	17.998815				

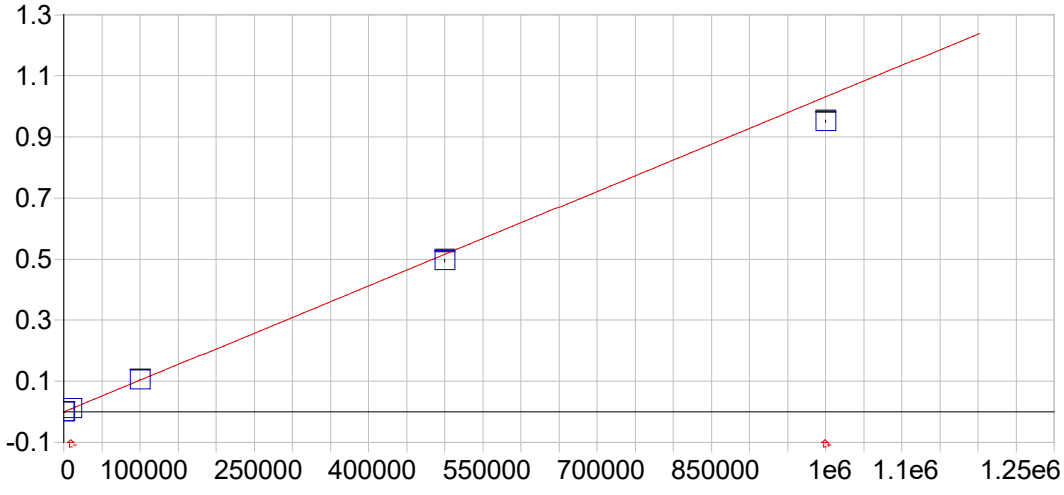
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.27299	-.273	.000	.00001	.000	1
CalStd10=10	10000.	10579.	579.	5.79	.00933	.000	1
CalStd13=10	100000.	110740.	10700.	10.7	.09756	.000	1
CalStd14=50	500000.	510260.	10300.	2.05	.44951	.001	1
CalStd9=100	1000.0	1108.8	109.	10.9	.00098	.000	1
CalibStd15=	1000000.	978310.	-21700.	-2.17	.86183	.002	1



Fe 259.940 {129}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Var
A0 (Offset):	0.000003		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999797		Status:	OK.	
Std Error of Est:	0.000032				
Predicted MDL:	2.618579				
Predicted MQL:	8.728598				

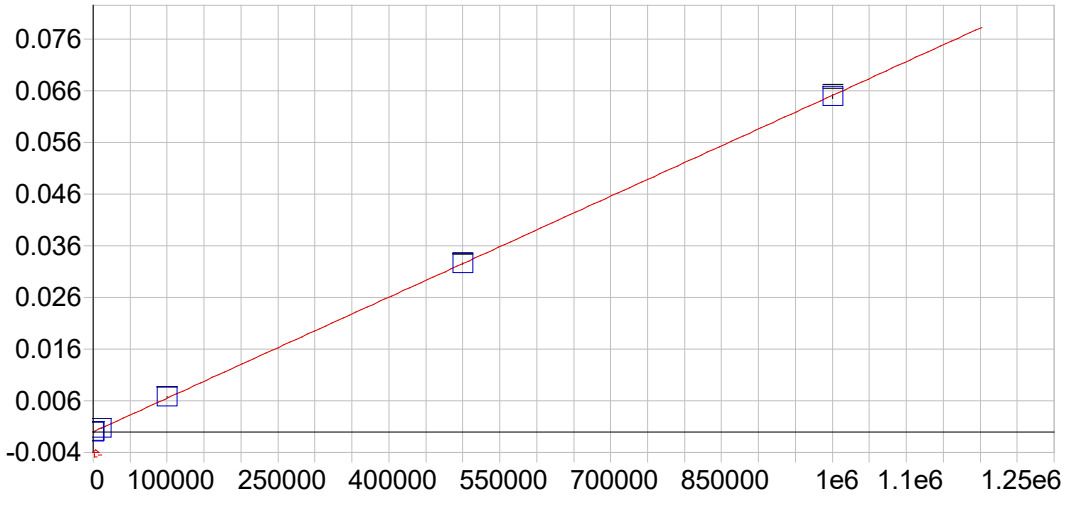
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.3314	-1.33	.000	-.00000	.000	1
CalStd10=10	10000.	9800.8	-199.	-1.99	.02284	.000	1
CalStd13=10	100000.	101070.	1070.	1.07	.23545	.001	1
CalStd14=50	500000.	475430.	-24600.	-4.91	1.1076	.004	1
CalStd9=100	1000.0	1026.9	26.9	2.69	.00239	.000	1
CalibStd15=	1000000.	893890.	-106000.	-10.6	2.0825	.025	1



Mg 202.582 {466}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	-0.000007		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998925		Status:	OK.	
Std Error of Est:	0.000055				
Predicted MDL:	3.527247				
Predicted MQL:	11.757490				

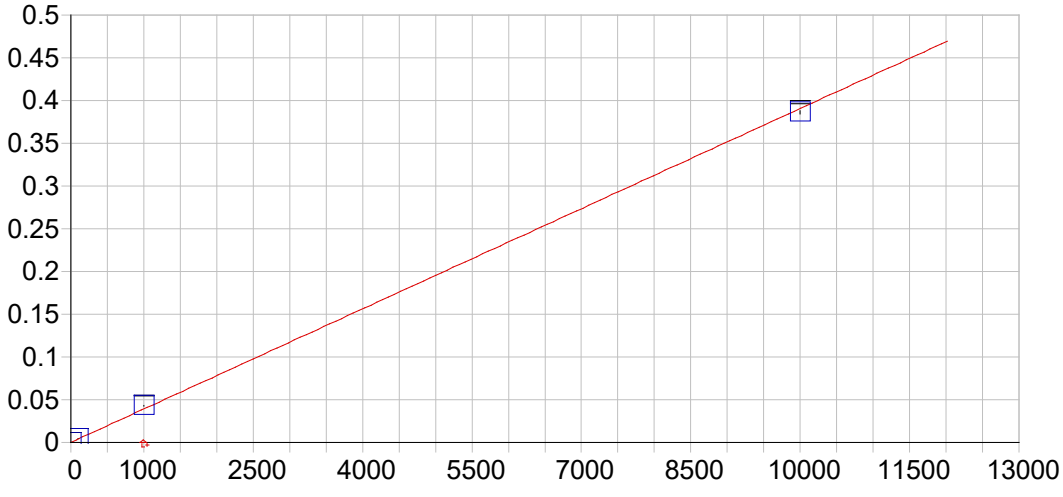
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.3143	-5.31	.000	-.00001	.000	1
CalStd13=10	100000.	102420.	2420.	2.42	.10560	.000	1
CalStd10=10	10000.	10012.	12.3	.123	.01032	.000	1
CalStd14=50	500000.	480250.	-19800.	-3.95	.49518	.003	1
CalStd9=100	1000.0	1103.5	104.	10.4	.00113	.000	1
CalibStd15=	1000000.	922700.	-77300.	-7.73	.95139	.004	1



Mg 279.079 {121}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999945		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	38.747087				
Predicted MQL:	129.156957				

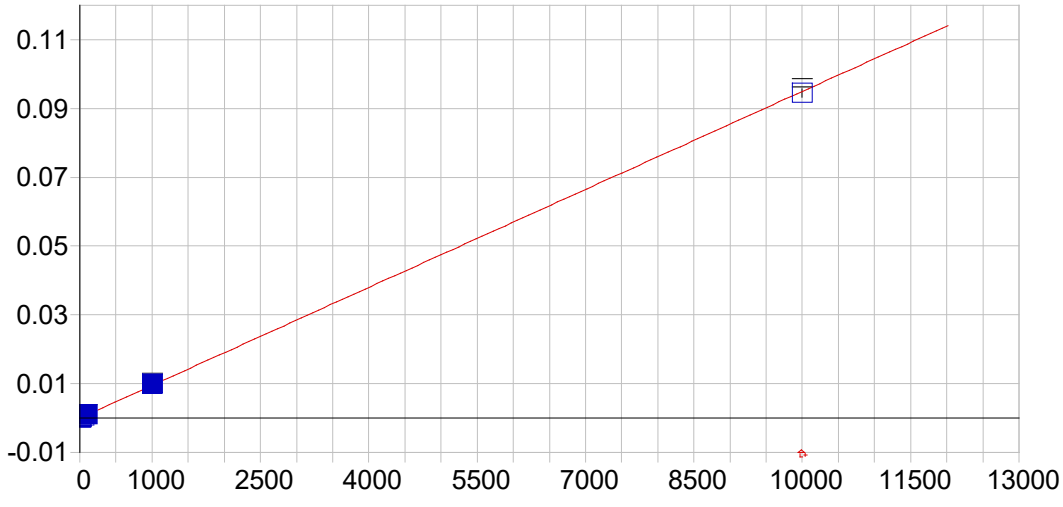
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.05045	-.050	.000	.00000	.000	1
CalStd13=10	100000.	104030.	4030.	4.03	.00677	.000	1
CalStd10=10	10000.	9986.3	-13.7	-.137	.00065	.000	1
CalStd14=50	500000.	499830.	-166.	-.033	.03253	.000	1
CalStd9=100	1000.0	1015.7	15.7	1.57	.00007	.000	1
CalibStd15=	1000000.	996140.	-3860.	-.386	.06483	.000	1



Mg 280.270 {120}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000053		Re-Slope:	1.000000	
A1 (Gain):	0.000039		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999420		Status:	OK.	
Std Error of Est:	0.000063				
Predicted MDL:	0.017302				
Predicted MQL:	0.057673				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01858	-.019	.000	.00005	.000	1
CalStd9=100	1000.0	1103.6	104.	10.4	.04316	.000	1
CalStd10=10	10000.	9887.1	-113.	-1.13	.38625	.002	1
CalStd8=100	100.00	109.35	9.35	9.35	.00432	.000	1

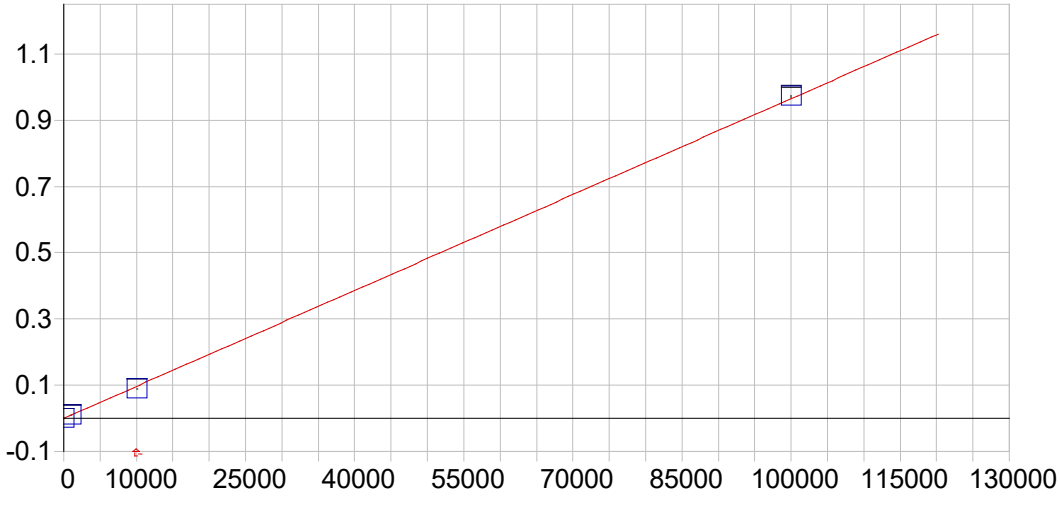


Mn 257.610 {131}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000009	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999873	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.061677		
Predicted MQL:	0.205591		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00213	-.002	.000	-.00000	.000	1
CalStd5=10	10.000	10.780	.780	7.80	.00010	.000	1
CalStd7=50	50.000	53.136	3.14	6.27	.00050	.000	1
CalStd6=20	20.000	21.394	1.39	6.97	.00020	.000	1
CalStd8=100	100.00	103.49	3.49	3.49	.00098	.000	1
CalStd4=5	5.0000	5.7043	.704	14.1	.00005	.000	1
CalStd9=100	1000.0	1044.4	44.4	4.44	.00992	.000	1
CalStd10=10	10000.	9946.1	-53.9	-.539	.09444	.001	1

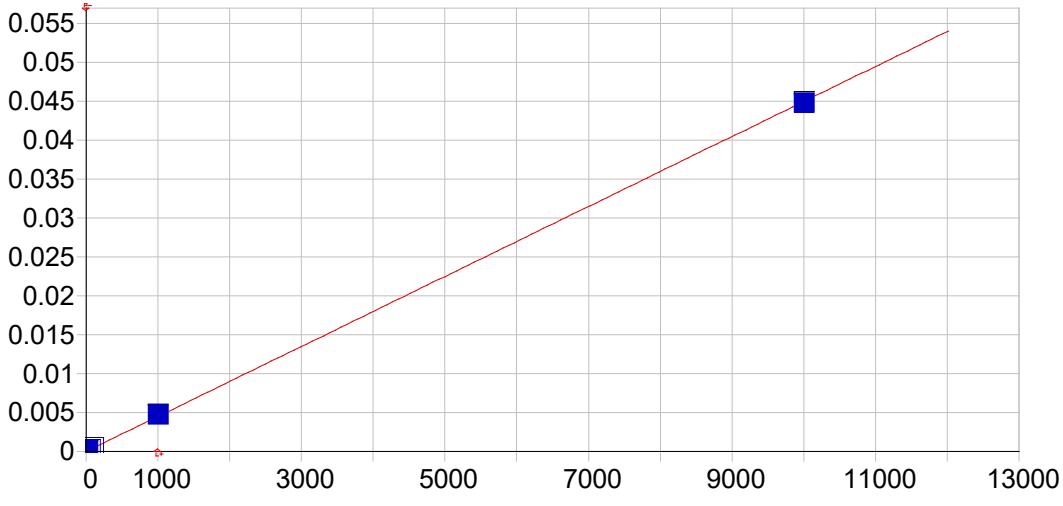


Mn 259.373 {130}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999724	Status:	OK.
Std Error of Est:	0.000107		
Predicted MDL:	0.582115		
Predicted MQL:	1.940382		

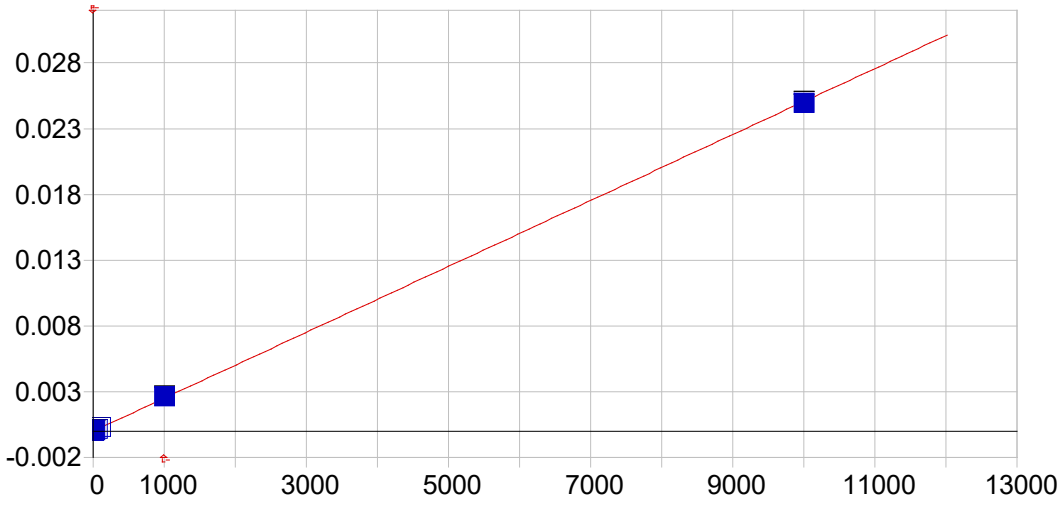
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.08788	.088	.000	.00000	.000	1
CalStd10=10	10000.	9258.9	-741.	-7.41	.08936	.000	1
CalStd9=100	1000.0	978.61	-21.4	-2.14	.00945	.000	1
CalStd12=10	100000.	100760.	762.	.762	.97241	.003	1



Mo 202.030 {466}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000004		Re-Slope:	1.000000	
A1 (Gain):	0.000004		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999892		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.510949				
Predicted MQL:	1.703163				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00153	-.002	.000	.00000	.000	1
CalStd7=50	50.000	52.183	2.18	4.37	.00024	.000	1
CalStd6=20	20.000	21.230	1.23	6.15	.00010	.000	1
CalStd5=10	10.000	10.254	.254	2.54	.00005	.000	1
CalStd8=100	100.00	102.17	2.17	2.17	.00046	.000	1
CalStd4=5	5.0000	5.5731	.573	11.5	.00003	.000	1
CalStd9=100	1000.0	1043.3	43.3	4.33	.00470	.000	1
CalStd10=10	10000.	9950.3	-49.7	-.497	.04477	.000	1

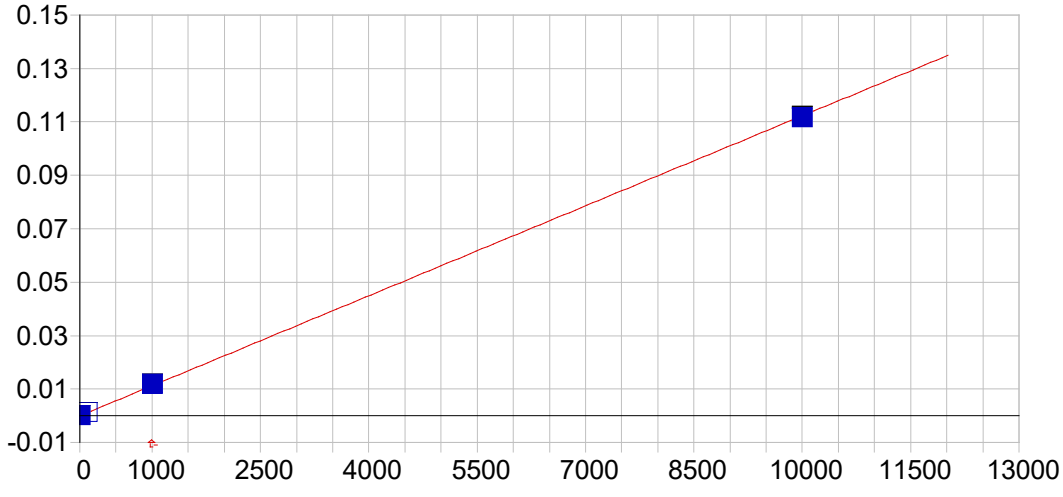


Mo 204.598 {464}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999882	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.025727		
Predicted MQL:	3.419090		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00201	-.002	.000	.00000	.000	1
CalStd7=50	50.000	52.210	2.21	4.42	.00013	.000	1
CalStd6=20	20.000	20.603	.603	3.01	.00005	.000	1
CalStd5=10	10.000	11.276	1.28	12.8	.00003	.000	1
CalStd8=100	100.00	102.89	2.89	2.89	.00026	.000	1
CalStd4=5	5.0000	5.6579	.658	13.2	.00002	.000	1
CalStd9=100	1000.0	1043.8	43.8	4.38	.00262	.000	1
CalStd10=10	10000.	9948.6	-51.4	-.514	.02493	.000	1

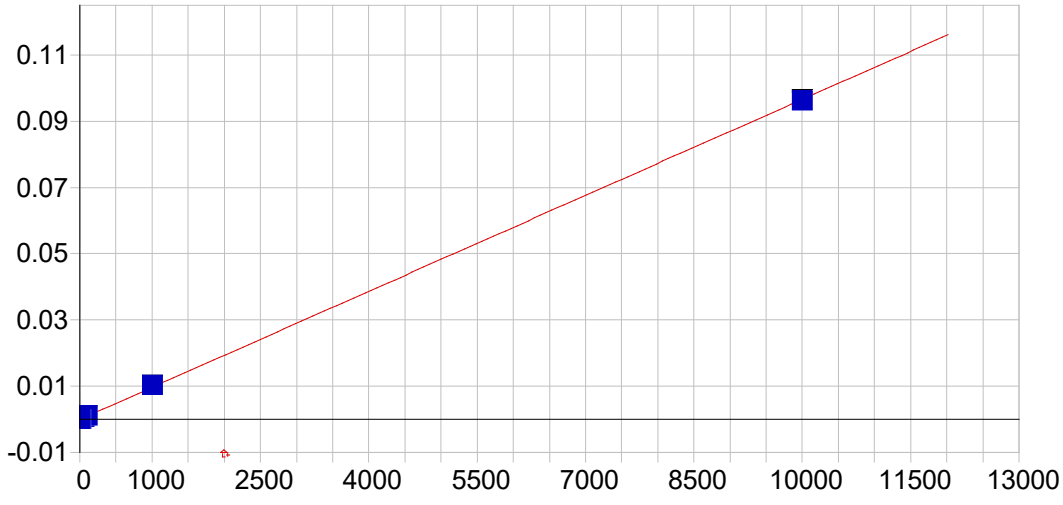


Ni 221.647 {452}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000011	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999866	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	0.425359		
Predicted MQL:	1.417864		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00899	-.009	.000	-.00001	.000	1
CalStd10=10	10000.	9945.6	-54.4	-.544	.11166	.000	1
CalStd8=100	100.00	104.56	4.56	4.56	.00117	.000	1
CalStd9=100	1000.0	1049.8	49.8	4.98	.01178	.000	1

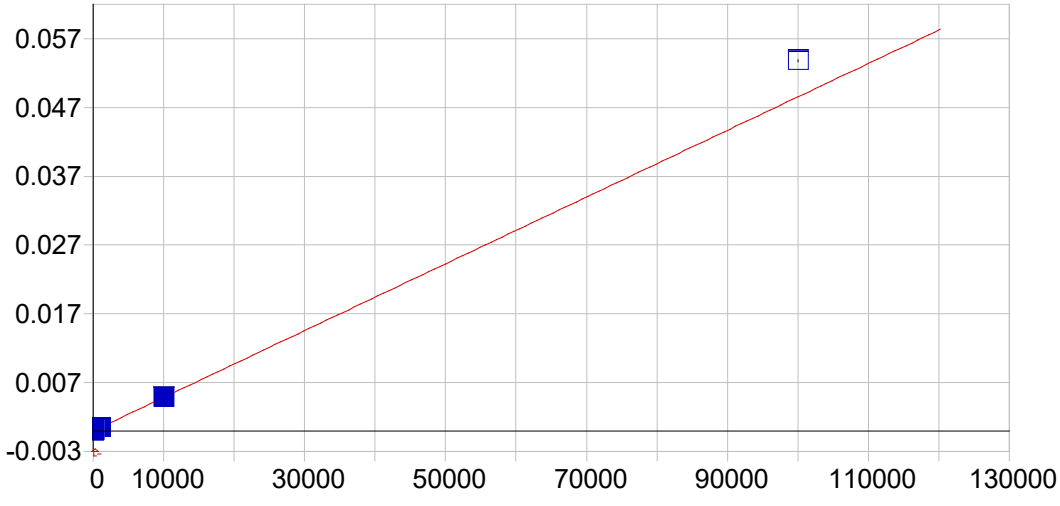


Ni 231.604 {445}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999837	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.458507		
Predicted MQL:	1.528355		

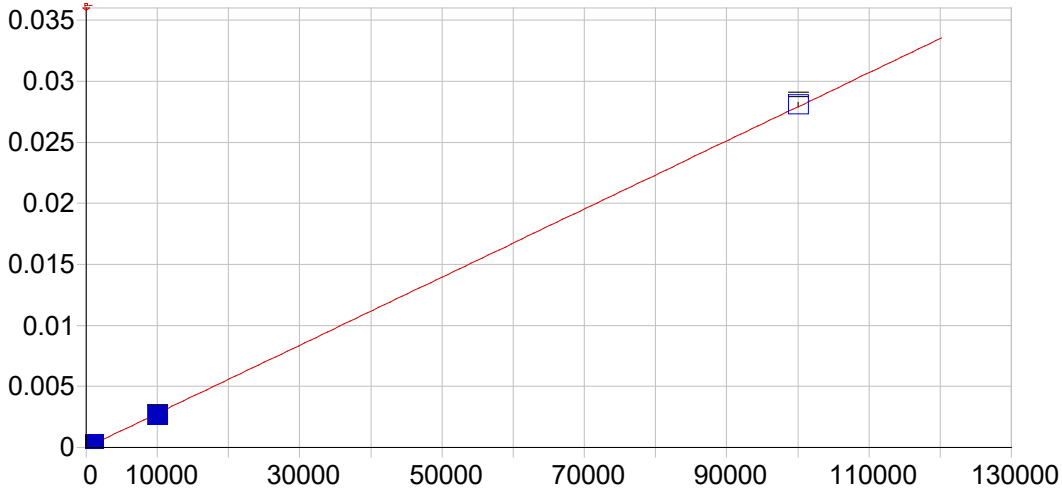
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00037	-.000	.000	-.00000	.000	1
CalStd7=50	50.000	52.914	2.91	5.83	.00051	.000	1
CalStd5=10	10.000	10.907	.907	9.07	.00010	.000	1
CalStd8=100	100.00	104.60	4.60	4.60	.00101	.000	1
CalStd4=5	5.0000	6.2525	1.25	25.1	.00006	.000	1
CalStd9=100	1000.0	1050.0	50.0	5.00	.01013	.000	1
CalStd3=1	1.0000	.87600	-.124	-12.4	.00001	.000	1
CalStd10=10	10000.	9940.6	-59.4	-.594	.09608	.000	1



Pb 216.999 {455}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999970		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	7.299745				
Predicted MQL:	24.332482				

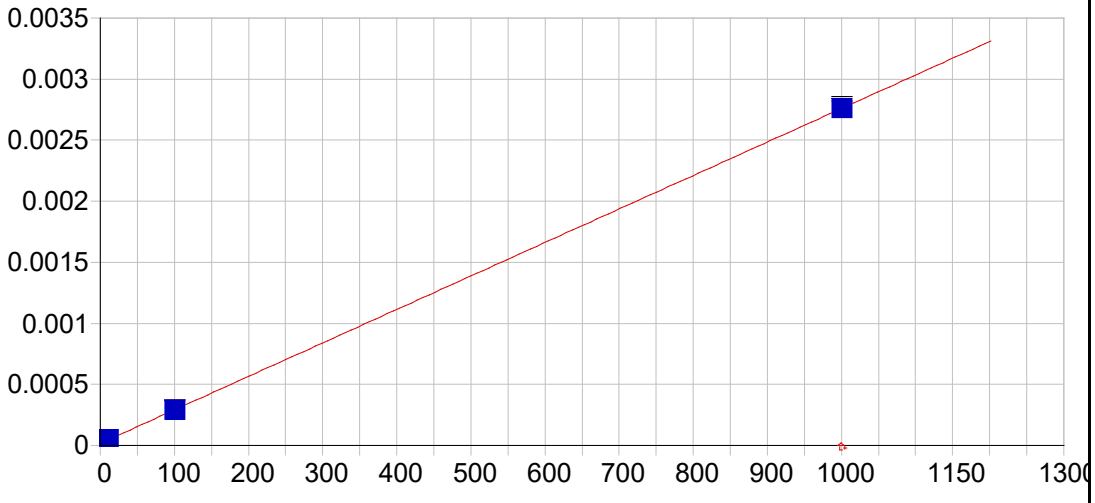
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00412	-.004	.000	.00000	.000	1
CalStd9=100	1000.0	1079.4	79.4	7.94	.00053	.000	1
CalStd10=10	10000.	10015.	15.2	.152	.00488	.000	1
CalStd8=100	100.00	103.08	3.08	3.08	.00005	.000	1
CalStd5=10	10.000	13.126	3.13	31.3	.00001	.000	1
CalStd12=10	100000.	110840.	10800.	10.8	.05380	.000	1



Pb 220.353 {153}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999818		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	1.916183				
Predicted MQL:	6.387276				

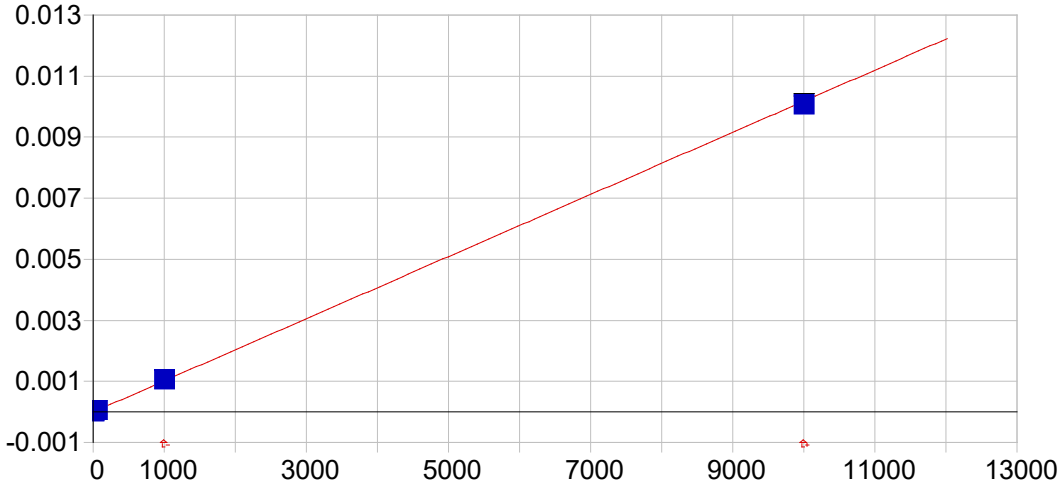
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00644	.006	.000	.00000	.000	1
CalStd9=100	1000.0	982.67	-17.3	-1.73	.00028	.000	1
CalStd10=10	10000.	9396.6	-603.	-6.03	.00262	.000	1
CalStd8=100	100.00	100.71	.709	.709	.00003	.000	1
CalStd12=10	100000.	100620.	620.	.620	.02807	.000	1



Pb 220.353 {453}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000017		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999598		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	1.747476				
Predicted MQL:	5.824919				

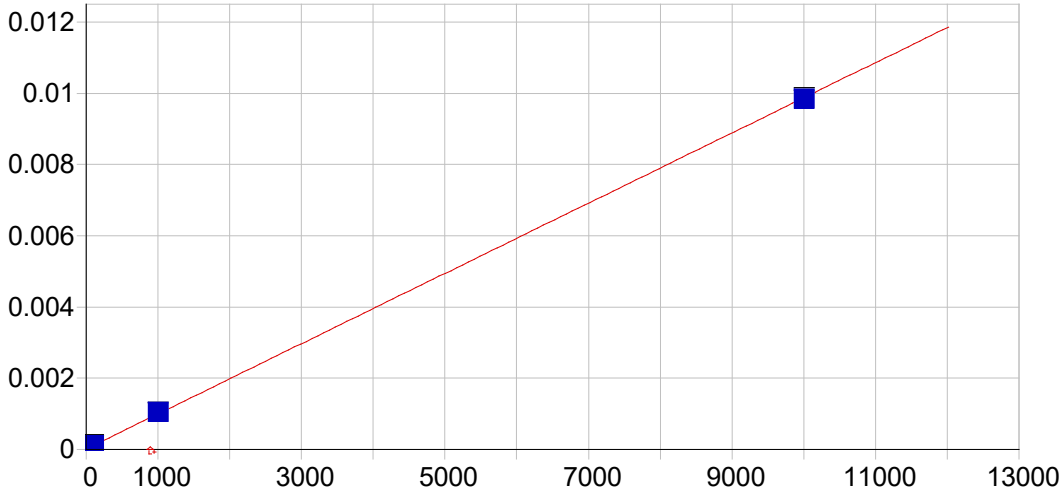
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00217	-.002	.000	.00002	.000	1
CalStd5=10	10.000	10.351	.351	3.51	.00005	.000	1
CalStd8=100	100.00	98.492	-1.51	-1.51	.00029	.000	1
CalStd4=5	5.0000	7.0739	2.07	41.5	.00004	.000	1
CalStd9=100	1000.0	999.08	-.917	-.092	.00276	.000	1



Sb 206.833 {463}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999835		Status:	OK.	
Std Error of Est:	0.000008				
Predicted MDL:	2.768049				
Predicted MQL:	9.226829				

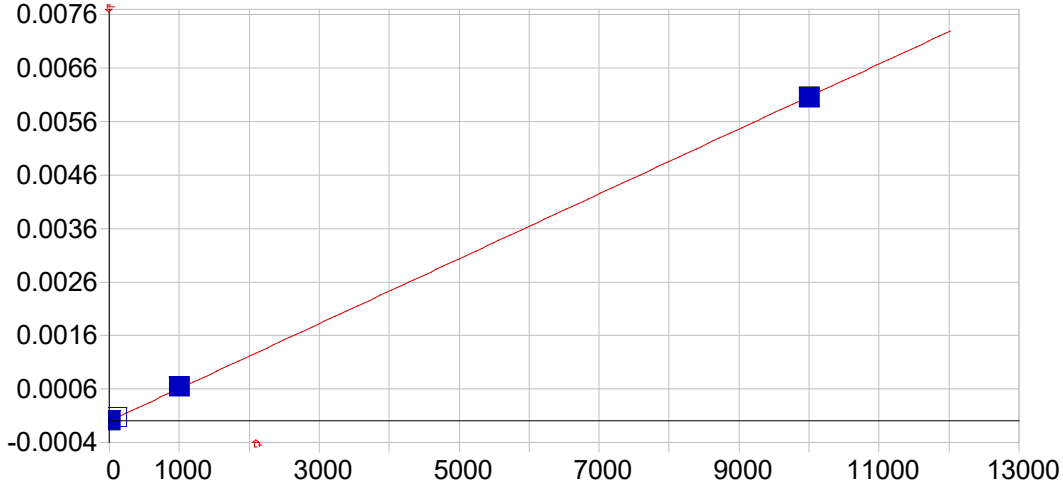
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.0817	-1.08	.000	-.00000	.000	1
CalStd9=100	1000.0	1027.0	27.0	2.70	.00104	.000	1
CalStd5=10	10.000	8.8123	-1.19	-11.9	.00001	.000	1
CalStd7=50	50.000	49.875	-.125	-.250	.00005	.000	1
CalStd10=10	10000.	9884.4	-116.	-1.16	.01006	.000	1



Sb 217.581 {455}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000012		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999908		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	3.302099				
Predicted MQL:	11.006997				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00144	-.001	.000	.00001	.000	1
CalStd9=100	1000.0	1039.3	39.3	3.93	.00104	.000	1
CalStd6=20	20.000	21.241	1.24	6.21	.00003	.000	1
CalStd5=10	10.000	10.426	.426	4.26	.00002	.000	1
CalStd8=100	100.00	103.87	3.87	3.87	.00011	.000	1
CalStd4=5	5.0000	5.5513	.551	11.0	.00002	.000	1
CalStd10=10	10000.	9954.6	-45.4	-.454	.00983	.000	1

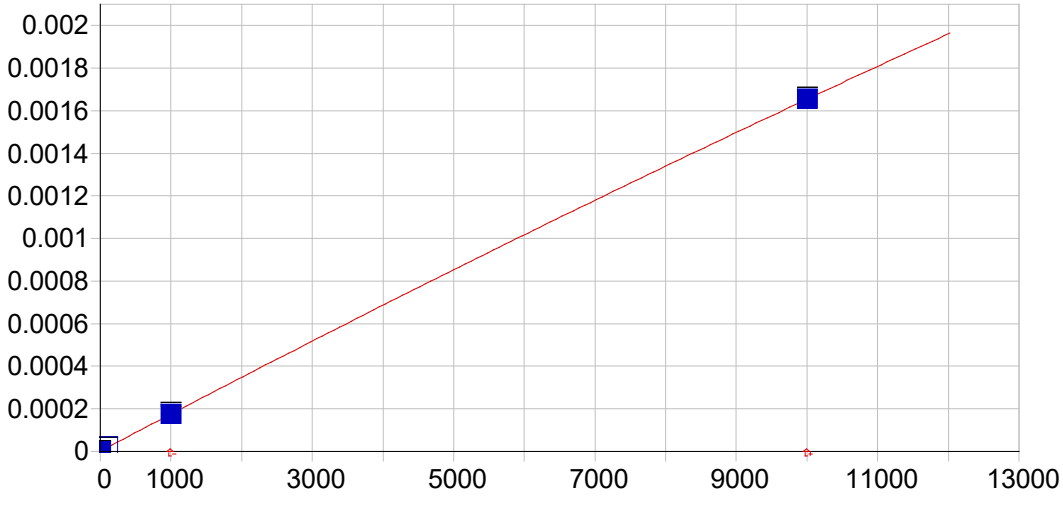


Se 196.090 {472}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999897	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.546972		
Predicted MQL:	11.823242		

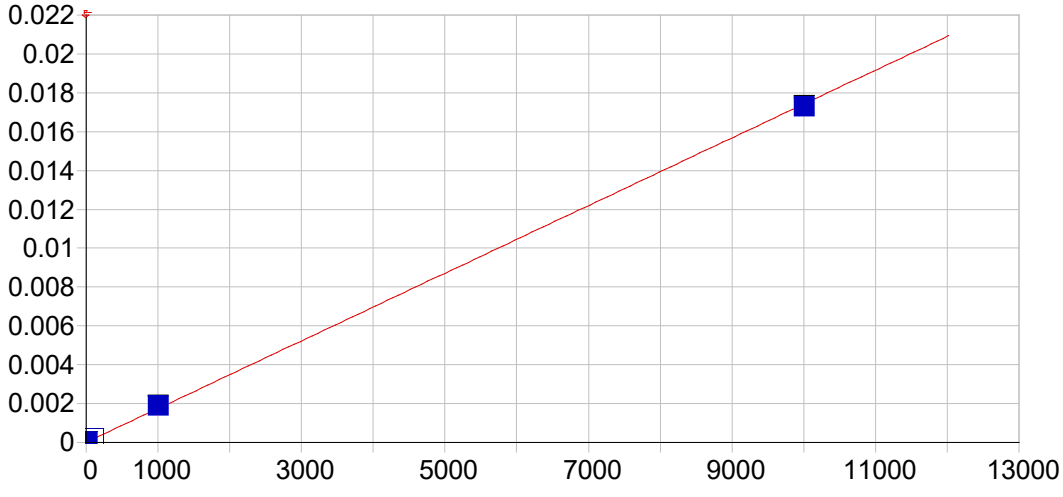
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00060	-.001	.000	.00000	.000	1
CalStd9=100	1000.0	1045.4	45.4	4.54	.00063	.000	1
CalStd5=10	10.000	10.084	.084	.837	.00001	.000	1
CalStd8=100	100.00	101.13	1.13	1.13	.00006	.000	1
CalStd10=10	10000.	9953.4	-46.6	-.466	.00604	.000	1



Se 206.279 {463}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	-0.000000				
n (Exponent):	1.000000				
Correlation:	0.999957		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	17.995433				
Predicted MQL:	59.984775				

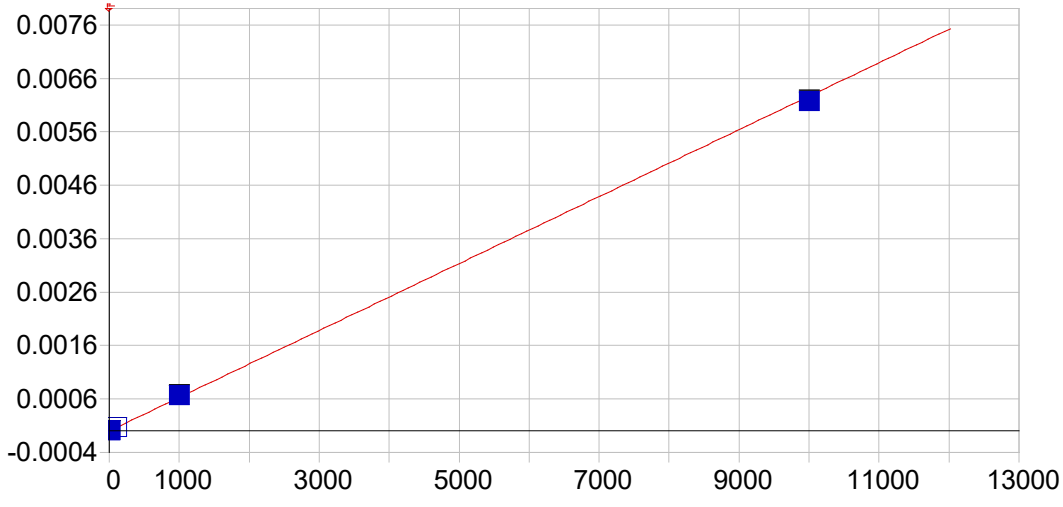
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00784	-.008	.000	.00000	.000	1
CalStd9=100	1000.0	990.22	-9.78	-.978	.00017	.000	1
CalStd10=10	10000.	10001.	.992	.010	.00166	.000	1
CalStd8=100	100.00	108.81	8.81	8.81	.00002	.000	1



Tl 190.856 {476}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000004		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999700		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	1.780647				
Predicted MQL:	5.935491				

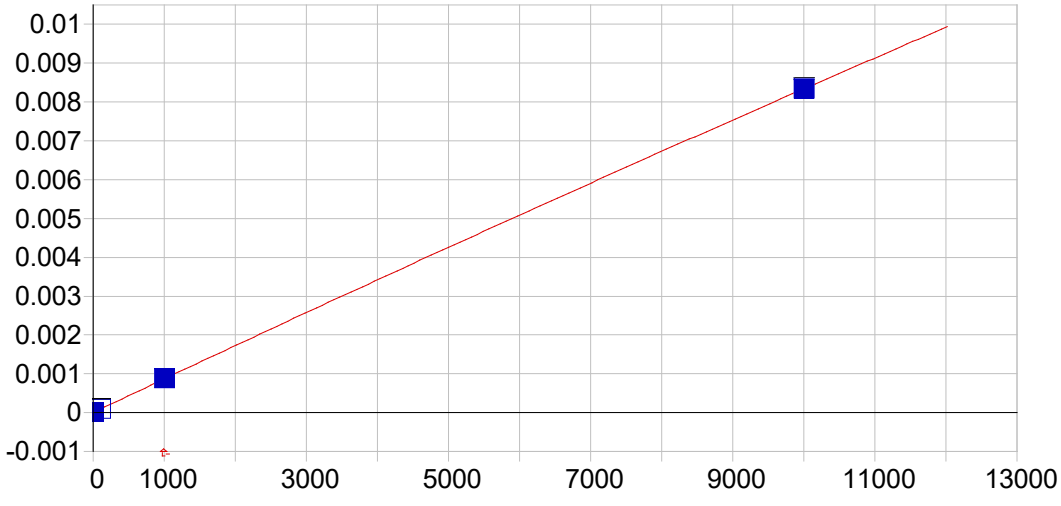
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00200	-.002	.000	.00000	.000	1
CalStd9=100	1000.0	1074.8	74.8	7.48	.00188	.000	1
CalStd8=100	100.00	105.92	5.92	5.92	.00019	.000	1
CalStd5=10	10.000	10.738	.738	7.38	.00002	.000	1
CalStd10=10	10000.	9918.5	-81.5	-.815	.01728	.000	1



Tl 190.856 {477}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000003		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999500		Status:	OK.	
Std Error of Est:	0.000006				
Predicted MDL:	2.505970				
Predicted MQL:	8.353235				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.8820	-2.88	.000	.00000	.000	1
CalStd9=100	1000.0	1057.1	57.1	5.71	.00067	.000	1
CalStd8=100	100.00	103.02	3.02	3.02	.00007	.000	1
CalStd5=10	10.000	6.8691	-3.13	-31.3	.00001	.000	1
CalStd10=10	10000.	9839.4	-161.	-1.61	.00617	.000	1

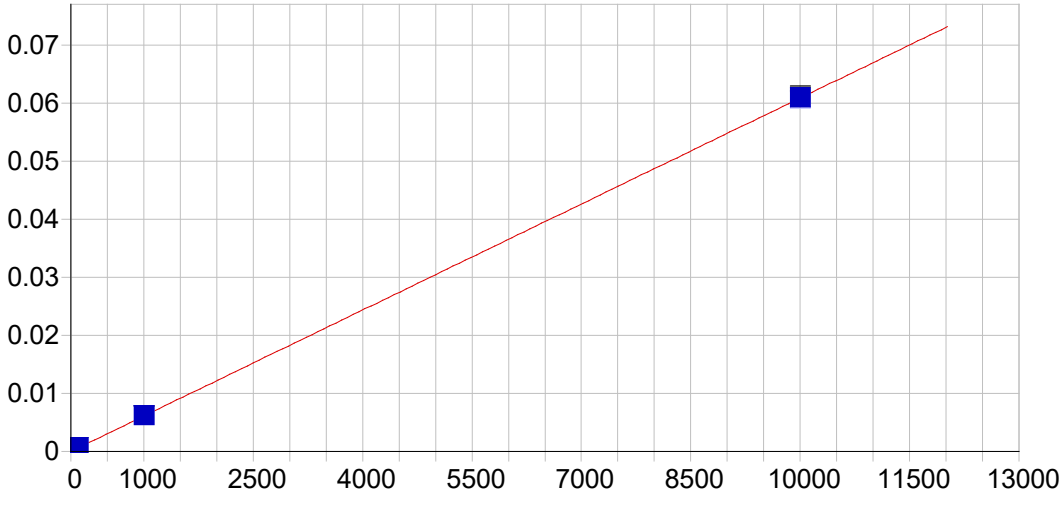


V 290.882 {116}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	8.073617		
Predicted MQL:	26.912058		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.8308	-1.83	.000	.00000	.000	1
CalStd9=100	1000.0	998.89	-1.11	-.111	.00087	.000	1
CalStd10=10	10000.	10000.	.063	.001	.00834	.000	1
CalStd8=100	100.00	100.24	.238	.238	.00009	.000	1

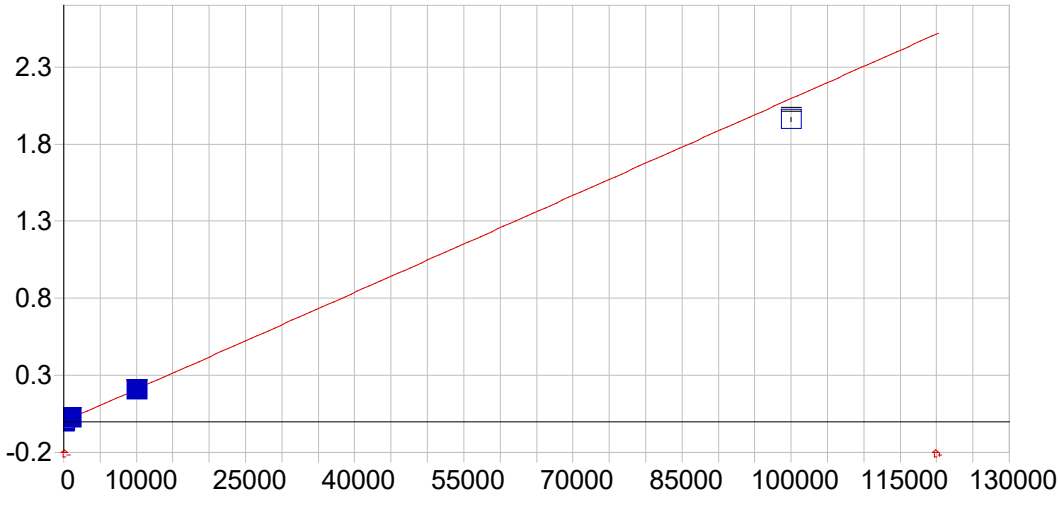


V 292.402 {115}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.374660		
Predicted MQL:	1.248866		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00014	-.000	.000	.00001	.000	1
CalStd7=50	50.000	50.365	.365	.730	.00032	.000	1
CalStd9=100	1000.0	1007.2	7.21	.721	.00612	.000	1
CalStd6=20	20.000	20.122	.122	.611	.00014	.000	1
CalStd5=10	10.000	10.078	.078	.780	.00008	.000	1
CalStd8=100	100.00	98.599	-1.40	-1.40	.00061	.000	1
CalStd10=10	10000.	9993.6	-6.37	-.064	.06059	.000	1

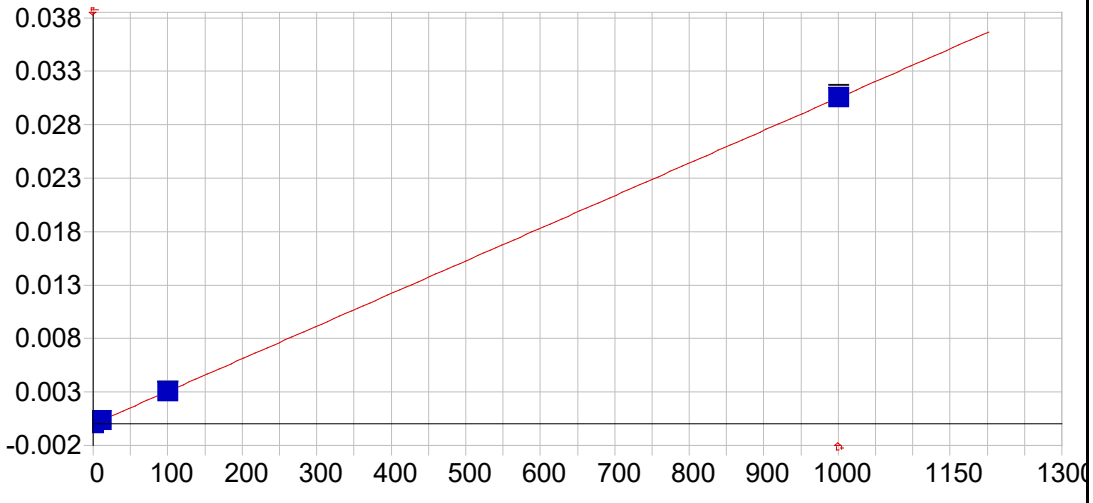


Zn 206.200 {463}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000021	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999265	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.152862		
Predicted MQL:	0.509541		

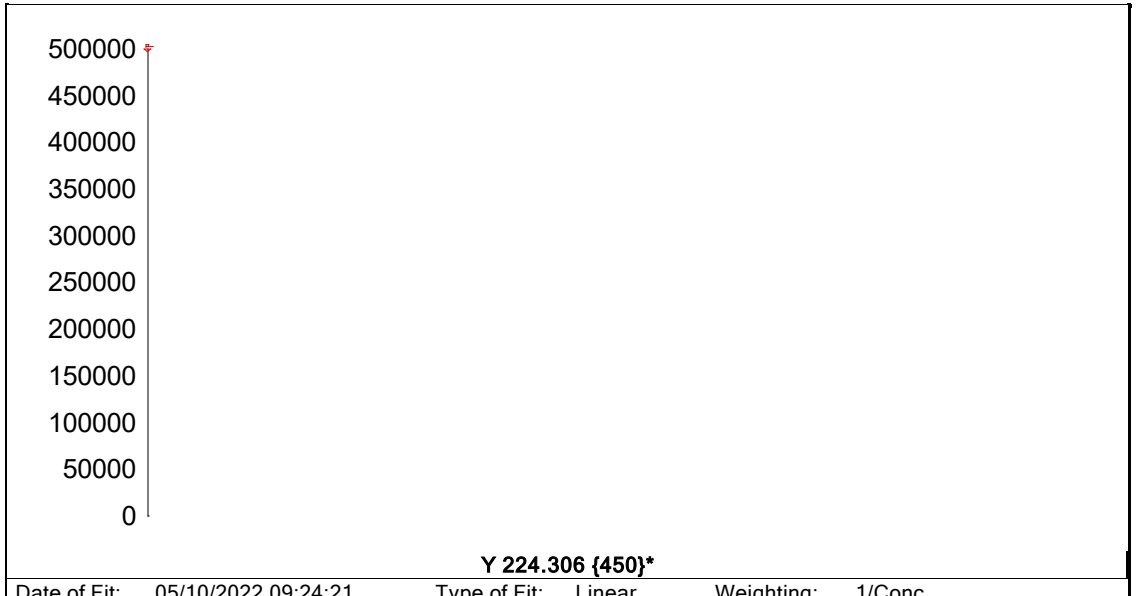
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	9763.8	-236.	-2.36	.20452	.001	1
Blank	.00000	-.37196	-.372	.000	-.00000	.000	1
CalStd9=100	1000.0	1033.1	33.1	3.31	.02165	.000	1
CalStd12=10	100000.	93485.	-6520.	-6.52	1.9581	.012	1
CalStd5=10	10.000	10.398	.398	3.98	.00022	.000	1
CalStd8=100	100.00	102.63	2.63	2.63	.00216	.000	1



Zn 213.856 {457}

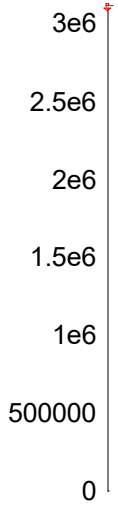
Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000031		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999979		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.116684				
Predicted MQL:	0.388947				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00056	-.001	.000	.00000	.000	1
CalStd9=100	1000.0	1000.1	.138	.014	.03066	.000	1
CalStd5=10	10.000	10.632	.632	6.32	.00033	.000	1
CalStd8=100	100.00	99.232	-.768	-.768	.00304	.000	1



Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

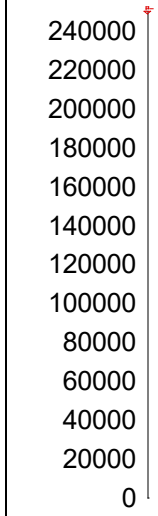
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	452790.	1710.	1



Y 324.228 {104}*

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

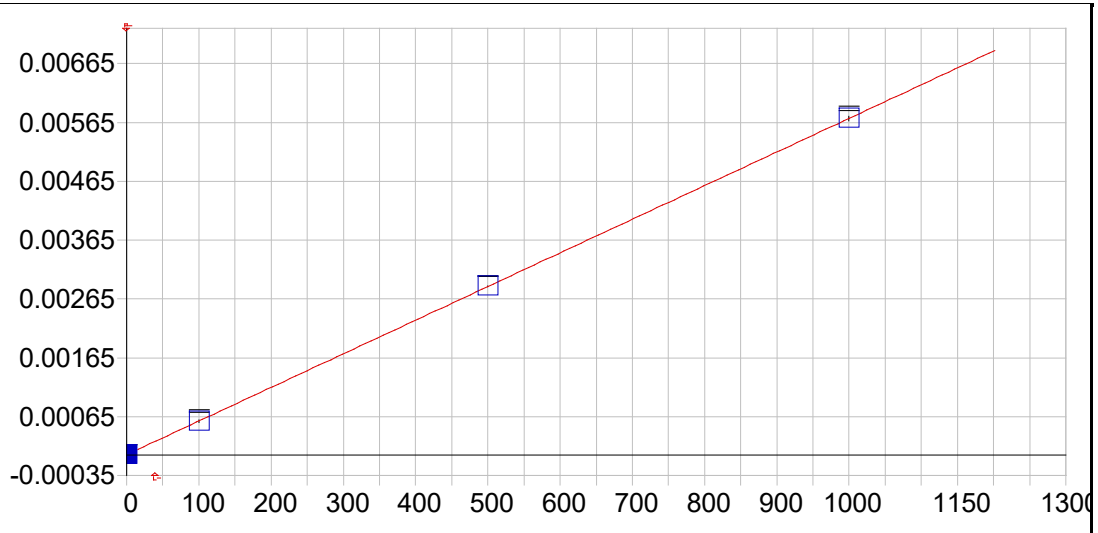
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	2929000.	8640.	1



Y 371.030 { 91}*

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

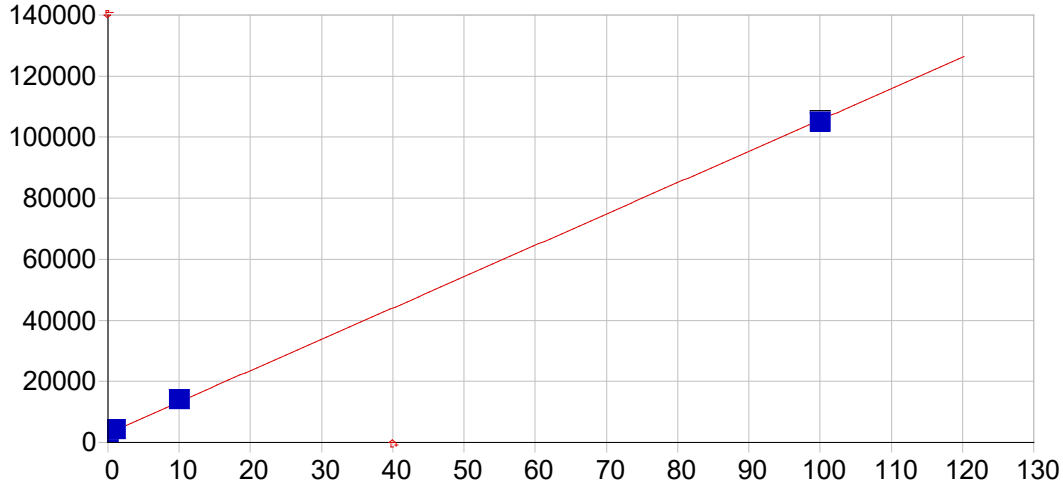
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	234250.	1080.	1



Na 330.237 {102}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000003		Re-Slope:	1.000000	
A1 (Gain):	0.000006		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999997		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	1.938494				
Predicted MQL:	6.461647				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00059	.001	.000	.00000	.000	1
CalStd13=10	100.00	99.208	-.792	-.792	.00057	.000	1
CalibStd15=	1000.0	999.53	-.467	-.047	.00572	.000	1
CalStd14=50	500.00	501.26	1.26	.252	.00287	.000	1

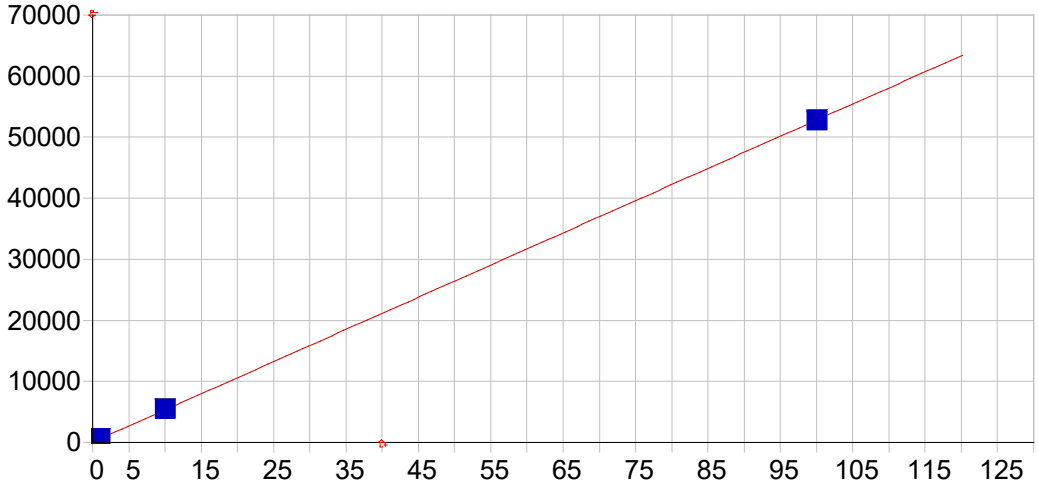


Na 588.995 { 57}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	3014.698306	Re-Slope:	1.000000
A1 (Gain):	1026.036912	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999751	Status:	OK.
Std Error of Est:	10.782376		
Predicted MDL:	0.011862		
Predicted MQL:	0.039538		

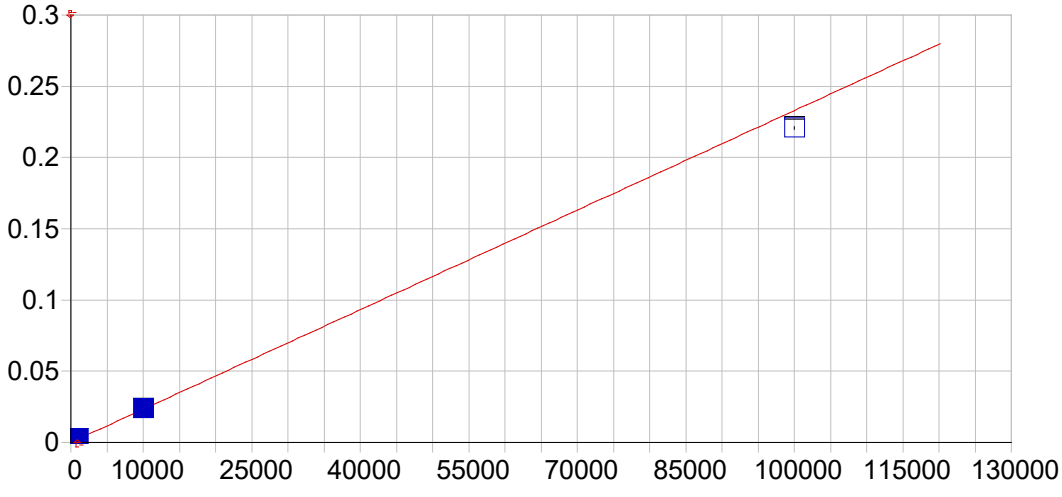
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00017	-.000	.000	3014.5	21.2	1
CalStd9=100	1.0000	1.1118	.112	11.2	4155.7	32.4	1
CalStd10=10	10.000	10.612	.612	6.12	13905.	19.4	1
CalStd13=10	100.00	99.276	-.724	-.724	104900.	341.	1



Na 589.592 { 57}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	48.399591		Re-Slope:	1.000000	
A1 (Gain):	527.457305		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999977		Status:	OK.	
Std Error of Est:	1.689053				
Predicted MDL:	0.014526				
Predicted MQL:	0.048419				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00005	-.000	.000	48.376	8.05	1
CalStd9=100	1.0000	1.0281	.028	2.81	591.09	8.35	1
CalStd10=10	10.000	10.196	.196	1.96	5430.6	13.5	1
CalStd13=10	100.00	99.776	-.224	-.224	52719.	192.	1

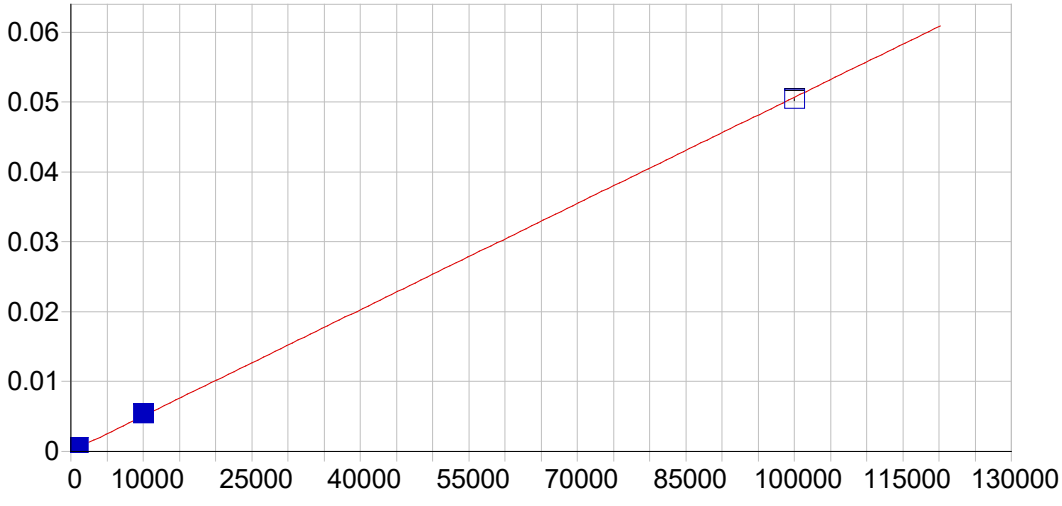


Si 212.412 {458}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000017	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999170	Status:	OK.
Std Error of Est:	0.000081		
Predicted MDL:	1.445412		
Predicted MQL:	4.818039		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.4036	-3.40	.000	.00001	.000	1
CalStd9=100	1000.0	1060.6	60.6	6.06	.00249	.000	1
CalibStd15=	100000.	94784.	-5220.	-5.22	.22079	.001	1
CalStd10=10	10000.	10189.	189.	1.89	.02375	.000	1

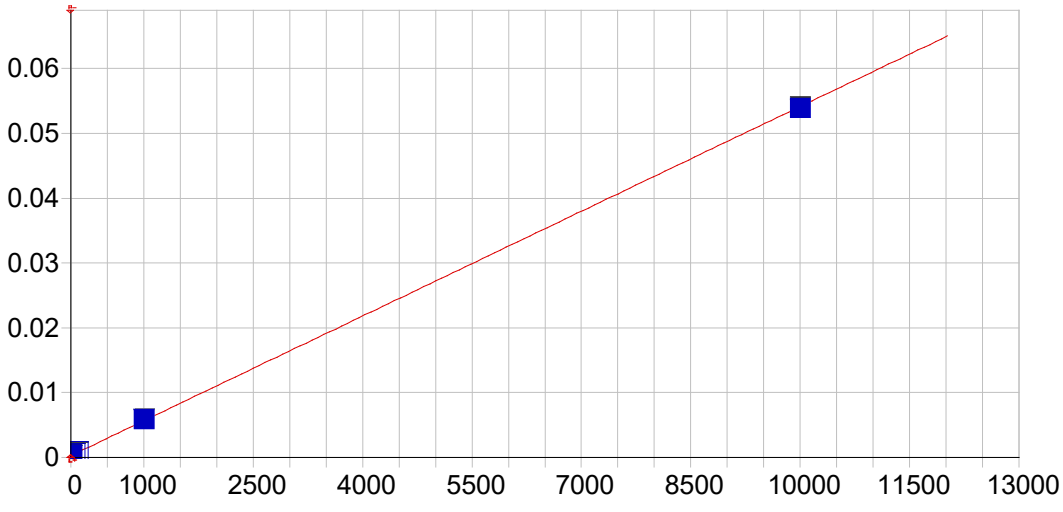


Si 251.611 {134}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999809	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	10.348099		
Predicted MQL:	34.493665		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.14699	-.147	.000	.00001	.000	1
CalStd9=100	1000.0	1100.0	100.0	10.00	.00056	.000	1
CalibStd15=	100000.	99367.	-633.	-.633	.05036	.000	1
CalStd10=10	10000.	10534.	534.	5.34	.00534	.000	1

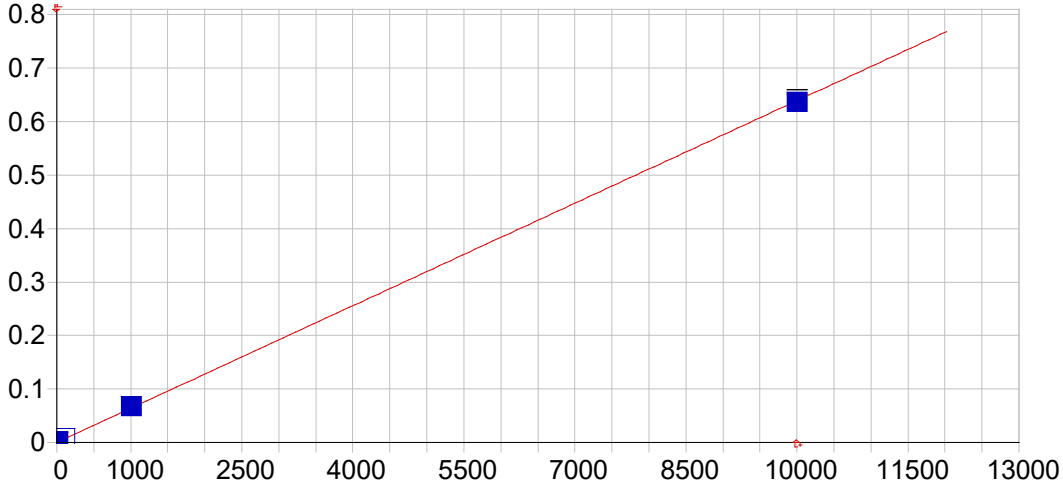


Ti 323.452 {104}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000275	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999609	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	2.281533		
Predicted MQL:	7.605111		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00771	-.008	.000	.00027	.000	1
CalStd5=10	10.000	14.679	4.68	46.8	.00035	.000	1
CalStd8=100	100.00	105.03	5.03	5.03	.00084	.000	1
CalStd9=100	1000.0	1035.8	35.8	3.58	.00586	.000	1
CalStd10=10	10000.	9942.9	-57.1	-.571	.05385	.000	1
CalStd7=50	50.000	57.355	7.36	14.7	.00058	.000	1
CalStd4=5	5.0000	9.2366	4.24	84.7	.00032	.000	1

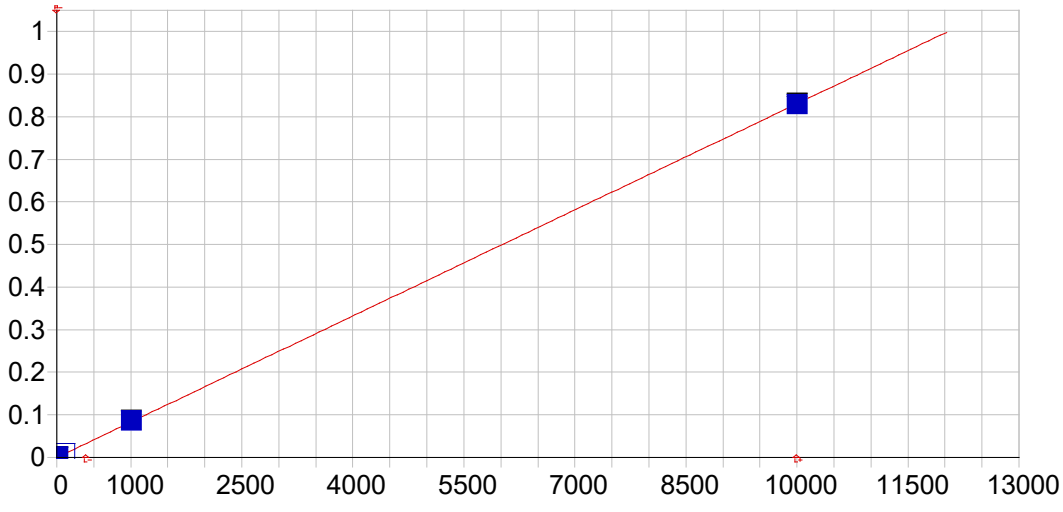


Sr 407.771 { 83}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000128	Re-Slope:	1.000000
A1 (Gain):	0.000064	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999897	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.242595		
Predicted MQL:	0.808650		

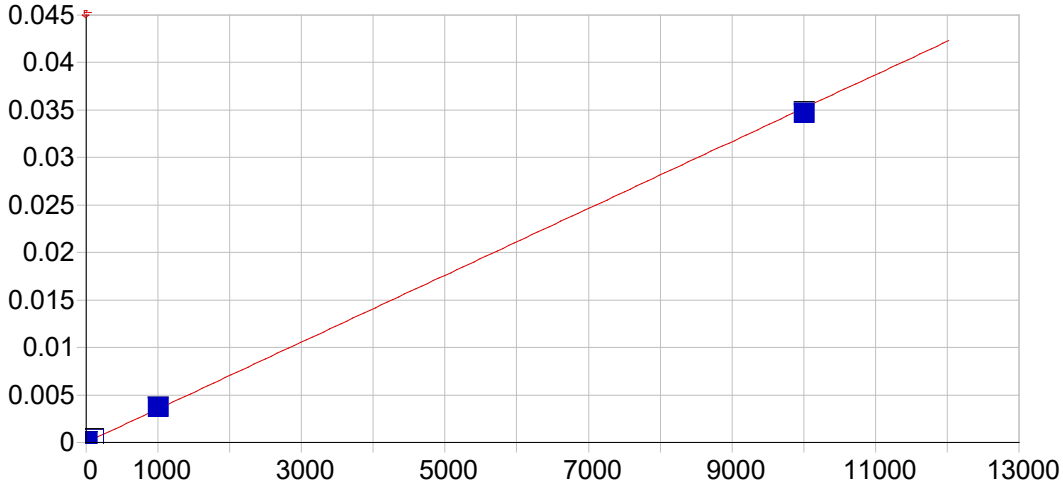
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00053	-.001	.000	.00013	.000	1
CalStd3=1	1.0000	1.2893	.289	28.9	.00021	.000	1
CalStd4=5	5.0000	5.4962	.496	9.92	.00048	.000	1
CalStd5=10	10.000	10.640	.640	6.40	.00081	.000	1
CalStd8=100	100.00	103.60	3.60	3.60	.00675	.000	1
CalStd9=100	1000.0	1042.1	42.1	4.21	.06672	.000	1
CalStd10=10	10000.	9952.9	-47.1	-.471	.63610	.004	1



Sr 421.552 { 80}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000075		Re-Slope:	1.000000	
A1 (Gain):	0.000083		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999949		Status:	OK.	
Std Error of Est:	0.000003				
Predicted MDL:	0.197430				
Predicted MQL:	0.658101				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00007	-.000	.000	.00008	.000	1
CalStd3=1	1.0000	.93923	-.061	-6.08	.00015	.000	1
CalStd4=5	5.0000	5.2744	.274	5.49	.00051	.000	1
CalStd5=10	10.000	10.206	.206	2.06	.00092	.000	1
CalStd8=100	100.00	102.45	2.45	2.45	.00858	.000	1
CalStd9=100	1000.0	1030.6	30.6	3.06	.08566	.001	1
CalStd10=10	10000.	9966.6	-33.4	-.334	.82778	.003	1

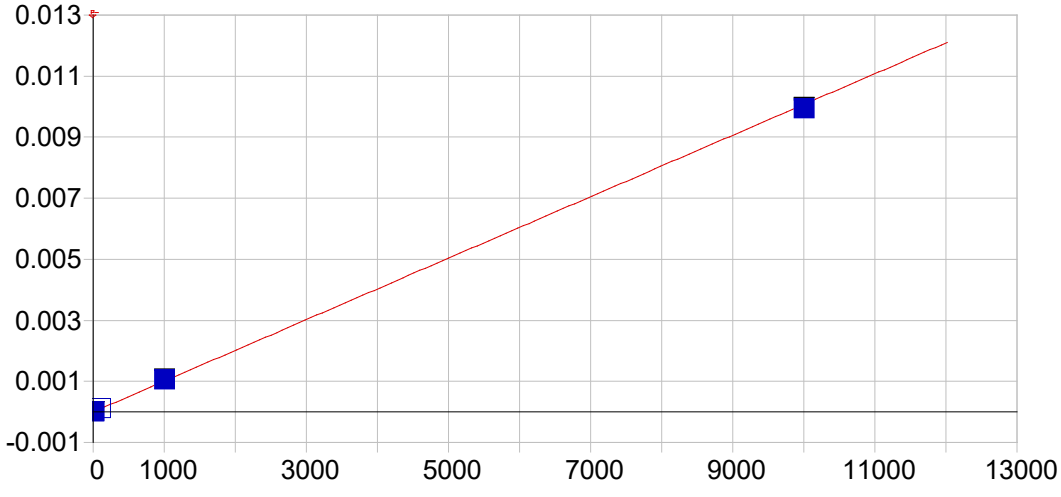


Sn 189.989 {477}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999704	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.633440		
Predicted MQL:	2.111468		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.2926	-1.29	.000	.00000	.000	1
CalStd10=10	10000.	9853.9	-146.	-1.46	.03468	.000	1
CalStd9=100	1000.0	1040.8	40.8	4.08	.00367	.000	1
CalStd8=100	100.00	101.66	1.66	1.66	.00037	.000	1
CalStd5=10	10.000	10.294	.294	2.94	.00005	.000	1

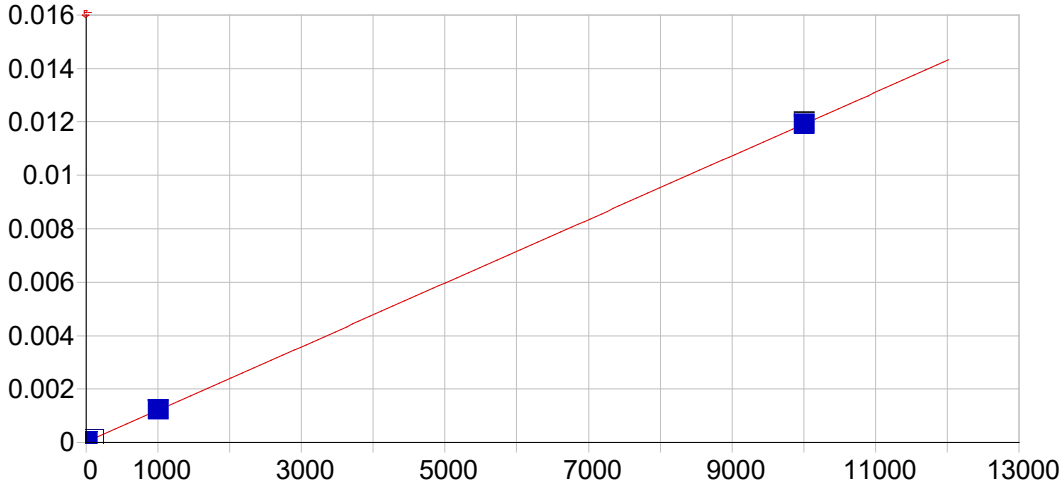


Sn 189.989 {478}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999695	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	1.604221		
Predicted MQL:	5.347403		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.90076	-.901	.000	.00000	.000	1
CalStd10=10	10000.	9863.8	-136.	-1.36	.00993	.000	1
CalStd9=100	1000.0	1044.5	44.5	4.45	.00105	.000	1
CalStd8=100	100.00	102.93	2.93	2.93	.00010	.000	1
CalStd5=10	10.000	10.685	.685	6.85	.00001	.000	1

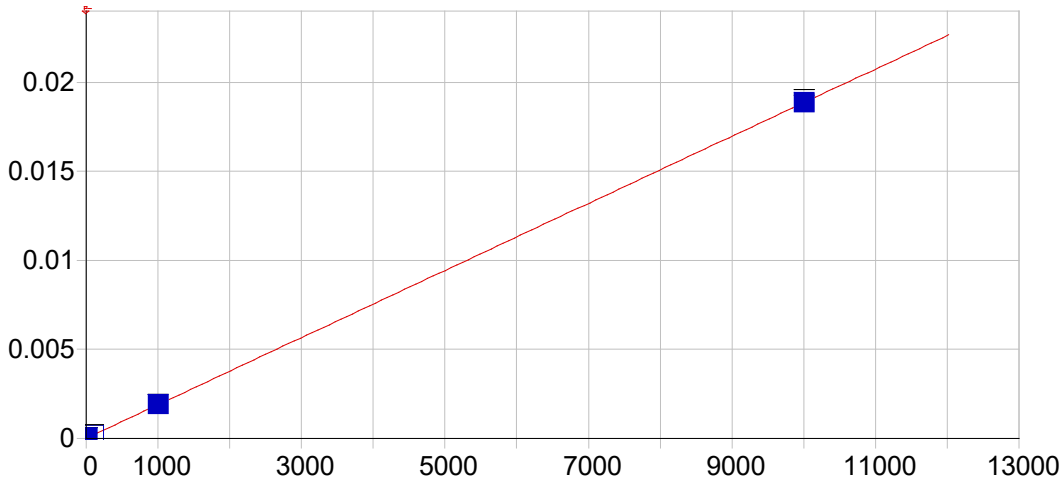


B 249.678 {135}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000012	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.100258		
Predicted MQL:	3.667527		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00030	.000	.000	.00001	.000	1
CalStd8=100	100.00	97.185	-2.81	-2.81	.00013	.000	1
CalStd5=10	10.000	9.9297	-.070	-.703	.00002	.000	1
CalStd9=100	1000.0	1005.2	5.17	.517	.00121	.000	1
CalStd10=10	10000.	9997.7	-2.28	-.023	.01192	.000	1

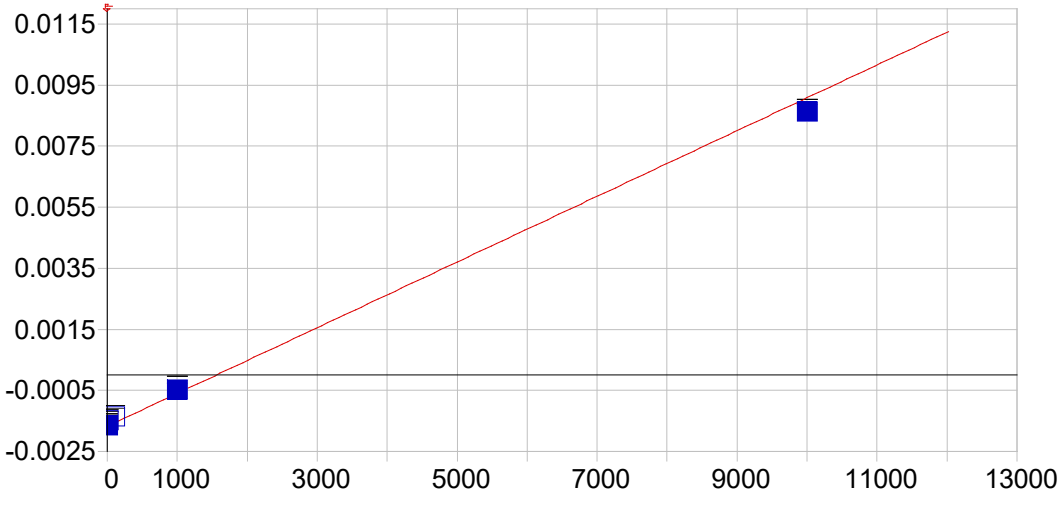


B 249.773 {135}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.609186		
Predicted MQL:	2.030621		

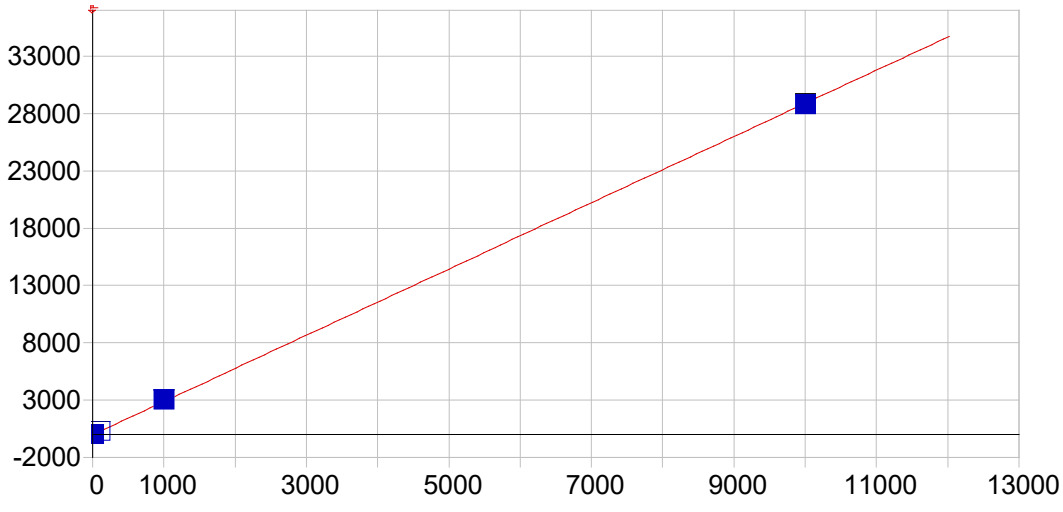
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00022	.000	.000	.00001	.000	1
CalStd8=100	100.00	98.989	-1.01	-1.01	.00019	.000	1
CalStd5=10	10.000	9.8519	-.148	-1.48	.00003	.000	1
CalStd9=100	1000.0	1002.6	2.61	.261	.00190	.000	1
CalStd10=10	10000.	9998.6	-1.45	-.014	.01886	.000	1



Li 610.353 { 55}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.001673		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.887876		Status:	OK.	
Std Error of Est:	0.000008				
Predicted MDL:	49.685459				
Predicted MQL:	165.618197				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.18066	-.181	.000	-.00167	.000	1
CalStd5=10	10.000	172.56	163.	1630.	-.00149	.000	1
CalStd8=100	100.00	275.06	175.	175.	-.00138	.000	1
CalStd9=100	1000.0	1103.1	103.	10.3	-.00049	.000	1
CalStd10=10	10000.	9559.3	-441.	-4.41	.00861	.000	1

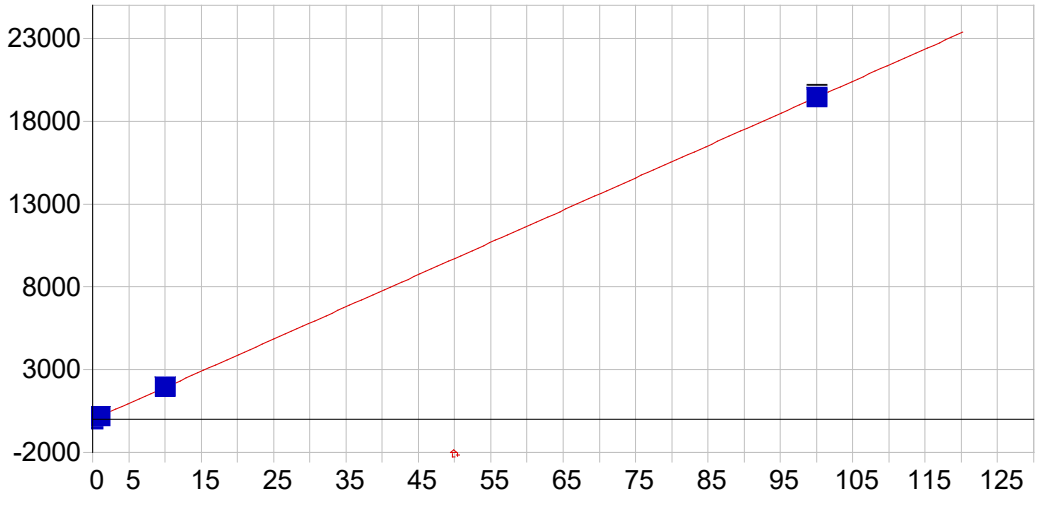


Li 670.776 { 50}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-13.747537	Re-Slope:	1.000000
A1 (Gain):	2.889610	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999871	Status:	OK.
Std Error of Est:	0.630661		
Predicted MDL:	2.402288		
Predicted MQL:	8.007626		

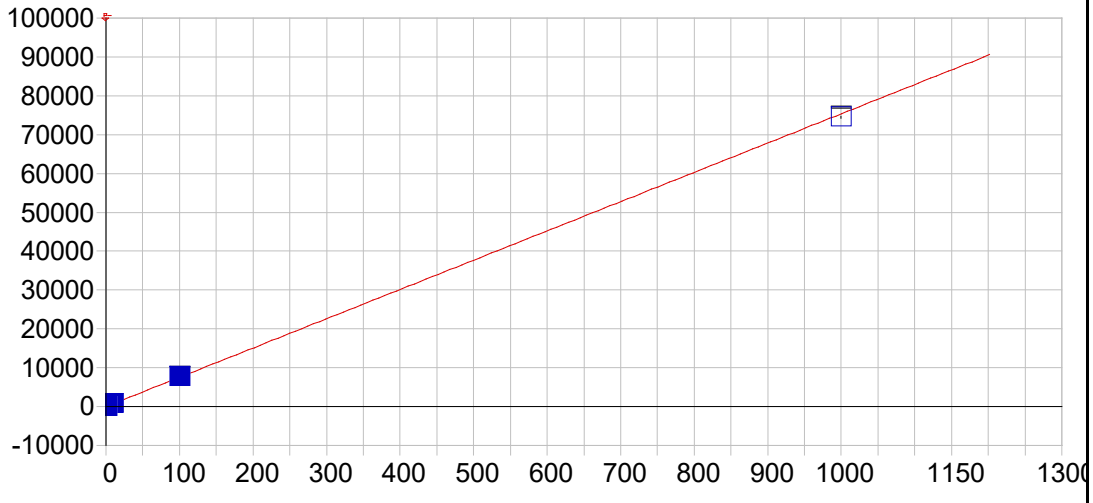
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00250	.002	.000	-13.740	2.63	1
CalStd5=10	10.000	7.1202	-2.88	-28.8	6.8270	6.99	1
CalStd8=100	100.00	99.919	-.081	-.081	274.98	2.54	1
CalStd9=100	1000.0	1043.2	43.2	4.32	3000.8	14.8	1
CalStd10=10	10000.	9959.7	-40.3	-.403	28766.	58.4	1



K 766.490 { 44}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-25.225853		Re-Slope:	1.000000	
A1 (Gain):	194.668728		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999989		Status:	OK.	
Std Error of Est:	0.438948				
Predicted MDL:	0.040705				
Predicted MQL:	0.135685				

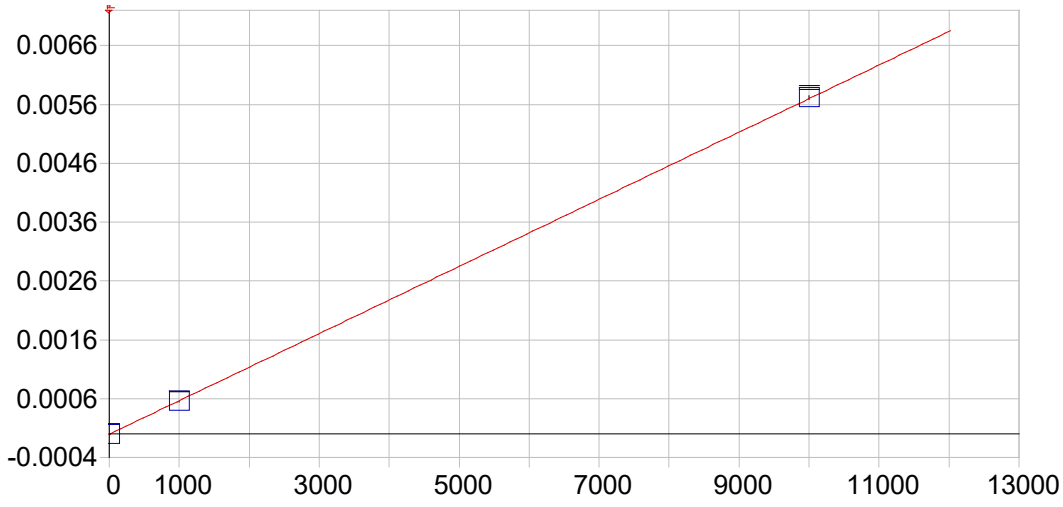
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00001	.000	.000	-25.223	2.97	1
CalStd9=100	1.0000	.97412	-.026	-2.59	164.99	4.93	1
CalStd10=10	10.000	10.133	.133	1.33	1953.1	8.52	1
CalStd13=10	100.00	99.893	-.107	-.107	19479.	118.	1



K 769.896 { 44}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	4.004528		Re-Slope:	1.000000	
A1 (Gain):	75.355169		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999742		Status:	OK.	
Std Error of Est:	37.298057				
Predicted MDL:	0.085581				
Predicted MQL:	0.285271				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.25049	-.250	.000	-14.871	3.63	1
CalStd10=10	10.000	10.494	.494	4.94	795.54	5.40	1
CalibStd15=	1000.0	988.46	-11.5	-1.15	74489.	198.	1
CalStd13=10	100.00	101.48	1.48	1.48	7658.4	34.3	1
CalStd9=100	1.0000	1.0770	.077	7.70	85.234	8.25	1

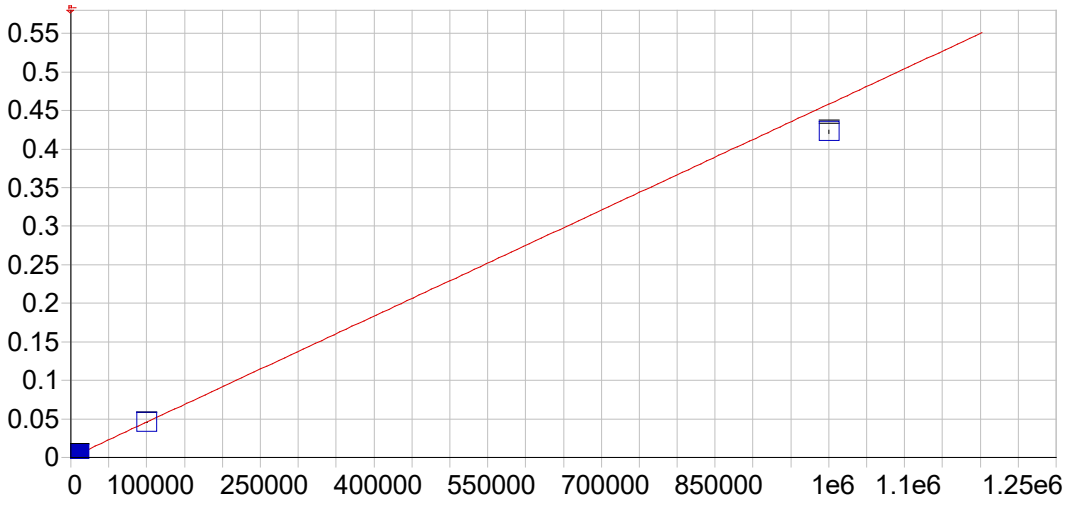


P 177.495 {489}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999961	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	2.251268		
Predicted MQL:	7.504227		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.02522	.025	.000	-.00001	.000	1
CalStd10=10	10000.	10028.	28.0	.280	.00571	.000	1
CalStd9=100	1000.0	971.98	-28.0	-2.80	.00055	.000	1

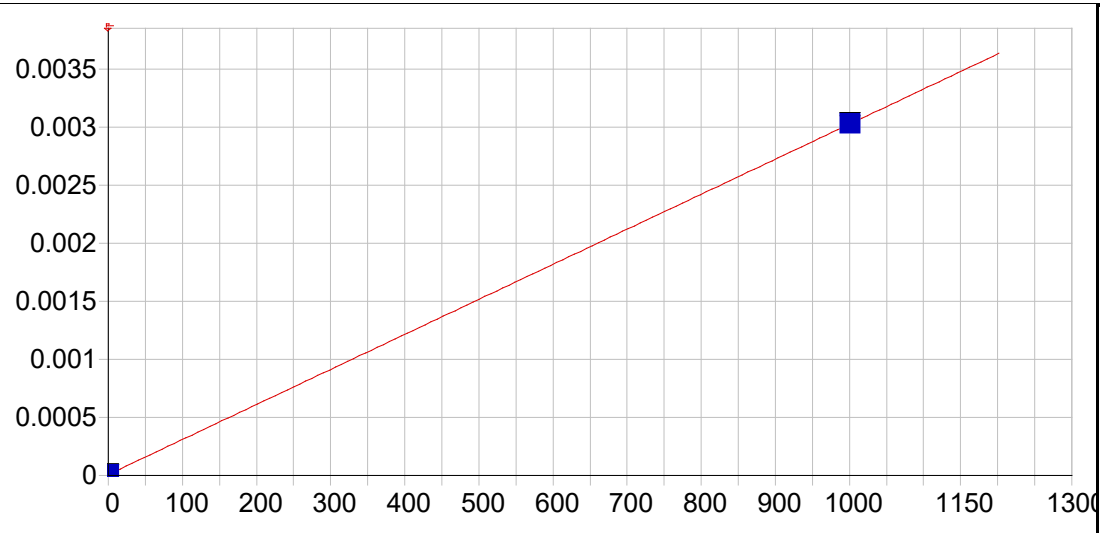


S 182.034 {485}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000019	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	3.717848		
Predicted MQL:	12.392827		

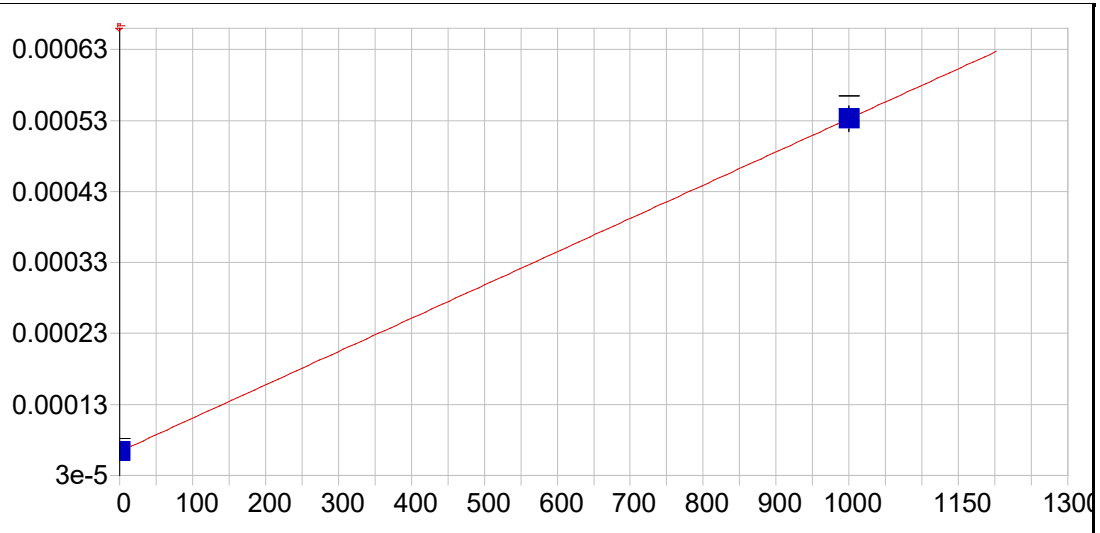
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.04928	.049	.000	.00002	.000	1
CalStd9=100	1000.0	963.13	-36.9	-3.69	.00046	.000	1
CalStd10=10	10000.	9847.4	-153.	-1.53	.00454	.000	1
CalibStd15=	1000000.	921820.	-78200.	-7.82	.42245	.002	1
CalStd13=10	100000.	99419.	-581.	-.581	.04558	.000	1



Hg 184.950 {482}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000008		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.592781				
Predicted MQL:	1.975937				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00001	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00302	.000	1



Ce 404.076 { 83}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000064	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	33.453712		
Predicted MQL:	111.512374		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00006	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00053	.000	1

Sample Name: Blank Acquired: 05/09/2022 07:32:55 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3158	Ca3933
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**52.8**	**.000**	**.000**	**.000**	**.000**	**-.000**	**-.000**	**.015**	**-.000**	**.000**	**.000**	**-.000**
Stddev	.000	1.0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	4.16	1.85	12.7	2.75	195.	26.6	19.4	29.2	.685	32.2	6.42	4.92	113.

Elem	Ca3968	Cd2265	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**-.000**	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**	**.000**	**-.000**	**-.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	435.	101.	180.	45.8	44.3	21.5	28.6	60.2	4.48	60.6	340.	11.8	155.

Elem	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**-.000**	**.000**	**.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.01	5.32	111.	27.3	174.	71.9	180.	212.	32.6	223.	8.17	261.	80.5

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**-.000**	**.000**	**.000**	**48.4**	**-25.2**	**-14.9**
Stddev	.000	.000	.000	.000	.000	8.1	3.0	3.6
%RSD	39.7	11.6	118.	112.	167.	16.6	11.8	24.4

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**452790.**	**2929000.**	**234250.**
Stddev	1709.	8635.	1079.
%RSD	.37740	.29481	.46046

Sample Name: CalStd2=0.5 Acquired: 05/09/2022 07:40:19 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Be2348	Be3130	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000
%RSD	344.	1.32	30.5	52.4

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**443030.**	**2844100.**	**228550.**
Stddev	1320.	15451.	804.
%RSD	.29795	.54326	.35163

Sample Name: CalStd3=1 Acquired: 05/09/2022 07:47:44 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	5.79	18.7	38.3	.784	5.93	42.3	20.4	20.2	44.9

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**439460.**	**2859000.**	**228880.**
Stddev	2696.	24252.	263.
%RSD	.61356	.84826	.11469

Sample Name: CalStd4=5 Acquired: 05/09/2022 07:55:06 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.57	3.24	7.69	1.01	1.91	10.9	5.24	5.34	8.65	.871	5.04	11.2	4.09

Elem	Pb2203	Sb2175
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	11.6	8.90

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**441920.**	**2820800.**	**228410.**
Stddev	1972.	30558.	214.
%RSD	.44616	1.0833	.09354

Sample Name: CalStd5=10 Acquired: 05/09/2022 08:02:27 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	102.	.000	.000	.000	-.000	.000	.000	.001	.000	.000	.000	.000
Stddev	.000	5.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	3.81	5.26	2.22	2.16	10.4	91.8	2.19	6.23	.913	1.65	3.02	2.36	2.25

Elem	Cr2677	Cu2230	Mn2576	Mo2020	Mo2045	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.62	6.30	1.01	1.96	6.84	4.14	39.5	3.14	16.7	11.8	21.2	11.9	2.28

Elem	Zn2062	Zn2138
Units	Cts/S	Cts/S
Avg	.000	.000
Stddev	.000	.000
%RSD	1.75	.957

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	439840.	2833300.	227180.
Stddev	3747.	27988.	995.
%RSD	.85200	.98782	.43793

Sample Name: CalStd6=20 Acquired: 05/09/2022 08:09:48 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ba2335	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000
%RSD	.853	.859	1.03	1.37	5.53	1.91

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**439670.**	**2797800.**	**226470.**
Stddev	2959.	18328.	807.
%RSD	.67304	.65509	.35617

Sample Name: CalStd7=50 Acquired: 05/09/2022 08:17:06 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	As1937	As1972	Ca3933	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.009**	**.001**	**.000**	**.001**	**.001**	**.000**	**.001**	**.000**	**.000**	**.001**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	4.69	13.9	.285	1.14	1.78	1.37	1.16	1.42	.548	1.19	.687	1.64	3.94

Elem	V_2924
Units	Cts/S
Avg	**.000**
Stddev	.000
%RSD	.349

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**438030.**	**2794700.**	**228020.**
Stddev	5063.	9273.	325.
%RSD	1.1558	.33181	.14243

Sample Name: CalStd8=100 Acquired: 05/09/2022 08:24:20 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3933	Ca3968	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**572.**	**.000**	**.000**	**.000**	**.000**	**.001**	**.020**	**.001**	**.007**	**.017**	**.008**	**.003**
Stddev	.000	5.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.942	.896	.749	2.12	2.20	3.79	.507	.259	.977	.946	.066	.294	.582

Elem	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Mg2802	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.002**	**.000**	**.001**	**.000**	**.000**	**.004**	**.001**	**.000**	**.000**	**.001**	**.001**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.851	.387	.624	.359	1.05	.279	.952	.968	.748	.852	.805	.389	5.39

Elem	Pb2203	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**	**.002**	**.003**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.56	1.78	3.05	7.65	.222	.932	.351	.636

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**436590.**	**2790200.**	**223890.**
Stddev	2162.	23018.	757.
%RSD	.49520	.82496	.33824

Sample Name: CalStd9=1000 Acquired: 05/09/2022 08:31:24 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3158	Ca3933	Ca3968	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.002**	**.001**	**.001**	**.001**	**.000**	**.007**	**.057**	**.007**	**.069**	**.001**	**.163**	**.073**	*****
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	-----
%RSD	.347	.937	1.22	.816	1.01	.705	.414	.670	.647	1.29	.360	.357	-----

Elem	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.003**	**.017**	**.002**	**.012**	**.003**	**.004**	**.000**	**.001**	**.002**	**.001**	**.000**	**.043**	**.010**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.689	.552	.852	.676	.602	.600	.796	.790	.280	.602	3.38	.717	.786

Elem	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.009**	**.005**	**.003**	**.012**	**.010**	**.001**	**.003**	**.001**	**.001**	**.001**	**.000**	**.002**	**.006**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.285	.638	.602	.539	.670	1.27	.645	.555	.724	.879	4.64	.731	.854

Elem	Zn2062	Zn2138	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.022**	**.031**	**591.**	**165.**	**85.2**
Stddev	.000	.000	8.	5.	8.3
%RSD	.671	.511	1.41	2.99	9.68

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**437810.**	**2779000.**	**225690.**
Stddev	2392.	24189.	1040.
%RSD	.54645	.87041	.46075

Sample Name: CalStd10=10000 Acquired: 05/09/2022 08:38:20 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	As1972	Ba2335	Ba4934	Ca3158	Ca3968	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.005**	**.014**	**.004**	**.068**	**.410**	**.006**	**.706**	**.158**	**.018**	**.112**	**.027**	**.034**	**.004**
Stddev	.000	.000	.000	.000	.001	.000	.012	.001	.000	.001	.000	.000	.000
%RSD	.581	.410	.341	.439	.187	.263	1.63	.366	.640	.451	.767	.323	.701

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.009**	**.023**	**.010**	**.001**	**.386**	**.094**	**.089**	**.045**	**.025**	**.112**	**.096**	**.005**	**.010**
Stddev	.000	.000	.000	.000	.002	.001	.000	.000	.000	.000	.000	.000	.000
%RSD	.315	.208	.327	.749	.535	1.29	.253	.408	.467	.316	.399	.503	.379

Elem	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.010**	**.006**	**.002**	**.017**	**.061**	**.205**	**5430.**	**1950.**	**796.**
Stddev	.000	.000	.000	.000	.000	.001	14.	9.	5.
%RSD	.402	.314	.455	.399	.637	.506	.249	.436	.679

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**434700.**	**2693300.**	**224930.**
Stddev	1870.	19654.	430.
%RSD	.43008	.72975	.19108

Sample Name: CalStd12=100K Acquired: 05/09/2022 08:45:32 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Cr2055	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.14**	**.972**	**.054**	**1.96**
Stddev	.01	.003	.000	.01
%RSD	.708	.279	.295	.635

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**434710.**	**2732600.**	**221950.**
Stddev	1931.	21635.	1258.
%RSD	.44426	.79173	.56657

Sample Name: CalStd13=100000 Acquired: 05/09/2022 08:53:29 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	Na5895	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.055**	**.139**	**.066**	**.040**	**.098**	**.235**	**.106**	**.007**	**.001**	**52700.**	**19500.**
Stddev	.000	.001	.000	.000	.000	.001	.000	.000	.000	192.	118.
%RSD	.298	.452	.398	.473	.363	.373	.218	.271	3.34	.363	.605

Elem	K_7698
Units	Cts/S
Avg	**7660.**
Stddev	34.
%RSD	.448

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**421880.**	**2676200.**	**221410.**
Stddev	1412.	10401.	191.
%RSD	.33482	.38864	.08616

Sample Name: CalStd14=500000 Acquired: 05/09/2022 09:01:01 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.263**	**.686**	**.312**	**.450**	**1.11**	**.495**	**.033**	**.003**
Stddev	.000	.001	.000	.001	.00	.003	.000	.000
%RSD	.110	.209	.085	.191	.344	.656	.226	.198

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**389090.**	**213510.**
Stddev	2633.	528.
%RSD	.67678	.24750

Sample Name: CalibStd15=1000k Acquired: 05/09/2022 09:08:49 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.538**	**1.35**	**.606**	**.862**	**2.08**	**.951**	**.065**	**.006**	**74500.**
Stddev	.002	.02	.003	.002	.03	.004	.000	.000	198.
%RSD	.426	1.16	.417	.175	1.22	.378	.562	.676	.265

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**363820.**	**205870.**
Stddev	1597.	788.
%RSD	.43889	.38275

Sample Name: Ag 1000 Acquired: 05/09/2022 09:17:00 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382
Units	Cts/S
Avg	**4960.**
Stddev	5.
%RSD	.097

Sample Name: icv Acquired: 05/09/2022 09:31:49 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	As1972	Ba4934	Be3130	Ca3158	Ca3933	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.3**	**48.0**	**12300.**	**2110.**	**2050.**	**51.6**	**11000.**	**9550.**	**48.5**	**520.**	**208.**	**248.**
Stddev	.5	.6	78.	15.	6.	.3	49.	47.	.2	3.	1.	1.
%RSD	1.04	1.35	.635	.700	.280	.580	.445	.488	.482	.497	.492	.598
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Se2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5240.**	**5320.**	**10100.**	**10700.**	**522.**	**516.**	**514.**	**502.**	**478.**	**524.**	**2090.**	**1980.**
Stddev	25.	53.	59.	26.	3.	2.	3.	8.	4.	4.	18.	22.
%RSD	.479	1.00	.582	.248	.513	.410	.501	1.50	.753	.708	.861	1.12
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na3302	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**2010.**	**516.**	**513.**	**512.**	**103.**	**102.**
Stddev	12.	3.	2.	3.	.	.
%RSD	.571	.670	.371	.635	.246	.093
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: icv Acquired: 05/09/2022 09:31:49 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**432500.**	**2659100.**	**216000.**
Stddev	1628.	14114.	1070.
%RSD	.37647	.53079	.49539

Sample Name: ICVLL Acquired: 05/09/2022 09:46:06 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	F **26.6**	**1340.**	**1330.**	**57.5**	**33.3**	**12.8**	**1730.**	**1540.**	**1590.**	**15.9**	**33.2**	**31.7**	**34.0**
Stddev	.8	20.	5.	4.1	.4	.2	8.	2.	2.	.2	.6	.6	.6
%RSD	3.07	1.53	.398	7.04	1.27	1.31	.449	.106	.097	1.22	1.92	1.92	1.64
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	20.0												
Range	30.0%												

Elem	Fe2343	Fe2599	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**987.**	**985.**	**1700.**	**32.7**	**31.1**	**32.8**	**28.7**	**61.0**	**67.4**	**59.8**	**31.5**	**32.8**	**6.23**
Stddev	12.	7.	17.	.4	.3	.7	1.1	3.8	3.6	2.4	.5	.3	.03
%RSD	1.25	.678	1.01	1.23	1.10	2.01	3.71	6.17	5.34	4.08	1.66	1.05	.407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	K_7698
Units	mg/L	mg/L
Avg	**3.70**	**3.74**
Stddev	.04	.05
%RSD	1.01	1.37
Check ?	Chk Pass	Chk Pass
Value		
Range		

Sample Name: ICVLL Acquired: 05/09/2022 09:46:06 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**438110.**	**2758300.**	**217500.**
Stddev	3905.	29901.	483.
%RSD	.89122	1.0840	.22221

Sample Name: icb Acquired: 05/09/2022 10:00:47 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.723**	**-.325**	**-2.12**	**.015**	**.011**	**.806**	**.750**	**.090**	**.192**	**.236**	**-.187**	**.879**	**.248**
Stddev	.529	.556	3.52	.395	.009	.051	.136	.088	.197	.656	.885	.916	.027
%RSD	73.3	171.	166.	2620.	77.8	6.28	18.1	97.5	102.	278.	474.	104.	11.0
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.001**	**-.063**	**.040**	**.842**	**-.648**	**1.28**	**-2.37**	**-.061**	**.340**	**.032**	**.246**	**.182**
Stddev	.033	.295	.726	.437	.572	2.43	1.18	.261	.110	.011	.032	.071
%RSD	2220.	467.	1800.	51.9	88.2	190.	49.8	427.	32.4	34.0	13.1	39.2
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**443350.**	**2773700.**	**219900.**
Stddev	1032.	12021.	297.
%RSD	.23269	.43341	.13505

Sample Name: ICSA Acquired: 05/09/2022 10:15:25 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.093**	**520000.**	**491000.**	**-.026**	**.627**	**.201**	**528000.**	**.998**	**-.329**	**-8.45**	**-1.43**
Stddev	.498	346.	1470.	10.3	.408	.021	487.	.188	.395	.60	1.16
%RSD	535.	.066	.298	39000.	65.1	10.2	.092	18.8	120.	7.08	81.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**524000.**	**479000.**	**497000.**	**527000.**	**-5.06**	**-2.15**	**5.40**	**-.000**	**-3.66**	**-2.63**	**-.733**
Stddev	808.	240.	1750.	1110.	.13	.49	.63	2.97	.95	4.51	1.16
%RSD	.154	.050	.351	.210	2.65	23.0	11.7	1280000.	26.0	171.	158.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**10000.**	**-6.08**	**-.294**	**-.912**	**-.024**
Stddev	53.	.24	.007	.032	.127
%RSD	.529	3.99	2.30	3.47	520.
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Sample Name: ICSA Acquired: 05/09/2022 10:15:25 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**395850.**	**2527700.**	**208460.**
Stddev	1122.	12069.	585.
%RSD	.28340	.47746	.28069

Sample Name: ICSAB Acquired: 05/09/2022 10:22:51 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	Al3961	As1937	Ba2335	Be2348	Ca3158	Cd2288	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**456.**	**465.**	**523000.**	**486000.**	**524.**	**527.**	**486.**	**530000.**	**504.**	**504.**	**490.**
Stddev	2.	2.	488.	994.	13.	4.	3.	644.	6.	4.	2.
%RSD	.442	.381	.093	.204	2.53	.703	.519	.122	1.11	.808	.497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Cu2230	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**538.**	**523000.**	**480000.**	**490000.**	**524000.**	**509.**	**505.**	**497.**	**450.**	**507.**	**516.**
Stddev	6.	1270.	475.	4070.	727.	2.	5.	3.	5.	9.	10.
%RSD	1.03	.242	.099	.832	.139	.473	.916	.683	1.00	1.77	1.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na3302	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**494.**	**504.**	**464.**	**507.**	**53.5**	**49.9**	**52.2**
Stddev	4.	3.	5.	5.	1.0	.2	.3
%RSD	.873	.571	.990	.897	1.84	.352	.499
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB Acquired: 05/09/2022 10:22:51 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**400160.**	**2512300.**	**209460.**
Stddev	3546.	14077.	811.
%RSD	.88615	.56032	.38740

Sample Name: ICVLL ag Acquired: 05/09/2022 10:37:17 Type: Unk
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9.87**	**7.08**	**-35.9**	**-2.42**	**.410**	**.016**	**6.65**	**6.82**	**.078**	**.185**	**.285**	**.889**	**58.5**
Stddev	.50	.28	16.9	2.92	.081	.006	.16	.28	.095	.243	.094	1.46	5.9
%RSD	5.06	3.98	46.9	121.	19.9	39.0	2.44	4.13	122.	132.	33.0	164.	10.0

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**4.53**	**.150**	**.370**	**.141**	**-.722**	**.128**	**.726**	**-2.17**	**.168**	**.374**	**.042**	**.226**	**.269**
Stddev	.04	.057	.149	.530	2.26	2.36	.769	.65	.446	.111	.010	.007	.084
%RSD	.957	38.1	40.2	377.	314.	1840.	106.	29.8	265.	29.7	23.0	3.21	31.3

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**436130.**	**2753900.**	**216970.**
Stddev	2827.	11357.	536.
%RSD	.64828	.41238	.24724

Sample Name: ccv1 Acquired: 05/09/2022 11:52:15 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	As1972	Ba4934	Be2348	Ca3158	Ca3933	Ca3968	Cd2288	Co2286	Co2388	Cr2055	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**482.**	**5120.**	**5210.**	**4930.**	**460.**	**5360.**	**4740.**	**4870.**	**481.**	**5120.**	**5090.**	**4950.**	**5100.**
Stddev	2.	23.	39.	12.	2.	7.	13.	14.	2.	27.	19.	25.	31.
%RSD	.417	.449	.745	.247	.472	.135	.277	.280	.315	.518	.382	.499	.616
Check ?	None	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2924	Zn2062	Na3302
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**5160.**	**4920.**	**5070.**	**5100.**	**5100.**	**5130.**	**5030.**	**5140.**	**5020.**	**5000.**	**5160.**	**5000.**	**97.0**
Stddev	20.	16.	32.	70.	25.	28.	23.	33.	32.	22.	22.	20.	.9
%RSD	.377	.323	.635	1.38	.489	.552	.450	.637	.628	.444	.417	.405	.945
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7698
Units	mg/L
Avg	**101.**
Stddev	.
%RSD	.263
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv1 Acquired: 05/09/2022 11:52:15 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**433470.**	**2691800.**	**219110.**
Stddev	1819.	15054.	512.
%RSD	.41964	.55923	.23378

Sample Name: ccv2 Acquired: 05/09/2022 11:58:51 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**46.2**	**52.7**	**506.**	**507.**	**531.**	**50.9**	**487.**	**504.**	**50.3**	**528.**	**508.**	**537.**	**534.**
Stddev	1.0	.7	10.	2.	3.	.6	1.	.	.3	3.	5.	3.	8.
%RSD	2.20	1.27	1.92	.389	.481	1.12	.228	.091	.621	.617	.959	.564	1.42
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Fe2599	Mg2802	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**508.**	**550.**	**527.**	**505.**	**526.**	**539.**	**492.**	**527.**	**526.**	**535.**	**515.**	**512.**	**510.**
Stddev	4.	6.	6.	3.	3.	5.	4.	7.	3.	4.	6.	1.	4.
%RSD	.689	1.18	1.22	.584	.614	.849	.835	1.24	.623	.757	1.13	.290	.688
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L
Avg	**9.86**	**10.4**	**10.6**
Stddev	.02	.1	.1
%RSD	.232	.553	.550
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv2 Acquired: 05/09/2022 11:58:51 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**437110.**	**2755500.**	**218660.**
Stddev	2249.	31581.	678.
%RSD	.51462	1.1461	.31000

Sample Name: ccb Acquired: 05/09/2022 12:05:40 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.002**	**-.337**	**-5.00**	**.200**	**-.003**	**.009**	**-.107**	**-.012**	**.175**	**-.031**	**-1.24**	**-.360**	**-.064**
Stddev	.395	.522	3.30	.133	.007	.039	.211	.092	.057	.335	1.74	.712	.011
%RSD	26300.	155.	65.9	66.8	203.	455.	196.	735.	32.5	1080.	140.	198.	17.2
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.009**	**.560**	**.234**	**-.162**	**-.106**	**1.96**	**-1.35**	**-.079**	**.217**	**.018**	**.508**	**.226**
Stddev	.059	.516	.537	2.25	.990	4.16	.56	.335	.091	.012	.034	.057
%RSD	696.	92.2	229.	1390.	937.	212.	41.1	423.	42.1	70.3	6.76	25.2
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**447280.**	**2857300.**	**224050.**
Stddev	2775.	13781.	1002.
%RSD	.62044	.48231	.44715

Sample Name: lcsw95236 Acquired: 05/09/2022 13:04:17 Type: Unk
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**19.8**	**912.**	**1040.**	**905.**	**901.**	**21.8**	**221000.**	**72.8**	**222.**	**87.4**	**115.**
Stddev	.5	4.	3.	1.	3.	.2	599.	1.0	1.	.6	.
%RSD	2.76	.482	.294	.077	.285	.786	.272	1.38	.428	.707	.185

Elem	Fe2343	Mg2025	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**439.**	**106000.**	**103000.**	**219.**	**2190.**	**222.**	**207.**	**234.**	**916.**	**881.**	**218.**
Stddev	5.	515.	389.	2.	10.	1.	5.	3.	7.	13.	2.
%RSD	1.06	.487	.379	.967	.441	.371	2.38	1.26	.811	1.52	.687

Elem	Zn2062	Zn2138	Na3302	K_7698
Units	ug/L	ug/L	mg/L	mg/L
Avg	**221.**	**225.**	**106.**	**107.**
Stddev	1.	1.	2.	.
%RSD	.376	.303	1.97	.122

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**413420.**	**2654000.**	**216360.**
Stddev	1518.	25760.	584.
%RSD	.36715	.97059	.27009

Sample Name: mbw95236 Acquired: 05/09/2022 13:11:25 Type: Unk
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.121**	**2.61**	**-3.17**	**-.152**	**.001**	**10.8**	**11.0**	**.095**	**.048**	**-.060**	**1.26**	**5.28**	**1.68**
Stddev	.567	.29	4.17	.463	.022	1.6	1.7	.175	.089	.346	.39	.94	.15
%RSD	469.	11.2	131.	305.	1920.	14.7	15.4	184.	186.	581.	31.3	17.9	8.99

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.072**	**1.37**	**.003**	**.084**	**1.40**	**.325**	**-1.03**	**-.716**	**.373**	**.066**	**.433**	**.321**
Stddev	.026	.32	.095	1.47	2.18	1.12	1.00	.245	.018	.020	.012	.080
%RSD	35.7	22.9	2970.	1750.	156.	345.	97.3	34.2	4.72	30.5	2.85	24.9

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**435820.**	**2798900.**	**217650.**
Stddev	2039.	23794.	911.
%RSD	.46782	.85013	.41872

Sample Name: 1136212 Acquired: 05/09/2022 13:18:48 Type: Unk
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.180**	**150.**	**141.**	**-3.54**	**82.8**	**.023**	**64000.**	**.023**	**.206**	**3.50**	**2.73**	**205.**
Stddev	.503	.	6.	5.12	.4	.009	119.	.072	.292	.50	.89	.
%RSD	280.	.297	4.20	145.	.533	37.0	.185	309.	142.	14.1	32.6	.212

Elem	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**26000.**	**24200.**	**9.04**	**3.75**	**.774**	**1.13**	**-.571**	**2.18**	**-1.75**	**-.092**	**55.2**	**26.5**
Stddev	141.	59.	.10	.27	.595	1.04	2.21	1.77	1.56	.572	.4	.0
%RSD	.541	.243	1.09	7.32	76.9	92.5	387.	81.1	89.1	625.	.654	.179

Elem	K_7664	K_7698
Units	mg/L	mg/L
Avg	**1.31**	**1.15**
Stddev	.04	.07
%RSD	2.63	6.36

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**427430.**	**2756800.**	**222890.**
Stddev	1580.	11045.	236.
%RSD	.36963	.40064	.10603

Sample Name: ccv1 Acquired: 05/09/2022 13:26:20 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	As1972	Ba4934	Be3130	Ca3158	Ca3933	Ca3968	Cd2288	Co2286	Co2388	Cr2055	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**482.**	**5000.**	**5190.**	**4940.**	**495.**	**5270.**	**4760.**	**4880.**	**492.**	**5140.**	**5020.**	**4990.**	**5090.**
Stddev	3.	15.	17.	10.	3.	3.	6.	5.	2.	10.	26.	12.	3.
%RSD	.636	.295	.331	.194	.519	.058	.123	.101	.455	.197	.511	.249	.061
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2924	Zn2062	Na3302
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**5090.**	**4800.**	**4890.**	**5060.**	**5200.**	**5060.**	**5090.**	**5150.**	**5100.**	**5100.**	**5080.**	**5050.**	**98.7**
Stddev	29.	9.	18.	42.	14.	4.	14.	8.	21.	9.	34.	14.	.9
%RSD	.568	.181	.365	.822	.264	.074	.279	.161	.411	.181	.668	.270	.945
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7698
Units	mg/L
Avg	**104.**
Stddev	1.
%RSD	.517
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv1 Acquired: 05/09/2022 13:26:20 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**426290.**	**2705800.**	**223550.**
Stddev	812.	14821.	1469.
%RSD	.19042	.54774	.65725

Sample Name: ccv2 Acquired: 05/09/2022 13:32:58 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.6**	**52.6**	**542.**	**489.**	**511.**	**534.**	**49.9**	**484.**	**499.**	**50.7**	**527.**	**498.**	**532.**
Stddev	1.0	.6	7.	10.	3.	2.	.6	1.	1.	.3	4.	6.	4.
%RSD	2.11	1.17	1.24	2.12	.575	.453	1.14	.226	.138	.612	.707	1.21	.736
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Fe2343	Fe2599	Mg2802	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**523.**	**493.**	**541.**	**516.**	**508.**	**528.**	**544.**	**496.**	**525.**	**531.**	**544.**	**502.**	**520.**
Stddev	7.	2.	7.	6.	3.	3.	2.	4.	3.	6.	4.	6.	2.
%RSD	1.34	.493	1.23	1.16	.646	.506	.439	.830	.560	1.05	.643	1.10	.454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	mg/L	mg/L	mg/L
Avg	**508.**	**10.0**	**10.4**	**10.7**
Stddev	3.	.0	.1	.1
%RSD	.665	.455	.559	.597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Sample Name: ccv2 Acquired: 05/09/2022 13:32:58 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**434020.**	**2788500.**	**220180.**
Stddev	1968.	34706.	842.
%RSD	.45348	1.2446	.38242

Sample Name: ccb Acquired: 05/09/2022 13:39:45 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.096**	**-.139**	**-3.42**	**.321**	**.007**	**.528**	**.494**	**.021**	**.219**	**.078**	**-.227**	**-.120**	**.015**
Stddev	.354	.321	4.22	.086	.003	.113	.121	.103	.032	.410	.521	.842	.012
%RSD	367.	231.	123.	26.7	40.4	21.4	24.6	479.	14.6	524.	229.	700.	76.8
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.052**	**.424**	**.158**	**-.760**	**-2.64**	**1.96**	**-.060**	**-.468**	**.416**	**.016**	**.263**	**.197**
Stddev	.041	.304	.338	.926	1.03	2.16	1.38	.371	.038	.008	.050	.067
%RSD	78.1	71.7	214.	122.	39.0	111.	2310.	79.4	9.14	46.8	19.1	34.1
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**444540.**	**2845800.**	**222460.**
Stddev	1815.	17054.	1175.
%RSD	.40830	.59926	.52831

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Ag 328.068 {103}	05/04/2022 13:08:43	05/03/2022 14:18:32	Linear	1/Conc	-0.000021	0.000003	0.000000	1.000000	0.998983	0.000000	0.371569	1.238562
Ag 338.289 {100}	05/04/2022 13:08:43	05/03/2022 14:18:32	Linear	1/Conc	43.685570	5.279786	0.000000	1.000000	0.999489	0.795114	0.642150	2.140500
Al 167.079 {501}	05/04/2022 13:08:43	05/03/2022 13:30:00	Linear	1/Conc	0.000005	0.000003	0.000000	1.000000	0.999858	0.000000	0.352665	1.175551
Al 309.271 {109}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	0.000210	0.000001	0.000000	1.000000	0.999901	0.000001	12.773111	42.577038
Al 396.152 { 85}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Var	0.000008	0.000002	0.000000	1.000000	0.999732	0.000047	7.351281	24.504272
As 193.759 {474}	05/04/2022 13:08:43	05/03/2022 13:30:00	Linear	1/Conc	0.000005	0.000001	0.000000	1.000000	0.999730	0.000000	3.381583	11.271944
As 197.262 {471}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000002	0.000000	0.000000	1.000000	0.999806	0.000000	4.997884	16.659613
Ba 233.527 {445}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000000	0.000009	0.000000	1.000000	0.999662	0.000001	0.237141	0.790472
Ba 455.403 { 74}	05/04/2022 13:08:43	05/03/2022 13:37:53	Curvili	1/Conc	0.000110	0.000046	-0.000000	1.000000	0.999996	0.000001	0.204637	0.682123
Ba 493.409 { 68}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Var	0.000525	0.000044	0.000000	1.000000	0.999664	0.000149	0.793794	2.645981
Be 234.861 {144}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	-0.000000	0.000008	0.000000	1.000000	0.999779	0.000000	0.213609	0.712029
Be 313.042 {108}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	0.000025	0.000083	0.000000	1.000000	0.999985	0.000000	0.013526	0.045086
Be 313.107 {108}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	0.000013	0.000036	0.000000	1.000000	0.999976	0.000000	0.165969	0.553231
Ca 184.006 {483}	05/04/2022 13:08:43	05/03/2022 13:53:45	Linear	1/Conc	-0.000029	0.000002	0.000000	1.000000	0.999947	0.000009	1.009319	3.364395
Ca 315.887 {107}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Var	0.000049	0.000001	0.000000	1.000000	0.999296	0.000028	5.389620	17.965400
Ca 317.933 {106}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	0.002519	0.000001	0.000000	1.000000	0.998893	0.000108	2.591979	8.639929
Ca 393.366 { 86}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	0.000075	0.000198	0.000000	1.000000	0.999239	0.000083	0.042980	0.143265
Ca 396.847 { 85}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	0.000013	0.000084	0.000000	1.000000	0.999806	0.000078	0.094920	0.316401
Cd 226.502 {449}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	-0.000001	0.000021	0.000000	1.000000	0.999983	0.000000	0.156342	0.521141
Cd 228.802 {448}	05/04/2022 13:08:43	05/03/2022 13:30:01	Linear	1/Conc	0.000002	0.000005	0.000000	1.000000	0.999920	0.000000	0.413006	1.376688
Co 228.616 {447}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000003	0.000020	0.000000	1.000000	0.999793	0.000002	0.193332	0.644439
Co 238.892 {141}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	0.000001	0.000002	0.000000	1.000000	0.999974	0.000001	0.306626	1.022088
Cr 205.560 {464}	05/04/2022 13:08:43	05/03/2022 13:46:19	Linear	1/Var	-0.000004	0.000015	0.000000	1.000000	0.999496	0.000006	0.175844	0.586148
Cr 267.716 {126}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000002	0.000003	0.000000	1.000000	0.999987	0.000000	0.334828	1.116094
Cu 223.008 {451}	05/04/2022 13:08:43	05/03/2022 13:37:53	Linear	1/Conc	-0.000001	0.000004	0.000000	1.000000	0.999643	0.000001	0.956266	3.187553
Cu 324.754 {104}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	1/Conc	0.000329	0.000003	0.000000	1.000000	0.999813	0.000007	2.428330	8.094435
Cu 327.396 {103}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	1/Conc	0.000048	0.000002	0.000000	1.000000	0.999800	0.000001	4.575577	15.251924
Fe 234.349 {144}	05/04/2022 13:08:43	05/03/2022 13:53:45	Linear	1/Var	0.000015	0.000001	0.000000	1.000000	0.999984	0.000003	0.699558	2.331860
Fe 239.562 {140}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	0.000006	0.000001	0.000000	1.000000	0.997783	0.000082	3.836041	12.786804
Fe 259.940 {129}	05/04/2022 13:08:43	05/03/2022 14:10:52	Curvili	1/Var	0.000005	0.000003	0.000000	1.000000	0.999726	0.000036	1.513870	5.046235
Mg 202.582 {466}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Var	0.000015	0.000001	0.000000	1.000000	0.998853	0.000161	2.449654	8.165513
Mg 279.079 {121}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.999685	0.000003	25.559133	85.197111
Mg 280.270 {120}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000062	0.000048	0.000000	1.000000	0.999348	0.000081	0.013981	0.046604
Mn 257.610 {131}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	-0.000001	0.000012	0.000000	1.000000	0.999851	0.000002	0.047765	0.159218
Mn 259.373 {130}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	None	-0.000140	0.000010	0.000000	1.000000	0.999999	0.000737	0.364684	1.215613
Mo 202.030 {466}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Var	0.000004	0.000006	0.000000	1.000000	0.999955	0.000009	0.365364	1.217882
Mo 204.598 {464}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000002	0.000003	0.000000	1.000000	0.999825	0.000001	0.736140	2.453799
Ni 221.647 {452}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	-0.000002	0.000012	0.000000	1.000000	0.999779	0.000012	0.367243	1.224142
Ni 231.604 {445}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	-0.000001	0.000011	0.000000	1.000000	0.999786	0.000001	0.366247	1.220824
Pb 216.999 {455}	05/04/2022 13:08:43	05/03/2022 13:46:20	Curvili	1/Conc	0.000002	0.000001	0.000000	1.000000	0.999971	0.000000	4.698486	15.661621
Pb 220.353 {153}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999986	0.000000	1.717821	5.726069
Pb 220.353 {453}	05/04/2022 13:08:43	05/03/2022 13:30:02	Linear	1/Conc	0.000014	0.000003	0.000000	1.000000	0.999972	0.000000	1.426759	4.755862
Sb 206.833 {463}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Var	-0.000001	0.000001	0.000000	1.000000	0.999811	0.000008	1.941046	6.470152
Sb 217.581 {455}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000010	0.000001	0.000000	1.000000	0.999816	0.000000	2.305353	7.684509

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 309.271 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 234.861 {144}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 313.107 {108}	OK.	1.000000	0.000000	1	0
	Ca 184.006 {483}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {448}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0

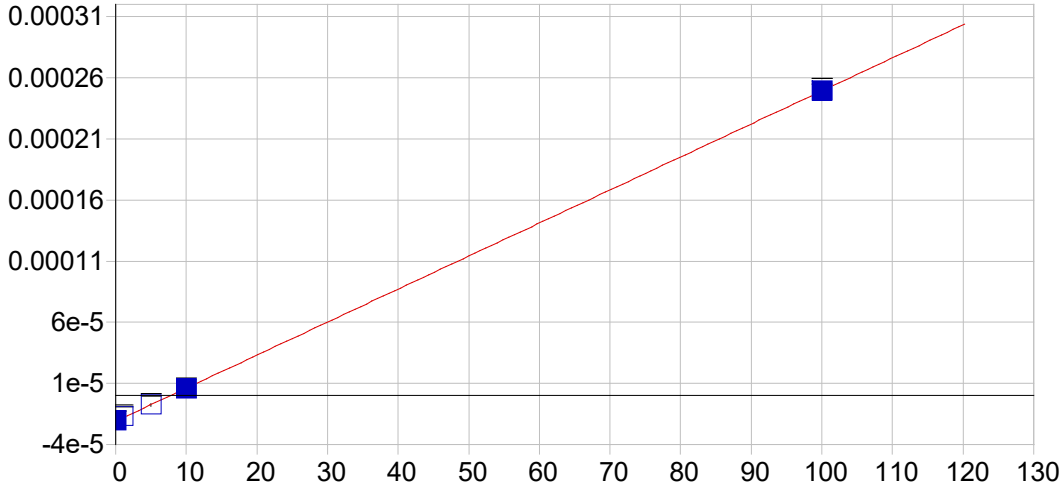
	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
	Se 196.090 {472}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000003	0.000001	0.000000	1.000000	0.999776	0.000000	2.889846	9.632820
	Se 206.279 {463}	05/04/2022 13:08:43	05/03/2022 13:37:54	Curvili	1/Conc	0.000004	0.000000	0.000000	1.000000	0.999844	0.000000	14.818017	49.393390
	Tl 190.856 {476}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000000	0.000002	0.000000	1.000000	0.999670	0.000001	1.703755	5.679182
	Tl 190.856 {477}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Var	0.000004	0.000001	0.000000	1.000000	0.999439	0.000011	2.759172	9.197239
	V 290.882 {116}	05/04/2022 13:08:43	05/03/2022 13:37:54	Curvili	1/Var	0.000013	0.000001	-0.000000	1.000000	0.999991	0.000001	4.338762	14.462541
	V 292.402 {115}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000012	0.000008	0.000000	1.000000	0.999997	0.000000	0.280078	0.933592
	Zn 206.200 {463}	05/04/2022 13:08:43	05/03/2022 13:46:20	Linear	1/Var	0.000013	0.000013	0.000000	1.000000	0.996634	0.000037	0.200498	0.668325
	Zn 213.856 {457}	05/04/2022 13:08:43	05/03/2022 13:30:02	Linear	1/Conc	0.000009	0.000036	0.000000	1.000000	0.999985	0.000001	0.090243	0.300810
	Y 224.306 {450}*	05/04/2022 13:08:43	05/03/2022 12:29:47	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 324.228 {104}*	05/04/2022 13:08:43	05/03/2022 12:29:47	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 371.030 { 91}*	05/04/2022 13:08:43	05/03/2022 12:29:47	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Na 330.237 {102}	05/04/2022 13:08:43	05/03/2022 14:10:52	Linear	1/Conc	-0.000000	0.000007	0.000000	1.000000	0.999847	0.000002	1.078491	3.594970
	Na 588.995 { 57}	05/04/2022 13:08:43	05/03/2022 13:53:46	Linear	1/Conc	2219.4181	1611.6123	0.000000	1.000000	0.999985	4.223921	0.006709	0.022363
	Na 589.592 { 57}	05/04/2022 13:08:43	05/03/2022 13:53:46	Linear	1/Conc	51.809383	702.06957	0.000000	1.000000	0.999993	1.198180	0.008962	0.029873
	Si 212.412 {458}	05/04/2022 13:08:43	05/03/2022 14:10:53	Linear	1/Var	0.000045	0.000003	0.000000	1.000000	0.997384	0.000167	1.075564	3.585212
	Si 251.611 {134}	05/04/2022 13:08:43	05/03/2022 14:10:53	Linear	1/Conc	0.000005	0.000001	0.000000	1.000000	0.998752	0.000012	6.992742	23.309141
	Ti 323.452 {104}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000272	0.000007	0.000000	1.000000	0.999875	0.000001	1.242070	4.140234
	Sr 407.771 { 83}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000095	0.000071	0.000000	1.000000	0.999847	0.000005	0.139140	0.463801
	Sr 421.552 { 80}	05/04/2022 13:08:43	05/03/2022 13:37:54	Linear	1/Conc	0.000036	0.000097	0.000000	1.000000	0.999889	0.000006	0.108229	0.360762
	Sn 189.989 {477}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Var	0.000004	0.000004	0.000000	1.000000	0.999850	0.000008	0.522706	1.742355
	Sn 189.989 {478}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Var	0.000002	0.000001	0.000000	1.000000	0.999405	0.000005	1.442288	4.807625
	B 249.678 {135}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	0.000001	0.000002	0.000000	1.000000	0.999999	0.000000	0.769694	2.565646
	B 249.773 {135}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	0.000007	0.000003	0.000000	1.000000	0.999999	0.000000	0.403725	1.345751
	Li 610.353 { 55}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	-0.000474	0.000001	0.000000	1.000000	0.994993	0.000002	23.843010	79.476700
	Li 670.776 { 50}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	-30.799338	5.065816	0.000000	1.000000	0.999892	1.014185	1.271588	4.238626
	K 766.490 { 44}	05/04/2022 13:08:43	05/03/2022 13:53:46	Linear	1/Var	32.267543	211.13077	0.000000	1.000000	0.999998	5.883864	0.032208	0.107360
	K 769.896 { 44}	05/04/2022 13:08:43	05/03/2022 14:10:53	Linear	1/Var	3.540317	111.37843	0.000000	1.000000	0.999561	58.298796	0.054157	0.180523
	P 177.495 {489}	05/04/2022 13:08:43	05/03/2022 13:37:55	Linear	1/Conc	-0.000003	0.000001	0.000000	1.000000	0.999994	0.000000	2.036108	6.787028
	S 182.034 {485}	05/04/2022 13:08:43	05/03/2022 14:10:53	Linear	1/Var	0.000060	0.000000	0.000000	1.000000	0.998222	0.000071	3.771207	12.570692
	Hg 184.950 {482}	05/04/2022 13:08:43	05/03/2022 13:30:03	Linear	1/Conc	0.000005	0.000003	0.000000	1.000000	1.000000	0.000000	0.567355	1.891182
	Ce 404.076 { 83}	05/04/2022 13:08:43	05/03/2022 13:30:03	Linear	1/Conc	0.000047	0.000001	0.000000	1.000000	1.000000	0.000000	17.718102	59.060340

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	Warnin	1.000000	0.000000	1	0
	Na 330.237 {102}	OK.	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 212.412 {458}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {478}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 610.353 { 55}	OK.	1.000000	0.000000	1	0
	Li 670.776 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 177.495 {489}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	Ce	0.000000	0.000000	No
			Al	-0.000018	0.000000	No
Ag 338.289 {100}	☒	2	Fe	0.000038	0.000000	No
			Na	0.100000	0.000000	No
Al 167.079 {501}	☒	None				
Al 309.271 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001396	0.000000	No
As 197.262 {471}	☒	1	Al	0.000027	0.000000	No
Ba 233.527 {445}	☒	1	Fe	-0.000003	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000006	0.000000	No
Ba 493.409 { 68}	☒	1	S	-0.005000	0.000000	No
Be 234.861 {144}	☒	None				
Be 313.042 {108}	☒	1	Fe	0.000004	0.000000	No
Be 313.107 {108}	☒	1	Fe	0.000002	0.000000	No
Ca 184.006 {483}	☒	None				
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	None				
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000165	0.000000	No
Cd 228.802 {448}	☒	1	Fe	-0.000007	0.000000	No
Co 228.616 {447}	☒	3	Fe	-0.000001	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.002165	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 223.008 {451}	☒	3	Fe	-0.000018	0.000000	No
			Mo	0.008000	0.000000	No
			Ni	0.006000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	0.000308	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000009	0.000000	No
			Mo	-0.000319	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000031	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mn 259.373 {130}	☒	1	Fe	0.001120	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000014	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000021	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	5	Fe	-0.000074	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.001918	0.000000	No
Pb 216.999 {455}	☒	3	Al	0.001866	0.000000	No
			Na	0.000000	0.000000	No
			Fe	0.002996	0.000000	No
Pb 220.353 {153}	☒	2	Fe	0.000002	0.000000	No
			Al	-0.000020	0.000000	No
Pb 220.353 {453}	☒	2	Si	0.000000	0.000000	No
			Al	-0.000020	0.000000	No
Sb 206.833 {463}	☒	3	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
			Ce	0.005500	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000049	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000332	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	1	Fe	-0.000126	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000083	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	6	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No
			Al	0.000000	0.000000	No
			Ti	0.000420	0.000000	No
			Mo	-0.000481	0.000000	No
			Cu	-0.003767	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	5	Fe	0.000115	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mo	0.000034	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Na 330.237 {102}	☒	1	Sr	-0.002100	0.000000	No
Na 588.995 { 57}	☒	1	Fe	0.000000	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Na 589.592 { 57}	☒	1	Fe	0.000001	0.000000	No
Si 212.412 {458}	☒	1	Fe	-0.000007	0.000000	No
Si 251.611 {134}	☒	1	Fe	-0.000177	0.000000	No
Ti 323.452 {104}	☒	2	Fe	0.000034	0.000000	No
			Ce	0.000123	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000036	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000012	0.000000	No
Sn 189.989 {478}	☒	1	Fe	-0.000008	0.000000	No
B 249.678 {135}	☒	1	Fe	0.000018	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000401	0.000000	No
Li 610.353 { 55}	☒	1	Fe	-0.000109	0.000000	No
Li 670.776 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000003	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000001	0.000000	No
P 177.495 {489}	☒	None				
S 182.034 {485}	☒	None				
Hg 184.950 {482}	☒	1	Fe	-0.000000	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

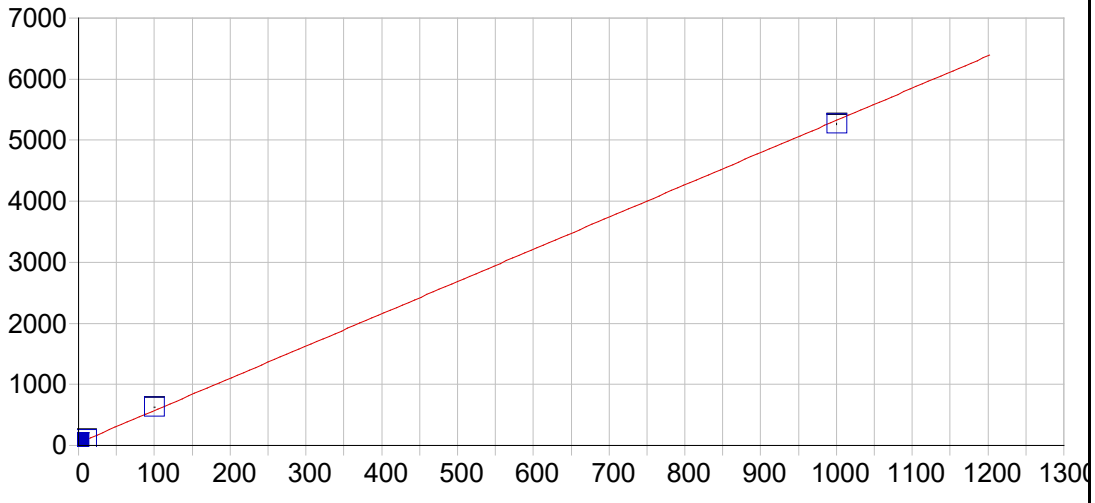


Ag 328.068 {103}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000021	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998983	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.371569		
Predicted MQL:	1.238562		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00042	-.000	.000	-.00002	.000	1
CalStd8=100	100.00	99.908	-.092	-.092	.00025	.000	1
CalStd4=5	5.0000	4.8638	-.136	-2.72	-.00001	.000	1
CalStd5=10	10.000	9.7528	-.247	-2.47	.00001	.000	1
CalStd3=1	1.0000	1.4757	.476	47.6	-.00002	.000	1

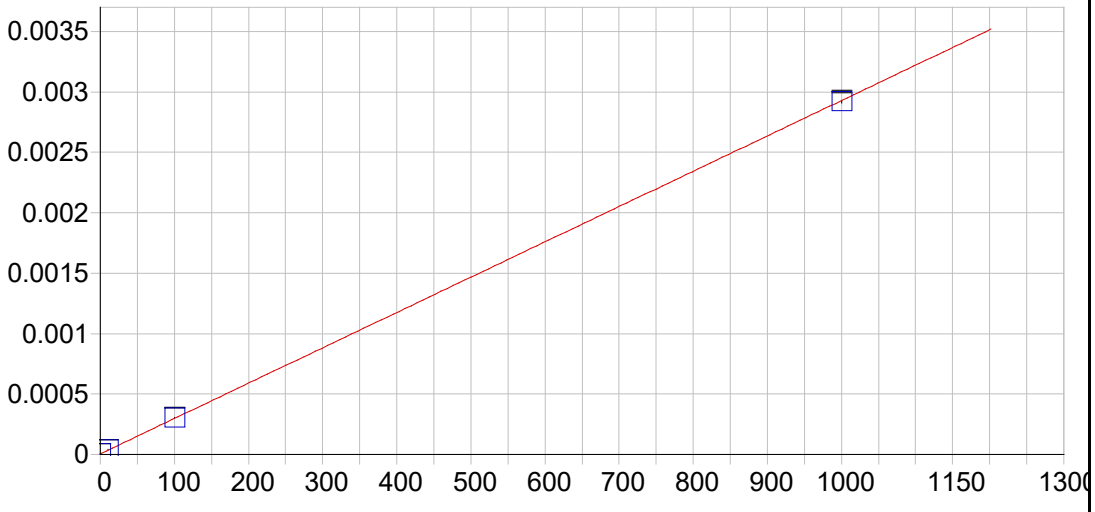


Ag 338.289 {100}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	43.685570	Re-Slope:	1.000000
A1 (Gain):	5.279786	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999489	Status:	OK.
Std Error of Est:	0.795114		
Predicted MDL:	0.642150		
Predicted MQL:	2.140500		

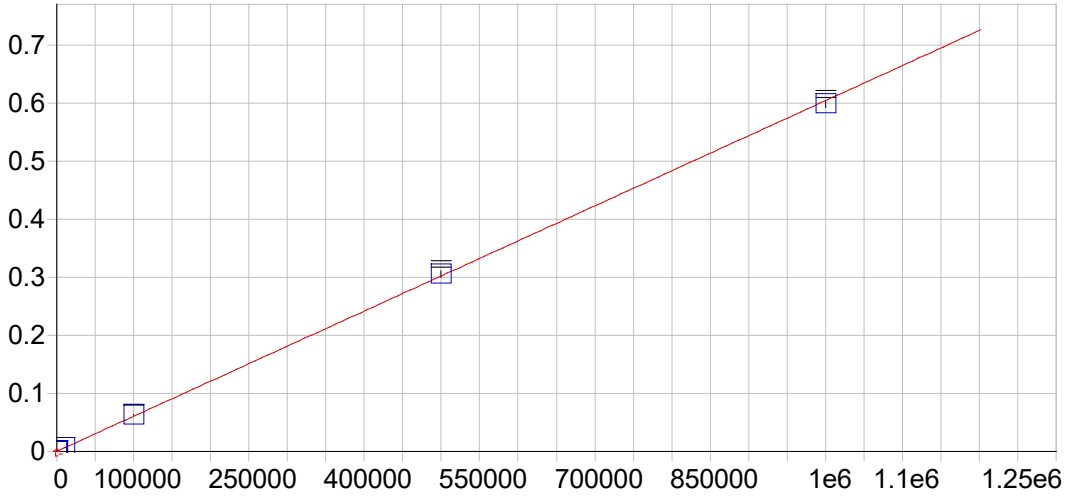
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00111	-.001	.000	43.680	1.02	1
Ag 1000	1000.0	989.68	-10.3	-1.03	5269.0	10.5	1
CalStd5=10	10.000	10.202	.202	2.02	97.552	2.07	1
CalStd8=100	100.00	110.12	10.1	10.1	625.10	1.83	1



Al 167.079 {501}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999858		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.352665				
Predicted MQL:	1.175551				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00179	-.002	.000	.00001	.000	1
CalStd9=100	1000.0	996.54	-3.46	-.346	.00292	.000	1
CalStd5=10	10.000	11.647	1.65	16.5	.00004	.000	1
CalStd8=100	100.00	101.81	1.81	1.81	.00030	.000	1

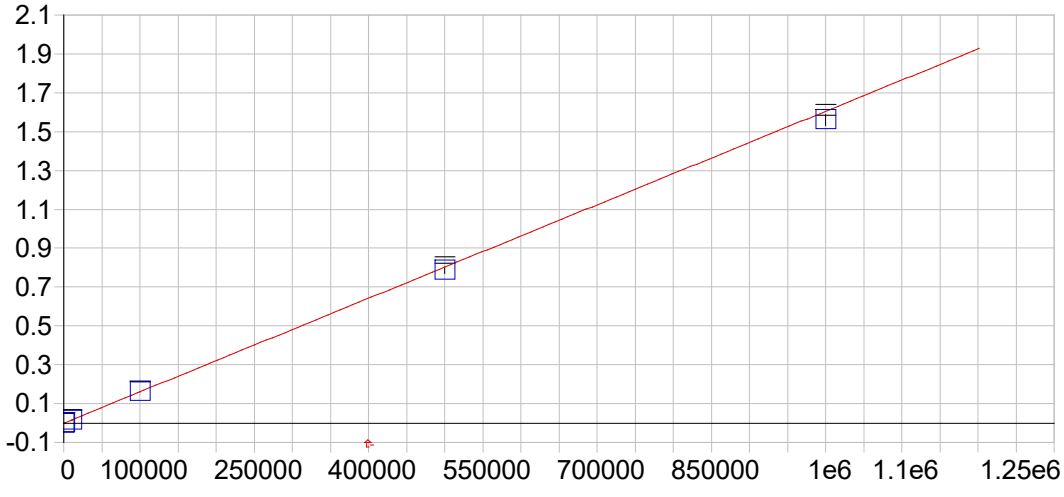


Al 309.271 {109}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000210	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999901	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	12.773111		
Predicted MQL:	42.577038		

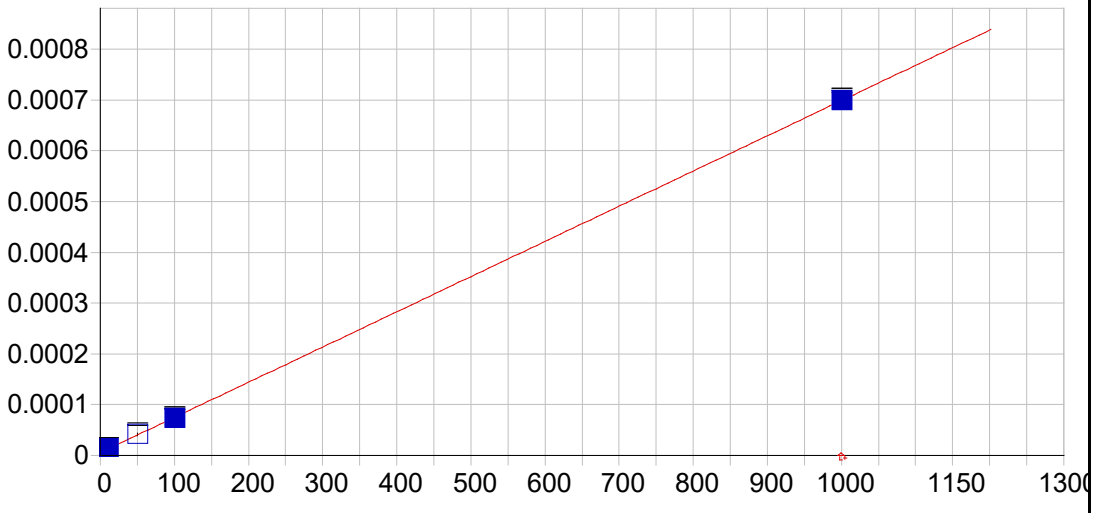
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01227	-.012	.000	.00021	.000	1
CalStd9=100	1000.0	1055.1	55.1	5.51	.00085	.000	1
CalStd5=10	10.000	19.299	9.30	93.0	.00022	.000	1
CalStd8=100	100.00	120.38	20.4	20.4	.00028	.000	1
CalStd10=10	10000.	9960.4	-39.6	-.396	.00622	.000	1
CalStd13=10	100000.	104080.	4080.	4.08	.06306	.001	1
CalStd14=50	500000.	505110.	5110.	1.02	.30522	.005	1
CalibStd15=	1000000.	990770.	-9230.	-.923	.59849	.006	1



Al 396.152 { 85}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000008		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999732		Status:	OK.	
Std Error of Est:	0.000047				
Predicted MDL:	7.351281				
Predicted MQL:	24.504272				

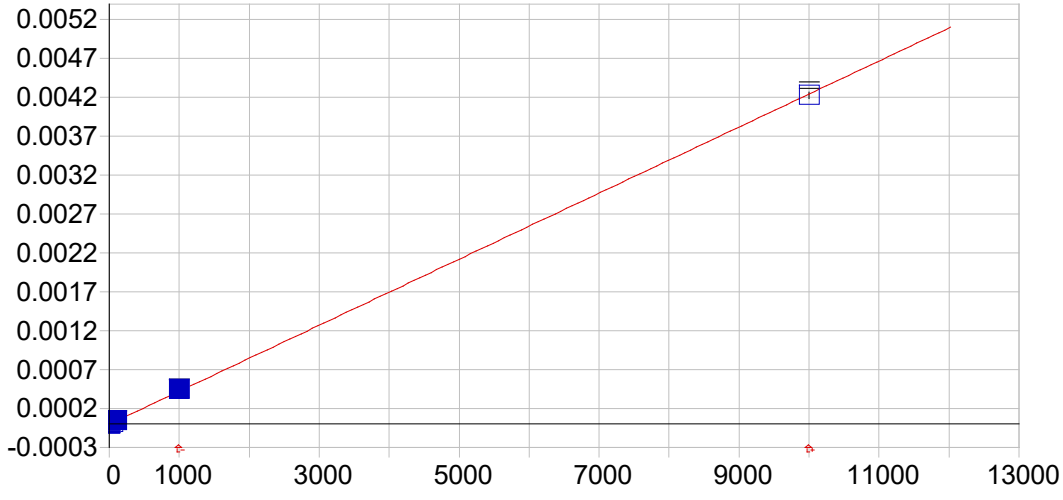
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.8752	-5.88	.000	-.00000	.000	1
CalStd14=50	500000.	490530.	-9470.	-1.89	.78714	.017	1
CalStd13=10	100000.	100740.	739.	.739	.16166	.001	1
CalStd10=10	10000.	9788.6	-211.	-2.11	.01572	.000	1
CalStd9=100	1000.0	1051.1	51.1	5.11	.00169	.000	1
CalibStd15=	1000000.	972590.	-27400.	-2.74	1.5607	.027	1



As 193.759 {474}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999730		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	3.381583				
Predicted MQL:	11.271944				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00227	-.002	.000	.00001	.000	1
CalStd9=100	1000.0	998.95	-1.05	-.105	.00070	.000	1
CalStd7=50	50.000	51.543	1.54	3.09	.00004	.000	1
CalStd5=10	10.000	12.244	2.24	22.4	.00001	.000	1
CalStd8=100	100.00	97.268	-2.73	-2.73	.00007	.000	1

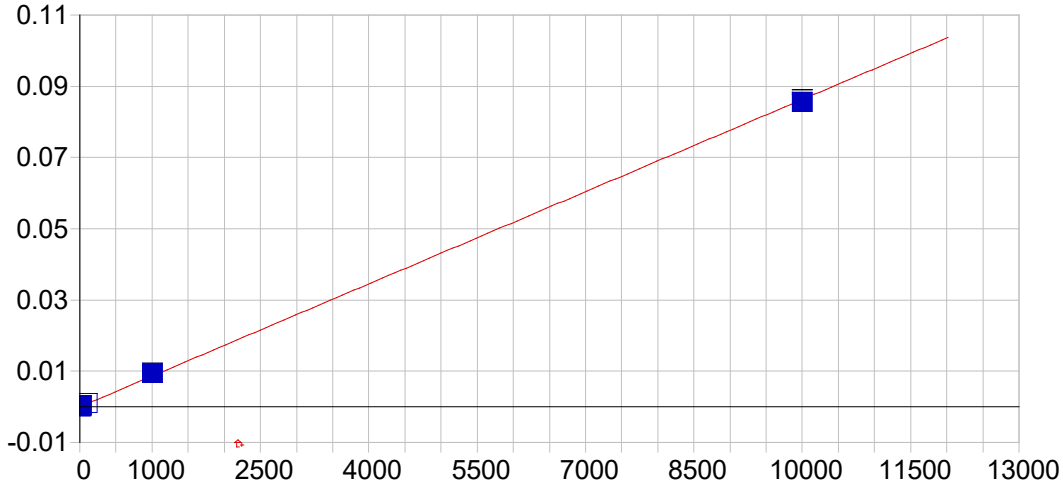


As 197.262 {471}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999806	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	4.997884		
Predicted MQL:	16.659613		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00384	.004	.000	-.00000	.000	1
CalStd9=100	1000.0	1049.0	49.0	4.90	.00044	.000	1
CalStd7=50	50.000	48.498	-1.50	-3.00	.00002	.000	1
CalStd5=10	10.000	5.9129	-4.09	-40.9	.00000	.000	1
CalStd8=100	100.00	101.03	1.03	1.03	.00004	.000	1
CalStd10=10	10000.	9955.6	-44.4	-.444	.00422	.000	1

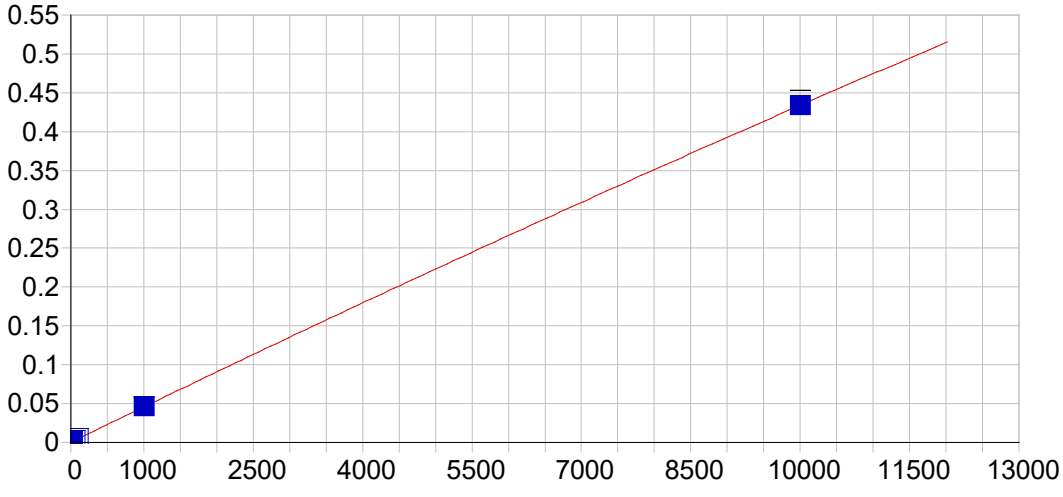


Ba 233.527 {445}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000009	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999662	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.237141		
Predicted MQL:	0.790472		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00049	-.000	.000	-.00000	.000	1
CalStd5=10	10.000	10.624	.624	6.24	.00009	.000	1
CalStd6=20	20.000	22.189	2.19	10.9	.00019	.000	1
CalStd8=100	100.00	106.68	6.68	6.68	.00092	.000	1
CalStd4=5	5.0000	5.4754	.475	9.51	.00005	.000	1
CalStd9=100	1000.0	1077.4	77.4	7.74	.00930	.000	1
CalStd3=1	1.0000	1.0887	.089	8.87	.00001	.000	1
CalStd10=10	10000.	9912.5	-87.5	-.875	.08554	.001	1

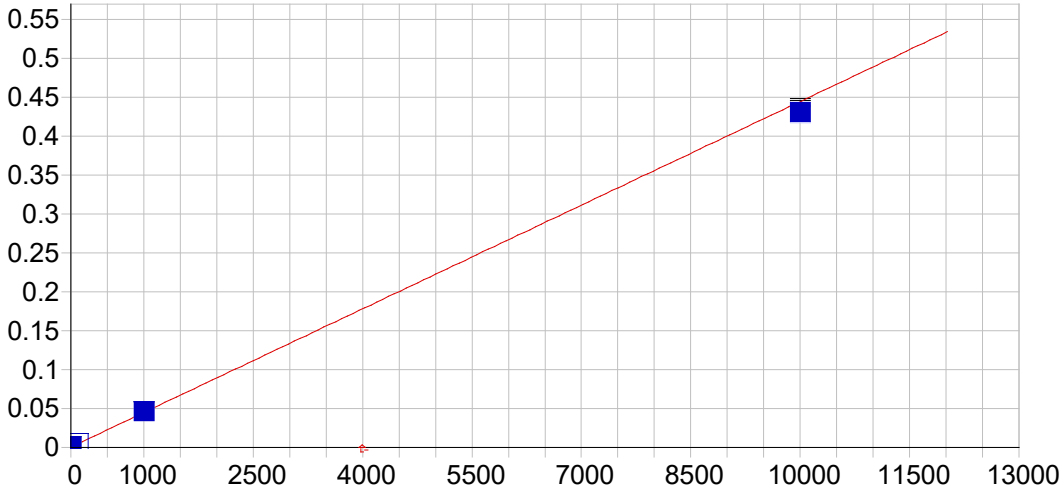


Ba 455.403 { 74}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000110	Re-Slope:	1.000000
A1 (Gain):	0.000046	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.204637		
Predicted MQL:	0.682123		

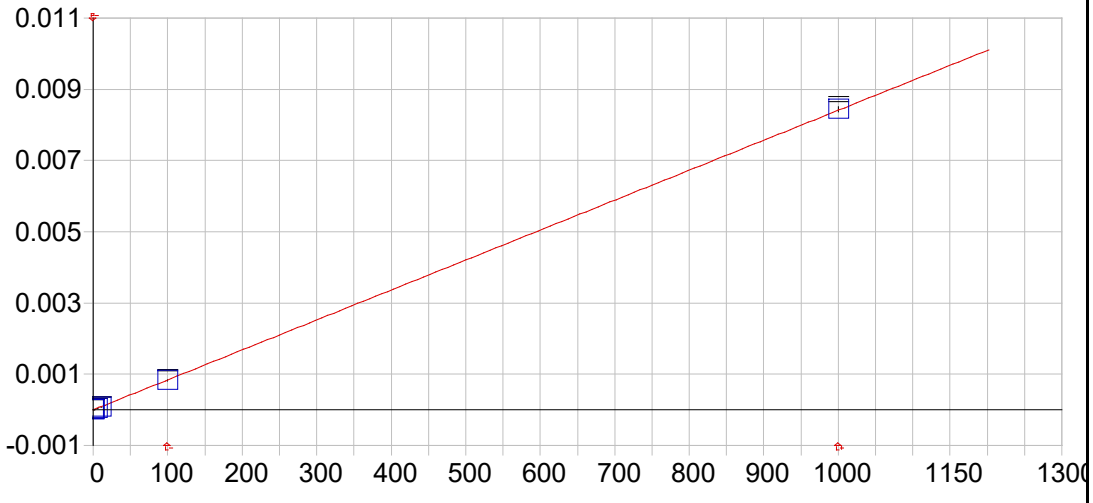
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00013	-.000	.000	.00011	.000	1
CalStd7=50	50.000	50.889	.889	1.78	.00244	.000	1
CalStd5=10	10.000	10.064	.064	.640	.00057	.000	1
CalStd6=20	20.000	20.632	.632	3.16	.00106	.000	1
CalStd8=100	100.00	98.733	-1.27	-1.27	.00464	.000	1
CalStd4=5	5.0000	5.4076	.408	8.15	.00036	.000	1
CalStd9=100	1000.0	999.17	-.828	-.083	.04568	.000	1
CalStd3=1	1.0000	1.0042	.004	.416	.00016	.000	1
CalStd10=10	10000.	10000.	.099	.001	.43383	.006	1



Ba 493.409 { 68}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000525		Re-Slope:	1.000000	
A1 (Gain):	0.000044		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999664		Status:	OK.	
Std Error of Est:	0.000149				
Predicted MDL:	0.793794				
Predicted MQL:	2.645981				

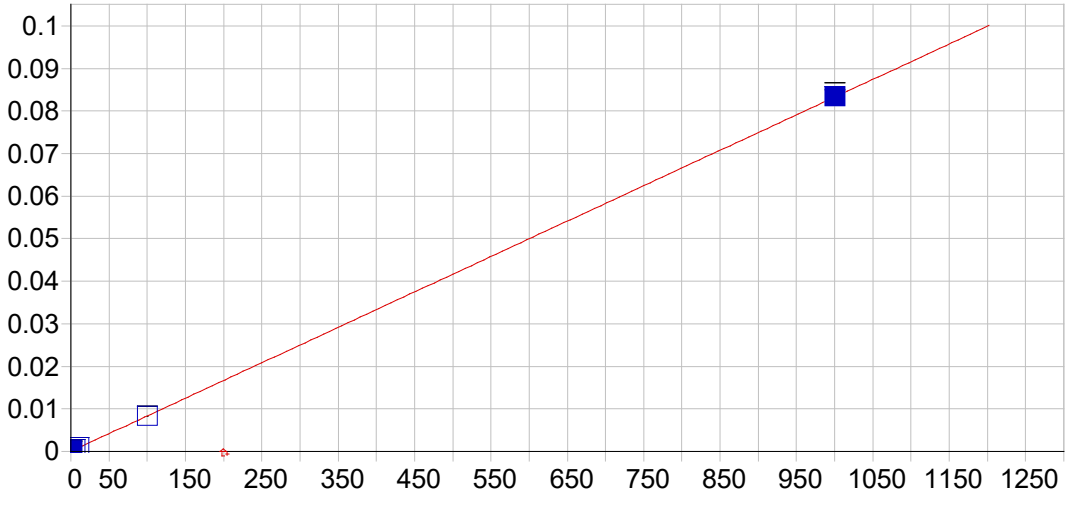
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.07721	-.077	.000	.00052	.000	1
CalStd9=100	1000.0	1022.0	22.0	2.20	.04571	.000	1
CalStd8=100	100.00	99.355	-.645	-.645	.00494	.000	1
CalStd10=10	10000.	9688.1	-312.	-3.12	.42873	.004	1



Be 234.861 {144}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000008		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999779		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.213609				
Predicted MQL:	0.712029				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00059	.001	.000	-.00000	.000	1
CalStd5=10	10.000	9.5951	-.405	-4.05	.00008	.000	1
CalStd8=100	100.00	98.155	-1.85	-1.85	.00083	.000	1
CalStd2=0.5	.50000	.18593	-.314	-62.8	.00000	.000	1
CalStd4=5	5.0000	4.9148	-.085	-1.70	.00004	.000	1
CalStd9=100	1000.0	1003.1	3.13	.313	.00844	.000	1
CalStd3=1	1.0000	.51617	-.484	-48.4	.00000	.000	1

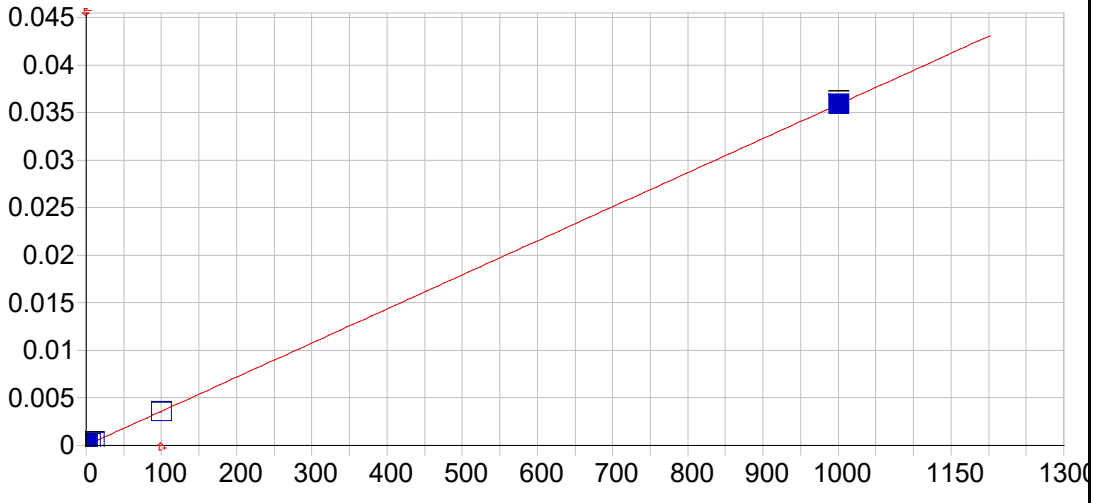


Be 313.042 {108}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000025	Re-Slope:	1.000000
A1 (Gain):	0.000083	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.013526		
Predicted MQL:	0.045086		

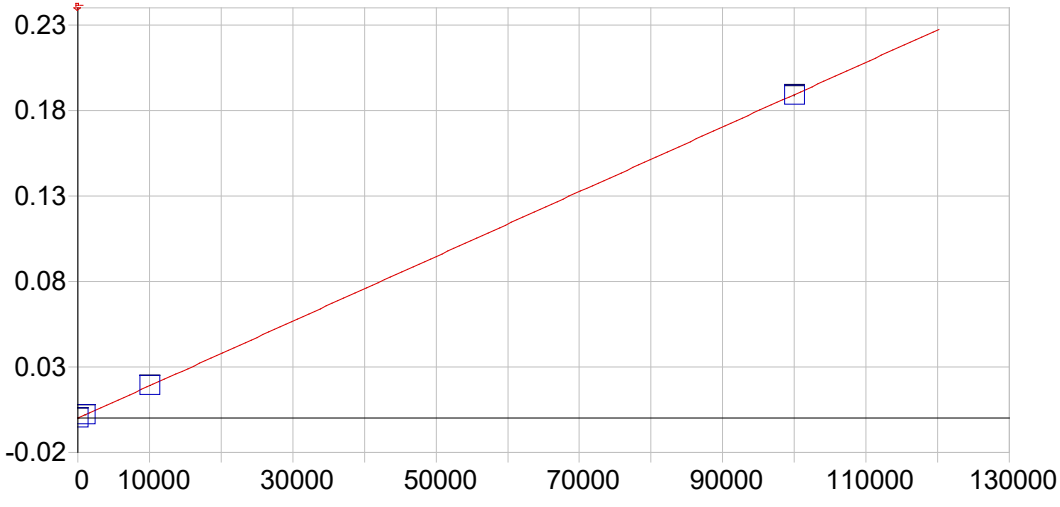
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00002	-.000	.000	.00002	.000	1
CalStd5=10	10.000	10.064	.064	.635	.00086	.000	1
CalStd8=100	100.00	98.311	-1.69	-1.69	.00821	.000	1
CalStd2=0.5	.50000	.51733	.017	3.47	.00007	.000	1
CalStd4=5	5.0000	4.9972	-.003	-.056	.00044	.000	1
CalStd9=100	1000.0	1001.6	1.59	.159	.08339	.001	1
CalStd3=1	1.0000	1.0200	.020	2.00	.00011	.000	1



Be 313.107 {108}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000013		Re-Slope:	1.000000	
A1 (Gain):	0.000036		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999976		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.165969				
Predicted MQL:	0.553231				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00007	.000	.000	.00001	.000	1
CalStd5=10	10.000	9.9118	-.088	-.882	.00037	.000	1
CalStd2=0.5	.50000	.38391	-.116	-23.2	.00003	.000	1
CalStd4=5	5.0000	5.0810	.081	1.62	.00019	.000	1
CalStd9=100	1000.0	1001.3	1.29	.129	.03592	.000	1
CalStd3=1	1.0000	1.0875	.088	8.75	.00005	.000	1
CalStd8=100	100.00	98.744	-1.26	-1.26	.00355	.000	1

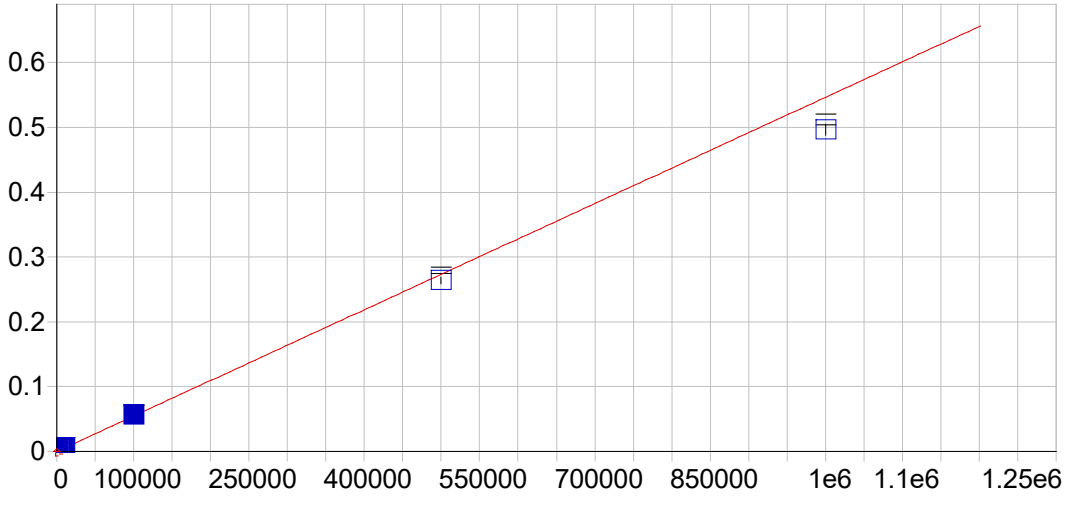


Ca 184.006 {483}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000029	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999947	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	1.009319		
Predicted MQL:	3.364395		

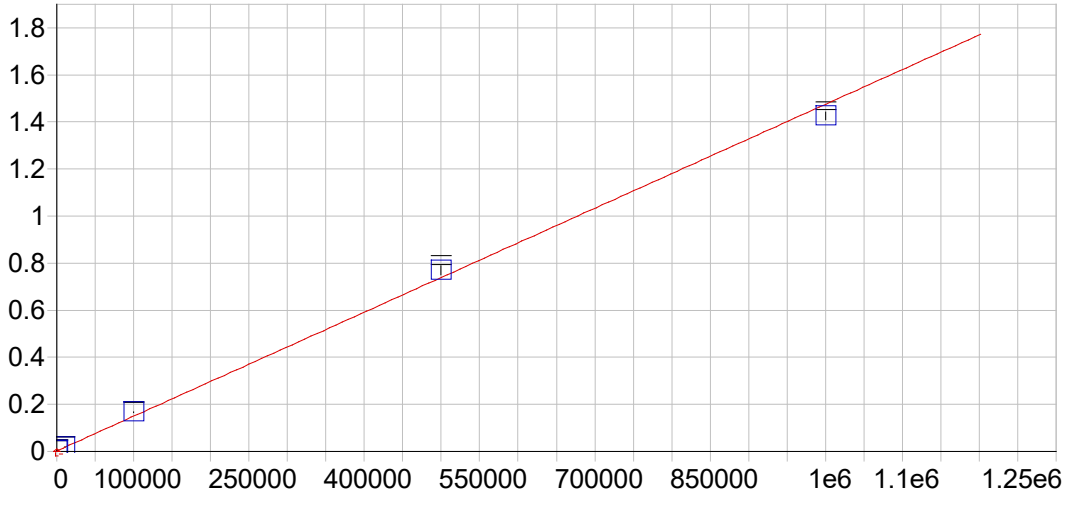
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.10969	-.110	.000	-.00003	.000	1
CalStd10=10	10000.	10115.	115.	1.15	.01912	.000	1
CalStd13=10	100000.	99784.	-216.	-.216	.18887	.000	1
CalStd9=100	1000.0	1100.3	100.	10.0	.00205	.000	1



Ca 315.887 {107}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000049		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999296		Status:	OK.	
Std Error of Est:	0.000028				
Predicted MDL:	5.389620				
Predicted MQL:	17.965400				

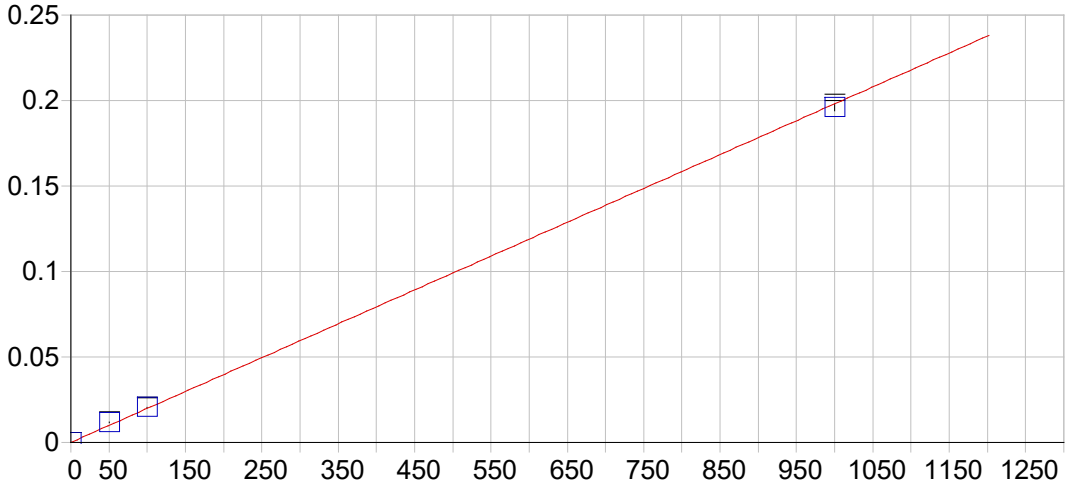
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-9.5808	-9.58	.000	.00004	.000	1
CalStd10=10	10000.	9897.5	-103.	-1.03	.00546	.000	1
CalStd13=10	100000.	102430.	2430.	2.43	.05602	.000	1
CalStd14=50	500000.	482500.	-17500.	-3.50	.26372	.005	1
CalStd9=100	1000.0	1037.5	37.5	3.75	.00062	.000	1
CalibStd15=	1000000.	908560.	-91400.	-9.14	.49656	.008	1



Ca 317.933 {106}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.002519		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998893		Status:	OK.	
Std Error of Est:	0.000108				
Predicted MDL:	2.591979				
Predicted MQL:	8.639929				

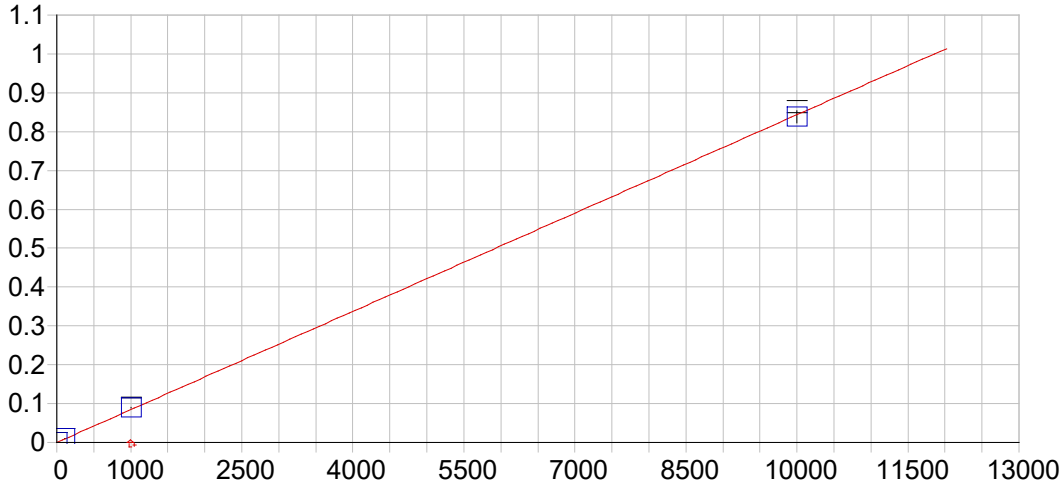
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.36371	-.364	.000	.00252	.000	1
CalStd10=10	10000.	10821.	821.	8.21	.01846	.000	1
CalStd13=10	100000.	112050.	12000.	12.0	.16754	.001	1
CalStd14=50	500000.	520940.	20900.	4.19	.76973	.018	1
CalStd9=100	1000.0	1153.2	153.	15.3	.00422	.000	1
CalibStd15=	1000000.	966040.	-34000.	-3.40	1.4253	.015	1



Ca 393.366 { 86}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000075		Re-Slope:	1.000000	
A1 (Gain):	0.000198		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999239		Status:	OK.	
Std Error of Est:	0.000083				
Predicted MDL:	0.042980				
Predicted MQL:	0.143265				

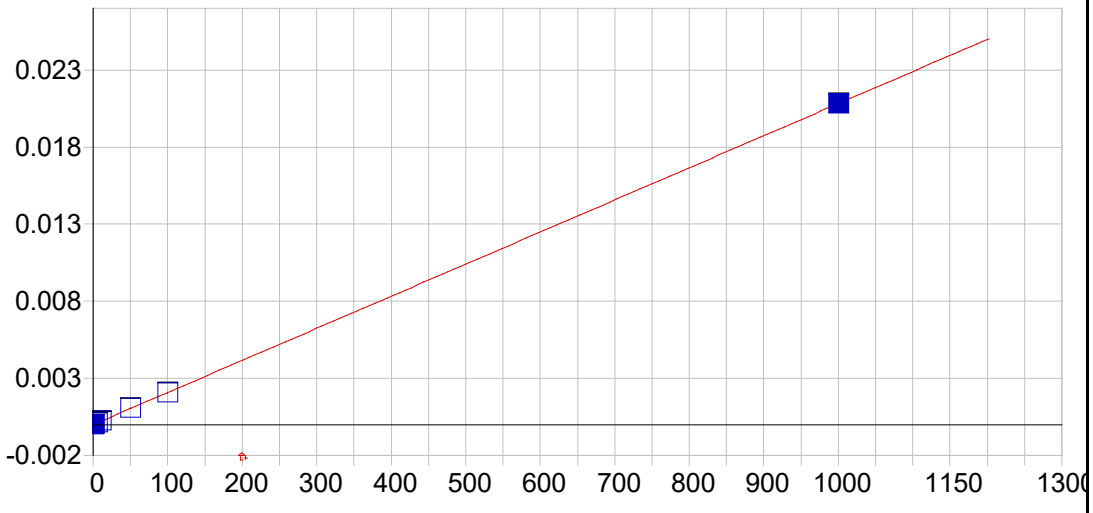
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00957	-.010	.000	.00007	.000	1
CalStd9=100	1000.0	988.48	-11.5	-1.15	.19583	.002	1
CalStd8=100	100.00	102.74	2.74	2.74	.02042	.000	1
CalStd7=50	50.000	58.780	8.78	17.6	.01172	.000	1



Ca 396.847 { 85}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000013		Re-Slope:	1.000000	
A1 (Gain):	0.000084		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999806		Status:	OK.	
Std Error of Est:	0.000078				
Predicted MDL:	0.094920				
Predicted MQL:	0.316401				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01448	-.014	.000	.00001	.000	1
CalStd10=10	10000.	9935.9	-64.1	-.641	.83792	.015	1
CalStd8=100	100.00	109.68	9.68	9.68	.00926	.000	1
CalStd9=100	1000.0	1054.4	54.4	5.44	.08893	.001	1

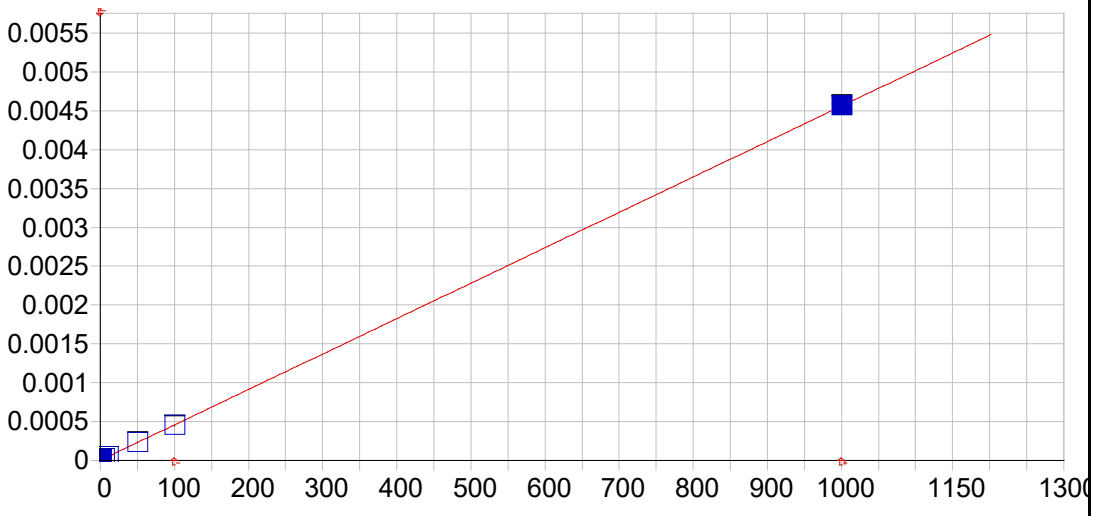


Cd 226.502 {449}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000021	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.156342		
Predicted MQL:	0.521141		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00011	-.000	.000	-.00000	.000	1
CalStd3=1	1.0000	1.0218	.022	2.18	.00002	.000	1
CalStd2=0.5	.50000	.57478	.075	15.0	.00001	.000	1
CalStd4=5	5.0000	5.0126	.013	.253	.00010	.000	1
CalStd5=10	10.000	10.306	.306	3.06	.00021	.000	1
CalStd9=100	1000.0	999.12	-.884	-.088	.02080	.000	1
CalStd8=100	100.00	99.597	-.403	-.403	.00207	.000	1
CalStd7=50	50.000	50.871	.871	1.74	.00106	.000	1

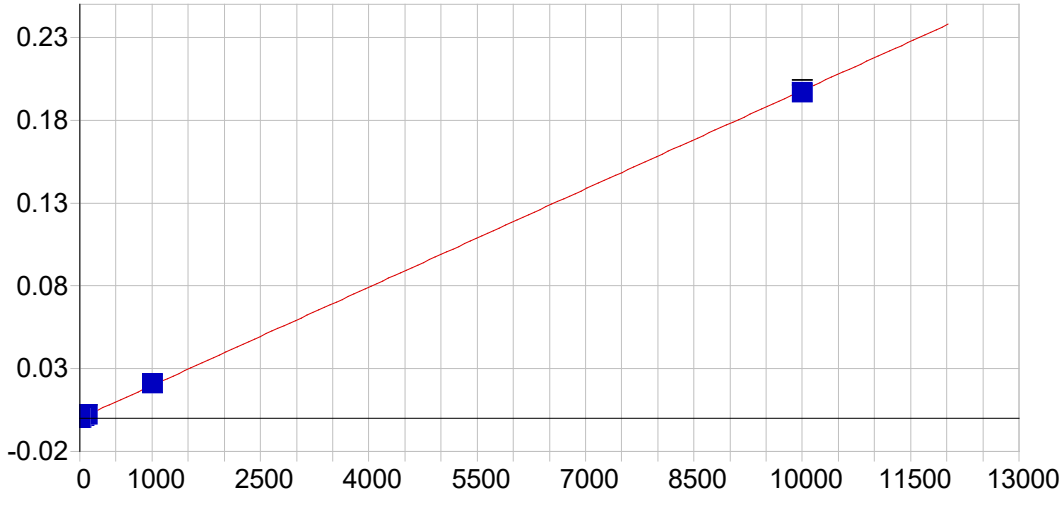


Cd 228.802 {448}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.413006		
Predicted MQL:	1.376688		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00033	-.000	.000	.00000	.000	1
CalStd3=1	1.0000	1.1236	.124	12.4	.00001	.000	1
CalStd2=0.5	.50000	.73209	.232	46.4	.00001	.000	1
CalStd4=5	5.0000	5.1708	.171	3.42	.00003	.000	1
CalStd5=10	10.000	10.512	.512	5.12	.00005	.000	1
CalStd9=100	1000.0	1000.2	.223	.022	.00456	.000	1
CalStd8=100	100.00	98.320	-1.68	-1.68	.00045	.000	1
CalStd7=50	50.000	50.419	.419	.838	.00023	.000	1

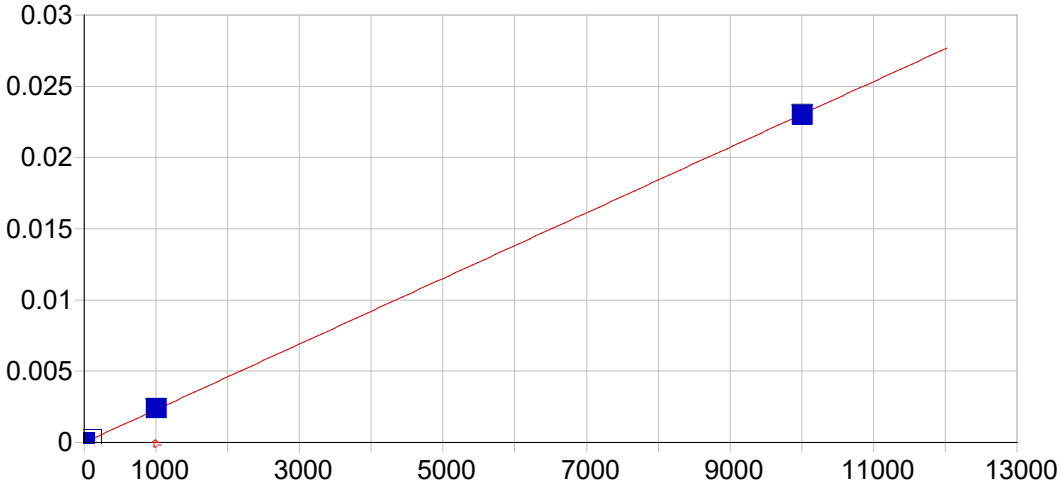


Co 228.616 {447}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999793	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.193332		
Predicted MQL:	0.644439		

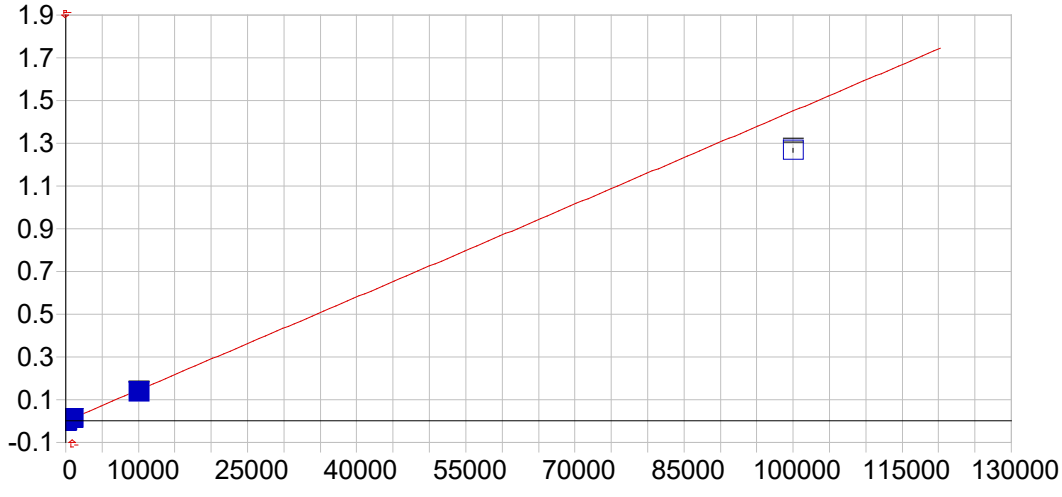
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00050	-.000	.000	-.00000	.000	1
CalStd7=50	50.000	53.802	3.80	7.60	.00106	.000	1
CalStd5=10	10.000	10.953	.953	9.53	.00021	.000	1
CalStd4=5	5.0000	5.3970	.397	7.94	.00010	.000	1
CalStd8=100	100.00	105.31	5.31	5.31	.00208	.000	1
CalStd9=100	1000.0	1058.7	58.7	5.87	.02097	.000	1
CalStd3=1	1.0000	1.1413	.141	14.1	.00002	.000	1
CalStd10=10	10000.	9930.7	-69.3	-.693	.19675	.002	1



Co 238.892 {141}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999974		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.306626				
Predicted MQL:	1.022088				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00439	-.004	.000	.00000	.000	1
CalStd9=100	1000.0	1021.4	21.4	2.14	.00235	.000	1
CalStd10=10	10000.	9976.1	-23.9	-.239	.02298	.000	1
CalStd8=100	100.00	102.49	2.49	2.49	.00024	.000	1

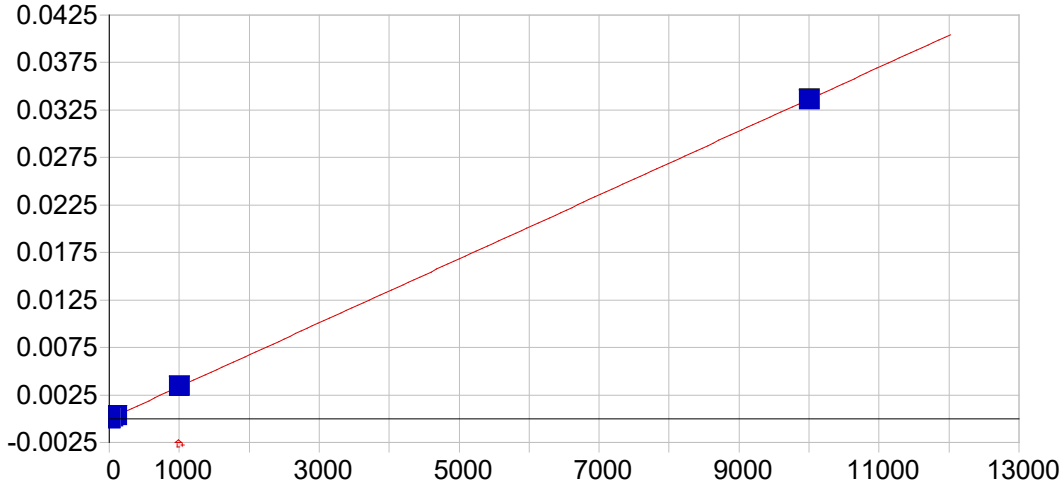


Cr 205.560 {464}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000015	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999496	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.175844		
Predicted MQL:	0.586148		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.09250	-.092	.000	-.00000	.000	1
CalStd5=10	10.000	10.130	.130	1.30	.00014	.000	1
CalStd7=50	50.000	50.825	.825	1.65	.00073	.000	1
CalStd9=100	1000.0	1004.7	4.67	.467	.01457	.000	1
CalStd8=100	100.00	99.125	-.875	-.875	.00143	.000	1
CalStd4=5	5.0000	5.0953	.095	1.91	.00007	.000	1
CalStd3=1	1.0000	1.0474	.047	4.74	.00001	.000	1
CalStd10=10	10000.	9401.4	-599.	-5.99	.13639	.001	1
CalStd12=10	100000.	87328.	-12700.	-12.7	1.2669	.008	1

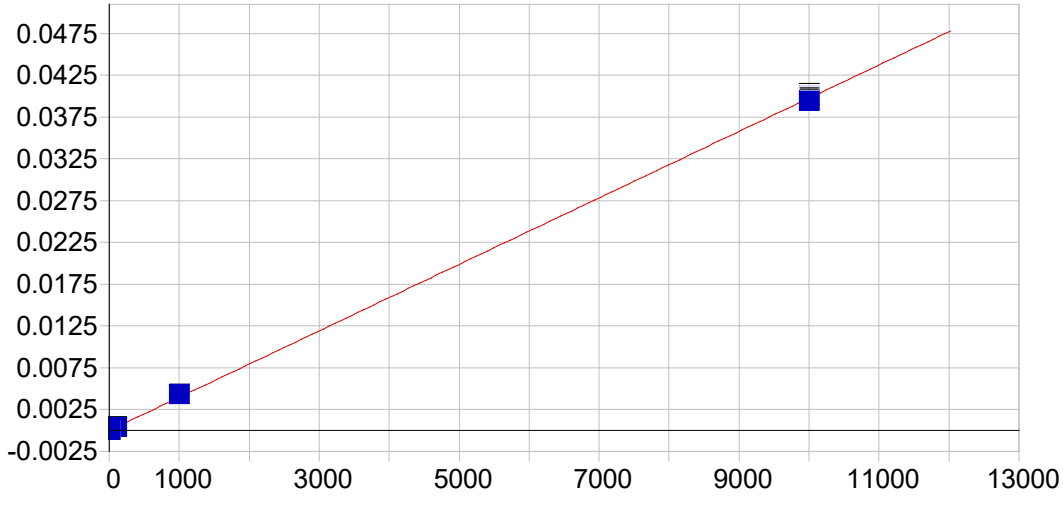


Cr 267.716 {126}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999987	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.334828		
Predicted MQL:	1.116094		

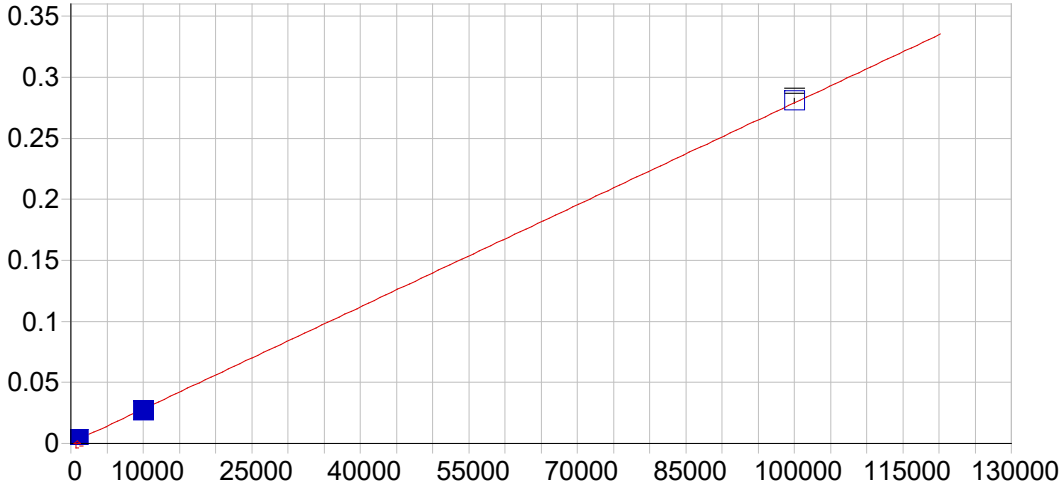
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00052	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	10.352	.352	3.52	.00003	.000	1
CalStd7=50	50.000	51.108	1.11	2.22	.00017	.000	1
CalStd9=100	1000.0	1013.8	13.8	1.38	.00341	.000	1
CalStd8=100	100.00	101.78	1.78	1.78	.00034	.000	1
CalStd4=5	5.0000	5.0856	.086	1.71	.00001	.000	1
CalStd10=10	10000.	9982.8	-17.2	-.172	.03359	.000	1



Cu 223.008 {451}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000004		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999643		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.956266				
Predicted MQL:	3.187553				

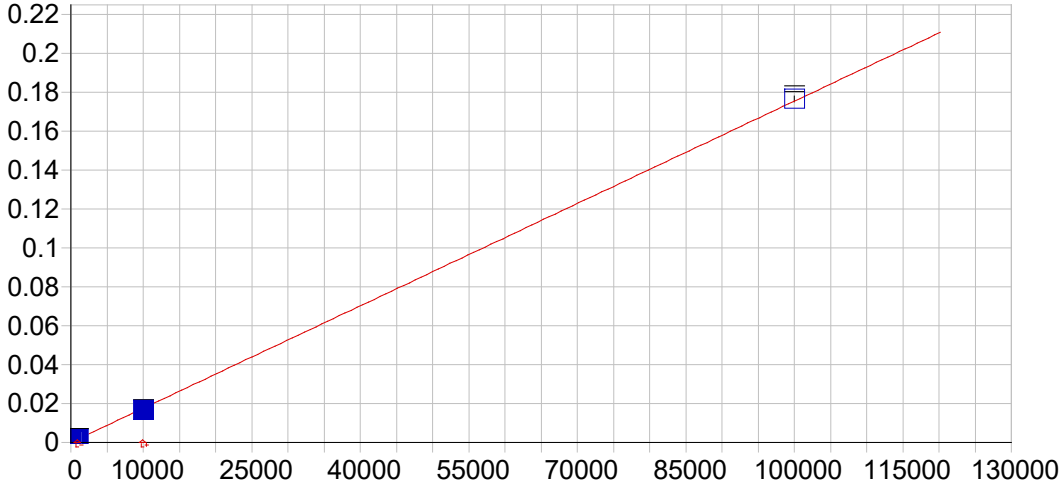
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00463	-.005	.000	-.00000	.000	1
CalStd9=100	1000.0	1075.5	75.5	7.55	.00433	.000	1
CalStd8=100	100.00	108.48	8.48	8.48	.00044	.000	1
CalStd5=10	10.000	13.114	3.11	31.1	.00005	.000	1
CalStd10=10	10000.	9912.9	-87.1	-.871	.03998	.000	1



Cu 324.754 {104}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000329		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999813		Status:	OK.	
Std Error of Est:	0.000007				
Predicted MDL:	2.428330				
Predicted MQL:	8.094435				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00922	.009	.000	.00033	.000	1
CalStd9=100	1000.0	988.66	-11.3	-1.13	.00308	.000	1
CalStd8=100	100.00	97.413	-2.59	-2.59	.00060	.000	1
CalStd10=10	10000.	9387.9	-612.	-6.12	.02649	.000	1
CalStd12=10	100000.	100630.	626.	.626	.28068	.002	1

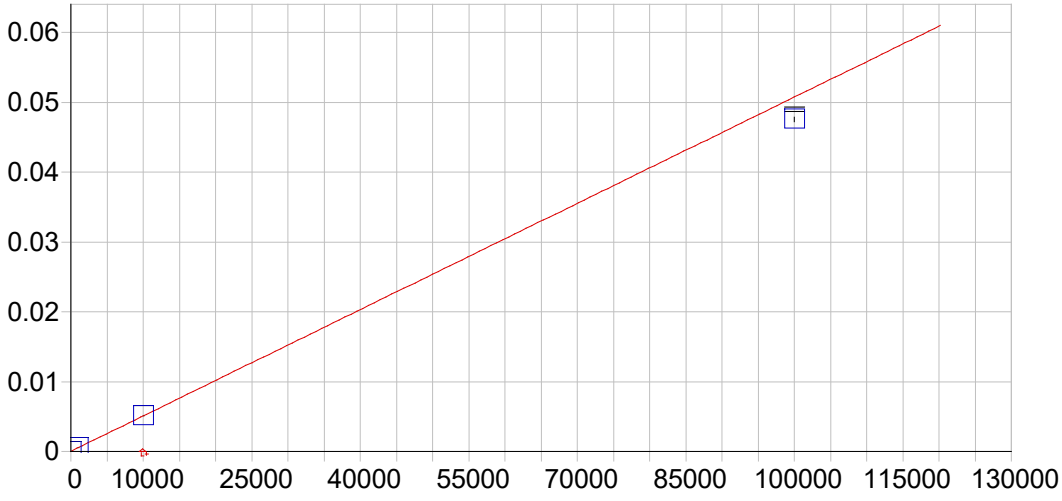


Cu 327.396 {103}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000048	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999800	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	4.575577		
Predicted MQL:	15.251924		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00002	.000	.000	.00005	.000	1
CalStd6=20	20.000	22.830	2.83	14.2	.00009	.000	1
CalStd7=50	50.000	47.140	-2.86	-5.72	.00013	.000	1
CalStd8=100	100.00	97.308	-2.69	-2.69	.00022	.000	1
CalStd9=100	1000.0	996.06	-3.94	-.394	.00179	.000	1
CalStd10=10	10000.	9370.1	-630.	-6.30	.01648	.000	1
CalStd4=5	5.0000	5.5646	.565	11.3	.00006	.000	1
CalStd5=10	10.000	8.8686	-1.13	-11.3	.00006	.000	1
CalStd12=10	100000.	100640.	637.	.637	.17659	.001	1

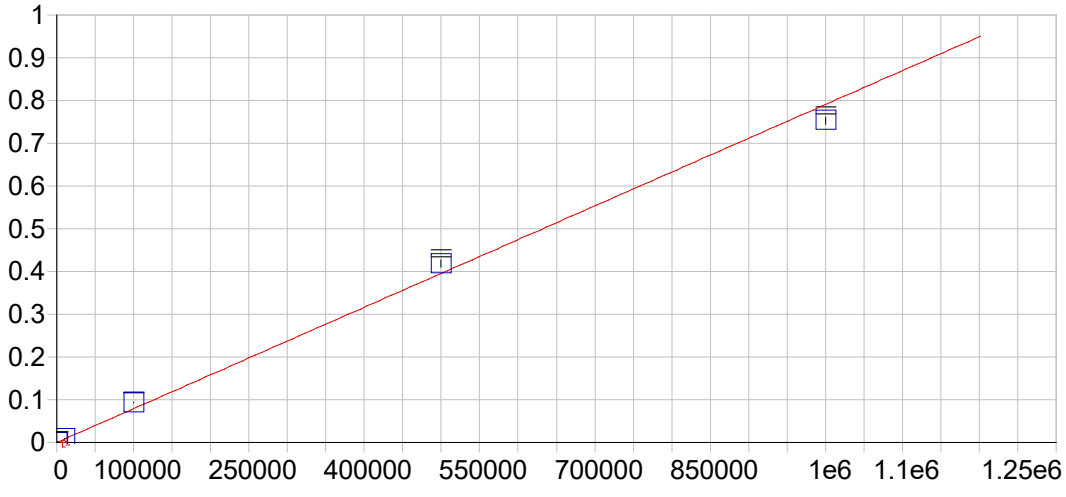


Fe 234.349 {144}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999984	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.699558		
Predicted MQL:	2.331860		

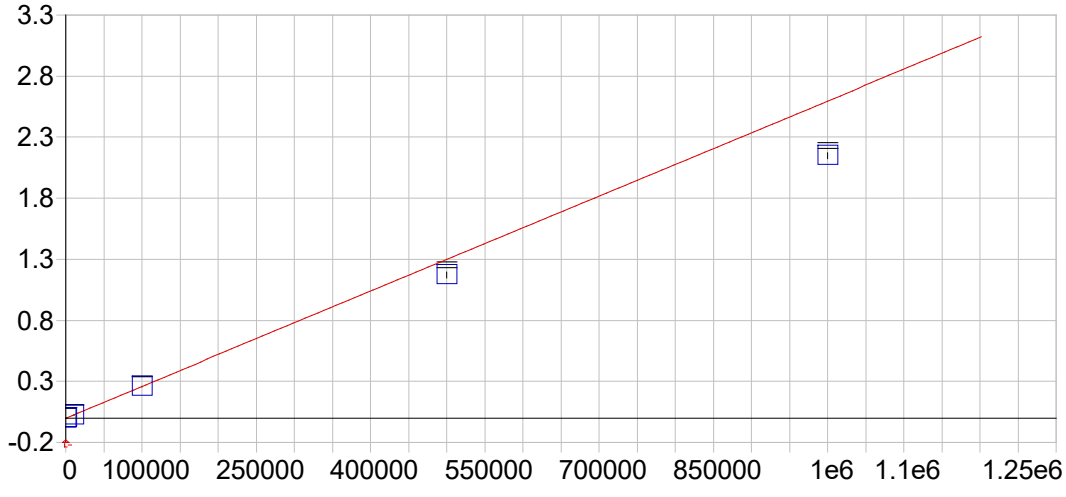
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.08524	-.085	.000	.00001	.000	1
CalStd10=10	10000.	10003.	3.28	.033	.00509	.000	1
CalStd13=10	100000.	93708.	-6290.	-6.29	.04756	.000	1
CalStd9=100	1000.0	1037.1	37.1	3.71	.00054	.000	1



Fe 239.562 {140}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000006		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.997783		Status:	OK.	
Std Error of Est:	0.000082				
Predicted MDL:	3.836041				
Predicted MQL:	12.786804				

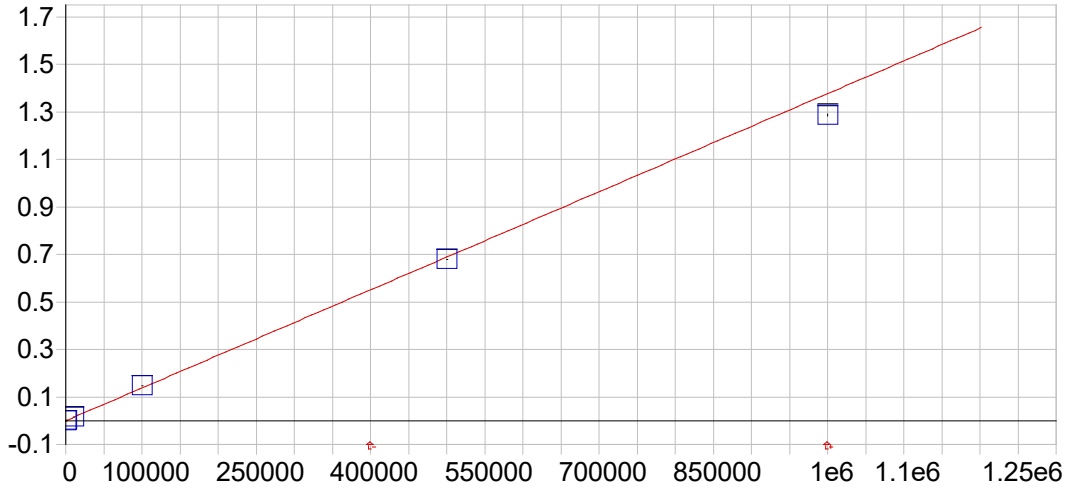
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.53247	-.532	.000	.00001	.000	1
CalStd10=10	10000.	11398.	1400.	14.0	.00902	.000	1
CalStd13=10	100000.	117180.	17200.	17.2	.09268	.001	1
CalStd14=50	500000.	529050.	29100.	5.81	.41843	.008	1
CalStd9=100	1000.0	1210.7	211.	21.1	.00096	.000	1
CalibStd15=	1000000.	952170.	-47800.	-4.78	.75306	.008	1



Fe 259.940 {129}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Var
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999726		Status:	OK.	
Std Error of Est:	0.000036				
Predicted MDL:	1.513870				
Predicted MQL:	5.046235				

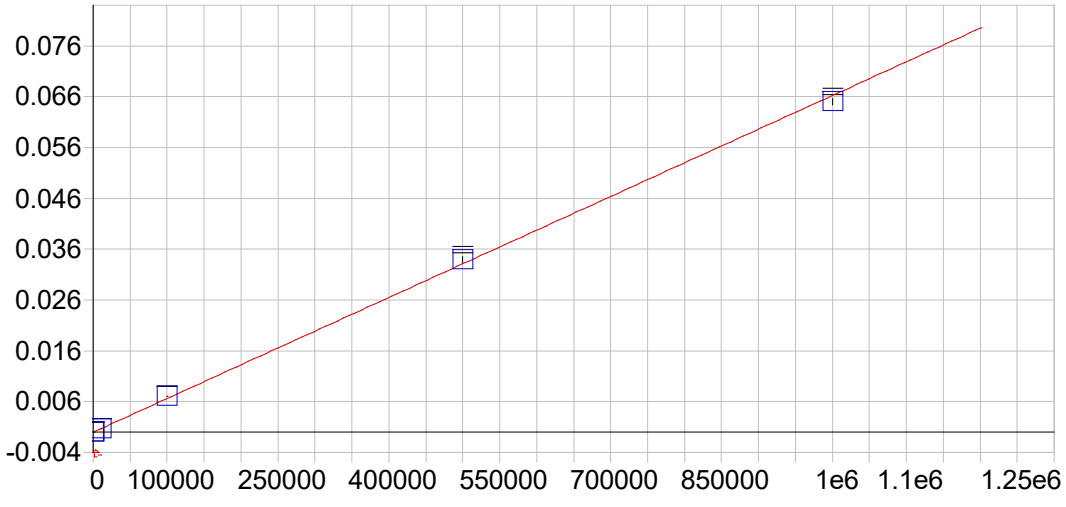
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.90767	-.908	.000	.00000	.000	1
CalStd10=10	10000.	9639.3	-361.	-3.61	.02503	.000	1
CalStd13=10	100000.	99481.	-519.	-.519	.25830	.002	1
CalStd14=50	500000.	451150.	-48900.	-9.77	1.1714	.025	1
CalStd9=100	1000.0	1027.5	27.5	2.75	.00267	.000	1
CalibStd15=	1000000.	827900.	-172000.	-17.2	2.1496	.023	1



Mg 202.582 {466}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000015		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998853		Status:	OK.	
Std Error of Est:	0.000161				
Predicted MDL:	2.449654				
Predicted MQL:	8.165513				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-16.218	-16.2	.000	-.00001	.000	1
CalStd13=10	100000.	107450.	7450.	7.45	.14794	.000	1
CalStd10=10	10000.	10588.	588.	5.88	.01459	.000	1
CalStd14=50	500000.	492960.	-7040.	-1.41	.67867	.001	1
CalStd9=100	1000.0	1160.9	161.	16.1	.00161	.000	1
CalibStd15=	1000000.	934200.	-65800.	-6.58	1.2861	.004	1

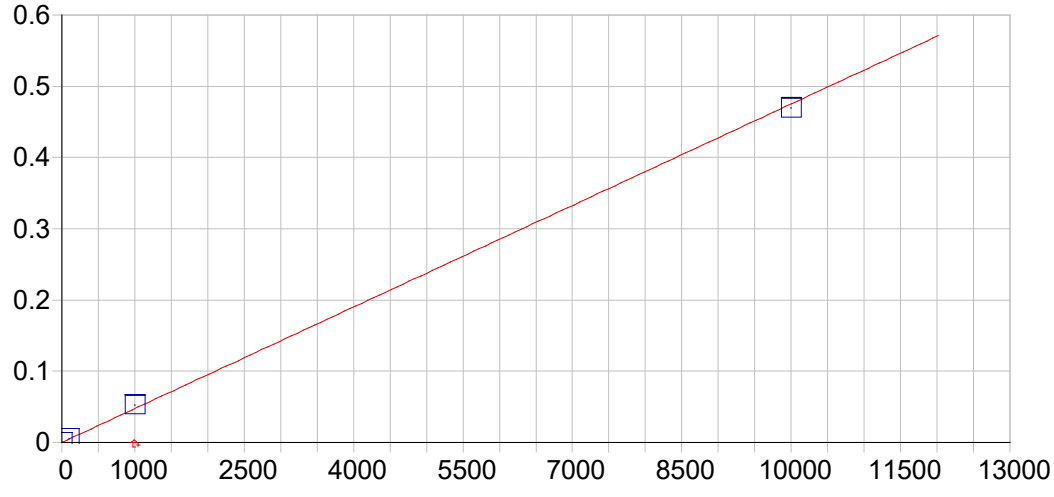


Mg 279.079 {121}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999685	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	25.559133		
Predicted MQL:	85.197111		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.19406	-.194	.000	.00000	.000	1
CalStd13=10	100000.	106270.	6270.	6.27	.00704	.000	1
CalStd10=10	10000.	10287.	287.	2.87	.00068	.000	1
CalStd14=50	500000.	511650.	11600.	2.33	.03390	.001	1
CalStd9=100	1000.0	1097.7	97.7	9.77	.00007	.000	1
CalibStd15=	1000000.	981700.	-18300.	-1.83	.06504	.001	1

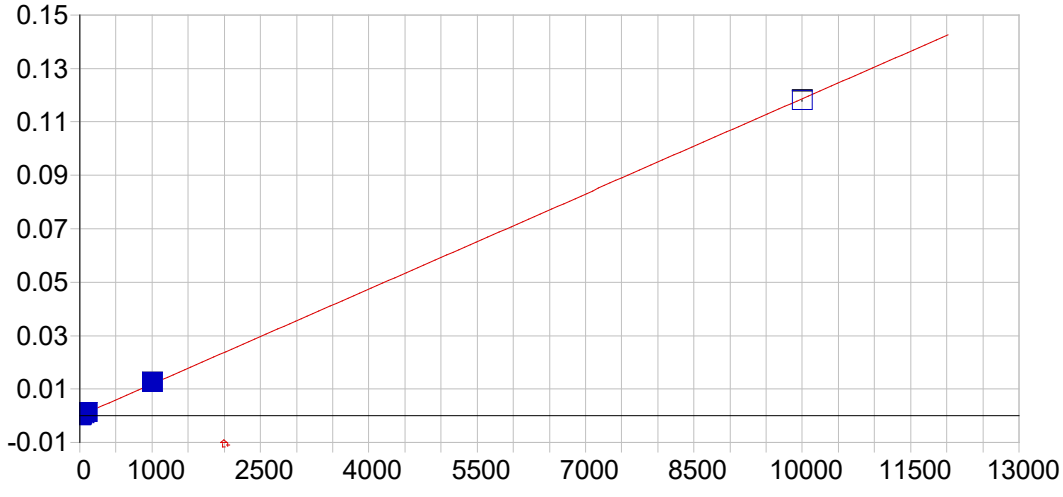


Mg 280.270 {120}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000062	Re-Slope:	1.000000
A1 (Gain):	0.000048	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999348	Status:	OK.
Std Error of Est:	0.000081		
Predicted MDL:	0.013981		
Predicted MQL:	0.046604		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.02085	-.021	.000	.00006	.000	1
CalStd9=100	1000.0	1108.6	109.	10.9	.05274	.000	1
CalStd10=10	10000.	9880.2	-120.	-1.20	.46956	.001	1
CalStd8=100	100.00	111.18	11.2	11.2	.00535	.000	1

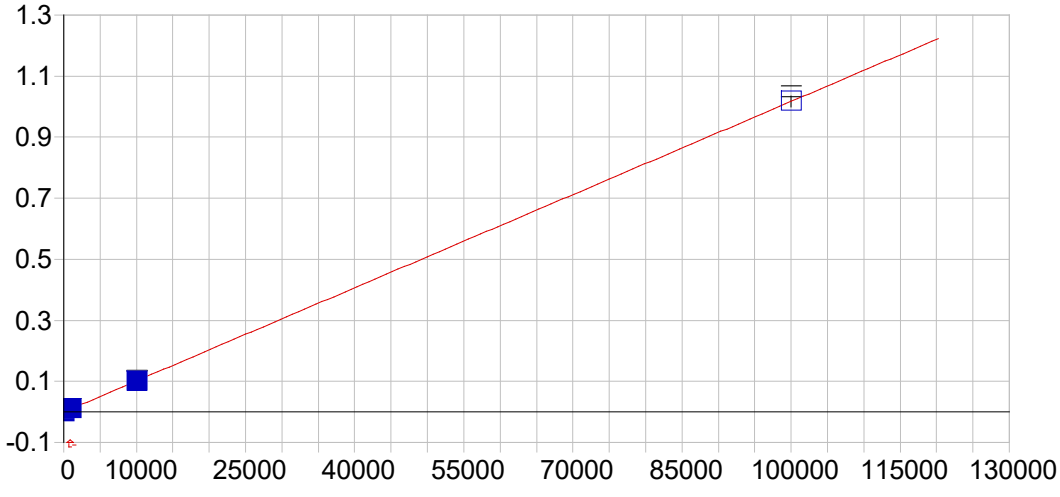


Mn 257.610 {131}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999851	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.047765		
Predicted MQL:	0.159218		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00206	-.002	.000	-.00000	.000	1
CalStd5=10	10.000	10.767	.767	7.67	.00013	.000	1
CalStd7=50	50.000	53.411	3.41	6.82	.00063	.000	1
CalStd6=20	20.000	21.744	1.74	8.72	.00026	.000	1
CalStd8=100	100.00	104.87	4.87	4.87	.00124	.000	1
CalStd4=5	5.0000	5.4442	.444	8.88	.00006	.000	1
CalStd9=100	1000.0	1047.6	47.6	4.76	.01243	.000	1
CalStd10=10	10000.	9941.1	-58.9	-.589	.11793	.000	1

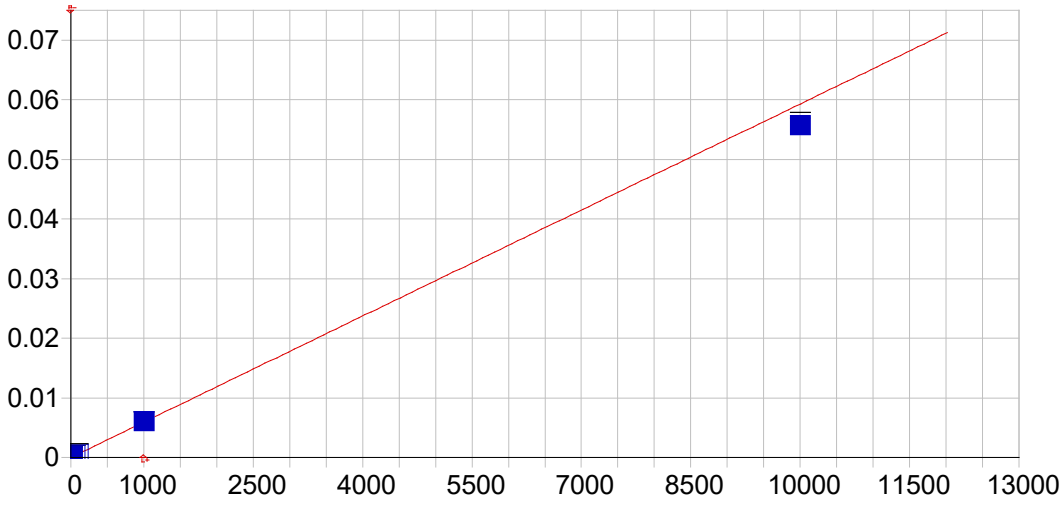


Mn 259.373 {130}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000140	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000737		
Predicted MDL:	0.364684		
Predicted MQL:	1.215613		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	13.801	13.8	.000	.00000	.000	1
CalStd10=10	10000.	9918.5	-81.5	-.815	.10086	.001	1
CalStd9=100	1000.0	1060.1	60.1	6.01	.01065	.000	1
CalStd12=10	100000.	100010.	7.56	.008	1.0171	.018	1

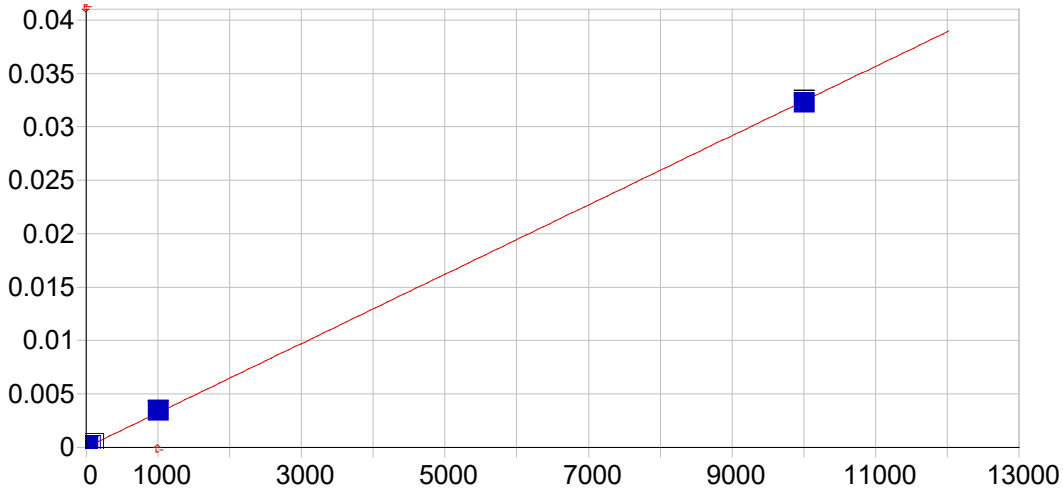


Mo 202.030 {466}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	0.365364		
Predicted MQL:	1.217882		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.02246	.022	.000	.00000	.000	1
CalStd7=50	50.000	50.522	.522	1.04	.00030	.000	1
CalStd6=20	20.000	20.314	.314	1.57	.00012	.000	1
CalStd5=10	10.000	10.342	.342	3.42	.00006	.000	1
CalStd8=100	100.00	98.465	-1.54	-1.54	.00059	.000	1
CalStd4=5	5.0000	5.0329	.033	.657	.00003	.000	1
CalStd9=100	1000.0	1001.9	1.93	.193	.00594	.000	1
CalStd10=10	10000.	9392.9	-607.	-6.07	.05568	.000	1

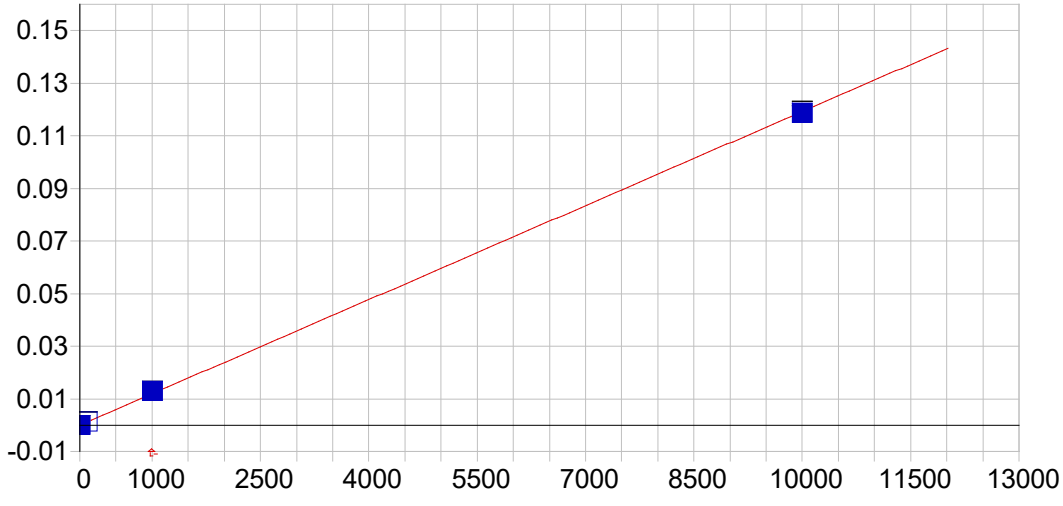


Mo 204.598 {464}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999825	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.736140		
Predicted MQL:	2.453799		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00135	-.001	.000	.00000	.000	1
CalStd7=50	50.000	52.949	2.95	5.90	.00017	.000	1
CalStd6=20	20.000	20.675	.675	3.38	.00007	.000	1
CalStd5=10	10.000	10.427	.427	4.27	.00004	.000	1
CalStd8=100	100.00	103.30	3.30	3.30	.00034	.000	1
CalStd4=5	5.0000	5.2573	.257	5.15	.00002	.000	1
CalStd9=100	1000.0	1056.3	56.3	5.63	.00343	.000	1
CalStd10=10	10000.	9936.1	-63.9	-.639	.03220	.000	1

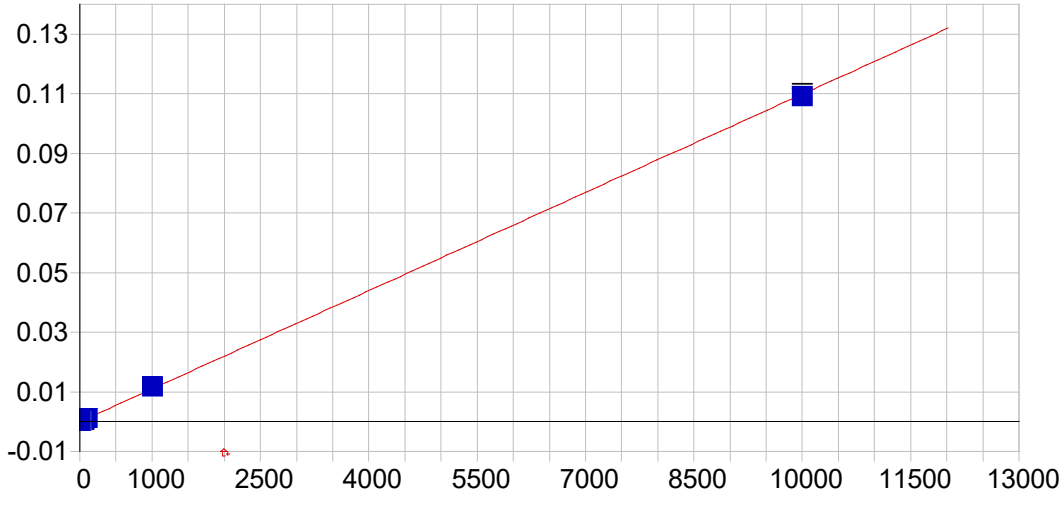


Ni 221.647 {452}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999779	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.367243		
Predicted MQL:	1.224142		

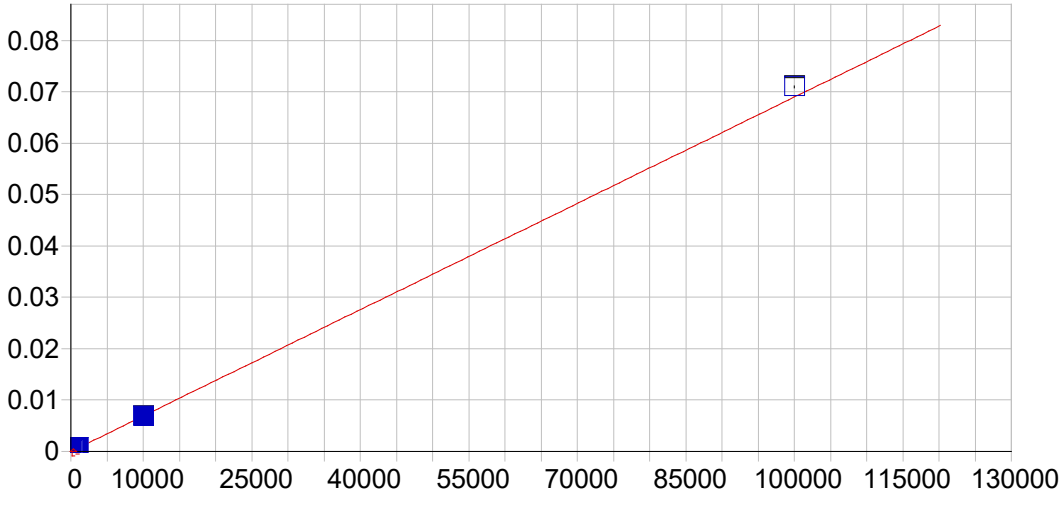
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01148	-.011	.000	-.00000	.000	1
CalStd10=10	10000.	9930.2	-69.8	-.698	.11841	.001	1
CalStd8=100	100.00	105.78	5.78	5.78	.00126	.000	1
CalStd9=100	1000.0	1064.0	64.0	6.40	.01269	.000	1



Ni 231.604 {445}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000011		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999786		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.366247				
Predicted MQL:	1.220824				

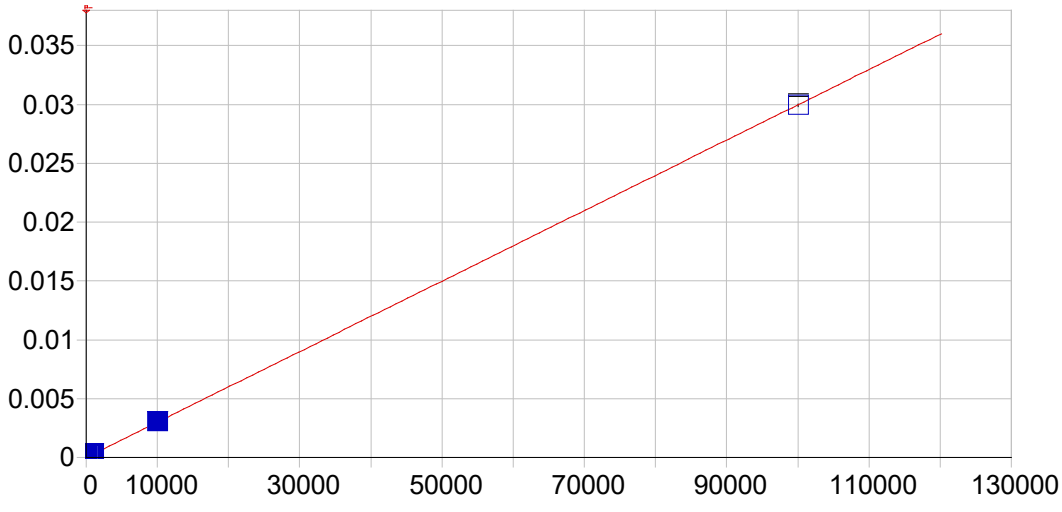
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00014	-.000	.000	-.00000	.000	1
CalStd7=50	50.000	53.884	3.88	7.77	.00059	.000	1
CalStd5=10	10.000	10.866	.866	8.66	.00012	.000	1
CalStd8=100	100.00	105.09	5.09	5.09	.00115	.000	1
CalStd4=5	5.0000	5.0760	.076	1.52	.00005	.000	1
CalStd9=100	1000.0	1060.2	60.2	6.02	.01163	.000	1
CalStd3=1	1.0000	.85773	-.142	-14.2	.00001	.000	1
CalStd10=10	10000.	9930.1	-69.9	-.699	.10914	.001	1



Pb 216.999 {455}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999971		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	4.698486				
Predicted MQL:	15.661621				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00142	-.001	.000	.00000	.000	1
CalStd9=100	1000.0	1075.6	75.6	7.56	.00075	.000	1
CalStd10=10	10000.	9939.8	-60.2	-.602	.00688	.000	1
CalStd8=100	100.00	105.34	5.34	5.34	.00007	.000	1
CalStd5=10	10.000	10.218	.218	2.18	.00001	.000	1
CalStd12=10	100000.	102900.	2900.	2.90	.07099	.000	1

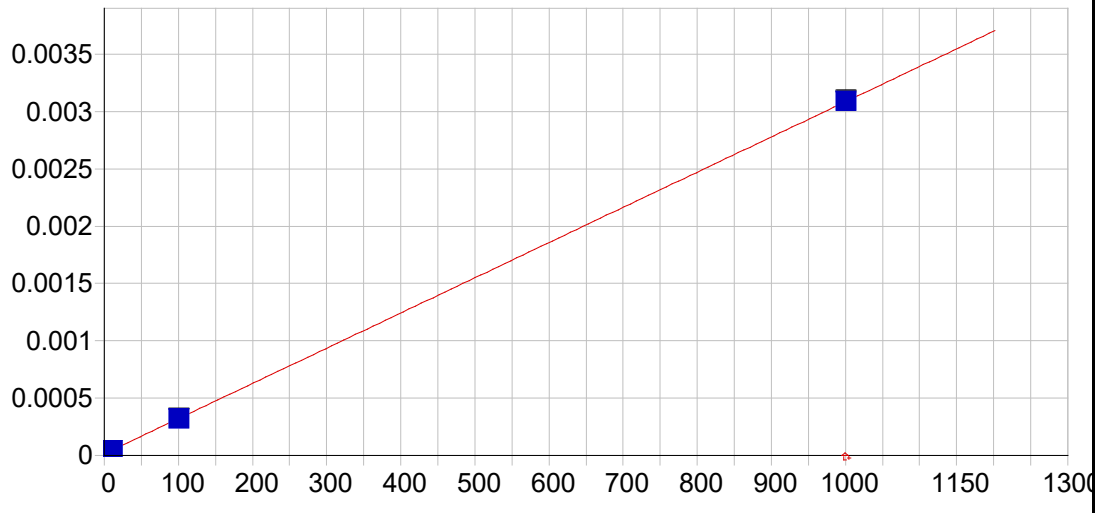


Pb 220.353 {153}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.717821		
Predicted MQL:	5.726069		

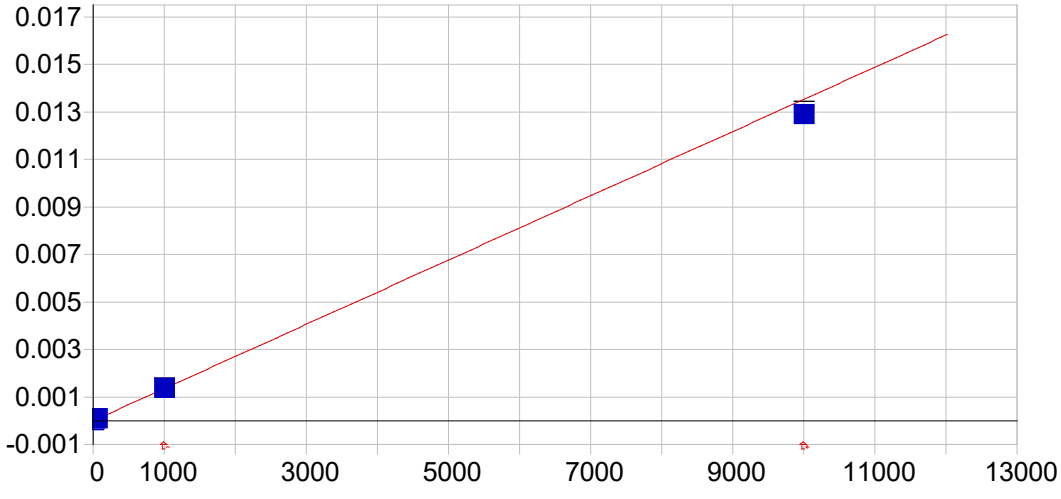
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00945	-.009	.000	.00000	.000	1
CalStd9=100	1000.0	1047.9	47.9	4.79	.00032	.000	1
CalStd10=10	10000.	10064.	63.6	.636	.00302	.000	1
CalStd8=100	100.00	104.14	4.14	4.14	.00003	.000	1
CalStd12=10	100000.	99884.	-116.	-.116	.02993	.000	1



Pb 220.353 {453}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000014		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999972		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	1.426759				
Predicted MQL:	4.755862				

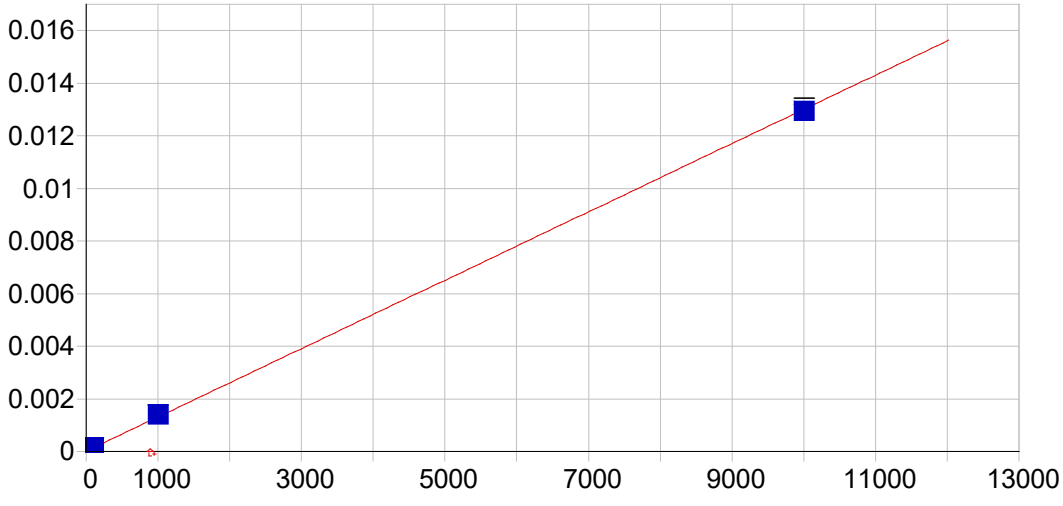
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00056	.001	.000	.00001	.000	1
CalStd5=10	10.000	10.002	.002	.021	.00004	.000	1
CalStd8=100	100.00	99.373	-.627	-.627	.00032	.000	1
CalStd4=5	5.0000	4.4673	-.533	-10.7	.00003	.000	1
CalStd9=100	1000.0	1001.2	1.16	.116	.00309	.000	1



Sb 206.833 {463}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999811		Status:	OK.	
Std Error of Est:	0.000008				
Predicted MDL:	1.941046				
Predicted MQL:	6.470152				

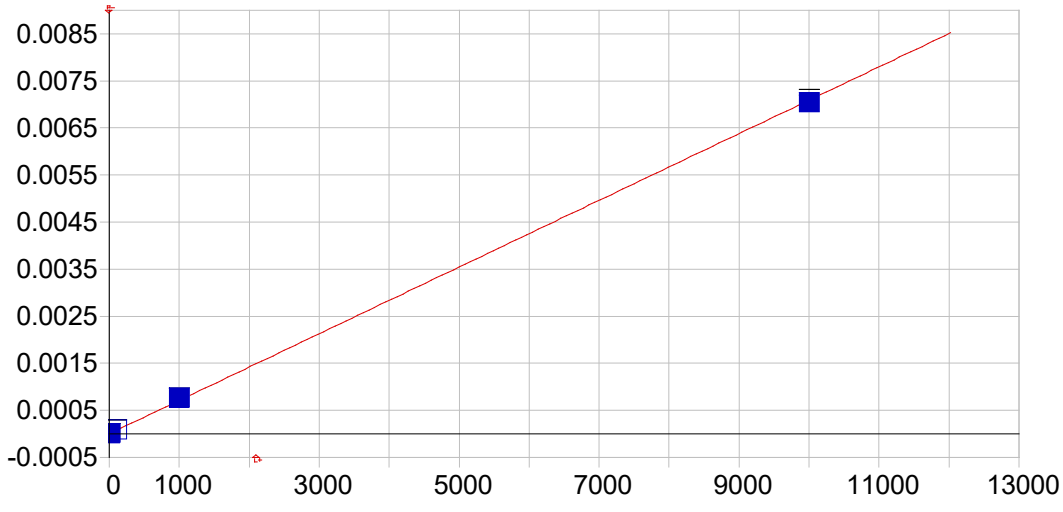
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.08232	.082	.000	-.00000	.000	1
CalStd9=100	1000.0	1007.2	7.20	.720	.00137	.000	1
CalStd5=10	10.000	8.6007	-1.40	-14.0	.00001	.000	1
CalStd7=50	50.000	50.235	.235	.470	.00007	.000	1
CalStd10=10	10000.	9532.2	-468.	-4.68	.01289	.000	1



Sb 217.581 {455}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000010		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999816		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	2.305353				
Predicted MQL:	7.684509				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00146	.001	.000	.00001	.000	1
CalStd9=100	1000.0	1056.5	56.5	5.65	.00138	.000	1
CalStd6=20	20.000	19.047	-.953	-4.76	.00004	.000	1
CalStd5=10	10.000	9.3468	-.653	-6.53	.00002	.000	1
CalStd8=100	100.00	103.57	3.57	3.57	.00014	.000	1
CalStd4=5	5.0000	3.6767	-1.32	-26.5	.00002	.000	1
CalStd10=10	10000.	9942.8	-57.2	-.572	.01293	.000	1

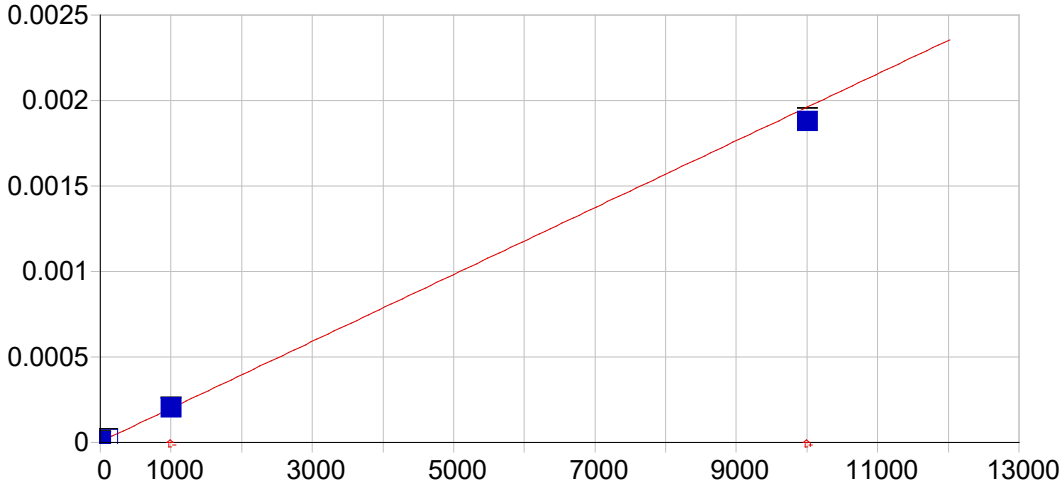


Se 196.090 {472}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999776	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.889846		
Predicted MQL:	9.632820		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00283	-.003	.000	.00000	.000	1
CalStd9=100	1000.0	1062.6	62.6	6.26	.00076	.000	1
CalStd5=10	10.000	11.757	1.76	17.6	.00001	.000	1
CalStd8=100	100.00	105.15	5.15	5.15	.00008	.000	1
CalStd10=10	10000.	9930.5	-69.5	-.695	.00704	.000	1

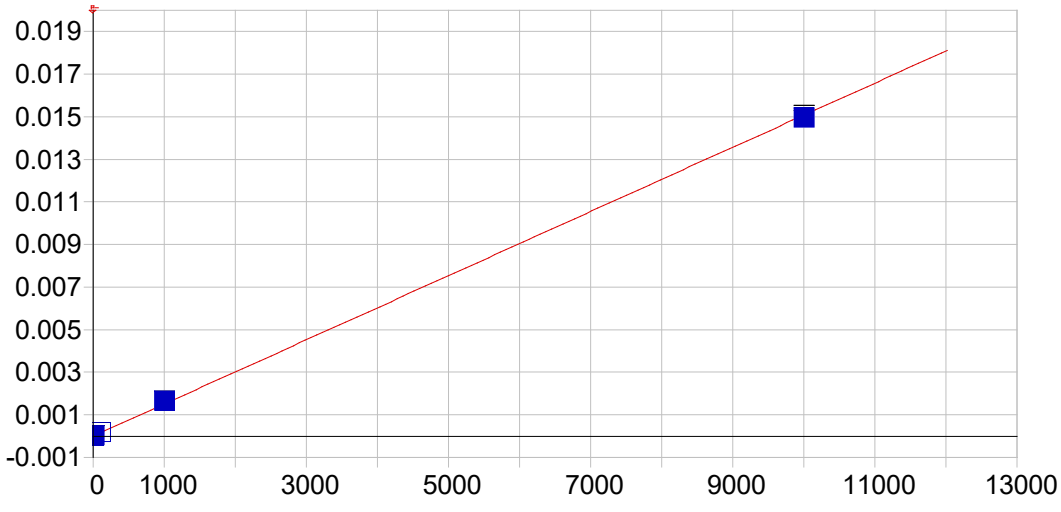


Se 206.279 {463}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999844	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	14.818017		
Predicted MQL:	49.393390		

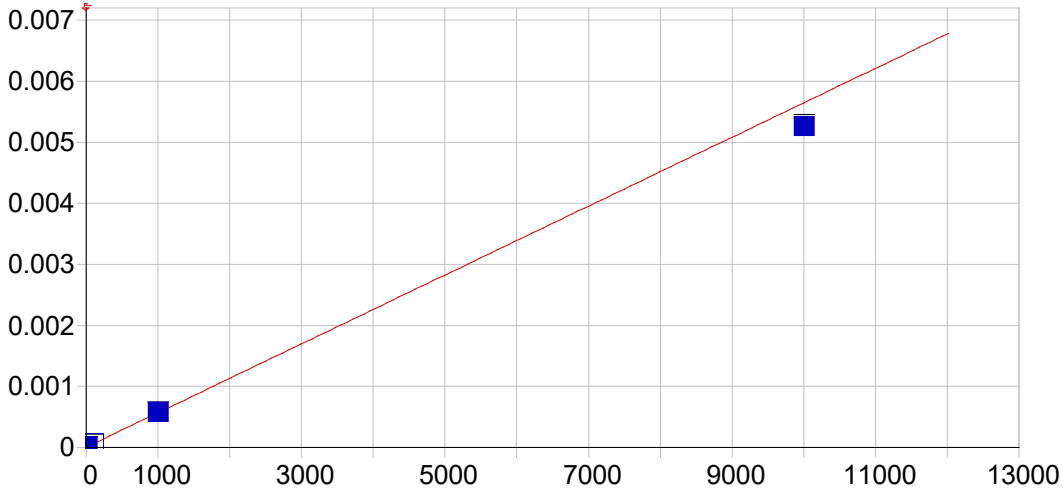
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01509	.015	.000	.00000	.000	1
CalStd9=100	1000.0	1014.4	14.4	1.44	.00020	.000	1
CalStd10=10	10000.	9573.8	-426.	-4.26	.00188	.000	1
CalStd8=100	100.00	83.023	-17.0	-17.0	.00002	.000	1



Tl 190.856 {476}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999670		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	1.703755				
Predicted MQL:	5.679182				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00192	-.002	.000	.00000	.000	1
CalStd9=100	1000.0	1079.4	79.4	7.94	.00163	.000	1
CalStd8=100	100.00	105.07	5.07	5.07	.00016	.000	1
CalStd5=10	10.000	10.704	.704	7.04	.00002	.000	1
CalStd10=10	10000.	9914.8	-85.2	-.852	.01494	.000	1

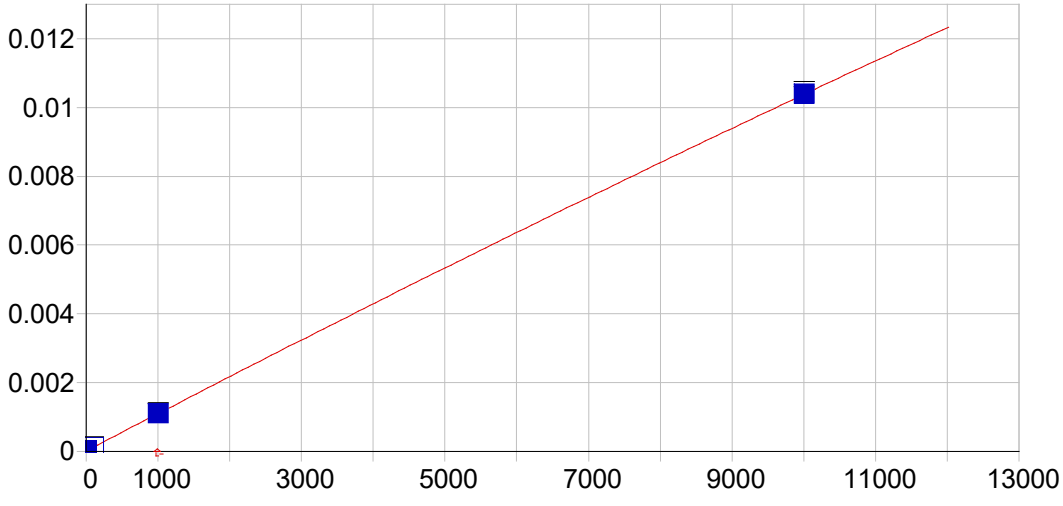


Tl 190.856 {477}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999439	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	2.759172		
Predicted MQL:	9.197239		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.6353	-2.64	.000	.00000	.000	1
CalStd9=100	1000.0	1012.8	12.8	1.28	.00058	.000	1
CalStd8=100	100.00	96.011	-3.99	-3.99	.00006	.000	1
CalStd5=10	10.000	5.8832	-4.12	-41.2	.00001	.000	1
CalStd10=10	10000.	9307.5	-693.	-6.93	.00525	.000	1

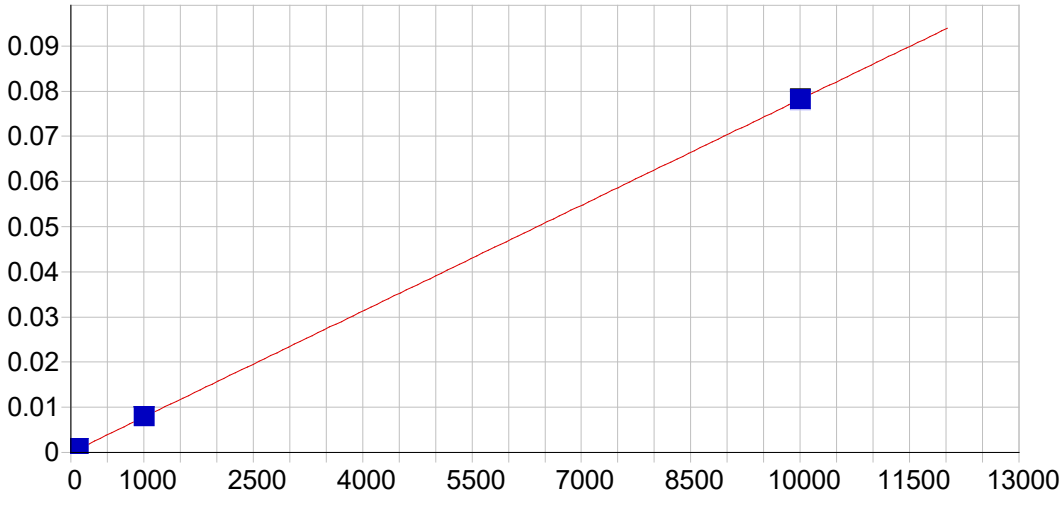


V 290.882 {116}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999991	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	4.338762		
Predicted MQL:	14.462541		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.20827	.208	.000	.00001	.000	1
CalStd9=100	1000.0	1002.9	2.91	.291	.00110	.000	1
CalStd10=10	10000.	9998.8	-1.17	-.012	.01038	.000	1
CalStd8=100	100.00	98.295	-1.70	-1.70	.00012	.000	1

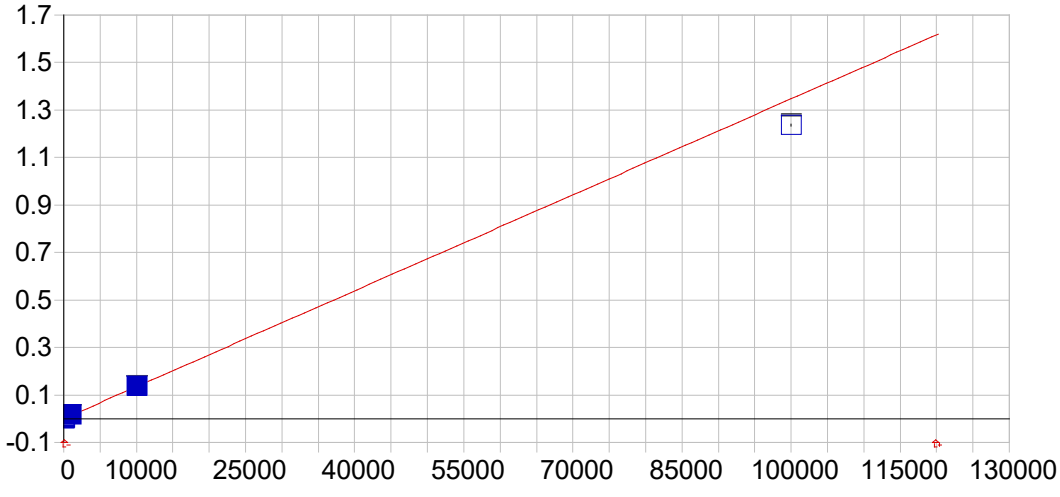


V 292.402 {115}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000012	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.280078		
Predicted MQL:	0.933592		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00002	-.000	.000	.00001	.000	1
CalStd7=50	50.000	50.197	.197	.394	.00040	.000	1
CalStd9=100	1000.0	1007.7	7.72	.772	.00786	.000	1
CalStd6=20	20.000	20.236	.236	1.18	.00017	.000	1
CalStd5=10	10.000	9.8149	-.185	-1.85	.00009	.000	1
CalStd8=100	100.00	99.833	-.167	-.167	.00079	.000	1
CalStd10=10	10000.	9992.2	-7.80	-.078	.07781	.000	1

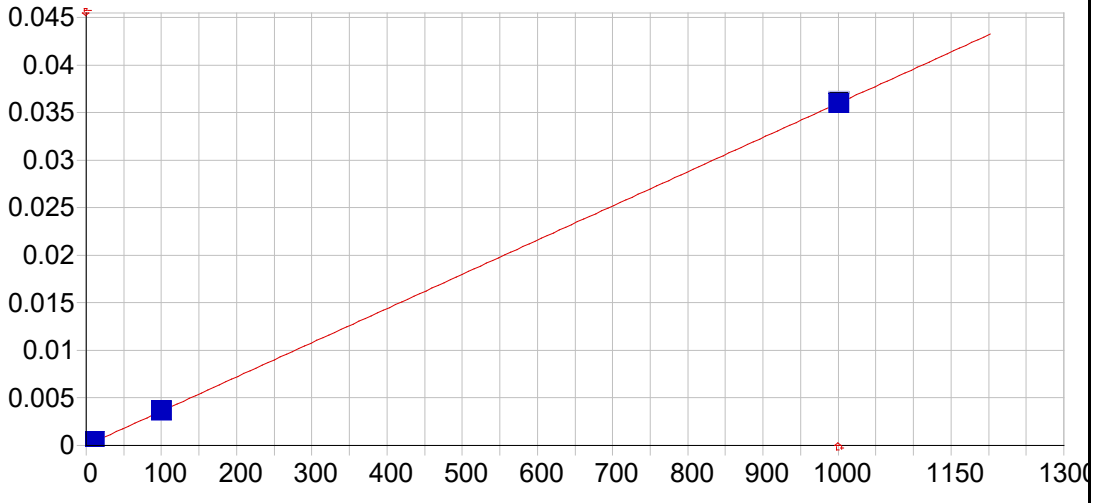


Zn 206.200 {463}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000013	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996634	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.200498		
Predicted MQL:	0.668325		

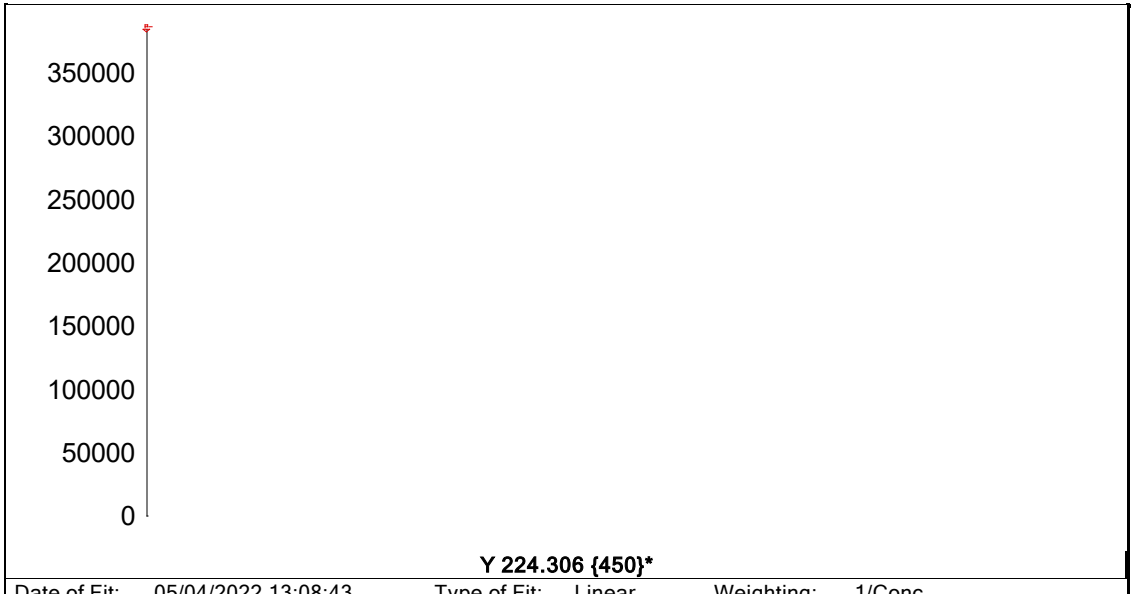
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	10215.	215.	2.15	.13762	.001	1
Blank	.00000	-.94328	-.943	.000	.00000	.000	1
CalStd9=100	1000.0	1090.0	90.0	9.00	.01470	.000	1
CalStd12=10	100000.	91760.	-8240.	-8.24	1.2361	.004	1
CalStd5=10	10.000	10.365	.365	3.65	.00015	.000	1
CalStd8=100	100.00	107.78	7.78	7.78	.00146	.000	1



Zn 213.856 {457}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000009		Re-Slope:	1.000000	
A1 (Gain):	0.000036		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999985		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.090243				
Predicted MQL:	0.300810				

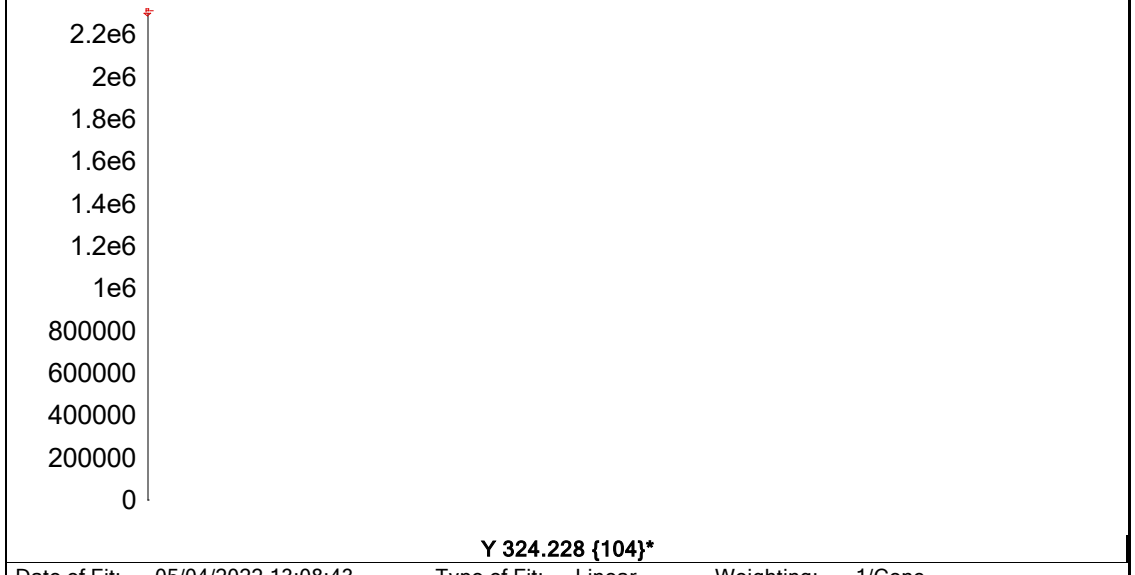
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00053	-.001	.000	.00001	.000	1
CalStd9=100	1000.0	999.82	-.180	-.018	.03615	.000	1
CalStd5=10	10.000	10.568	.568	5.68	.00039	.000	1
CalStd8=100	100.00	99.614	-.386	-.386	.00361	.000	1



Y 224.306 {450}*

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

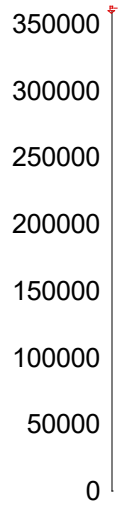
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	362680.	3580.	1



Y 324.228 {104}*

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

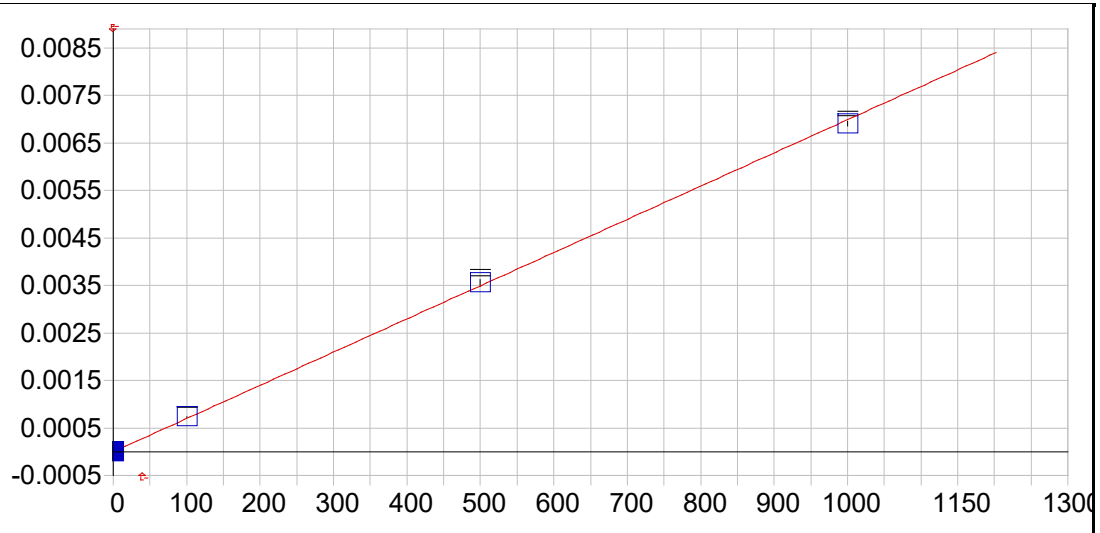
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	2169900.	11400.	1



Y 371.030 { 91}*

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

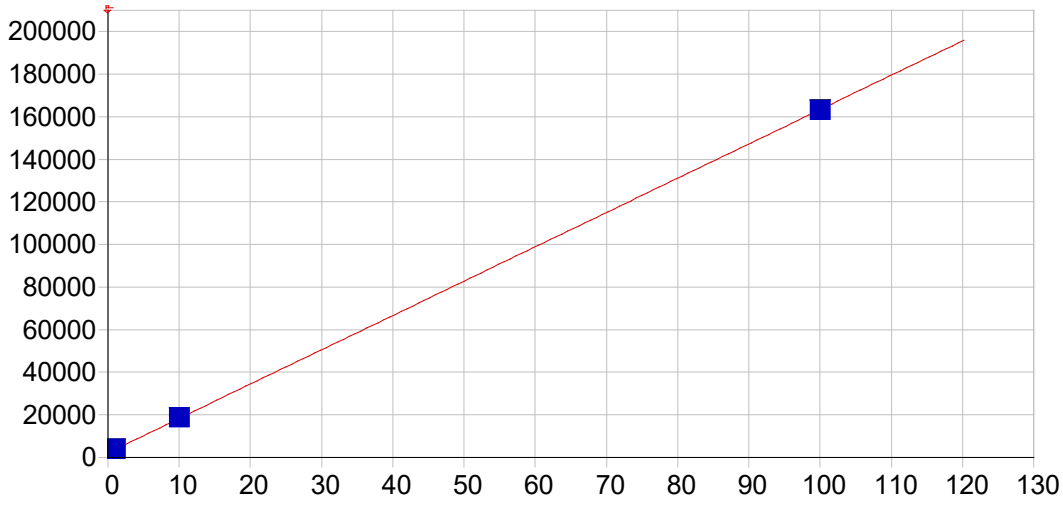
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	334670.	7010.	1



Na 330.237 {102}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000007		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999847		Status:	OK.	
Std Error of Est:	0.000002				
Predicted MDL:	1.078491				
Predicted MQL:	3.594970				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00492	-.005	.000	-.00000	.000	1
CalStd13=10	100.00	104.59	4.59	4.59	.00073	.000	1
CalibStd15=	1000.0	987.54	-12.5	-1.25	.00690	.000	1
CalStd14=50	500.00	507.87	7.87	1.57	.00355	.000	1

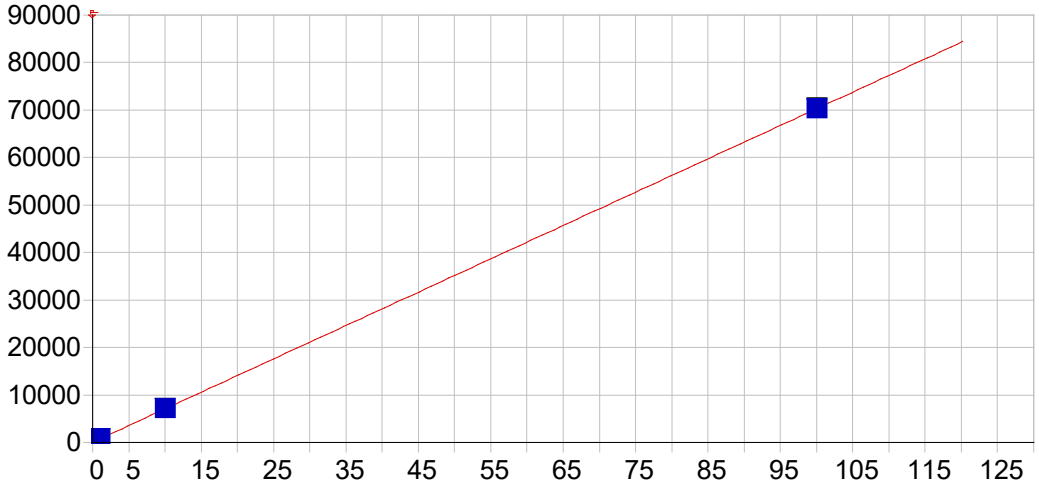


Na 588.995 { 57}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	2219.418161	Re-Slope:	1.000000
A1 (Gain):	1611.612360	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	4.223921		
Predicted MDL:	0.006709		
Predicted MQL:	0.022363		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00003	-.000	.000	2219.4	15.0	1
CalStd9=100	1.0000	1.0160	.016	1.60	3857.1	15.0	1
CalStd10=10	10.000	10.169	.169	1.69	18610.	57.1	1
CalStd13=10	100.00	99.815	-.185	-.185	163110.	265.	1

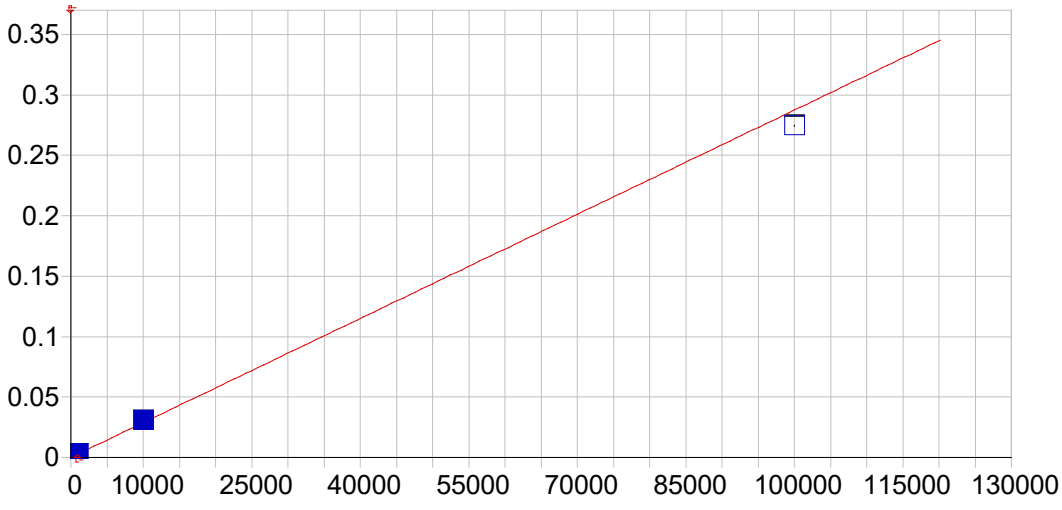


Na 589.592 { 57}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	51.809383	Re-Slope:	1.000000
A1 (Gain):	702.069574	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	1.198180		
Predicted MDL:	0.008962		
Predicted MQL:	0.029873		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00004	-.000	.000	51.782	2.21	1
CalStd9=100	1.0000	1.0375	.037	3.75	780.76	7.87	1
CalStd10=10	10.000	10.016	.016	.155	7089.1	25.2	1
CalStd13=10	100.00	99.947	-.053	-.053	70279.	134.	1

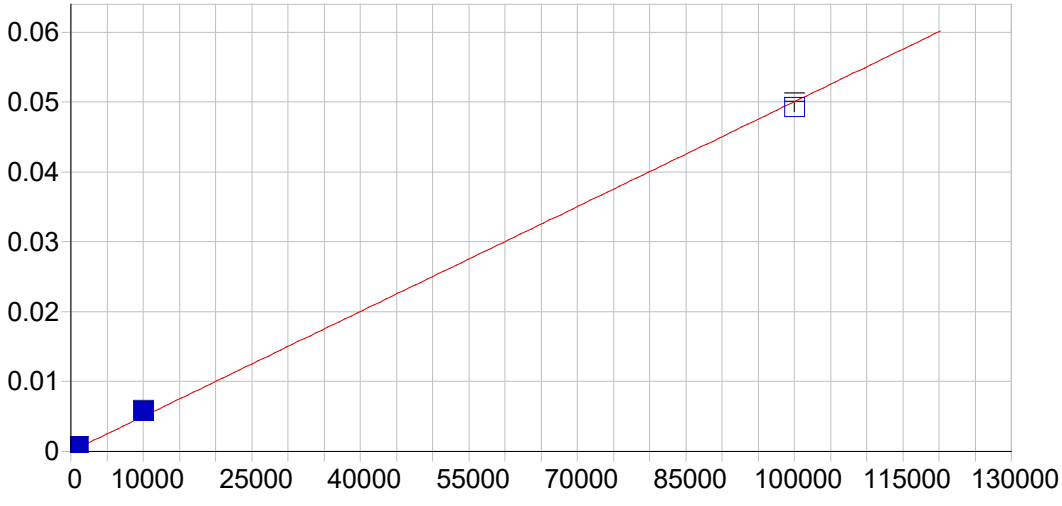


Si 212.412 {458}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000045	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997384	Status:	OK.
Std Error of Est:	0.000167		
Predicted MDL:	1.075564		
Predicted MQL:	3.585212		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-11.063	-11.1	.000	.00001	.000	1
CalStd9=100	1000.0	1108.0	108.	10.8	.00323	.000	1
CalibStd15=	100000.	95483.	-4520.	-4.52	.27442	.000	1
CalStd10=10	10000.	10587.	587.	5.87	.03047	.000	1

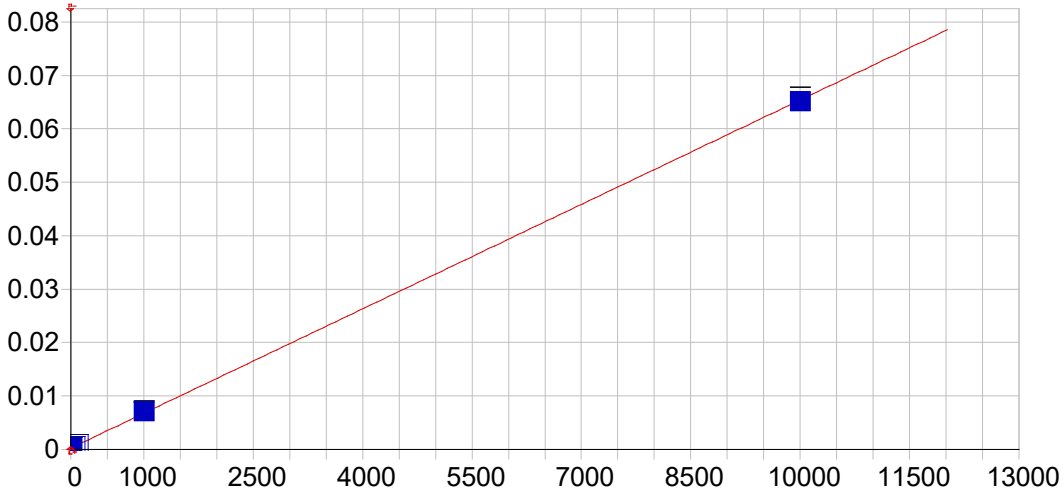


Si 251.611 {134}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998752	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	6.992742		
Predicted MQL:	23.309141		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.32470	-.325	.000	.00000	.000	1
CalStd9=100	1000.0	1195.6	196.	19.6	.00060	.000	1
CalibStd15=	100000.	98349.	-1650.	-1.65	.04923	.001	1
CalStd10=10	10000.	11456.	1460.	14.6	.00574	.000	1

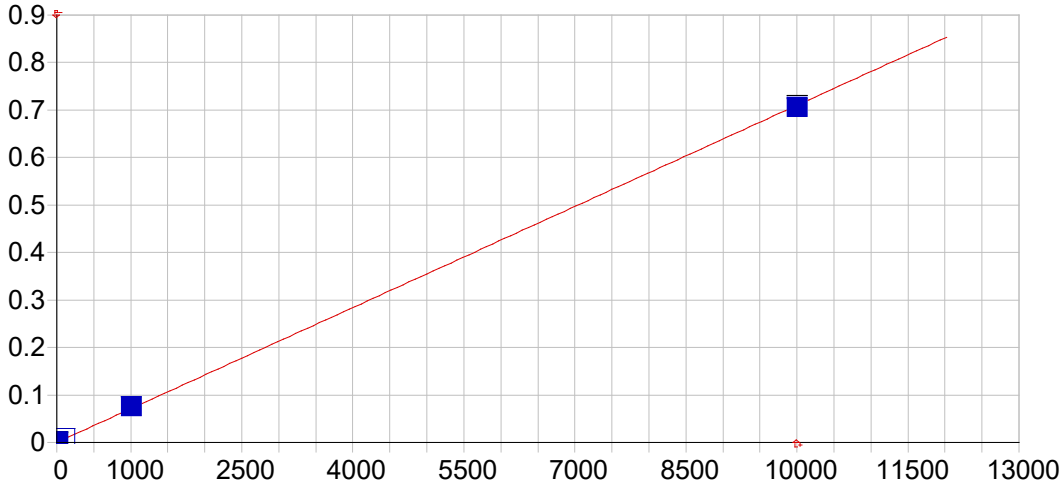


Ti 323.452 {104}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000272	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999875	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.242070		
Predicted MQL:	4.140234		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00181	-.002	.000	.00027	.000	1
CalStd5=10	10.000	11.383	1.38	13.8	.00035	.000	1
CalStd8=100	100.00	105.08	5.08	5.08	.00096	.000	1
CalStd9=100	1000.0	1041.4	41.4	4.14	.00706	.000	1
CalStd10=10	10000.	9947.7	-52.3	-.523	.06506	.001	1
CalStd7=50	50.000	54.170	4.17	8.34	.00063	.000	1
CalStd4=5	5.0000	5.2650	.265	5.30	.00031	.000	1

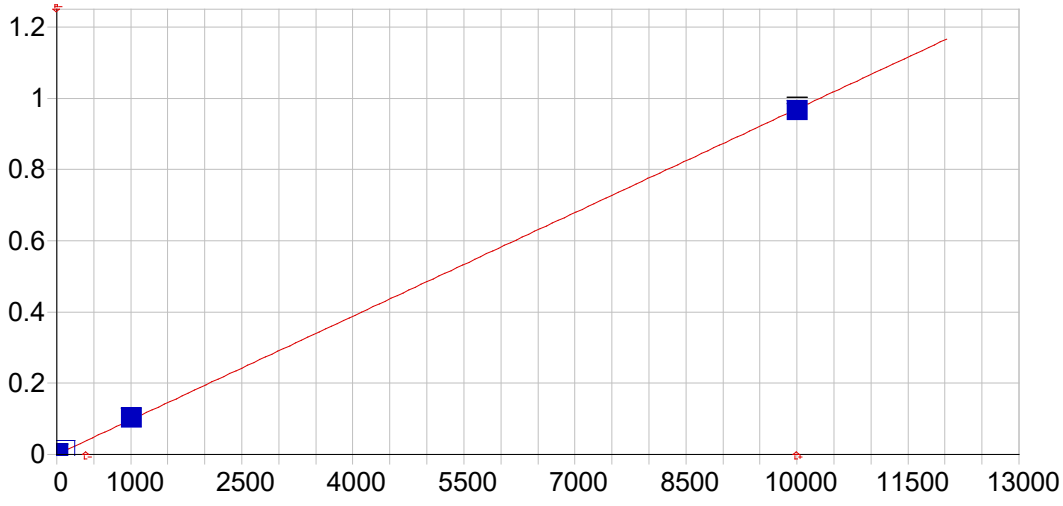


Sr 407.771 { 83}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000095	Re-Slope:	1.000000
A1 (Gain):	0.000071	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999847	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.139140		
Predicted MQL:	0.463801		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00044	-.000	.000	.00009	.000	1
CalStd3=1	1.0000	1.2115	.212	21.2	.00018	.000	1
CalStd4=5	5.0000	5.3761	.376	7.52	.00048	.000	1
CalStd5=10	10.000	10.627	.627	6.27	.00085	.000	1
CalStd8=100	100.00	104.30	4.30	4.30	.00750	.000	1
CalStd9=100	1000.0	1052.5	52.5	5.25	.07482	.001	1
CalStd10=10	10000.	9941.9	-58.1	-.581	.70590	.003	1

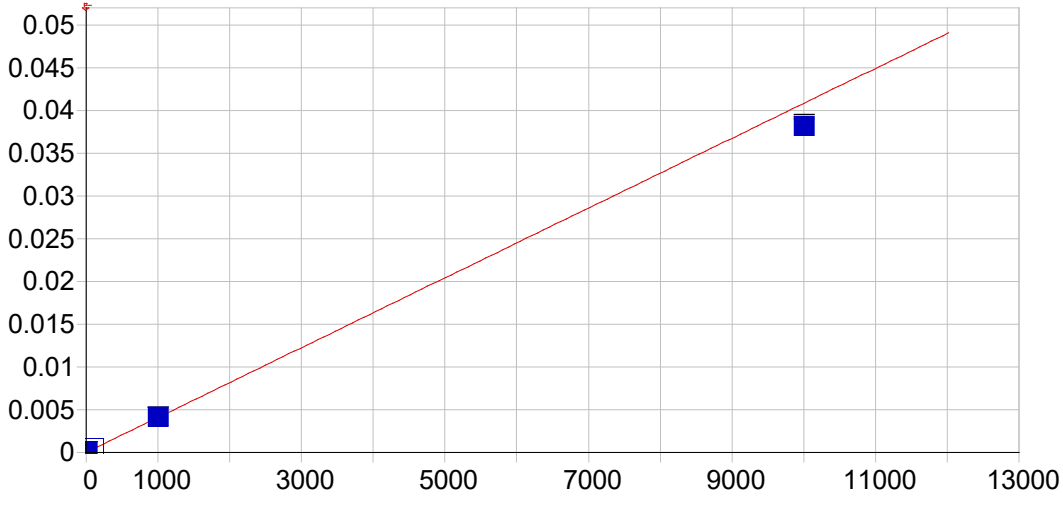


Sr 421.552 { 80}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000036	Re-Slope:	1.000000
A1 (Gain):	0.000097	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999889	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.108229		
Predicted MQL:	0.360762		

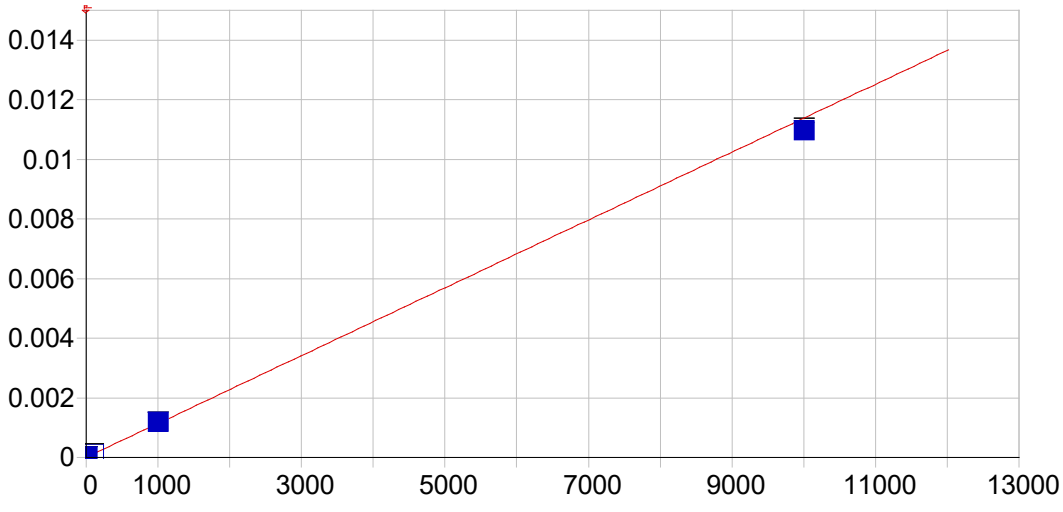
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00029	-.000	.000	.00004	.000	1
CalStd3=1	1.0000	1.1010	.101	10.1	.00014	.000	1
CalStd4=5	5.0000	5.2705	.270	5.41	.00055	.000	1
CalStd5=10	10.000	10.508	.508	5.08	.00105	.000	1
CalStd8=100	100.00	103.97	3.97	3.97	.01012	.000	1
CalStd9=100	1000.0	1044.8	44.8	4.48	.10137	.001	1
CalStd10=10	10000.	9950.4	-49.6	-.496	.96512	.009	1



Sn 189.989 {477}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000004		Re-Slope:	1.000000	
A1 (Gain):	0.000004		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999850		Status:	OK.	
Std Error of Est:	0.000008				
Predicted MDL:	0.522706				
Predicted MQL:	1.742355				

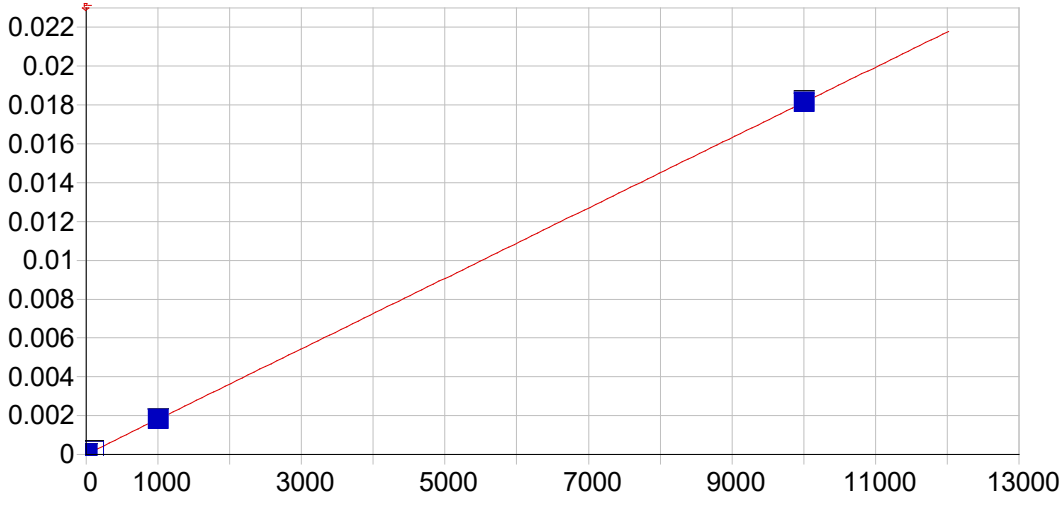
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.42227	-.422	.000	.00000	.000	1
CalStd10=10	10000.	9328.0	-672.	-6.72	.03809	.000	1
CalStd9=100	1000.0	1003.7	3.69	.369	.00410	.000	1
CalStd8=100	100.00	100.10	.100	.100	.00041	.000	1
CalStd5=10	10.000	11.030	1.03	10.3	.00005	.000	1



Sn 189.989 {478}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999405		Status:	OK.	
Std Error of Est:	0.000005				
Predicted MDL:	1.442288				
Predicted MQL:	4.807625				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.30797	-.308	.000	.00000	.000	1
CalStd10=10	10000.	9629.9	-370.	-3.70	.01096	.000	1
CalStd9=100	1000.0	1032.5	32.5	3.25	.00118	.000	1
CalStd8=100	100.00	101.15	1.15	1.15	.00012	.000	1
CalStd5=10	10.000	10.092	.092	.916	.00001	.000	1

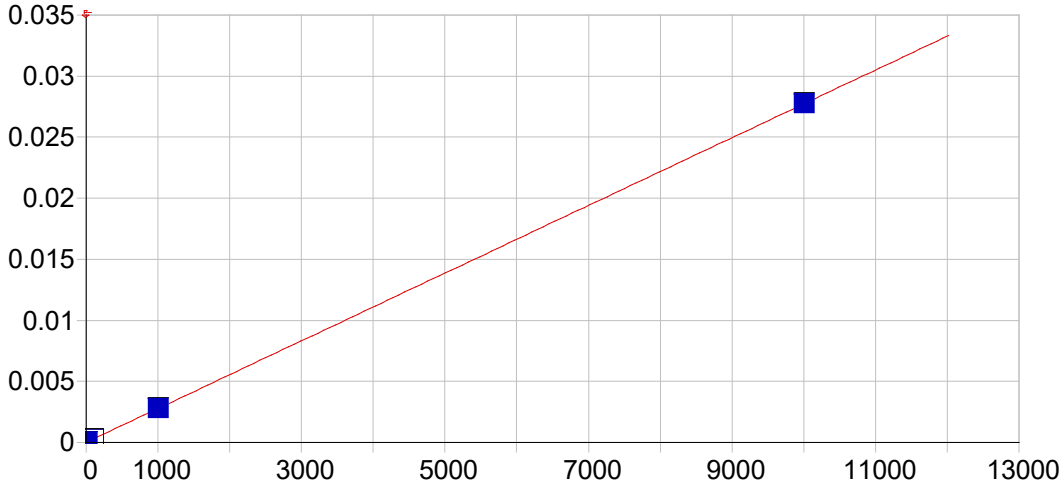


B 249.678 {135}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.769694		
Predicted MQL:	2.565646		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00017	-.000	.000	.00000	.000	1
CalStd8=100	100.00	98.672	-1.33	-1.33	.00018	.000	1
CalStd5=10	10.000	10.293	.293	2.93	.00002	.000	1
CalStd9=100	1000.0	1000.7	.677	.068	.00182	.000	1
CalStd10=10	10000.	10000.	.358	.004	.01814	.000	1

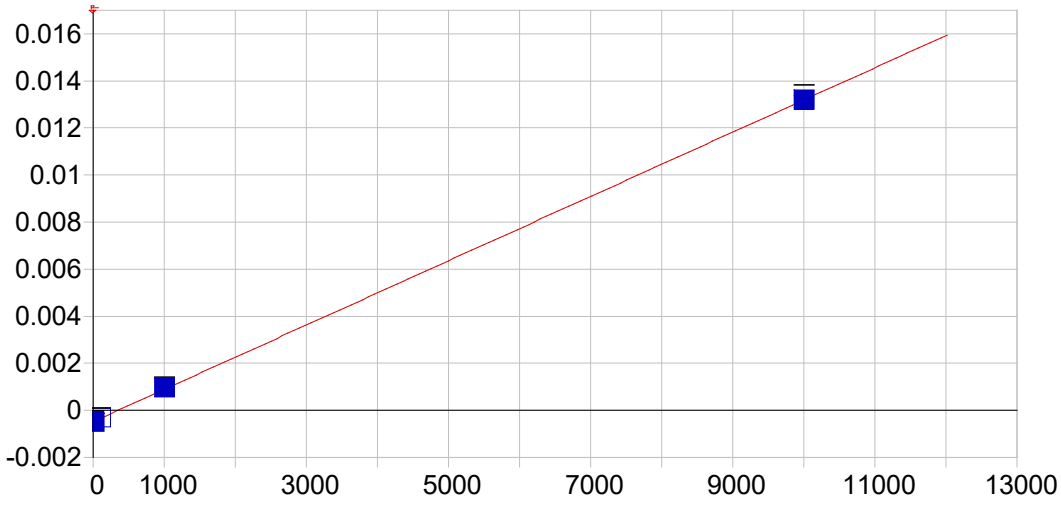


B 249.773 {135}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.403725		
Predicted MQL:	1.345751		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00048	-.000	.000	.00001	.000	1
CalStd8=100	100.00	100.13	.135	.135	.00029	.000	1
CalStd5=10	10.000	10.483	.483	4.83	.00004	.000	1
CalStd9=100	1000.0	998.24	-1.76	-.176	.00278	.000	1
CalStd10=10	10000.	10001.	1.14	.011	.02774	.000	1

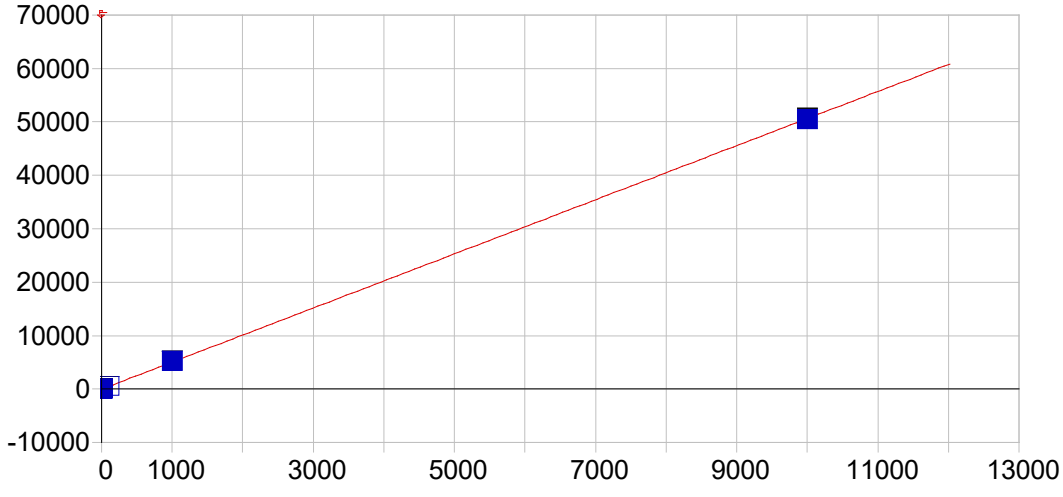


Li 610.353 { 55}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000474	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.994993	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	23.843010		
Predicted MQL:	79.476700		

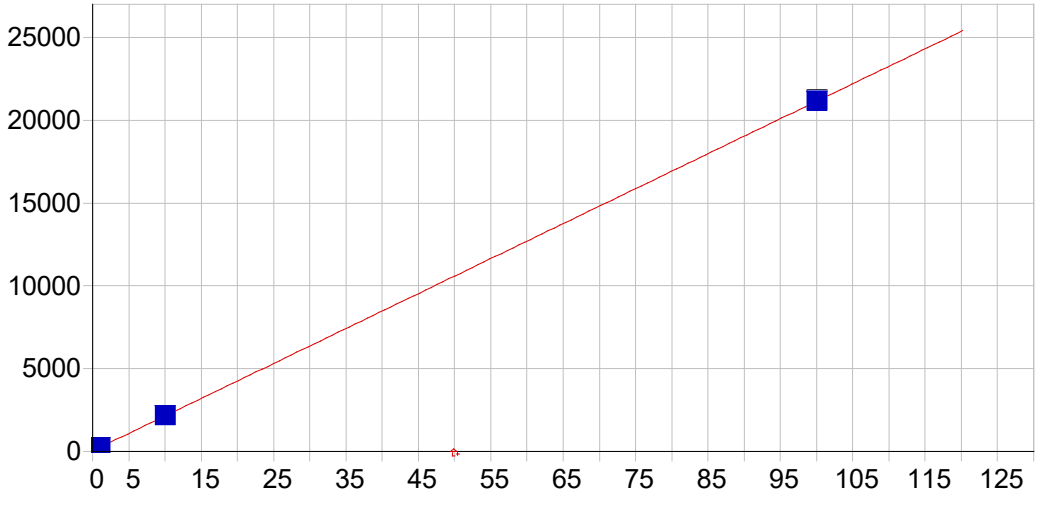
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.03204	.032	.000	-.00047	.000	1
CalStd5=10	10.000	-23.123	-33.1	-331.	-.00051	.000	1
CalStd8=100	100.00	106.77	6.77	6.77	-.00033	.000	1
CalStd9=100	1000.0	1042.0	42.0	4.20	.00095	.000	1
CalStd10=10	10000.	9984.3	-15.7	-.157	.01317	.000	1



Li 670.776 { 50}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-30.799338		Re-Slope:	1.000000	
A1 (Gain):	5.065816		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999892		Status:	OK.	
Std Error of Est:	1.014185				
Predicted MDL:	1.271588				
Predicted MQL:	4.238626				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00375	-.004	.000	-30.818	6.07	1
CalStd5=10	10.000	12.921	2.92	29.2	34.656	4.61	1
CalStd8=100	100.00	105.42	5.42	5.42	503.22	5.45	1
CalStd9=100	1000.0	1033.0	33.0	3.30	5202.2	8.79	1
CalStd10=10	10000.	9958.7	-41.3	-.413	50419.	224.	1

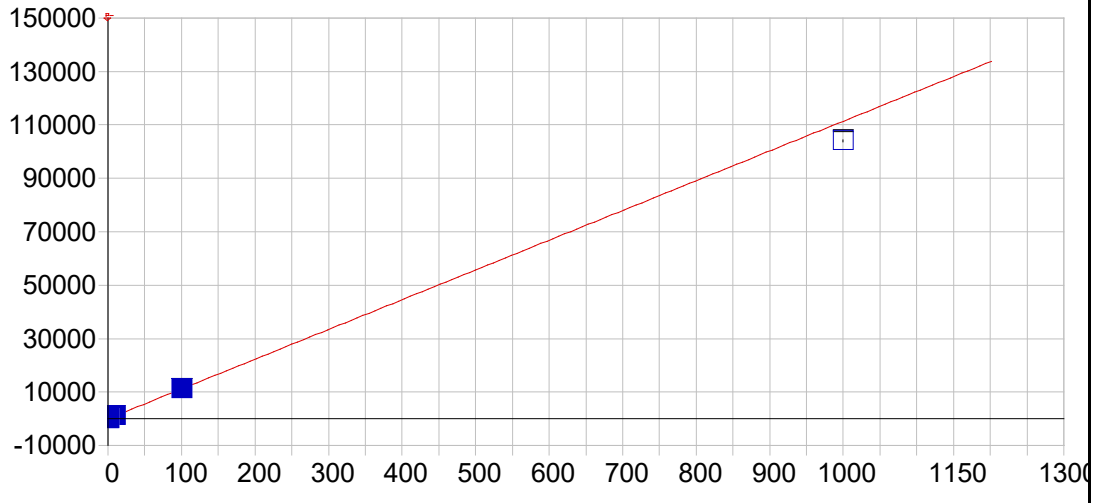


K 766.490 { 44}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	32.267543	Re-Slope:	1.000000
A1 (Gain):	211.130773	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	5.883864		
Predicted MDL:	0.032208		
Predicted MQL:	0.107360		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00022	.000	.000	32.315	3.58	1
CalStd9=100	1.0000	.97175	-.028	-2.83	238.07	6.41	1
CalStd10=10	10.000	10.033	.033	.329	2156.8	6.67	1
CalStd13=10	100.00	99.923	-.077	-.077	21192.	34.0	1

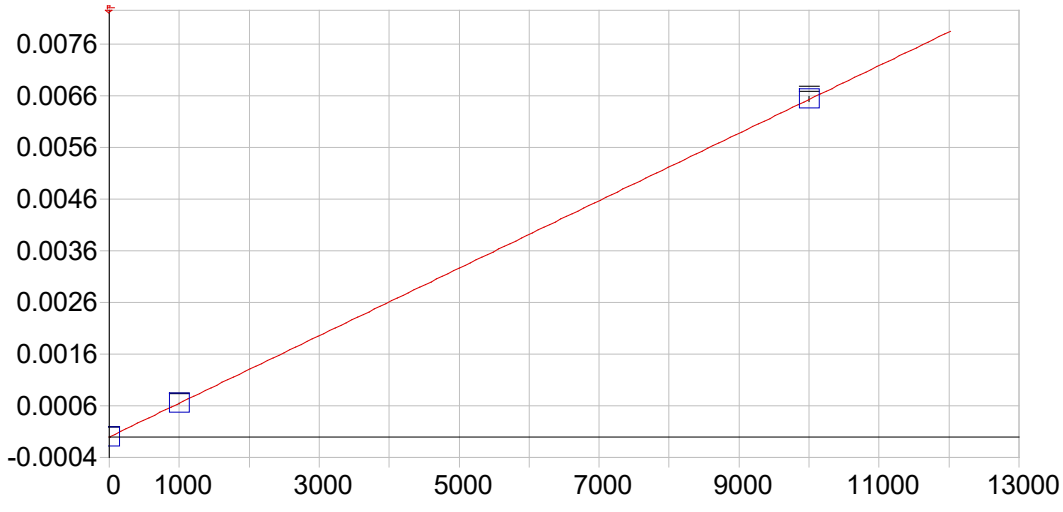


K 769.896 { 44}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	3.540317	Re-Slope:	1.000000
A1 (Gain):	111.378434	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999561	Status:	OK.
Std Error of Est:	58.298796		
Predicted MDL:	0.054157		
Predicted MQL:	0.180523		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.07676	-.077	.000	-5.0090	3.02	1
CalStd10=10	10.000	10.026	.026	.262	1121.4	3.26	1
CalibStd15=	1000.0	934.09	-65.9	-6.59	104040.	323.	1
CalStd13=10	100.00	101.33	1.33	1.33	11301.	14.8	1
CalStd9=100	1.0000	1.0053	.005	.525	115.62	3.18	1

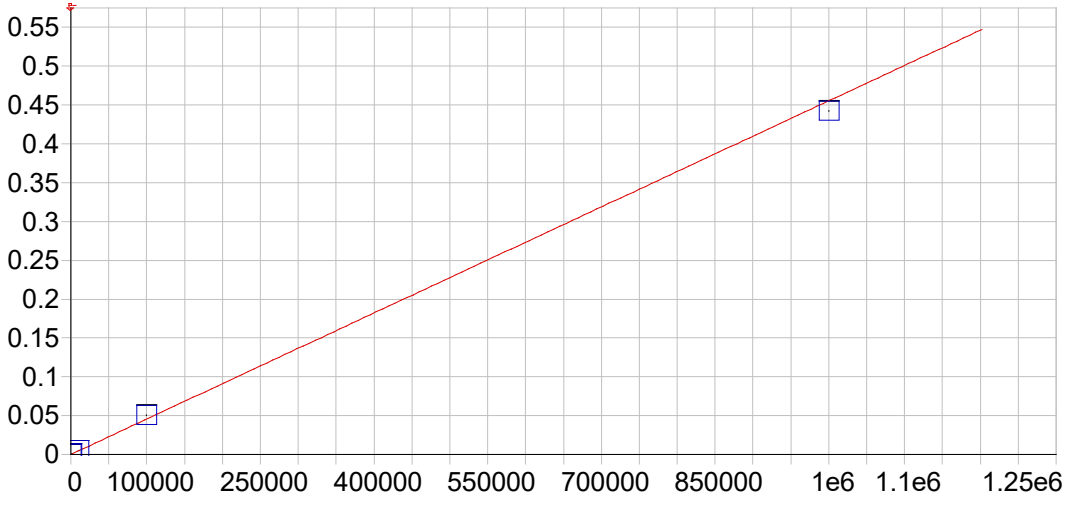


P 177.495 {489}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.036108		
Predicted MQL:	6.787028		

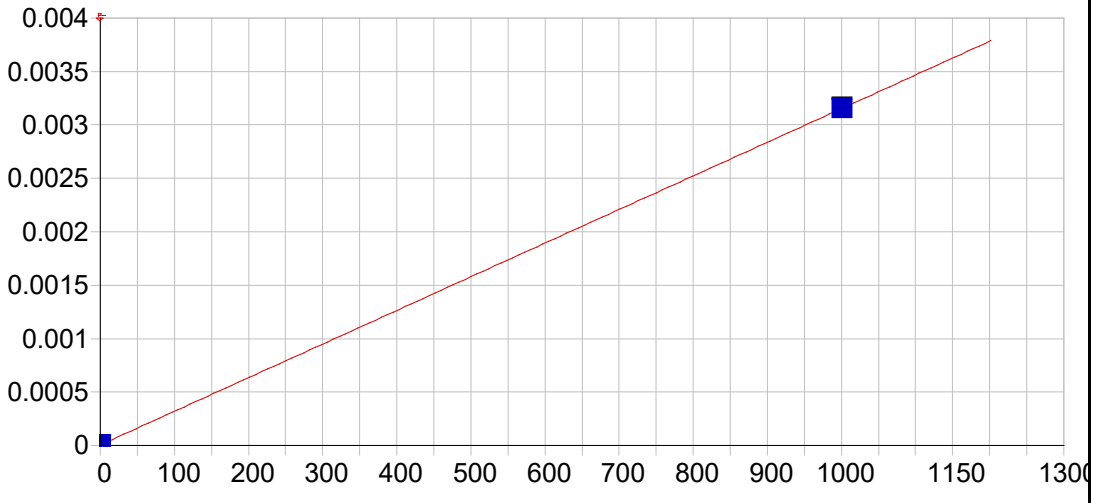
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00956	.010	.000	-.00000	.000	1
CalStd10=10	10000.	10011.	10.6	.106	.00653	.000	1
CalStd9=100	1000.0	989.37	-10.6	-1.06	.00064	.000	1



S 182.034 {485}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000060		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998222		Status:	OK.	
Std Error of Est:	0.000071				
Predicted MDL:	3.771207				
Predicted MQL:	12.570692				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-77.064	-77.1	.000	.00002	.000	1
CalStd9=100	1000.0	1068.5	68.5	6.85	.00055	.000	1
CalStd10=10	10000.	11119.	1120.	11.2	.00512	.000	1
CalibStd15=	1000000.	970890.	-29100.	-2.91	.44213	.000	1
CalStd13=10	100000.	110810.	10800.	10.8	.05051	.000	1

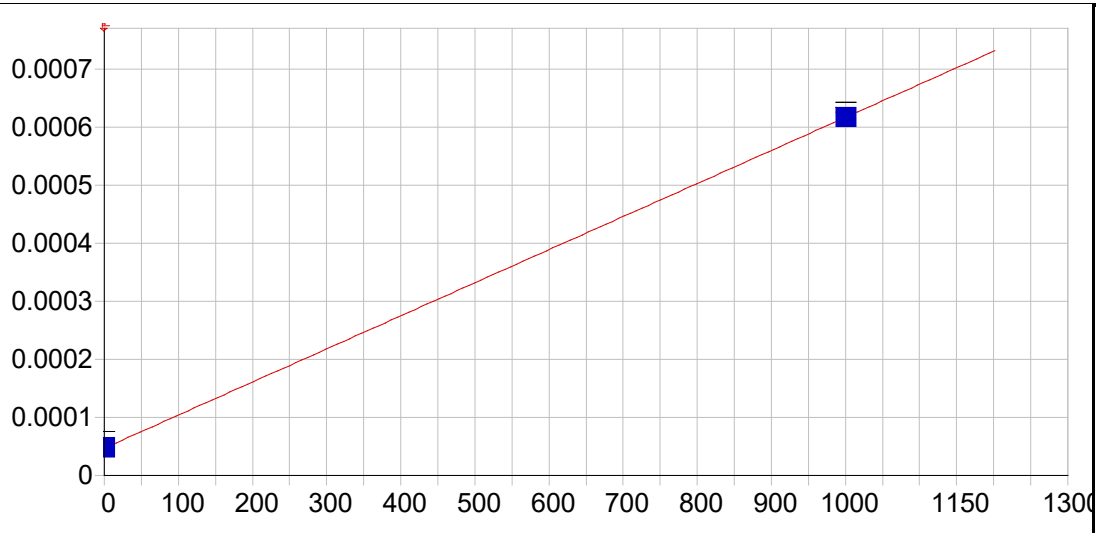


Hg 184.950 {482}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.567355		
Predicted MQL:	1.891182		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00000	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00315	.000	1



Ce 404.076 { 83}

Date of Fit:	05/04/2022 13:08:43	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000047		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	17.718102				
Predicted MQL:	59.060340				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00005	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00062	.000	1

Sample Name: Blank Acquired: 05/03/2022 12:22:10 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3158	Ca3968
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**43.7**	**.000**	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**.001**	**-.000**	**.000**	**.000**	**.000**
Stddev	.000	1.0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.29	2.34	11.5	3.49	870.	18.9	69.6	388.	4.77	540.	2.50	7.44	38.9

Elem	Cd2265	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**-.000**	**.000**	**.000**	**.000**	**-.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	140.	70.7	169.	80.0	5.17	54.1	942.	1.34	46.7	210.	39.6	2960.	.337

Elem	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	47.5	780.	41.6	65.1	139.	213.	81.1	22.1	281.	17.1	111.	46.8	169.

Elem	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**-.000**	**51.8**	**32.3**	**-5.01**
Stddev	.000	.000	.000	.000	2.2	3.6	3.02
%RSD	20.2	299.	12.4	1530.	4.26	11.1	60.3

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**362680.**	**2169900.**	**334670.**
Stddev	3580.	11425.	7008.
%RSD	.98723	.52651	2.0939

Sample Name: CalStd2=0.5 Acquired: 05/03/2022 12:29:50 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Be2348	Be3130	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000
%RSD	149.	2.20	3.65	39.3

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**355660.**	**2155900.**	**329450.**
Stddev	1350.	11907.	2371.
%RSD	.37950	.55230	.71953

Sample Name: CalStd3=1 Acquired: 05/03/2022 12:37:31 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	3.91	8.54	32.3	1.71	20.2	14.2	8.88	15.5	48.2

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**357200.**	**2147100.**	**326520.**
Stddev	1226.	15868.	2849.
%RSD	.34331	.73903	.87258

Sample Name: CalStd4=5 Acquired: 05/03/2022 12:45:12 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	12.0	3.16	3.02	.677	4.76	5.55	.982	1.30	4.66	1.42	8.77	8.58	3.43

Elem	Pb2203	Sb2175
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	10.6	19.4

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**356280.**	**2160400.**	**326990.**
Stddev	1534.	7141.	2091.
%RSD	.43059	.33052	.63951

Sample Name: CalStd5=10 Acquired: 05/03/2022 12:52:53 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**97.6**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	2.1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	9.27	2.12	1.41	3.49	9.46	163.	1.54	1.99	.909	1.26	5.43	.477	.224

Elem	Cr2677	Cu2230	Mn2576	Mo2020	Mo2045	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.40	1.87	.984	3.28	5.19	2.73	32.6	4.70	17.4	9.82	12.0	5.25	1.06

Elem	Zn2062	Zn2138
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	.576	1.01

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**355960.**	**2142200.**	**326890.**
Stddev	1498.	17011.	1672.
%RSD	.42077	.79407	.51158

Sample Name: CalStd6=20 Acquired: 05/03/2022 13:00:34 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ba2335	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000
%RSD	.694	.481	1.96	3.59	2.59	.654

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**354930.**	**2142700.**	**324860.**
Stddev	1281.	11847.	1290.
%RSD	.36097	.55292	.39720

Sample Name: CalStd7=50 Acquired: 05/03/2022 13:08:13 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	As1937	As1972	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316	Sb2068	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.001**	**.000**	**.001**	**.001**	**.000**	**.001**	**.000**	**.000**	**.001**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	6.67	6.04	.686	1.10	.365	.533	.933	.918	.673	.354	.775	2.34	1.16

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**354690.**	**2148400.**	**325370.**
Stddev	1327.	20652.	2874.
%RSD	.37410	.96125	.88327

Sample Name: CalStd8=100 Acquired: 05/03/2022 13:15:39 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3968	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**625.**	**.000**	**.000**	**.000**	**.000**	**.001**	**.005**	**.001**	**.008**	**.009**	**.002**	**.000**
Stddev	.000	2.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.935	.294	.533	1.90	3.01	4.72	.518	2.70	1.35	.465	1.20	.195	.740

Elem	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Mg2802	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.002**	**.000**	**.001**	**.000**	**.000**	**.005**	**.001**	**.001**	**.000**	**.001**	**.001**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.466	.388	.615	.571	1.08	.545	.467	.374	.587	.327	.525	3.05	.593

Elem	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.001**	**.001**	**.004**
Stddev	.000	.000	.000	.000	.000	.000	.000
%RSD	1.75	1.26	10.2	.883	.573	.450	.369

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**353700.**	**2119700.**	**324580.**
Stddev	1133.	9111.	4548.
%RSD	.32036	.42983	1.4012

Sample Name: CalStd9=1000 Acquired: 05/03/2022 13:22:59 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3158	Ca3968	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.003**	**.001**	**.002**	**.001**	**.000**	**.009**	**.046**	**.008**	**.083**	**.001**	**.089**	**.021**	**.005**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.001	.000	.000
%RSD	.391	.699	1.44	.564	.324	.253	.767	.899	.974	1.01	.945	.162	.263

Elem	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576	Mn2593
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.021**	**.002**	**.015**	**.003**	**.004**	**.001**	**.001**	**.003**	**.002**	**.000**	**.053**	**.012**	**.011**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.129	.752	.153	.927	.186	.862	1.06	.858	.544	1.96	.841	.807	.968

Elem	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.006**	**.003**	**.013**	**.012**	**.001**	**.003**	**.001**	**.001**	**.001**	**.000**	**.002**	**.008**	**.015**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.100	.418	.090	.189	.385	.244	.337	.122	.374	1.17	.489	.796	.354

Elem	Zn2138	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.036**	**781.**	**238.**	**116.**
Stddev	.000	8.	6.	3.
%RSD	.101	1.01	2.69	2.75

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**355080.**	**2141200.**	**326860.**
Stddev	479.	18504.	2893.
%RSD	.13483	.86417	.88493

Sample Name: CalStd10=10000 Acquired: 05/03/2022 13:30:07 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	As1972	Ba2335	Ba4934	Ca3158	Ca3968	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.006**	**.016**	**.004**	**.086**	**.429**	**.005**	**.838**	**.197**	**.023**	**.136**	**.034**	**.040**	**.005**
Stddev	.000	.000	.000	.001	.004	.000	.015	.002	.000	.001	.000	.000	.000
%RSD	1.18	.972	.954	.799	.984	.768	1.84	.800	.099	.785	.148	.894	.048

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.009**	**.025**	**.015**	**.001**	**.470**	**.118**	**.101**	**.056**	**.032**	**.118**	**.109**	**.007**	**.013**
Stddev	.000	.000	.000	.000	.001	.000	.001	.000	.000	.001	.001	.000	.000
%RSD	1.23	.803	.910	1.07	.159	.180	1.08	.802	.774	.749	.734	.862	.910

Elem	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.013**	**.007**	**.002**	**.015**	**.078**	**.138**	**7090.**	**2160.**	**1120.**
Stddev	.000	.000	.000	.000	.000	.001	25.	7.	3.
%RSD	.932	.887	1.04	.764	.154	.552	.356	.309	.291

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**350980.**	**2042100.**	**327470.**
Stddev	2811.	3127.	2513.
%RSD	.80078	.15312	.76726

Sample Name: CalStd12=100K Acquired: 05/03/2022 13:37:59 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Cr2055	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.27**	**1.02**	**.071**	**1.24**
Stddev	.01	.02	.000	.00
%RSD	.646	1.73	.295	.301

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**352890.**	**2129200.**	**325570.**
Stddev	976.	6237.	1581.
%RSD	.27656	.29294	.48564

Sample Name: CalStd13=100000 Acquired: 05/03/2022 13:46:24 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	Na5895	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.063**	**.162**	**.056**	**.048**	**.093**	**.258**	**.148**	**.007**	**.001**	**70300.**	**21200.**
Stddev	.001	.001	.000	.000	.001	.002	.000	.000	.000	134.	34.
%RSD	.877	.694	.760	.624	.739	.691	.210	.789	.586	.191	.161

Elem	K_7698
Units	Cts/S
Avg	**11300.**
Stddev	15.
%RSD	.131

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**341040.**	**2077300.**	**323980.**
Stddev	383.	11507.	2514.
%RSD	.11239	.55395	.77598

Sample Name: CalStd14=500000 Acquired: 05/03/2022 13:53:50 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.305**	**.787**	**.264**	**.418**	**1.17**	**.679**	**.034**	**.004**
Stddev	.005	.017	.005	.008	.03	.001	.001	.000
%RSD	1.79	2.13	1.81	1.87	2.12	.117	1.79	1.89

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**311830.**	**311670.**
Stddev	472.	4947.
%RSD	.15135	1.5871

Sample Name: CalibStd15=1000k Acquired: 05/03/2022 14:02:15 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.598**	**1.56**	**.497**	**.753**	**2.15**	**1.29**	**.065**	**.007**	**104000.**
Stddev	.006	.03	.008	.008	.02	.00	.001	.000	323.
%RSD	1.01	1.75	1.67	1.08	1.06	.294	1.03	.703	.310

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**290490.**	**305250.**
Stddev	197.	3552.
%RSD	.06798	1.1635

Sample Name: Ag 1000 Acquired: 05/03/2022 14:10:56 Type: Cal
Method: DOD Calibration Updated 060614(v5020) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382
Units	Cts/S
Avg	**5270.**
Stddev	11.
%RSD	.200

Sample Name: icv Acquired: 05/03/2022 14:26:16 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	As1972	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.6**	**50.4**	**12000.**	**2050.**	**2040.**	**49.8**	**10300.**	**47.6**	**516.**	**202.**	**246.**	**5020.**
Stddev	.3	.6	180.	12.	4.	.4	107.	.2	1.	2.	2.	40.
%RSD	.596	1.24	1.50	.577	.201	.902	1.03	.496	.220	.940	.620	.799
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Se2062	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5170.**	**10400.**	**507.**	**505.**	**512.**	**493.**	**474.**	**510.**	**2070.**	**1970.**	**2010.**	**487.**
Stddev	89.	87.	5.	1.	2.	3.	1.	2.	7.	10.	4.	5.
%RSD	1.71	.834	.932	.206	.322	.671	.164	.361	.354	.500	.174	.970
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Zn2062	Zn2138	Na3302	Na5895	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**556.**	**503.**	**106.**	**98.2**	**99.1**
Stddev	.	1.	1.	.6	.4
%RSD	.059	.201	.704	.618	.411
Check ?	None	None	None	None	None
Value					
Range					

Sample Name: icv Acquired: 05/03/2022 14:26:16 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**346090.**	**2067400.**	**321090.**
Stddev	731.	17946.	2826.
%RSD	.21132	.86803	.88015

Sample Name: ICVLL Acquired: 05/03/2022 14:40:51 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**8.79**	**9.17**	**401.**	**20.7**	**10.7**	**4.06**	**511.**	**5.06**	**10.6**	**9.93**	**11.0**	**307.**	**548.**
Stddev	.53	1.13	2.	4.4	.2	.02	2.	.11	.1	.16	1.1	3.	2.
%RSD	6.07	12.3	.485	21.4	2.19	.386	.367	2.19	1.06	1.59	10.4	.859	.429
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**10.3**	**9.95**	**10.4**	**9.07**	**20.9**	**25.0**	**22.2**	**9.53**	**10.3**	**2.02**	**1.15**	**1.02**
Stddev	.0	.62	.2	1.36	2.6	1.6	1.3	.12	.1	.02	.03	.03
%RSD	.432	6.22	1.96	15.0	12.3	6.34	5.67	1.30	1.02	.781	2.42	2.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**358640.**	**2159200.**	**333450.**
Stddev	1359.	9331.	2213.
%RSD	.37894	.43213	.66376

Sample Name: icb Acquired: 05/03/2022 14:56:07 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.209**	**.150**	**-.109**	**-.569**	**.197**	**.002**	**.083**	**-.064**	**-.073**	**.016**	**.607**	**.617**	**.037**
Stddev	.312	.414	.494	3.44	.166	.005	.039	.176	.171	.210	.576	.414	.069
%RSD	150.	277.	453.	606.	84.3	247.	47.1	274.	234.	1300.	94.9	67.1	186.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**-.066**	**-.025**	**-.123**	**-.331**	**-2.65**	**.540**	**-.737**	**-.169**	**-.027**	**.005**	**.004**	**-.083**
Stddev	.021	.304	.360	.874	2.04	1.16	1.12	.267	.075	.007	.035	.023
%RSD	31.8	1190.	292.	264.	76.9	215.	152.	158.	272.	149.	825.	27.4
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**362960.**	**2175700.**	**334280.**
Stddev	2329.	25560.	2110.
%RSD	.64153	1.1748	.63134

Sample Name: MRL/LLOQ Acquired: 05/03/2022 15:03:49 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**7.88**	**7.79**	**407.**	**20.2**	**10.8**	**4.12**	**529.**	**5.14**	**10.7**	**9.98**	**12.8**	**346.**	**558.**
Stddev	.41	.84	3.	1.8	.1	.01	1.	.17	.2	.25	.7	3.	1.
%RSD	5.27	10.8	.796	9.03	1.31	.248	.221	3.31	2.18	2.49	5.61	.900	.267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**10.5**	**10.1**	**10.2**	**9.21**	**17.9**	**22.5**	**19.1**	**9.84**	**10.2**	**2.00**	**1.02**	**.930**
Stddev	.0	.4	.3	1.10	1.9	.9	1.2	.13	.2	.01	.05	.054
%RSD	.364	3.62	2.79	11.9	10.7	3.79	6.33	1.31	1.65	.394	4.70	5.80
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**354980.**	**2113900.**	**327460.**
Stddev	1974.	6113.	1432.
%RSD	.55614	.28919	.43730

Sample Name: ICSA Acquired: 05/03/2022 15:11:26 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.000**	**.023**	**511000.**	**494000.**	**-.784**	**.022**	**-.140**	**487000.**	**-.000**	**.376**	**-7.72**
Stddev	.310	.726	2670.	4910.	8.49	.217	.020	3400.	.330	.255	.44
%RSD	194000.	3220.	.522	.994	1080.	999.	14.2	.699	115000.	67.9	5.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Cu2230	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2.31**	**538000.**	**452000.**	**506000.**	**522000.**	**-.877**	**-1.91**	**4.63**	**.000**	**.000**	**-.008**
Stddev	.64	3630.	6160.	675.	2670.	.137	.17	.38	2.35	1.25	3.36
%RSD	27.6	.674	1.36	.133	.511	15.6	8.97	8.24	1130000.	257000.	42500.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**-.016**	**9410.**	**4.83**	**-.316**	**-1.25**	**-.308**
Stddev	2.02	71.	.52	.020	.02	.035
%RSD	12700.	.759	10.7	6.22	1.45	11.5
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA Acquired: 05/03/2022 15:11:26 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**320540.**	**1990500.**	**316800.**
Stddev	492.	16138.	1094.
%RSD	.15353	.81075	.34543

Sample Name: ICSAB Acquired: 05/03/2022 15:19:35 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al3092	Al3961	As1937	Ba2335	Be2348	Ca3158	Cd2288	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**453.**	**516000.**	**502000.**	**504.**	**528.**	**502.**	**495000.**	**510.**	**496.**	**482.**	**538.**
Stddev	1.	7620.	9920.	10.	3.	8.	7020.	2.	2.	2.	2.
%RSD	.225	1.48	1.98	2.01	.644	1.56	1.42	.400	.401	.315	.293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**553000.**	**458000.**	**510000.**	**527000.**	**499.**	**493.**	**491.**	**443.**	**510.**	**507.**	**526.**
Stddev	9350.	8510.	1700.	7690.	2.	3.	2.	2.	4.	7.	2.
%RSD	1.69	1.86	.334	1.46	.325	.575	.421	.482	.820	1.46	.411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**478.**	**493.**	**508.**	**52.5**	**49.9**	**49.7**	**51.1**
Stddev	2.	3.	2.	.6	.0	.0	.1
%RSD	.391	.559	.449	1.18	.067	.089	.189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB Acquired: 05/03/2022 15:19:35 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**321230.**	**1970800.**	**316790.**
Stddev	809.	6719.	4520.
%RSD	.25186	.34092	1.4269

Sample Name: ICV LL ag Acquired: 05/03/2022 15:34:55 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**8.04**	**8.79**	**3.50**	**1.89**	**.209**	**.007**	**5.80**	**.092**	**-.002**	**.063**	**1.83**	**39.6**	**3.01**
Stddev	.58	.27	.44	1.84	.129	.008	.04	.069	.073	.170	.60	6.2	.03
%RSD	7.19	3.09	12.6	97.2	61.9	120.	.716	75.1	4810.	273.	32.9	15.5	1.01

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.127**	**.319**	**-.128**	**-.144**	**-1.68**	**1.56**	**.346**	**-.140**	**.275**	**.024**	**-.016**	**-.033**
Stddev	.049	.230	.356	1.12	1.79	4.38	1.21	.220	.096	.012	.021	.029
%RSD	38.6	72.1	278.	774.	107.	281.	348.	157.	35.0	50.0	128.	88.0

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**357290.**	**2150100.**	**328290.**
Stddev	552.	12486.	1094.
%RSD	.15445	.58072	.33331

Sample Name: ccv1 Acquired: 05/03/2022 20:03:24 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al3092	As1972	Ba4934	Be2348	Ca3158	Cd2288	Co2286	Co2388	Cr2055	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**506.**	**4710.**	**4680.**	**4640.**	**467.**	**4880.**	**474.**	**4750.**	**4820.**	**4570.**	**4680.**	**4860.**	**4780.**
Stddev	2.	99.	22.	75.	8.	75.	1.	7.	37.	8.	10.	41.	80.
%RSD	.379	2.11	.469	1.62	1.70	1.54	.149	.155	.762	.168	.216	.846	1.68
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2924	Zn2062	Na3302	Na5895	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**4770.**	**4640.**	**4970.**	**4640.**	**4650.**	**4510.**	**4700.**	**4920.**	**4710.**	**5280.**	**95.4**	**95.0**	**95.7**
Stddev	76.	74.	7.	8.	3.	13.	14.	10.	32.	13.	2.2	.3	.2
%RSD	1.59	1.59	.138	.173	.059	.293	.306	.204	.671	.250	2.31	.321	.244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**349370.**	**2045700.**	**328460.**
Stddev	352.	15599.	5533.
%RSD	.10061	.76256	1.6846

Sample Name: ccv2 Acquired: 05/03/2022 20:10:23 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.0**	**475.**	**465.**	**505.**	**47.5**	**479.**	**45.3**	**490.**	**485.**	**490.**	**501.**	**491.**	**529.**
Stddev	.2	1.	4.	1.	.4	5.	.3	1.	4.	1.	5.	6.	4.
%RSD	.520	.304	.830	.279	.741	1.02	.753	.176	.898	.174	.960	1.27	.834
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**494.**	**469.**	**495.**	**498.**	**467.**	**480.**	**492.**	**526.**	**467.**	**536.**	**463.**	**9.63**	**9.56**
Stddev	4.	1.	1.	7.	1.	2.	2.	2.	4.	1.	1.	.05	.04
%RSD	.801	.143	.103	1.39	.171	.333	.414	.376	.752	.206	.187	.520	.386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7698
Units	mg/L
Avg	**9.72**
Stddev	.04
%RSD	.422
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv2 Acquired: 05/03/2022 20:10:23 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**358630.**	**2134400.**	**331250.**
Stddev	672.	17206.	2284.
%RSD	.18747	.80612	.68960

Sample Name: ccb Acquired: 05/03/2022 20:17:21 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.948**	**-.358**	**-.035**	**1.59**	**-.262**	**.031**	**1.56**	**.093**	**.074**	**-.056**	**.939**	**.943**	**.587**
Stddev	.598	.480	.398	3.40	.159	.008	.33	.145	.153	.398	.868	.325	.015
%RSD	63.1	134.	1140.	214.	60.8	26.2	21.0	156.	206.	713.	92.4	34.4	2.57
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.025**	**1.27**	**.181**	**1.21**	**-2.35**	**.393**	**-.156**	**-.052**	**.116**	**.036**	**.050**	**-.019**
Stddev	.060	.24	.516	.84	2.13	2.07	1.07	.313	.037	.005	.025	.075
%RSD	238.	18.6	285.	69.4	90.9	528.	687.	597.	32.1	12.9	49.8	398.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**366170.**	**2168800.**	**338130.**
Stddev	196.	10956.	3193.
%RSD	.05357	.50515	.94439

Sample Name: lcsw95267 Acquired: 05/03/2022 21:35:19 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**19.3**	**38.1**	**752.**	**799.**	**825.**	**19.7**	**196000.**	**17.7**	**198.**	**81.3**	**97.2**
Stddev	.6	.4	2.	3.	1.	.1	1290.	.2	1.	.6	.7
%RSD	3.03	.964	.209	.430	.071	.693	.658	.872	.258	.738	.701

Elem	Fe2343	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**403.**	**95400.**	**201.**	**2050.**	**201.**	**188.**	**200.**	**821.**	**820.**	**193.**	**222.**
Stddev	3.	881.	1.	7.	1.	1.	1.	4.	1.	2.	1.
%RSD	.855	.924	.578	.351	.316	.681	.616	.480	.113	.874	.322

Elem	Zn2138	Na3302	Na5895	K_7698
Units	ug/L	mg/L	mg/L	mg/L
Avg	**197.**	**98.8**	**91.5**	**96.2**
Stddev	.	1.4	.2	.2
%RSD	.121	1.37	.270	.231

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**338540.**	**2031200.**	**325960.**
Stddev	438.	12311.	2484.
%RSD	.12933	.60608	.76189

Sample Name: ccv1 Acquired: 05/03/2022 21:42:32 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al3092	As1972	Ba4934	Be2348	Ca3158	Cd2288	Co2286	Co2388	Cr2055	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**508.**	**4630.**	**4640.**	**4610.**	**464.**	**4860.**	**476.**	**4750.**	**4830.**	**4560.**	**4650.**	**4870.**	**4750.**
Stddev	1.	55.	47.	39.	5.	48.	3.	37.	24.	35.	44.	26.	37.
%RSD	.224	1.18	1.02	.848	1.17	.979	.677	.776	.495	.770	.941	.526	.789
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2924	Zn2062	Na3302	Na5895	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**4730.**	**4620.**	**4980.**	**4610.**	**4630.**	**4490.**	**4710.**	**4930.**	**4700.**	**5300.**	**94.9**	**93.1**	**96.3**
Stddev	47.	42.	35.	39.	37.	44.	33.	33.	20.	29.	.6	.3	.2
%RSD	.984	.913	.712	.854	.797	.974	.703	.668	.433	.550	.615	.309	.171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**351380.**	**2046500.**	**331880.**
Stddev	2221.	12112.	3166.
%RSD	.63202	.59182	.95381

Sample Name: ccv2 Acquired: 05/03/2022 21:49:33 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.1**	**479.**	**465.**	**506.**	**47.5**	**471.**	**44.9**	**490.**	**484.**	**486.**	**500.**	**492.**	**532.**
Stddev	.0	1.	2.	1.	.0	2.	.3	1.	2.	2.	1.	5.	1.
%RSD	.016	.176	.375	.293	.087	.428	.718	.138	.443	.428	.147	1.08	.112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**494.**	**469.**	**495.**	**498.**	**467.**	**476.**	**491.**	**535.**	**463.**	**544.**	**462.**	**9.66**	**9.65**
Stddev	.	.	1.	3.	5.	2.	4.	6.	.	1.	1.	.12	.08
%RSD	.044	.047	.196	.514	1.03	.430	.754	1.16	.051	.135	.178	1.20	.849
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7698
Units	mg/L
Avg	**9.93**
Stddev	.13
%RSD	1.27
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv2 Acquired: 05/03/2022 21:49:33 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**358110.**	**2128800.**	**329020.**
Stddev	1121.	617.	4892.
%RSD	.31294	.02898	1.4867

Sample Name: ccb Acquired: 05/03/2022 21:56:31 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1.20**	**-.691**	**-.128**	**-1.50**	**.243**	**.035**	**1.63**	**.011**	**-.008**	**-.264**	**.688**	**.702**	**.632**
Stddev	.21	.687	.431	3.13	.205	.004	.16	.110	.166	.353	.630	.762	.039
%RSD	17.5	99.5	338.	208.	84.4	12.9	9.82	1020.	2080.	134.	91.5	108.	6.17
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**-.010**	**1.07**	**.178**	**-.706**	**-2.12**	**.144**	**-.435**	**-.090**	**.141**	**.181**	**.224**	**.119**
Stddev	.043	.18	.161	1.92	1.85	2.94	1.33	.303	.037	.011	.034	.074
%RSD	446.	16.5	90.4	272.	87.6	2050.	306.	338.	26.1	6.31	15.4	61.9
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**366140.**	**2181700.**	**335790.**
Stddev	3681.	13478.	1767.
%RSD	1.0053	.61779	.52621

Sample Name: mbw95267 Acquired: 05/03/2022 22:04:12 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1.17**	**-.716**	**2.23**	**-.230**	**-.059**	**.037**	**3.69**	**-.019**	**-.050**	**-.039**	**2.21**	**3.44**	**.616**
Stddev	.21	.643	.29	3.30	.180	.009	.10	.182	.137	.337	.32	.91	.058
%RSD	18.0	89.8	13.0	1430.	306.	24.7	2.60	981.	277.	853.	14.3	26.5	9.39

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.020**	**1.06**	**-.169**	**-.606**	**-1.88**	**.300**	**.205**	**-.018**	**.376**	**.155**	**.175**	**.051**
Stddev	.035	.11	.374	.518	.73	3.18	2.19	.073	.100	.016	.020	.033
%RSD	176.	10.5	221.	85.5	38.6	1060.	1070.	405.	26.6	10.6	11.6	64.7

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**360520.**	**2145500.**	**332970.**
Stddev	1887.	12167.	2733.
%RSD	.52347	.56712	.82093

Sample Name: 1137439 Acquired: 05/03/2022 22:11:53 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1.33**	**18.8**	**329.**	**3.52**	**34.9**	**.163**	**67800.**	**-.098**	**.674**	**3.36**	**5.30**	**684.**
Stddev	.19	.3	4.	3.77	.4	.009	719.	.098	.165	.31	.07	2.
%RSD	14.0	1.52	1.07	107.	1.02	5.72	1.06	99.4	24.4	9.21	1.41	.297

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**678.**	**32800.**	**81.2**	**1.40**	**.319**	**3.13**	**-.092**	**1.89**	**.065**	**.888**	**51.2**	**27.1**
Stddev	9.	423.	.4	.25	.179	.61	3.06	2.35	1.63	.170	.2	.3
%RSD	1.27	1.29	.529	17.8	56.2	19.4	3340.	124.	2510.	19.1	.327	1.00

Elem	K_7664	K_7698
Units	mg/L	mg/L
Avg	**1.81**	**1.77**
Stddev	.06	.03
%RSD	3.17	1.87

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**352060.**	**2090600.**	**333290.**
Stddev	2234.	6722.	6105.
%RSD	.63442	.32152	1.8317

Sample Name: I1137439 Acquired: 05/03/2022 22:19:41 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1.24**	**7.36**	**51.7**	**-.600**	**6.08**	**.059**	**16900.**	**-.019**	**.182**	**.620**	**2.01**	**145.**
Stddev	.28	.67	4.5	2.89	.41	.017	901.	.098	.181	.300	.72	7.
%RSD	22.7	9.15	8.60	482.	6.80	29.6	5.32	521.	99.4	48.4	35.7	4.84

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**8230.**	**17.7**	**.317**	**-.196**	**.190**	**-.850**	**-2.27**	**.815**	**-.029**	**9.19**	**6.76**	**.496**
Stddev	459.	.9	.318	.307	.402	.708	1.31	1.32	.346	.69	.31	.030
%RSD	5.57	4.88	100.	157.	211.	83.3	57.6	162.	1190.	7.47	4.58	6.00

Elem	K_7698
Units	mg/L
Avg	**.416**
Stddev	.033
%RSD	7.97

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**360280.**	**2127900.**	**337000.**
Stddev	1198.	21672.	3806.
%RSD	.33260	1.0185	1.1292

Sample Name: dup1137439 Acquired: 05/03/2022 22:27:42 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1.13**	**17.9**	**351.**	**3.11**	**35.7**	**.189**	**68500.**	**.074**	**.874**	**3.53**	**6.25**	**700.**
Stddev	.53	.3	2.	2.91	.2	.017	845.	.110	.226	.40	.45	5.
%RSD	46.3	1.41	.635	93.4	.532	9.15	1.23	149.	25.8	11.4	7.13	.662

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**699.**	**33400.**	**82.1**	**.991**	**.716**	**1.97**	**-.514**	**2.44**	**-.725**	**.742**	**52.6**	**27.1**
Stddev	9.	370.	.6	.272	.300	.43	.830	1.83	.893	.215	.3	.2
%RSD	1.29	1.11	.769	27.5	41.8	21.8	161.	74.9	123.	28.9	.574	.813

Elem	K_7664	K_7698
Units	mg/L	mg/L
Avg	**1.76**	**1.72**
Stddev	.04	.03
%RSD	2.35	1.78

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**350540.**	**2101700.**	**329770.**
Stddev	1521.	17765.	4534.
%RSD	.43383	.84531	1.3749

Sample Name: msw1137439 Acquired: 05/03/2022 22:35:30 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**19.9**	**38.4**	**1690.**	**2110.**	**826.**	**884.**	**20.7**	**267000.**	**18.5**	**204.**	**87.0**
Stddev	.2	.4	4.	31.	5.	2.	.1	3840.	.2	.	.5
%RSD	1.10	1.16	.262	1.46	.600	.171	.594	1.44	1.07	.148	.540

Elem	Cu2230	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**107.**	**1480.**	**1480.**	**132000.**	**289.**	**2110.**	**205.**	**194.**	**209.**	**845.**	**824.**
Stddev	1.	11.	18.	1850.	1.	4.	.	1.	2.	4.	4.
%RSD	1.39	.744	1.22	1.40	.493	.182	.182	.688	1.07	.516	.498

Elem	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7698
Units	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**201.**	**280.**	**258.**	**130.**	**124.**	**103.**
Stddev	1.	1.	.	2.	.	.
%RSD	.481	.306	.078	1.23	.241	.214

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**333590.**	**2006700.**	**327880.**
Stddev	501.	11328.	3811.
%RSD	.15008	.56450	1.1622

Sample Name: msdw1137439 Acquired: 05/03/2022 22:42:33 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**19.3**	**38.6**	**3130.**	**814.**	**886.**	**20.5**	**267000.**	**18.6**	**203.**	**86.5**	**109.**
Stddev	.0	.6	29.	4.	2.	.2	2190.	.1	.	1.4	.
%RSD	.099	1.63	.929	.530	.211	1.17	.822	.608	.159	1.57	.354

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2100.**	**2130.**	**133000.**	**291.**	**2110.**	**205.**	**193.**	**207.**	**839.**	**817.**	**200.**
Stddev	24.	24.	1380.	3.	3.	.	1.	1.	3.	2.	2.
%RSD	1.12	1.11	1.04	.999	.123	.196	.716	.318	.353	.281	.880

Elem	Zn2062	Zn2138	Na3302	Na5895	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**284.**	**262.**	**130.**	**122.**	**101.**
Stddev	1.	.	1.	.	.
%RSD	.182	.081	1.14	.259	.250

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**334140.**	**2019900.**	**322150.**
Stddev	657.	19218.	2488.
%RSD	.19673	.95140	.77225

Sample Name: pdsw1137439 Acquired: 05/03/2022 22:49:36 Type: Unk
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	As1972	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**79.6**	**91.4**	**4420.**	**3630.**	**3620.**	**86.9**	**428000.**	**79.6**	**873.**	**353.**	**432.**
Stddev	.5	.8	157.	11.	6.	.4	12700.	.3	2.	2.	3.
%RSD	.608	.836	3.55	.306	.169	.442	2.97	.423	.214	.547	.644

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2169	Pb2203	Sb2068	Se2062	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2320.**	**2420.**	**216000.**	**946.**	**1600.**	**866.**	**930.**	**820.**	**875.**	**3520.**	**3440.**
Stddev	9.	67.	6300.	3.	3.	3.	9.	3.	7.	25.	5.
%RSD	.403	2.75	2.92	.344	.182	.289	.928	.350	.785	.696	.156

Elem	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7698
Units	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**856.**	**996.**	**928.**	**214.**	**200.**	**186.**
Stddev	4.	1.	2.	5.	3.	3.
%RSD	.443	.112	.226	2.13	1.64	1.64

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**326120.**	**1985200.**	**322960.**
Stddev	411.	9883.	3648.
%RSD	.12612	.49783	1.1295

Sample Name: ccv1 Acquired: 05/03/2022 23:19:51 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al3092	As1972	Ba4934	Be2348	Ca3158	Cd2288	Co2286	Co2388	Cr2055	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**504.**	**4860.**	**4760.**	**4630.**	**470.**	**4880.**	**470.**	**4780.**	**4750.**	**4570.**	**4750.**	**4830.**	**4910.**
Stddev	1.	123.	13.	59.	6.	81.	1.	13.	15.	15.	9.	25.	153.
%RSD	.137	2.52	.268	1.28	1.37	1.65	.299	.263	.316	.332	.198	.511	3.12
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2924	Zn2062	Na3302	Na5895	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**4890.**	**4740.**	**4920.**	**4720.**	**4650.**	**4570.**	**4740.**	**4860.**	**4700.**	**5210.**	**96.2**	**91.7**	**94.5**
Stddev	74.	71.	16.	12.	18.	12.	31.	22.	14.	27.	2.0	.8	.9
%RSD	1.51	1.49	.334	.259	.392	.262	.661	.449	.286	.525	2.13	.866	.942
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**349720.**	**2062900.**	**323250.**
Stddev	968.	6502.	5635.
%RSD	.27682	.31519	1.7431

Sample Name: ccv2 Acquired: 05/03/2022 23:26:52 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.4**	**482.**	**465.**	**502.**	**47.5**	**476.**	**45.8**	**490.**	**483.**	**493.**	**502.**	**491.**	**527.**
Stddev	.8	3.	3.	3.	.5	6.	.1	2.	5.	3.	5.	6.	6.
%RSD	1.68	.596	.714	.544	.980	1.26	.181	.371	.995	.679	1.06	1.17	1.06
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**493.**	**468.**	**492.**	**496.**	**465.**	**483.**	**493.**	**521.**	**468.**	**529.**	**467.**	**9.74**	**9.72**
Stddev	5.	2.	3.	3.	2.	4.	1.	2.	4.	4.	2.	.03	.03
%RSD	1.02	.356	.559	.664	.513	.854	.184	.351	.819	.735	.352	.307	.335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7698
Units	mg/L
Avg	**9.92**
Stddev	.05
%RSD	.509
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv2 Acquired: 05/03/2022 23:26:52 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**361880.**	**2146700.**	**336890.**
Stddev	1035.	21867.	3146.
%RSD	.28612	1.0186	.93376

Sample Name: ccb Acquired: 05/03/2022 23:33:51 Type: QC
Method: DOD Calibration Updated 060614(v5020) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.286**	**-.985**	**-.099**	**1.45**	**.077**	**.001**	**2.01**	**.092**	**.028**	**-.025**	**.595**	**-.600**	**.736**
Stddev	.491	.393	.082	3.60	.111	.009	.12	.081	.178	.380	.780	.722	.015
%RSD	172.	39.9	82.7	248.	145.	1040.	5.82	88.1	640.	1530.	131.	120.	2.05
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.071**	**1.21**	**.214**	**-.024**	**-1.14**	**2.22**	**-.938**	**.010**	**1.52**	**.125**	**.102**	**.057**
Stddev	.020	.52	.204	.787	.96	4.33	.917	.180	.09	.021	.031	.079
%RSD	28.3	42.5	95.2	3300.	83.7	195.	97.8	1770.	5.99	16.8	30.6	138.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**371830.**	**2169100.**	**325500.**
Stddev	1953.	16432.	3382.
%RSD	.52521	.75753	1.0389

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Ag 328.068 {103}	05/10/2022 09:24:21	05/09/2022 08:31:18	Linear	1/Conc	0.000009	0.000003	0.000000	1.000000	0.999312	0.000000	0.498998	1.663328
Ag 338.289 {100}	05/10/2022 09:24:21	05/09/2022 09:24:19	Linear	1/Var	53.689454	4.912444	0.000000	1.000000	0.999986	7.012702	1.027826	3.426088
Al 167.079 {501}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000005	0.000002	0.000000	1.000000	0.999976	0.000000	0.608026	2.026754
Al 309.271 {109}	05/10/2022 09:24:21	05/09/2022 09:16:56	Linear	1/Conc	0.000278	0.000001	0.000000	1.000000	0.999925	0.000001	21.814928	72.716427
Al 396.152 { 85}	05/10/2022 09:24:21	05/09/2022 09:16:56	Linear	1/Var	0.000023	0.000001	0.000000	1.000000	0.999958	0.000064	13.209600	44.032000
As 193.759 {474}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000010	0.000001	0.000000	1.000000	0.999788	0.000000	4.202968	14.009892
As 197.262 {471}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000004	0.000000	0.000000	1.000000	0.999950	0.000000	5.989099	19.963662
Ba 233.527 {445}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000002	0.000007	0.000000	1.000000	0.999766	0.000001	0.315022	1.050075
Ba 455.403 { 74}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	0.000249	0.000023	0.000000	1.000000	0.999880	0.000001	0.564814	1.882714
Ba 493.409 { 68}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Var	0.015858	0.000040	0.000000	1.000000	0.999772	0.000729	1.366082	4.553608
Be 234.861 {144}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	-0.000006	0.000007	0.000000	1.000000	0.999533	0.000000	0.405033	1.350110
Be 313.042 {108}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000018	0.000069	0.000000	1.000000	0.999935	0.000001	0.016140	0.053800
Be 313.107 {108}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000007	0.000028	0.000000	1.000000	0.999846	0.000000	0.315048	1.050161
Ca 184.006 {483}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Conc	-0.000039	0.000002	0.000000	1.000000	0.999980	0.000005	1.023422	3.411406
Ca 315.887 {107}	05/10/2022 09:24:21	05/09/2022 09:16:56	Linear	1/Var	0.000091	0.000001	0.000000	1.000000	0.999933	0.000066	8.561413	28.538044
Ca 317.933 {106}	05/10/2022 09:24:21	05/09/2022 09:16:56	Linear	1/Conc	0.002474	0.000001	0.000000	1.000000	0.999656	0.000056	4.207076	14.023585
Ca 393.366 { 86}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	-0.000015	0.000164	0.000000	1.000000	0.999663	0.000046	0.081542	0.271808
Ca 396.847 { 85}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000001	0.000071	0.000000	1.000000	0.999922	0.000042	0.171350	0.571167
Cd 226.502 {449}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	-0.000002	0.000008	0.000000	1.000000	0.704232	0.000007	0.446740	1.489134
Cd 228.802 {448}	05/10/2022 09:24:21	05/09/2022 08:38:14	Linear	1/Conc	0.000001	0.000003	0.000000	1.000000	0.999910	0.000000	0.559670	1.865565
Co 228.616 {447}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000010	0.000016	0.000000	1.000000	0.999880	0.000001	0.265048	0.883493
Co 238.892 {141}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	0.000001	0.000002	0.000000	1.000000	0.999956	0.000001	0.397661	1.325536
Cr 205.560 {464}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Var	-0.000003	0.000012	0.000000	1.000000	0.999777	0.000009	0.235704	0.785681
Cr 267.716 {126}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	-0.000003	0.000003	0.000000	1.000000	0.999990	0.000000	0.429477	1.431589
Cu 223.008 {451}	05/10/2022 09:24:21	05/09/2022 08:45:26	Linear	1/Conc	0.000005	0.000003	0.000000	1.000000	0.999785	0.000001	1.233140	4.110467
Cu 324.754 {104}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Conc	0.000186	0.000002	0.000000	1.000000	0.999530	0.000010	4.045637	13.485456
Cu 327.396 {103}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Conc	0.000054	0.000002	0.000000	1.000000	0.999409	0.000001	7.806843	26.022811
Fe 234.349 {144}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Var	0.000011	0.000000	0.000000	1.000000	0.999679	0.000005	0.891672	2.972240
Fe 239.562 {140}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Conc	0.000008	0.000001	0.000000	1.000000	0.999417	0.000047	5.399645	17.998815
Fe 259.940 {129}	05/10/2022 09:24:21	05/09/2022 09:16:57	Curvili	1/Var	0.000003	0.000002	0.000000	1.000000	0.999797	0.000032	2.618579	8.728598
Mg 202.582 {466}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Var	-0.000007	0.000001	0.000000	1.000000	0.998925	0.000055	3.527247	11.757490
Mg 279.079 {121}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999945	0.000001	38.747087	129.15695
Mg 280.270 {120}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000053	0.000039	0.000000	1.000000	0.999420	0.000063	0.017302	0.057673
Mn 257.610 {131}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	-0.000002	0.000009	0.000000	1.000000	0.999873	0.000001	0.061677	0.205591
Mn 259.373 {130}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Conc	0.000002	0.000010	0.000000	1.000000	0.999724	0.000107	0.582115	1.940382
Mo 202.030 {466}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000004	0.000004	0.000000	1.000000	0.999892	0.000001	0.510949	1.703163
Mo 204.598 {464}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000001	0.000003	0.000000	1.000000	0.999882	0.000000	1.025727	3.419090
Ni 221.647 {452}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	-0.000006	0.000011	0.000000	1.000000	0.999866	0.000009	0.425359	1.417864
Ni 231.604 {445}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	-0.000002	0.000010	0.000000	1.000000	0.999837	0.000001	0.458507	1.528355
Pb 216.999 {455}	05/10/2022 09:24:21	05/09/2022 08:53:24	Curvili	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999970	0.000000	7.299745	24.332482
Pb 220.353 {153}	05/10/2022 09:24:21	05/09/2022 08:53:24	Linear	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999818	0.000001	1.916183	6.387276
Pb 220.353 {453}	05/10/2022 09:24:21	05/09/2022 08:38:15	Linear	1/Conc	0.000017	0.000003	0.000000	1.000000	0.999598	0.000000	1.747476	5.824919
Sb 206.833 {463}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Var	-0.000001	0.000001	0.000000	1.000000	0.999835	0.000008	2.768049	9.226829
Sb 217.581 {455}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000012	0.000001	0.000000	1.000000	0.999908	0.000000	3.302099	11.006997

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 309.271 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 234.861 {144}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 313.107 {108}	OK.	1.000000	0.000000	1	0
	Ca 184.006 {483}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {448}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0

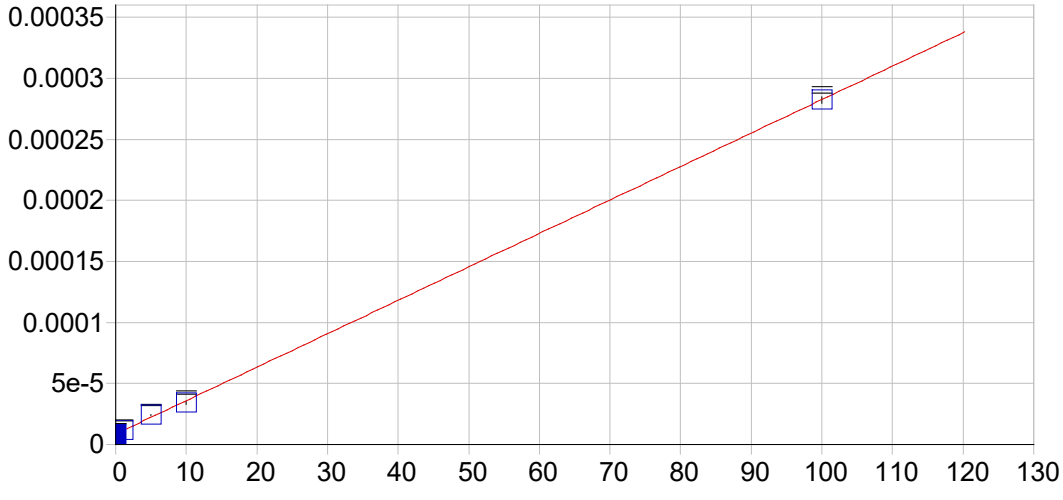
	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
	Se 196.090 {472}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000001	0.000001	0.000000	1.000000	0.999897	0.000000	3.546972	11.823242
	Se 206.279 {463}	05/10/2022 09:24:21	05/09/2022 08:45:27	Curvili	1/Conc	0.000001	0.000000	-0.000000	1.000000	0.999957	0.000000	17.995433	59.984775
	Tl 190.856 {476}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000004	0.000002	0.000000	1.000000	0.999700	0.000001	1.780647	5.935491
	Tl 190.856 {477}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Var	0.000003	0.000001	0.000000	1.000000	0.999500	0.000006	2.505970	8.353235
	V 290.882 {116}	05/10/2022 09:24:21	05/09/2022 08:45:27	Curvili	1/Var	0.000005	0.000001	-0.000000	1.000000	0.999999	0.000001	8.073617	26.912058
	V 292.402 {115}	05/10/2022 09:24:21	05/09/2022 08:45:27	Linear	1/Conc	0.000015	0.000006	0.000000	1.000000	0.999996	0.000000	0.374660	1.248866
	Zn 206.200 {463}	05/10/2022 09:24:21	05/09/2022 08:53:25	Linear	1/Var	0.000006	0.000021	0.000000	1.000000	0.999265	0.000036	0.152862	0.509541
	Zn 213.856 {457}	05/10/2022 09:24:21	05/09/2022 08:38:16	Linear	1/Conc	0.000001	0.000031	0.000000	1.000000	0.999979	0.000001	0.116684	0.388947
	Y 224.306 {450}*	05/10/2022 09:24:21	05/09/2022 07:40:15	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 324.228 {104}*	05/10/2022 09:24:21	05/09/2022 07:40:15	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 371.030 { 91}*	05/10/2022 09:24:21	05/09/2022 07:40:15	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Na 330.237 {102}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Conc	0.000003	0.000006	0.000000	1.000000	0.999997	0.000000	1.938494	6.461647
	Na 588.995 { 57}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Conc	3014.6983	1026.0369	0.000000	1.000000	0.999751	10.782376	0.011862	0.039538
	Na 589.592 { 57}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Conc	48.399591	527.45730	0.000000	1.000000	0.999977	1.689053	0.014526	0.048419
	Si 212.412 {458}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Var	0.000017	0.000002	0.000000	1.000000	0.999170	0.000081	1.445412	4.818039
	Si 251.611 {134}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Conc	0.000006	0.000001	0.000000	1.000000	0.999809	0.000005	10.348099	34.493665
	Ti 323.452 {104}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000275	0.000005	0.000000	1.000000	0.999609	0.000001	2.281533	7.605111
	Sr 407.771 { 83}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000128	0.000064	0.000000	1.000000	0.999897	0.000004	0.242595	0.808650
	Sr 421.552 { 80}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000075	0.000083	0.000000	1.000000	0.999949	0.000003	0.197430	0.658101
	Sn 189.989 {477}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Var	0.000009	0.000004	0.000000	1.000000	0.999704	0.000011	0.633440	2.111468
	Sn 189.989 {478}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Var	0.000001	0.000001	0.000000	1.000000	0.999695	0.000005	1.604221	5.347403
	B 249.678 {135}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000012	0.000001	0.000000	1.000000	0.999995	0.000000	1.100258	3.667527
	B 249.773 {135}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	0.000008	0.000002	0.000000	1.000000	0.999999	0.000000	0.609186	2.030621
	Li 610.353 { 55}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	-0.001673	0.000001	0.000000	1.000000	0.887876	0.000008	49.685459	165.61819
	Li 670.776 { 50}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	-13.747537	2.889610	0.000000	1.000000	0.999871	0.630661	2.402288	8.007626
	K 766.490 { 44}	05/10/2022 09:24:21	05/09/2022 09:00:56	Linear	1/Conc	-25.225853	194.66872	0.000000	1.000000	0.999989	0.438948	0.040705	0.135685
	K 769.896 { 44}	05/10/2022 09:24:21	05/09/2022 09:16:57	Linear	1/Var	4.004528	75.355169	0.000000	1.000000	0.999742	37.298057	0.085581	0.285271
	P 177.495 {489}	05/10/2022 09:24:21	05/09/2022 08:45:28	Linear	1/Conc	-0.000006	0.000001	0.000000	1.000000	0.999961	0.000001	2.251268	7.504227
	S 182.034 {485}	05/10/2022 09:24:21	05/09/2022 09:16:57	Curvili	1/Conc	0.000019	0.000000	0.000000	1.000000	0.999998	0.000001	3.717848	12.392827
	Hg 184.950 {482}	05/10/2022 09:24:21	05/09/2022 08:38:16	Linear	1/Conc	0.000008	0.000003	0.000000	1.000000	1.000000	0.000000	0.592781	1.975937
	Ce 404.076 { 83}	05/10/2022 09:24:21	05/09/2022 08:38:17	Linear	1/Conc	0.000064	0.000000	0.000000	1.000000	1.000000	0.000000	33.453712	111.51237

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	Warnin	1.000000	0.000000	1	0
	Na 330.237 {102}	OK.	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 212.412 {458}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {478}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 610.353 { 55}	OK.	1.000000	0.000000	1	0
	Li 670.776 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 177.495 {489}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	1	Ce	-0.000548	0.000000	No
Ag 338.289 {100}	☒	2	Fe	0.000030	0.000000	No
			Na	0.090000	0.000000	No
Al 167.079 {501}	☒	None				
Al 309.271 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001356	0.000000	No
As 197.262 {471}	☒	1	Al	0.000027	0.000000	No
Ba 233.527 {445}	☒	1	Fe	-0.000007	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000006	0.000000	No
Ba 493.409 { 68}	☒	1	Ce	0.000000	0.000000	No
Be 234.861 {144}	☒	None				
Be 313.042 {108}	☒	1	Fe	0.000004	0.000000	No
Be 313.107 {108}	☒	1	Fe	0.000002	0.000000	No
Ca 184.006 {483}	☒	None				
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	None				
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000048	0.000000	No
Cd 228.802 {448}	☒	1	Fe	-0.000007	0.000000	No
Co 228.616 {447}	☒	3	Fe	-0.000001	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.002165	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 223.008 {451}	☒	3	Fe	-0.000018	0.000000	No
			Mo	0.008000	0.000000	No
			Ni	0.006000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	0.000308	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000009	0.000000	No
			Mo	-0.000319	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000031	0.000000	No
Mn 259.373 {130}	☒	None				

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mo 202.030 {466}	☒	1	Fe	-0.000014	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000021	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	5	Fe	-0.000074	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.001918	0.000000	No
Pb 216.999 {455}	☒	3	Al	0.001866	0.000000	No
			Na	0.000000	0.000000	No
			Fe	0.002996	0.000000	No
Pb 220.353 {153}	☒	1	Fe	0.000002	0.000000	No
Pb 220.353 {453}	☒	2	Si	0.000000	0.000000	No
			Al	-0.000042	0.000000	No
Sb 206.833 {463}	☒	2	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000018	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000115	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	1	Fe	-0.000035	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000083	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	6	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No
			Al	0.000000	0.000000	No
			Ti	0.000420	0.000000	No
			Mo	-0.000481	0.000000	No
			Cu	-0.003767	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	5	Fe	0.000115	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mo	0.000034	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Na 330.237 {102}	☒	1	Sr	-0.002100	0.000000	No
Na 588.995 { 57}	☒	1	Fe	0.000000	0.000000	No
Na 589.592 { 57}	☒	1	Fe	0.000001	0.000000	No
Si 212.412 {458}	☒	1	Fe	-0.000007	0.000000	No
Si 251.611 {134}	☒	1	Fe	-0.000177	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ti 323.452 {104}	☒	2	Fe	0.000034	0.000000	No
			Ce	0.000123	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000036	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000012	0.000000	No
Sn 189.989 {478}	☒	1	Fe	-0.000008	0.000000	No
B 249.678 {135}	☒	1	Fe	0.000018	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000401	0.000000	No
Li 610.353 { 55}	☒	1	Fe	-0.000109	0.000000	No
Li 670.776 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000003	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000001	0.000000	No
P 177.495 {489}	☒	None				
S 182.034 {485}	☒	1	Mn	0.002145	0.000000	No
Hg 184.950 {482}	☒	1	Fe	-0.000000	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

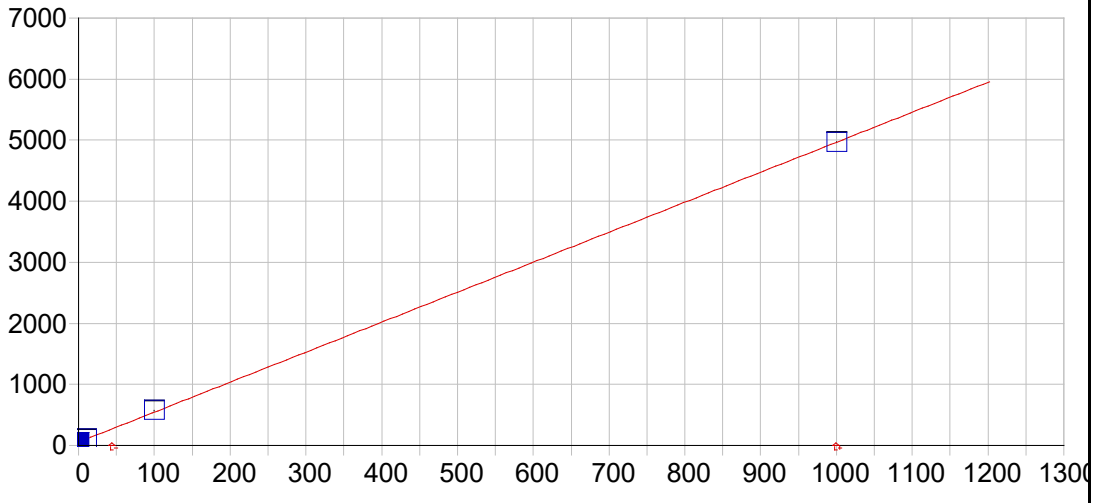


Ag 328.068 {103}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999312	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.498998		
Predicted MQL:	1.663328		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00021	-.000	.000	.00001	.000	1
CalStd8=100	100.00	99.885	-.115	-.115	.00028	.000	1
CalStd4=5	5.0000	5.6699	.670	13.4	.00002	.000	1
CalStd5=10	10.000	9.3005	-.700	-7.00	.00003	.000	1
CalStd3=1	1.0000	1.1449	.145	14.5	.00001	.000	1

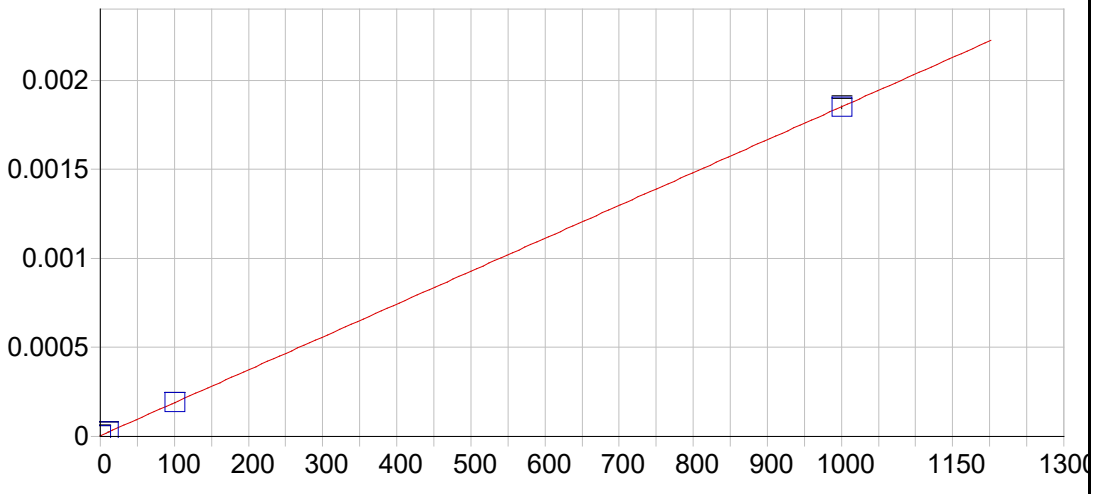


Ag 338.289 {100}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	53.689454	Re-Slope:	1.000000
A1 (Gain):	4.912444	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	7.012702		
Predicted MDL:	1.027826		
Predicted MQL:	3.426088		

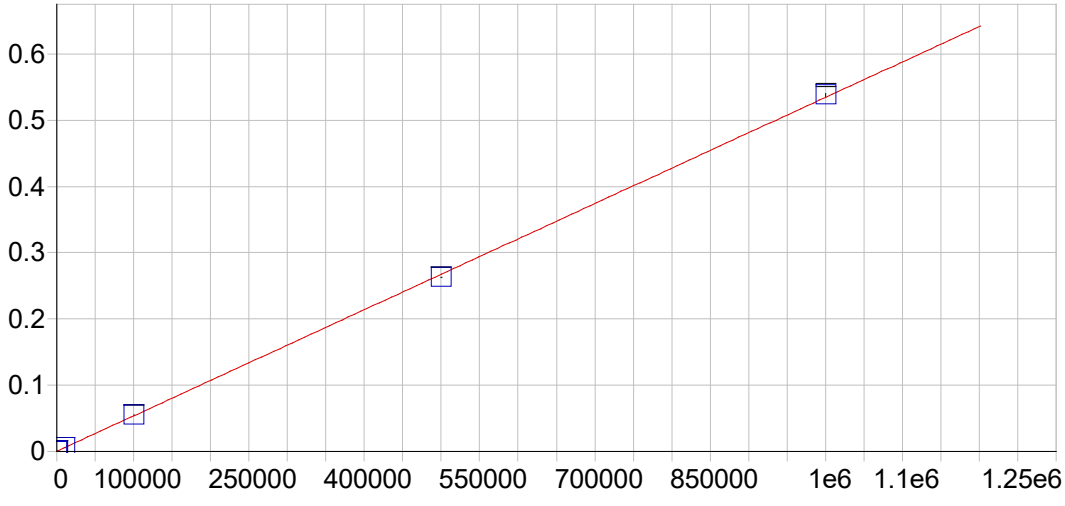
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.17463	-.175	.000	52.832	.977	1
Ag 1000	1000.0	999.51	-.487	-.049	4963.7	4.84	1
CalStd5=10	10.000	9.8563	-.144	-1.44	102.11	5.37	1
CalStd8=100	100.00	105.47	5.47	5.47	571.82	5.12	1



Al 167.079 {501}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999976		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.608026				
Predicted MQL:	2.026754				

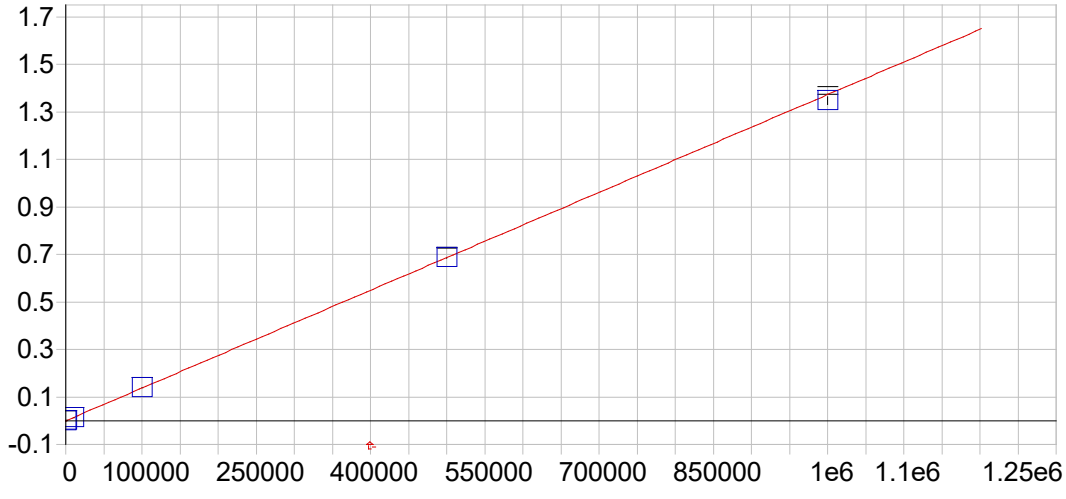
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00074	-.001	.000	.00000	.000	1
CalStd9=100	1000.0	998.92	-1.08	-.108	.00185	.000	1
CalStd5=10	10.000	10.718	.718	7.18	.00002	.000	1
CalStd8=100	100.00	100.36	.364	.364	.00019	.000	1



Al 309.271 {109}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000278		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999925		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	21.814928				
Predicted MQL:	72.716427				

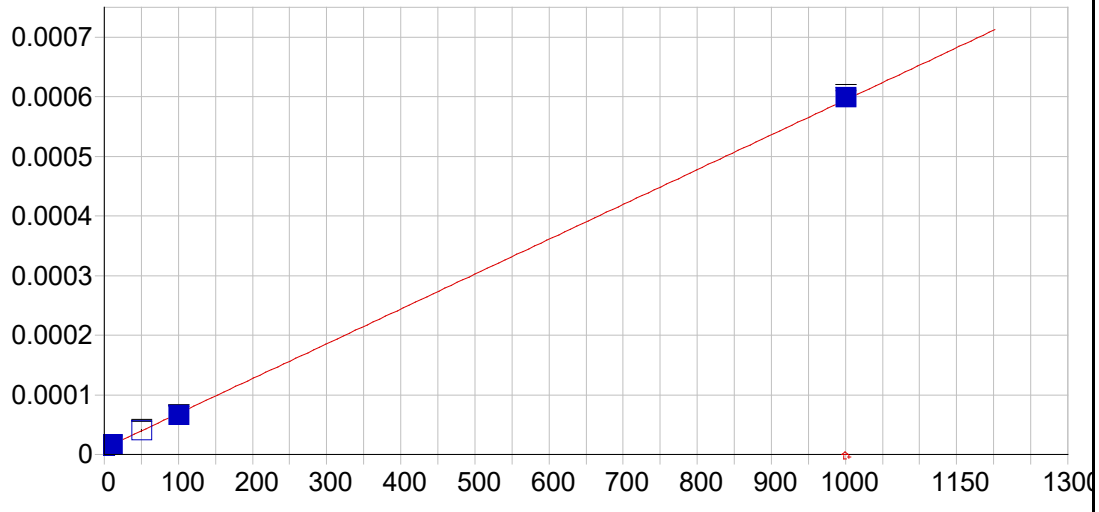
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00683	.007	.000	.00028	.000	1
CalStd9=100	1000.0	1011.9	11.9	1.19	.00082	.000	1
CalStd5=10	10.000	1.1063	-8.89	-88.9	.00028	.000	1
CalStd8=100	100.00	121.96	22.0	22.0	.00034	.000	1
CalStd10=10	10000.	9664.2	-336.	-3.36	.00544	.000	1
CalStd13=10	100000.	101860.	1860.	1.86	.05470	.000	1
CalStd14=50	500000.	491710.	-8290.	-1.66	.26297	.000	1
CalibStd15=	1000000.	1006700.	6730.	.673	.53812	.002	1



Al 396.152 { 85}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000023		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999958		Status:	OK.	
Std Error of Est:	0.000064				
Predicted MDL:	13.209600				
Predicted MQL:	44.032000				

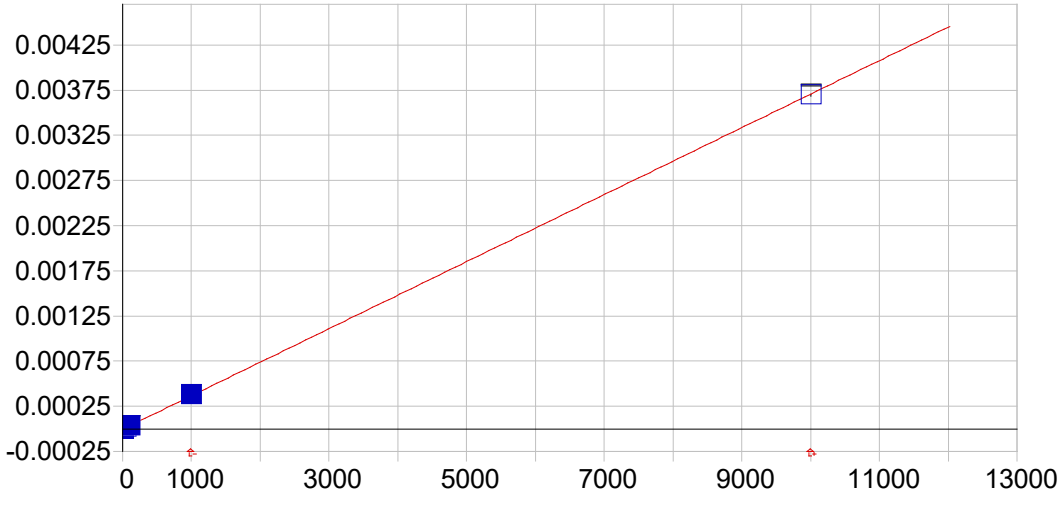
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-12.467	-12.5	.000	.00001	.000	1
CalStd14=50	500000.	499640.	-364.	-.073	.68587	.001	1
CalStd13=10	100000.	101480.	1480.	1.48	.13932	.001	1
CalStd10=10	10000.	9899.2	-101.	-1.01	.01361	.000	1
CalStd9=100	1000.0	1035.2	35.2	3.52	.00144	.000	1
CalibStd15=	1000000.	981570.	-18400.	-1.84	1.3474	.016	1



As 193.759 {474}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000010		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999788		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	4.202968				
Predicted MQL:	14.009892				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00094	.001	.000	.00001	.000	1
CalStd9=100	1000.0	1006.2	6.21	.621	.00060	.000	1
CalStd7=50	50.000	50.760	.760	1.52	.00004	.000	1
CalStd5=10	10.000	9.4865	-.513	-5.13	.00002	.000	1
CalStd8=100	100.00	93.549	-6.45	-6.45	.00007	.000	1

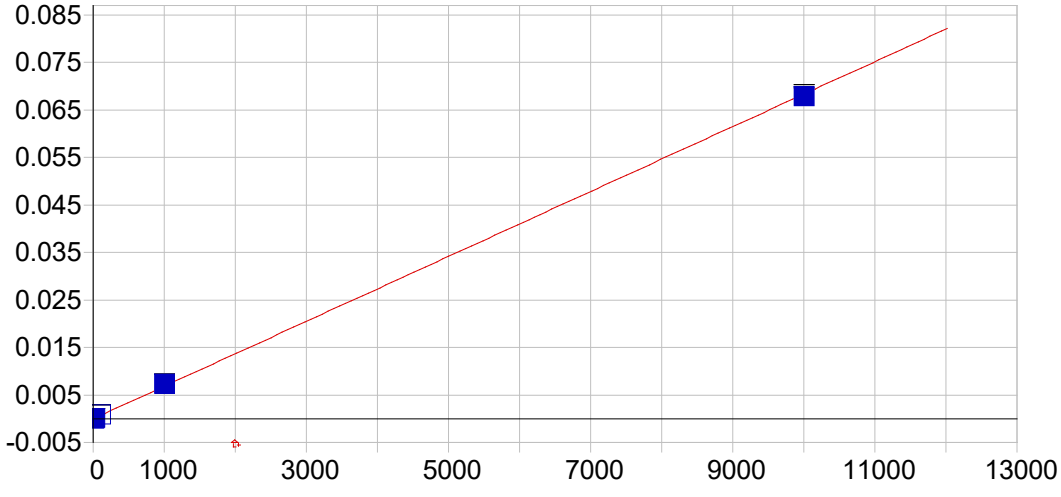


As 197.262 {471}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	5.989099		
Predicted MQL:	19.963662		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00011	-.000	.000	-.00000	.000	1
CalStd9=100	1000.0	1026.7	26.7	2.67	.00038	.000	1
CalStd7=50	50.000	53.306	3.31	6.61	.00002	.000	1
CalStd5=10	10.000	9.1066	-.893	-8.93	-.00000	.000	1
CalStd8=100	100.00	101.02	1.02	1.02	.00003	.000	1
CalStd10=10	10000.	9969.8	-30.2	-.302	.00369	.000	1

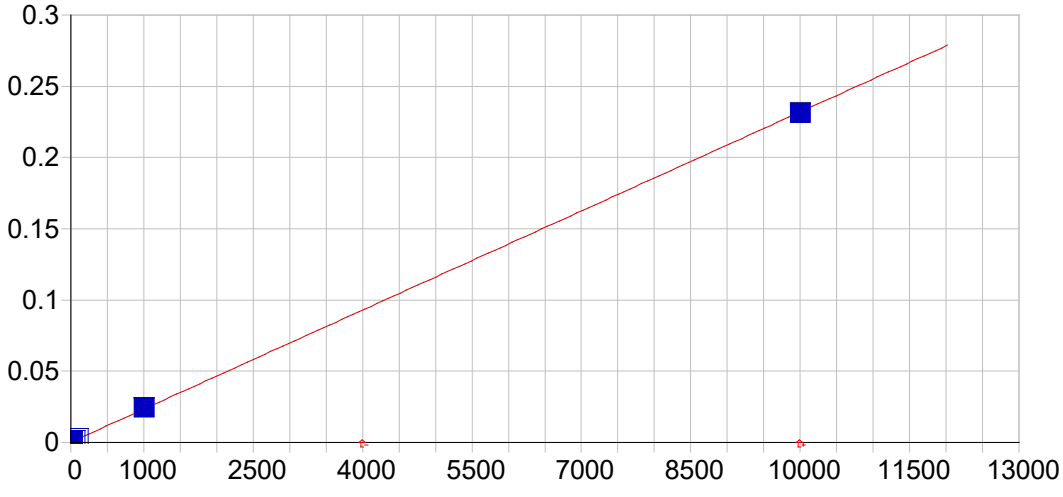


Ba 233.527 {445}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999766	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.315022		
Predicted MQL:	1.050075		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00075	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	11.144	1.14	11.4	.00007	.000	1
CalStd6=20	20.000	21.644	1.64	8.22	.00015	.000	1
CalStd8=100	100.00	105.09	5.09	5.09	.00072	.000	1
CalStd4=5	5.0000	5.7052	.705	14.1	.00004	.000	1
CalStd9=100	1000.0	1063.0	63.0	6.30	.00726	.000	1
CalStd3=1	1.0000	1.3094	.309	30.9	.00001	.000	1
CalStd10=10	10000.	9928.1	-71.9	-.719	.06785	.000	1

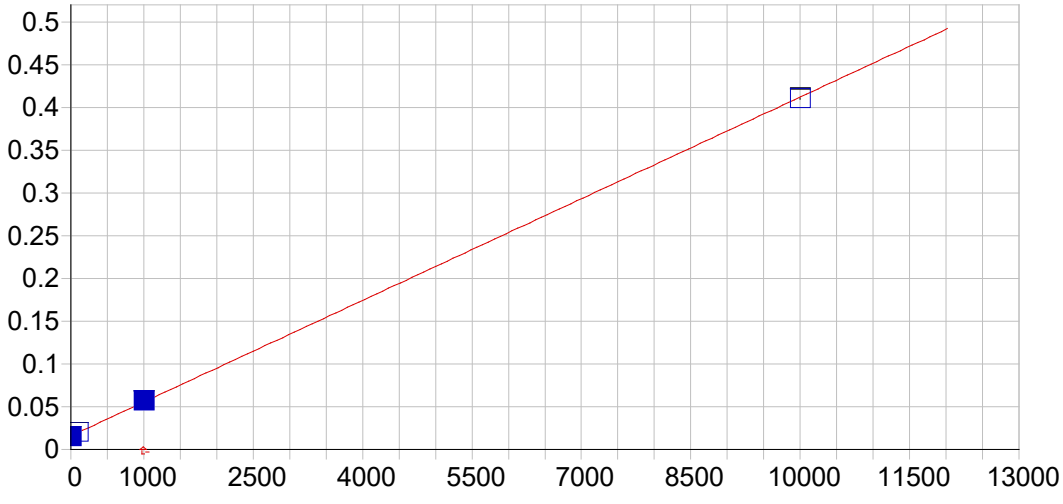


Ba 455.403 { 74}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000249	Re-Slope:	1.000000
A1 (Gain):	0.000023	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.564814		
Predicted MQL:	1.882714		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00094	-.001	.000	.00025	.000	1
CalStd7=50	50.000	53.316	3.32	6.63	.00148	.000	1
CalStd5=10	10.000	11.373	1.37	13.7	.00051	.000	1
CalStd6=20	20.000	21.729	1.73	8.65	.00075	.000	1
CalStd8=100	100.00	104.21	4.21	4.21	.00266	.000	1
CalStd4=5	5.0000	6.1261	1.13	22.5	.00039	.000	1
CalStd9=100	1000.0	1036.4	36.4	3.64	.02427	.000	1
CalStd3=1	1.0000	1.3559	.356	35.6	.00028	.000	1
CalStd10=10	10000.	9951.5	-48.5	-.485	.23086	.001	1

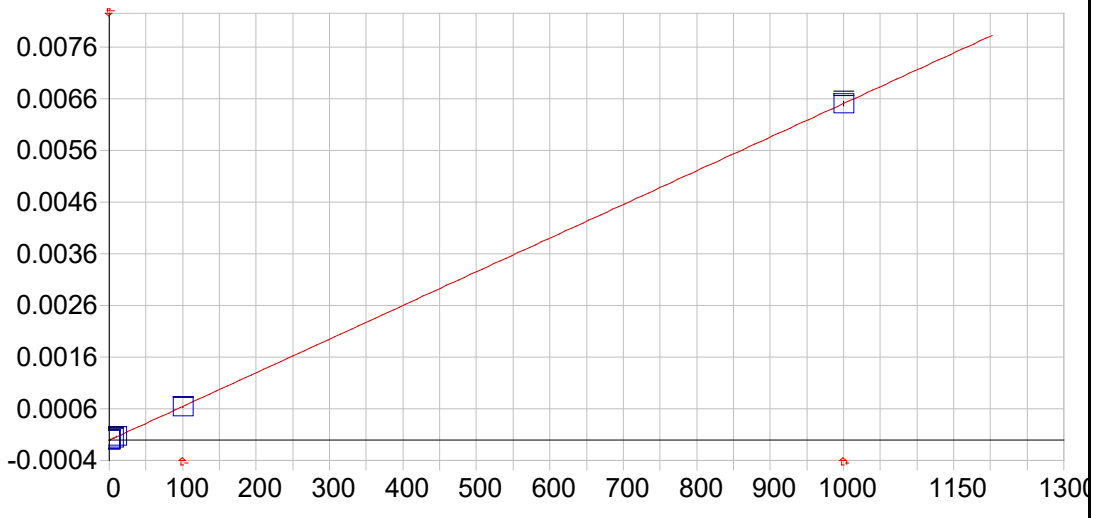


Ba 493.409 { 68}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.015858	Re-Slope:	1.000000
A1 (Gain):	0.000040	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999772	Status:	OK.
Std Error of Est:	0.000729		
Predicted MDL:	1.366082		
Predicted MQL:	4.553608		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-23.883	-23.9	.000	.01491	.000	1
CalStd9=100	1000.0	1029.4	29.4	2.94	.05665	.000	1
CalStd8=100	100.00	104.92	4.92	4.92	.02002	.000	1
CalStd10=10	10000.	9957.6	-42.4	-.424	.41043	.001	1

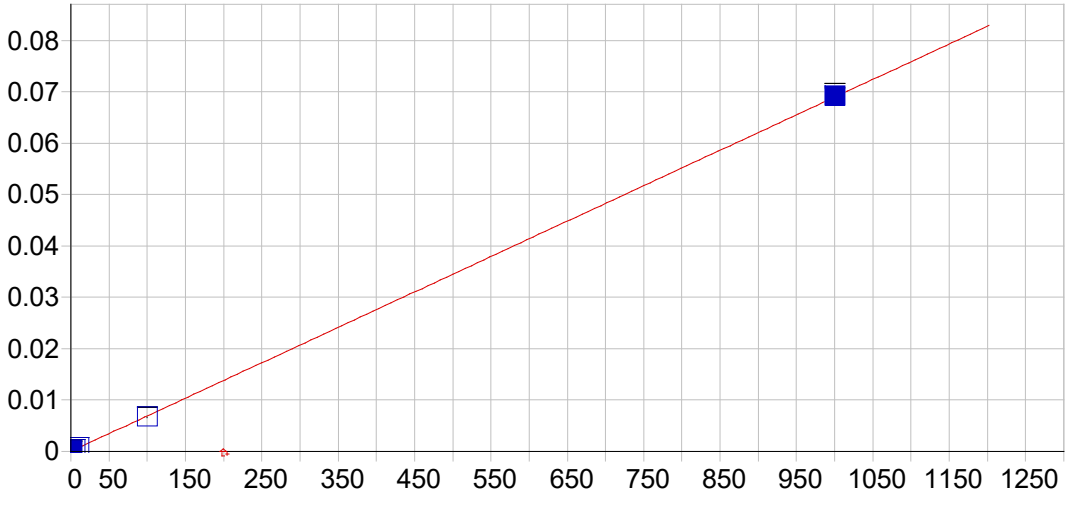


Be 234.861 {144}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999533	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.405033		
Predicted MQL:	1.350110		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00078	-.001	.000	-.00001	.000	1
CalStd5=10	10.000	11.162	1.16	11.6	.00007	.000	1
CalStd8=100	100.00	97.949	-2.05	-2.05	.00063	.000	1
CalStd2=0.5	.50000	.78721	.287	57.4	-.00000	.000	1
CalStd4=5	5.0000	5.3645	.364	7.29	.00003	.000	1
CalStd9=100	1000.0	999.42	-.583	-.058	.00650	.000	1
CalStd3=1	1.0000	1.8204	.820	82.0	.00001	.000	1

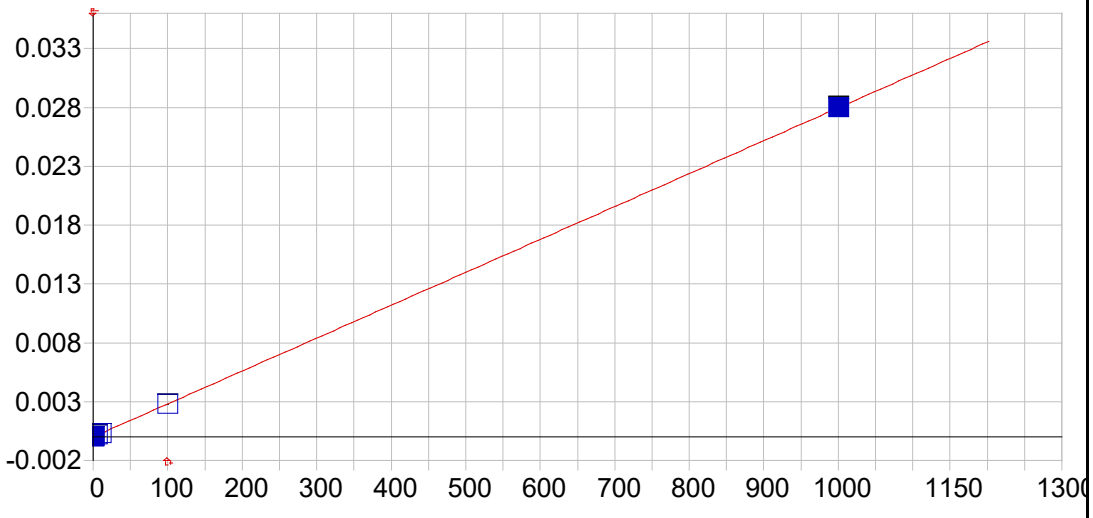


Be 313.042 {108}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000018	Re-Slope:	1.000000
A1 (Gain):	0.000069	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999935	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.016140		
Predicted MQL:	0.053800		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00004	-.000	.000	.00002	.000	1
CalStd5=10	10.000	9.9166	-.083	-.834	.00070	.000	1
CalStd8=100	100.00	96.549	-3.45	-3.45	.00667	.000	1
CalStd2=0.5	.50000	.53730	.037	7.46	.00005	.000	1
CalStd4=5	5.0000	5.2376	.238	4.75	.00038	.000	1
CalStd9=100	1000.0	1003.3	3.26	.326	.06919	.000	1
CalStd3=1	1.0000	.99661	-.003	-.339	.00009	.000	1

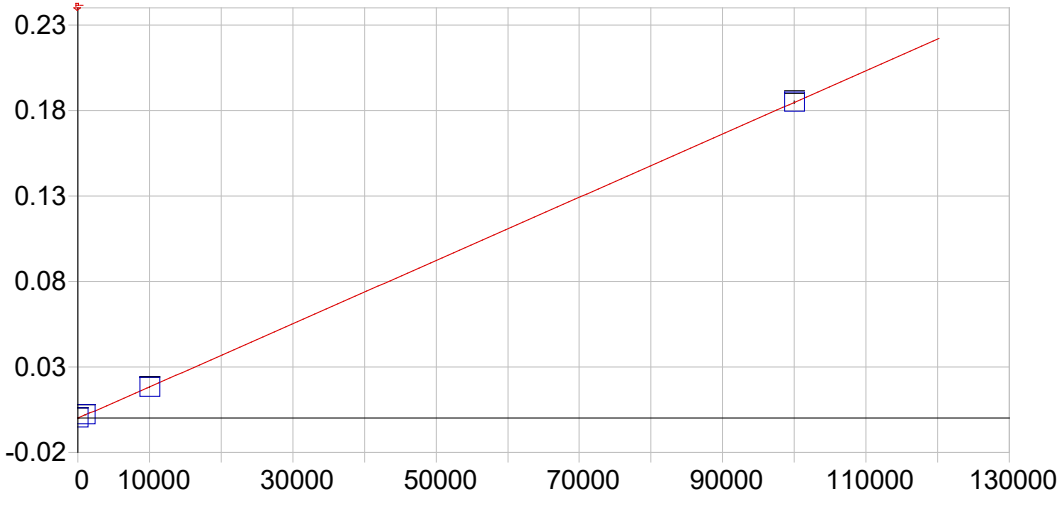


Be 313.107 {108}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000028	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999846	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.315048		
Predicted MQL:	1.050161		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00049	-.000	.000	.00001	.000	1
CalStd5=10	10.000	10.254	.254	2.54	.00029	.000	1
CalStd2=0.5	.50000	.81139	.311	62.3	.00003	.000	1
CalStd4=5	5.0000	5.5155	.516	10.3	.00016	.000	1
CalStd9=100	1000.0	1000.4	.391	.039	.02798	.000	1
CalStd3=1	1.0000	1.2440	.244	24.4	.00004	.000	1
CalStd8=100	100.00	98.285	-1.72	-1.72	.00275	.000	1

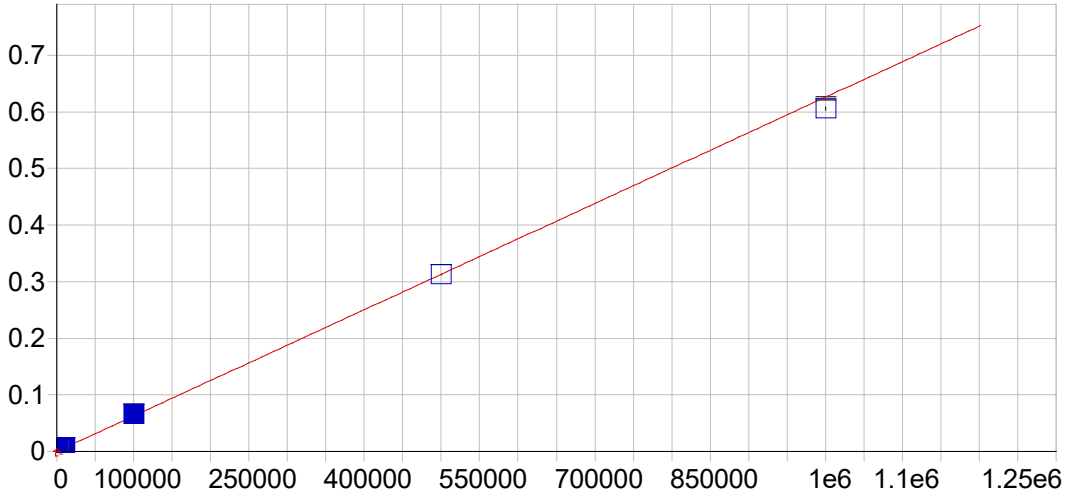


Ca 184.006 {483}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000039	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999980	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	1.023422		
Predicted MQL:	3.411406		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.04496	-.045	.000	-.00004	.000	1
CalStd10=10	10000.	9888.4	-112.	-1.12	.01823	.000	1
CalStd13=10	100000.	100060.	56.0	.056	.18481	.001	1
CalStd9=100	1000.0	1055.6	55.6	5.56	.00191	.000	1

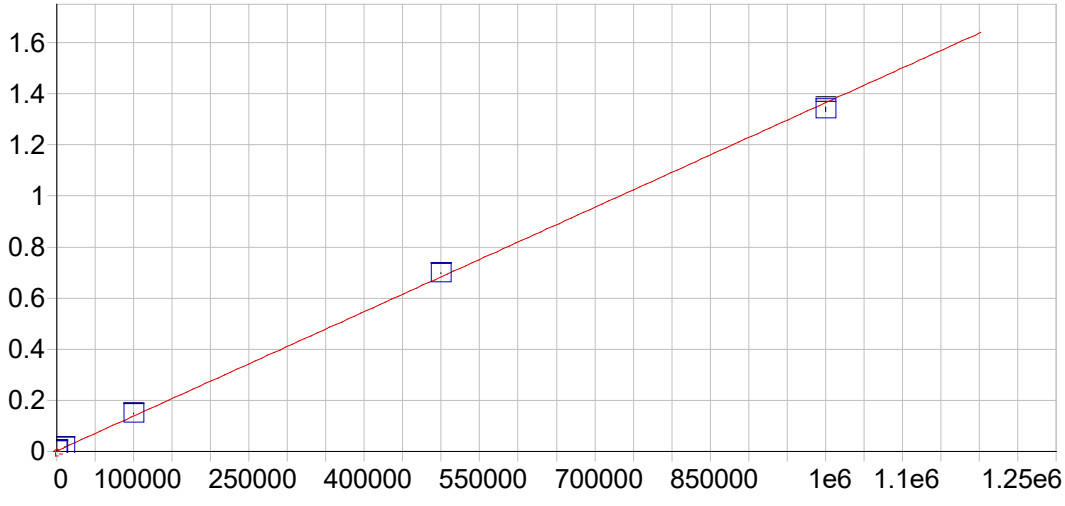


Ca 315.887 {107}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000091	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999933	Status:	OK.
Std Error of Est:	0.000066		
Predicted MDL:	8.561413		
Predicted MQL:	28.538044		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-14.926	-14.9	.000	.00008	.000	1
CalStd10=10	10000.	10119.	119.	1.19	.00642	.000	1
CalStd13=10	100000.	104560.	4560.	4.56	.06553	.000	1
CalStd14=50	500000.	499120.	-876.	-.175	.31245	.000	1
CalStd9=100	1000.0	1041.2	41.2	4.12	.00074	.000	1
CalibStd15=	1000000.	967640.	-32400.	-3.24	.60566	.003	1

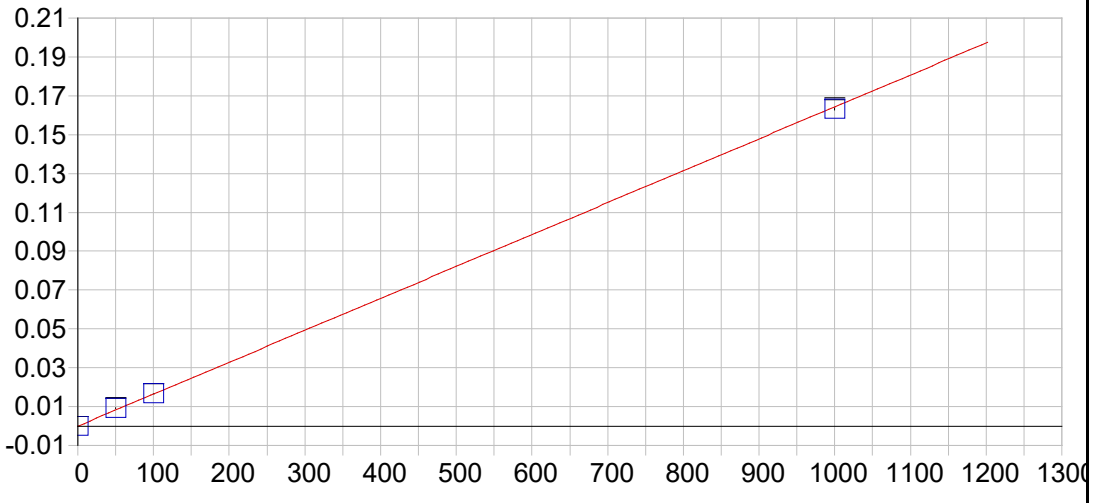


Ca 317.933 {106}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002474	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999656	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	4.207076		
Predicted MQL:	14.023585		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.18475	-.185	.000	.00247	.000	1
CalStd10=10	10000.	10356.	356.	3.56	.01658	.000	1
CalStd13=10	100000.	107280.	7280.	7.28	.14859	.001	1
CalStd14=50	500000.	510620.	10600.	2.12	.69795	.001	1
CalStd9=100	1000.0	1073.4	73.4	7.34	.00394	.000	1
CalibStd15=	1000000.	981670.	-18300.	-1.83	1.3395	.010	1

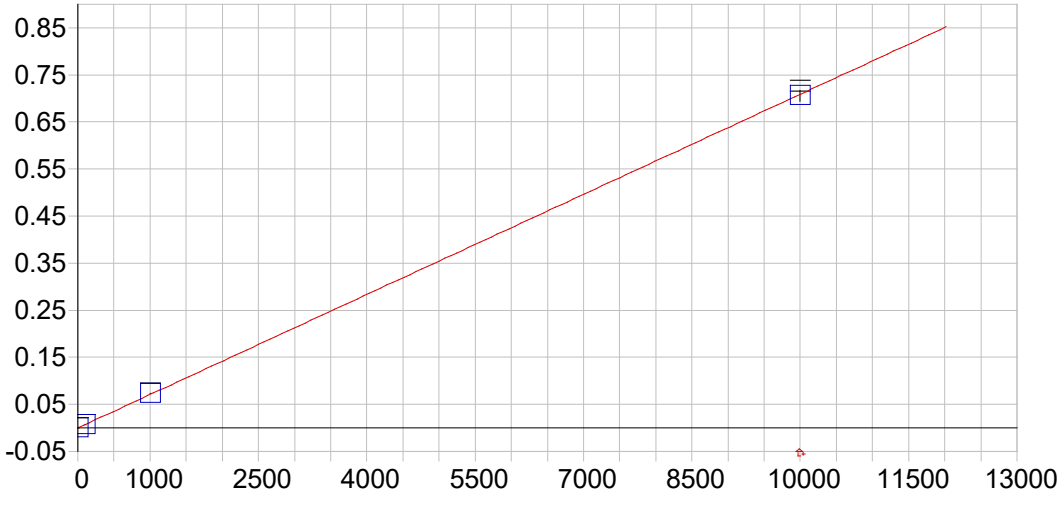


Ca 393.366 { 86}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000164	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999663	Status:	OK.
Std Error of Est:	0.000046		
Predicted MDL:	0.081542		
Predicted MQL:	0.271808		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00606	-.006	.000	-.00002	.000	1
CalStd9=100	1000.0	993.20	-6.80	-.680	.16316	.001	1
CalStd8=100	100.00	100.79	.794	.794	.01655	.000	1
CalStd7=50	50.000	56.006	6.01	12.0	.00919	.000	1

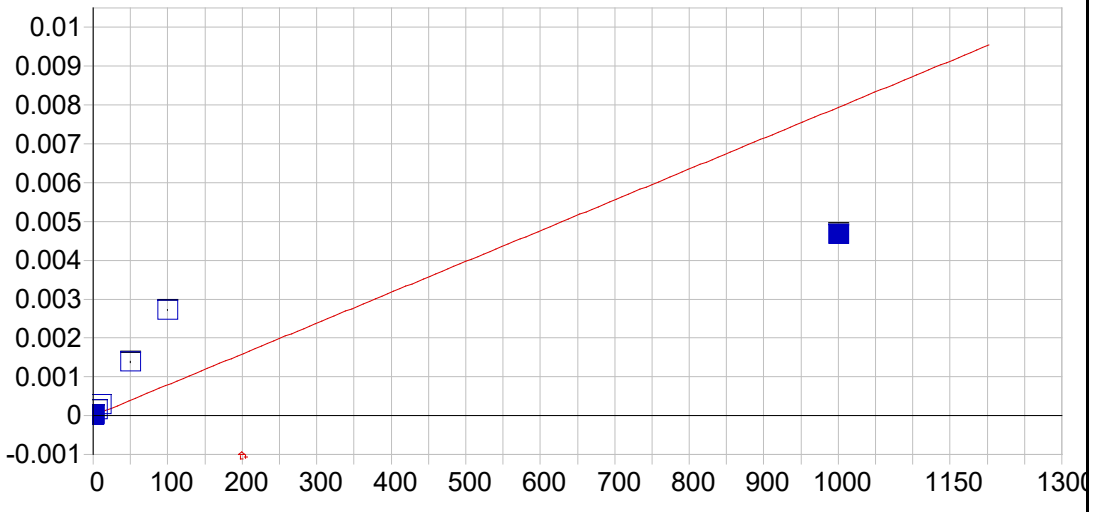


Ca 396.847 { 85}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000071	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999922	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.171350		
Predicted MQL:	0.571167		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00895	-.009	.000	-.00000	.000	1
CalStd10=10	10000.	9959.1	-40.9	-.409	.70594	.012	1
CalStd8=100	100.00	105.85	5.85	5.85	.00750	.000	1
CalStd9=100	1000.0	1035.1	35.1	3.51	.07337	.000	1

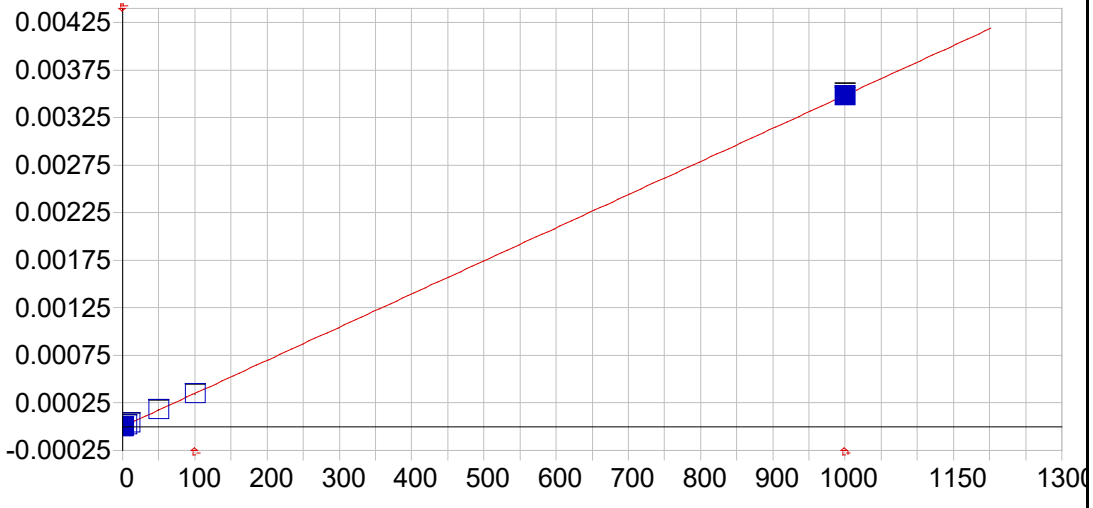


Cd 226.502 {449}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.704232	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.446740		
Predicted MQL:	1.489134		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00764	-.008	.000	-.00000	.000	1
CalStd3=1	1.0000	3.6622	2.66	266.	.00003	.000	1
CalStd2=0.5	.50000	1.9162	1.42	283.	.00001	.000	1
CalStd4=5	5.0000	18.497	13.5	270.	.00015	.000	1
CalStd5=10	10.000	35.649	25.6	256.	.00028	.000	1
CalStd9=100	1000.0	588.78	-411.	-41.1	.00467	.000	1
CalStd8=100	100.00	342.83	243.	243.	.00272	.000	1
CalStd7=50	50.000	175.19	125.	250.	.00139	.000	1

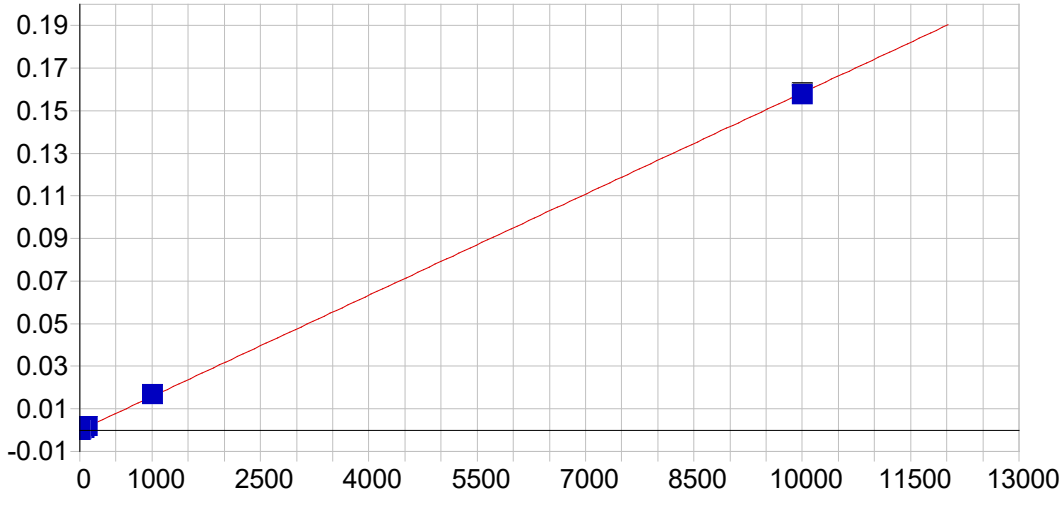


Cd 228.802 {448}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999910	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.559670		
Predicted MQL:	1.865565		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00023	-.000	.000	.00000	.000	1
CalStd3=1	1.0000	1.3069	.307	30.7	.00001	.000	1
CalStd2=0.5	.50000	.49554	-.004	-.892	.00000	.000	1
CalStd4=5	5.0000	5.6278	.628	12.6	.00002	.000	1
CalStd5=10	10.000	10.457	.457	4.57	.00004	.000	1
CalStd9=100	1000.0	999.00	-1.00	-.100	.00348	.000	1
CalStd8=100	100.00	99.075	-.925	-.925	.00035	.000	1
CalStd7=50	50.000	50.539	.539	1.08	.00018	.000	1

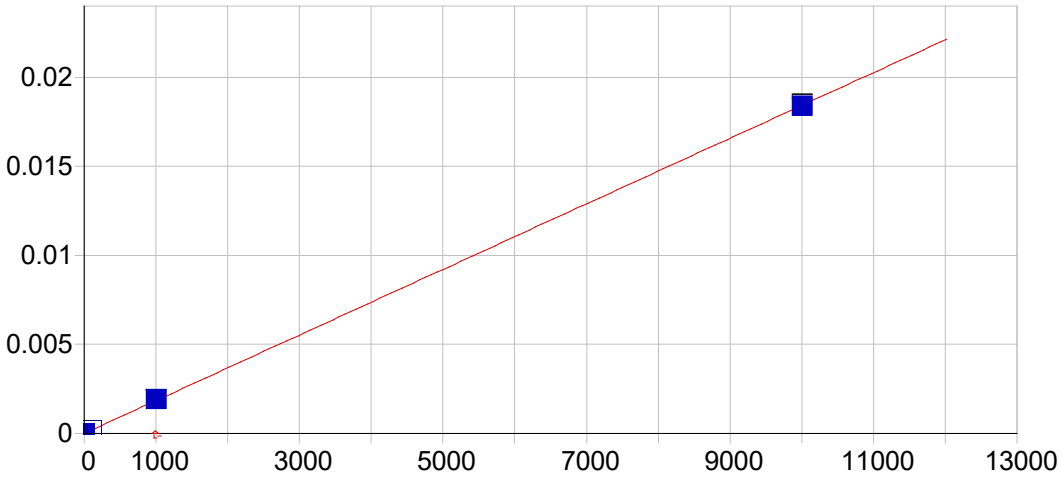


Co 228.616 {447}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000010	Re-Slope:	1.000000
A1 (Gain):	0.000016	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.265048		
Predicted MQL:	0.883493		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00046	-.000	.000	-.00001	.000	1
CalStd7=50	50.000	52.960	2.96	5.92	.00083	.000	1
CalStd5=10	10.000	10.789	.789	7.89	.00016	.000	1
CalStd4=5	5.0000	5.6185	.618	12.4	.00008	.000	1
CalStd8=100	100.00	103.85	3.85	3.85	.00164	.000	1
CalStd9=100	1000.0	1043.9	43.9	4.39	.01654	.000	1
CalStd3=1	1.0000	1.1213	.121	12.1	.00001	.000	1
CalStd10=10	10000.	9947.8	-52.2	-.522	.15771	.001	1

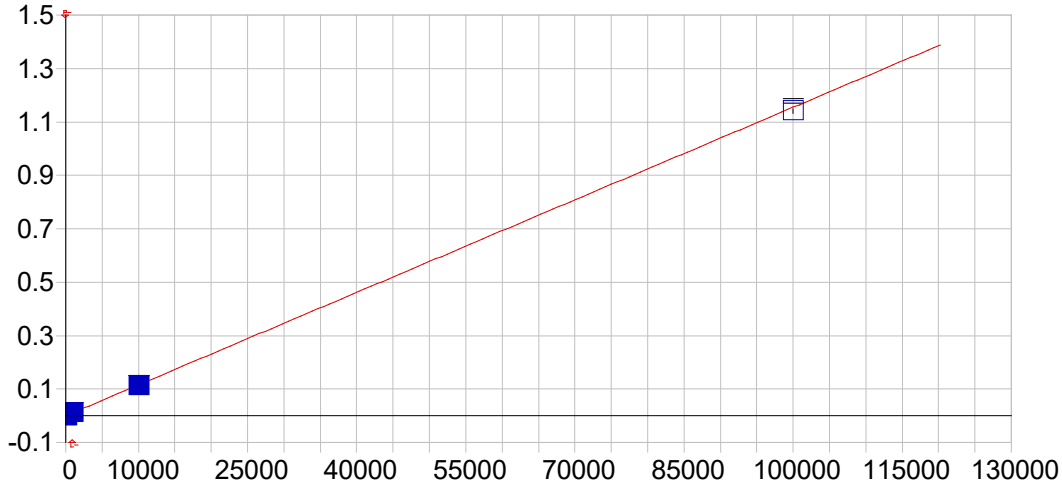


Co 238.892 {141}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999956	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.397661		
Predicted MQL:	1.325536		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00452	-.005	.000	.00000	.000	1
CalStd9=100	1000.0	1029.1	29.1	2.91	.00190	.000	1
CalStd10=10	10000.	9969.0	-31.0	-.310	.01836	.000	1
CalStd8=100	100.00	101.92	1.92	1.92	.00019	.000	1

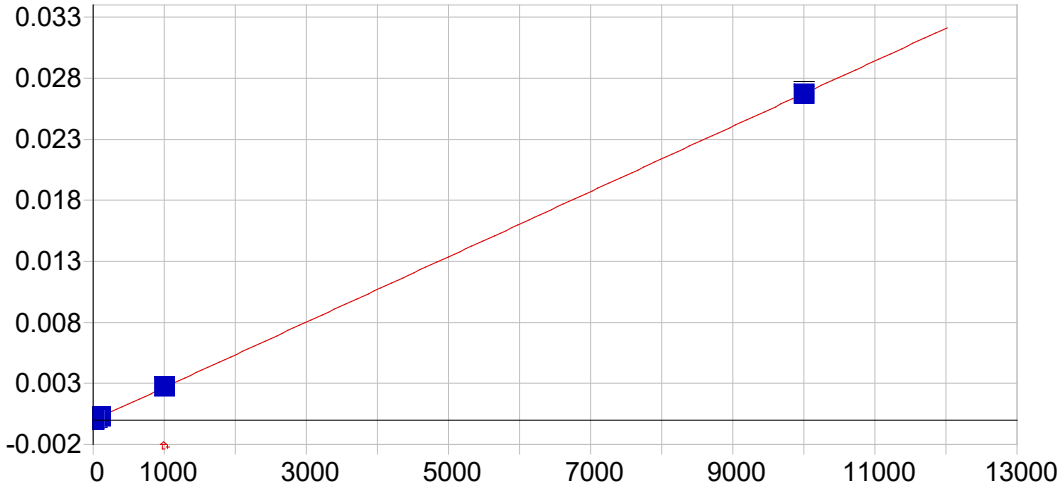


Cr 205.560 {464}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999777	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	0.235704		
Predicted MQL:	0.785681		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.27241	-.272	.000	-.00001	.000	1
CalStd5=10	10.000	10.332	.332	3.32	.00012	.000	1
CalStd7=50	50.000	51.373	1.37	2.75	.00059	.000	1
CalStd9=100	1000.0	1025.2	25.2	2.52	.01183	.000	1
CalStd8=100	100.00	101.06	1.06	1.06	.00116	.000	1
CalStd4=5	5.0000	5.3213	.321	6.43	.00006	.000	1
CalStd3=1	1.0000	.98723	-.013	-1.28	.00001	.000	1
CalStd10=10	10000.	9735.8	-264.	-2.64	.11241	.001	1
CalStd12=10	100000.	98804.	-1200.	-1.20	1.1409	.008	1

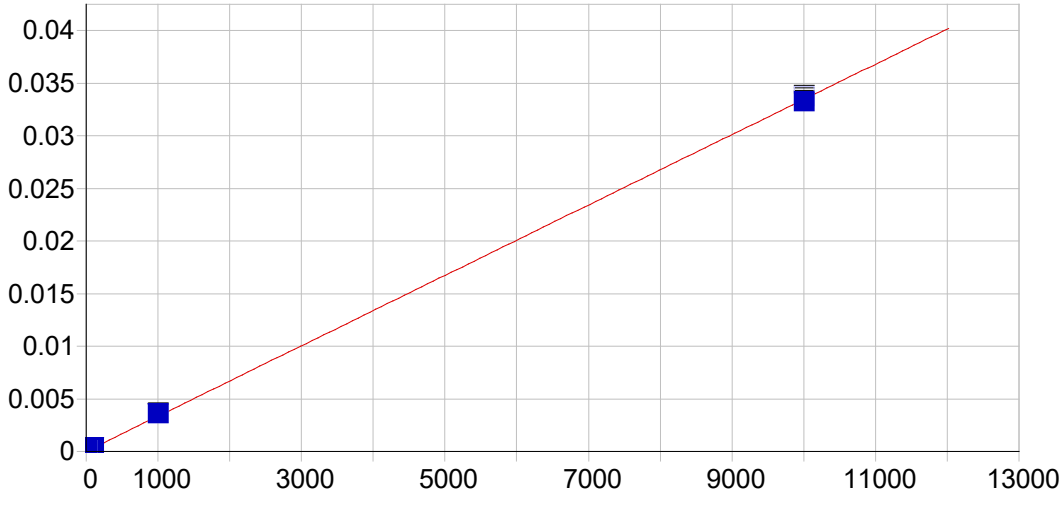


Cr 267.716 {126}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999990	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.429477		
Predicted MQL:	1.431589		

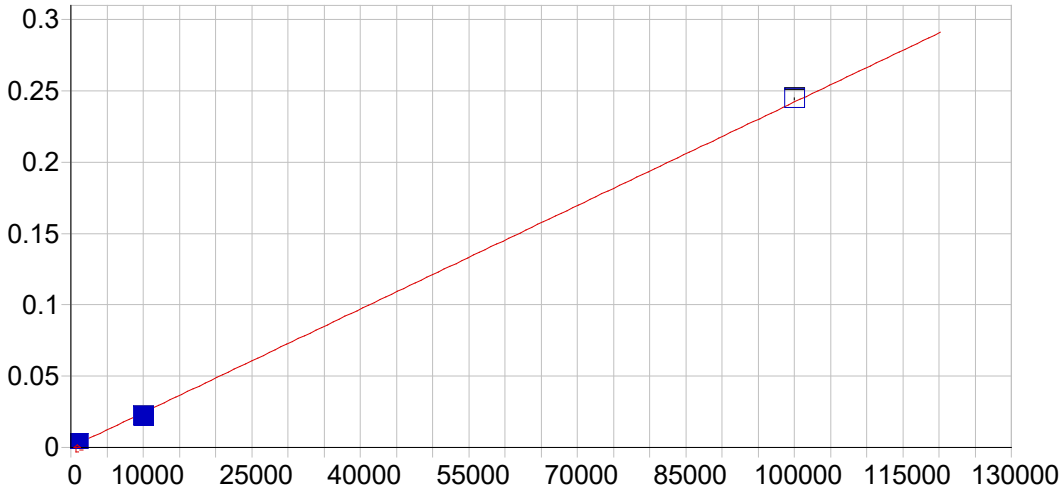
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00082	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	10.173	.173	1.73	.00002	.000	1
CalStd7=50	50.000	51.051	1.05	2.10	.00013	.000	1
CalStd9=100	1000.0	1010.8	10.8	1.08	.00270	.000	1
CalStd8=100	100.00	100.16	.158	.158	.00026	.000	1
CalStd4=5	5.0000	5.5723	.572	11.4	.00001	.000	1
CalStd10=10	10000.	9987.3	-12.7	-.127	.02671	.000	1



Cu 223.008 {451}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999785		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	1.233140				
Predicted MQL:	4.110467				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00237	-.002	.000	.00001	.000	1
CalStd9=100	1000.0	1062.0	62.0	6.20	.00360	.000	1
CalStd8=100	100.00	106.71	6.71	6.71	.00037	.000	1
CalStd5=10	10.000	11.149	1.15	11.5	.00004	.000	1
CalStd10=10	10000.	9930.1	-69.9	-.699	.03369	.000	1

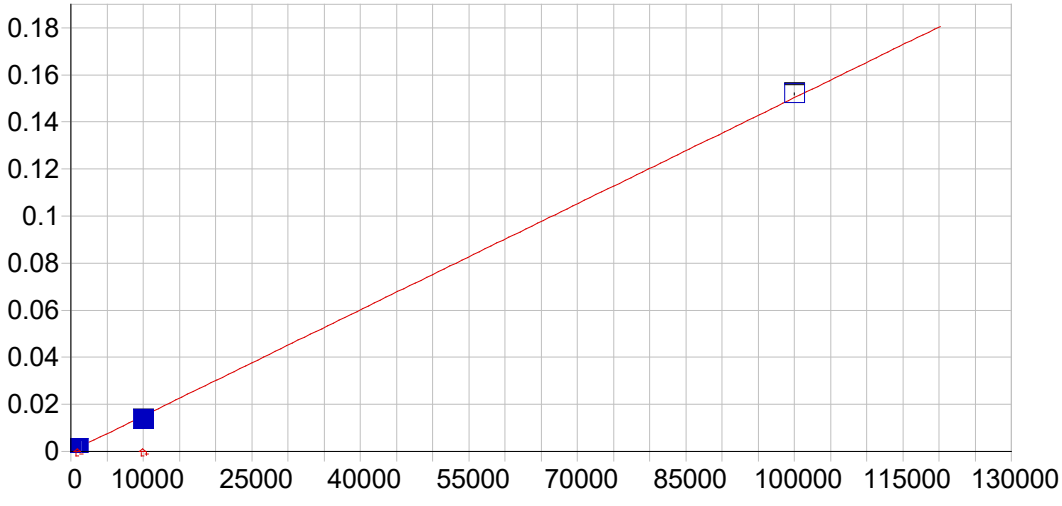


Cu 324.754 {104}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000186	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999530	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	4.045637		
Predicted MQL:	13.485456		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00359	.004	.000	.00019	.000	1
CalStd9=100	1000.0	955.73	-44.3	-4.43	.00250	.000	1
CalStd8=100	100.00	109.42	9.42	9.42	.00045	.000	1
CalStd10=10	10000.	9041.5	-959.	-9.59	.02207	.000	1
CalStd12=10	100000.	100990.	994.	.994	.24458	.001	1

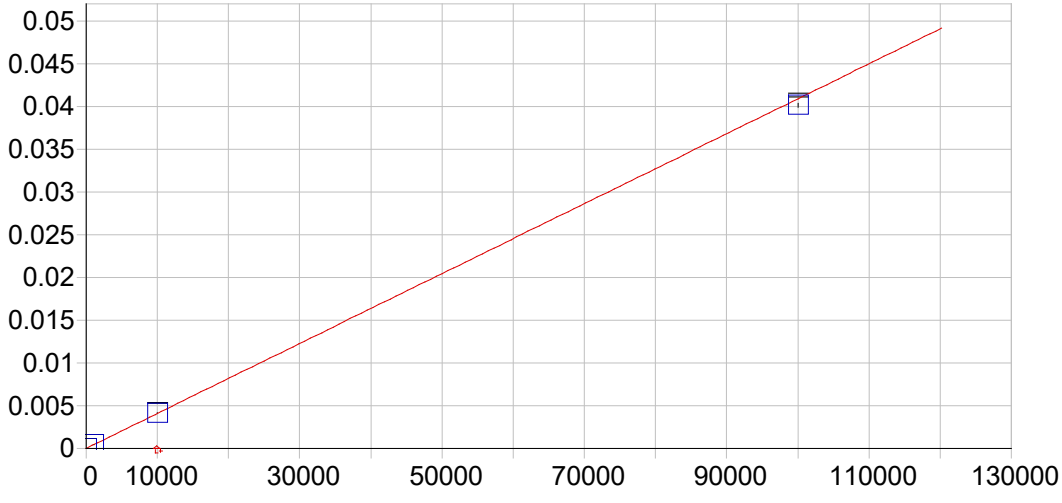


Cu 327.396 {103}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000054	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999409	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	7.806843		
Predicted MQL:	26.022811		

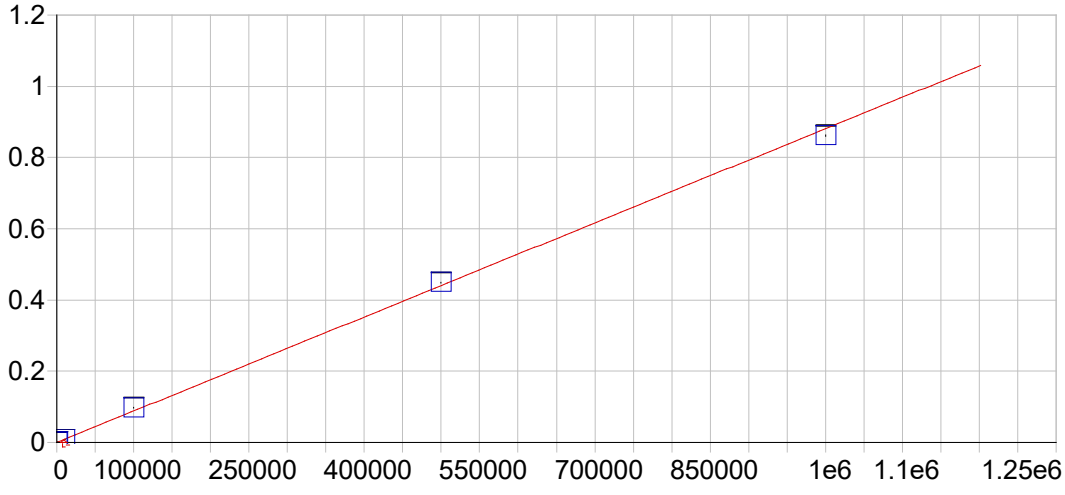
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00190	.002	.000	.00005	.000	1
CalStd6=20	20.000	20.011	.011	.055	.00008	.000	1
CalStd7=50	50.000	46.255	-3.75	-7.49	.00012	.000	1
CalStd8=100	100.00	94.876	-5.12	-5.12	.00020	.000	1
CalStd9=100	1000.0	934.38	-65.6	-6.56	.00146	.000	1
CalStd10=10	10000.	8951.5	-1050.	-10.5	.01350	.000	1
CalStd4=5	5.0000	7.2545	2.25	45.1	.00007	.000	1
CalStd5=10	10.000	4.5364	-5.46	-54.6	.00006	.000	1
CalStd12=10	100000.	101130.	1130.	1.13	.15197	.000	1



Fe 234.349 {144}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000011		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999679		Status:	OK.	
Std Error of Est:	0.000005				
Predicted MDL:	0.891672				
Predicted MQL:	2.972240				

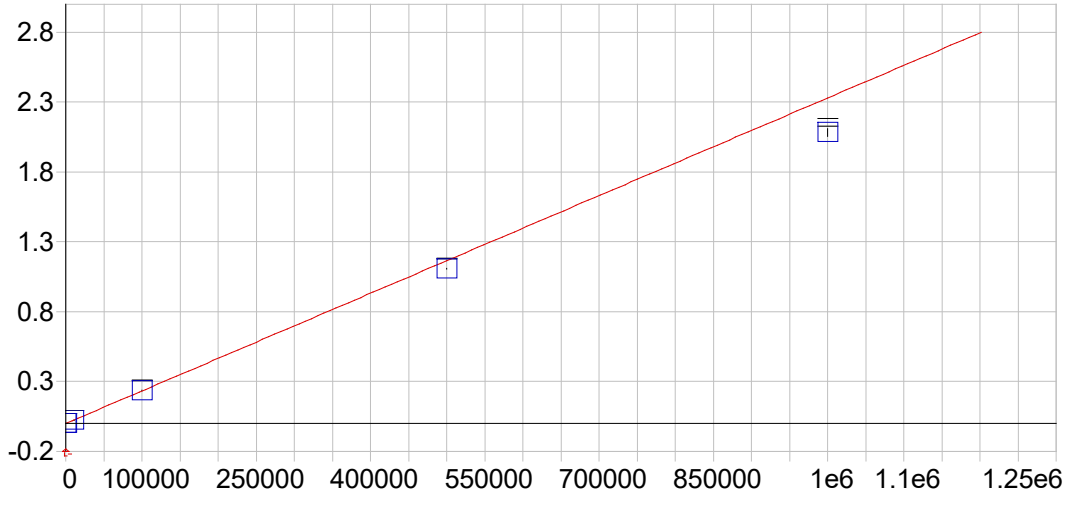
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.94712	-.947	.000	.00001	.000	1
CalStd10=10	10000.	10099.	99.3	.993	.00414	.000	1
CalStd13=10	100000.	98141.	-1860.	-1.86	.04014	.000	1
CalStd9=100	1000.0	1048.8	48.8	4.88	.00044	.000	1



Fe 239.562 {140}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000008		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999417		Status:	OK.	
Std Error of Est:	0.000047				
Predicted MDL:	5.399645				
Predicted MQL:	17.998815				

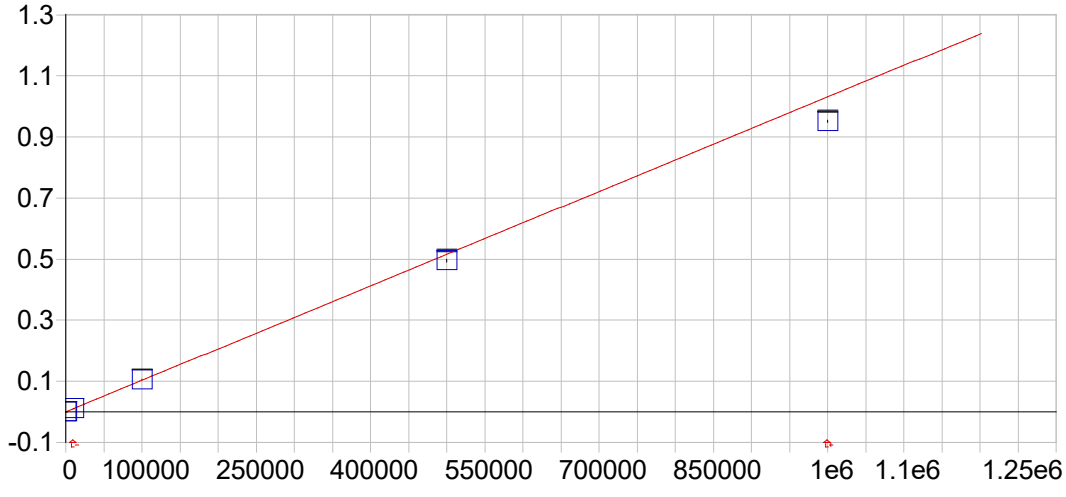
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.27299	-.273	.000	.00001	.000	1
CalStd10=10	10000.	10579.	579.	5.79	.00933	.000	1
CalStd13=10	100000.	110740.	10700.	10.7	.09756	.000	1
CalStd14=50	500000.	510260.	10300.	2.05	.44951	.001	1
CalStd9=100	1000.0	1108.8	109.	10.9	.00098	.000	1
CalibStd15=	1000000.	978310.	-21700.	-2.17	.86183	.002	1



Fe 259.940 {129}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Var
A0 (Offset):	0.000003		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999797		Status:	OK.	
Std Error of Est:	0.000032				
Predicted MDL:	2.618579				
Predicted MQL:	8.728598				

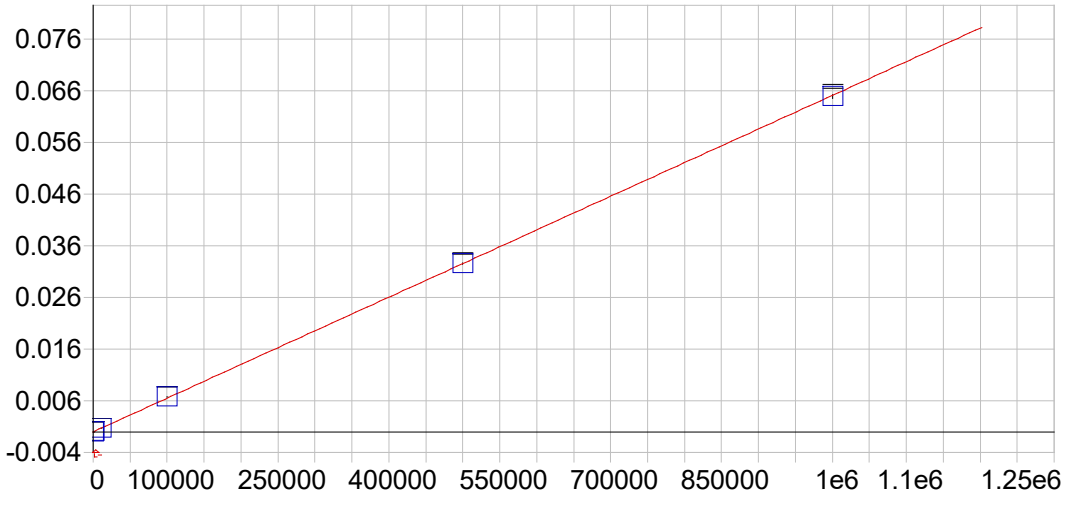
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.3314	-1.33	.000	-.00000	.000	1
CalStd10=10	10000.	9800.8	-199.	-1.99	.02284	.000	1
CalStd13=10	100000.	101070.	1070.	1.07	.23545	.001	1
CalStd14=50	500000.	475430.	-24600.	-4.91	1.1076	.004	1
CalStd9=100	1000.0	1026.9	26.9	2.69	.00239	.000	1
CalibStd15=	1000000.	893890.	-106000.	-10.6	2.0825	.025	1



Mg 202.582 {466}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	-0.000007		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998925		Status:	OK.	
Std Error of Est:	0.000055				
Predicted MDL:	3.527247				
Predicted MQL:	11.757490				

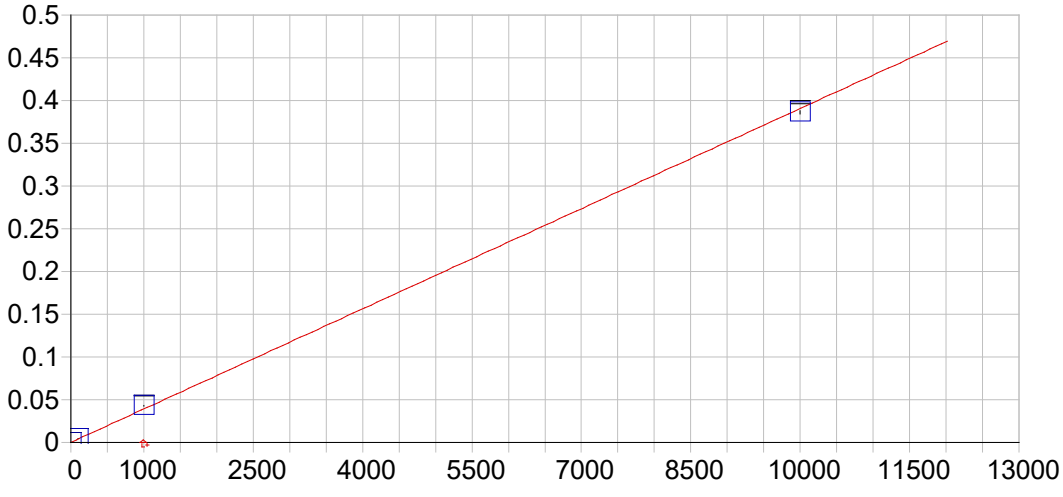
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.3143	-5.31	.000	-.00001	.000	1
CalStd13=10	100000.	102420.	2420.	2.42	.10560	.000	1
CalStd10=10	10000.	10012.	12.3	.123	.01032	.000	1
CalStd14=50	500000.	480250.	-19800.	-3.95	.49518	.003	1
CalStd9=100	1000.0	1103.5	104.	10.4	.00113	.000	1
CalibStd15=	1000000.	922700.	-77300.	-7.73	.95139	.004	1



Mg 279.079 {121}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999945		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	38.747087				
Predicted MQL:	129.156957				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.05045	-.050	.000	.00000	.000	1
CalStd13=10	100000.	104030.	4030.	4.03	.00677	.000	1
CalStd10=10	10000.	9986.3	-13.7	-.137	.00065	.000	1
CalStd14=50	500000.	499830.	-166.	-.033	.03253	.000	1
CalStd9=100	1000.0	1015.7	15.7	1.57	.00007	.000	1
CalibStd15=	1000000.	996140.	-3860.	-.386	.06483	.000	1

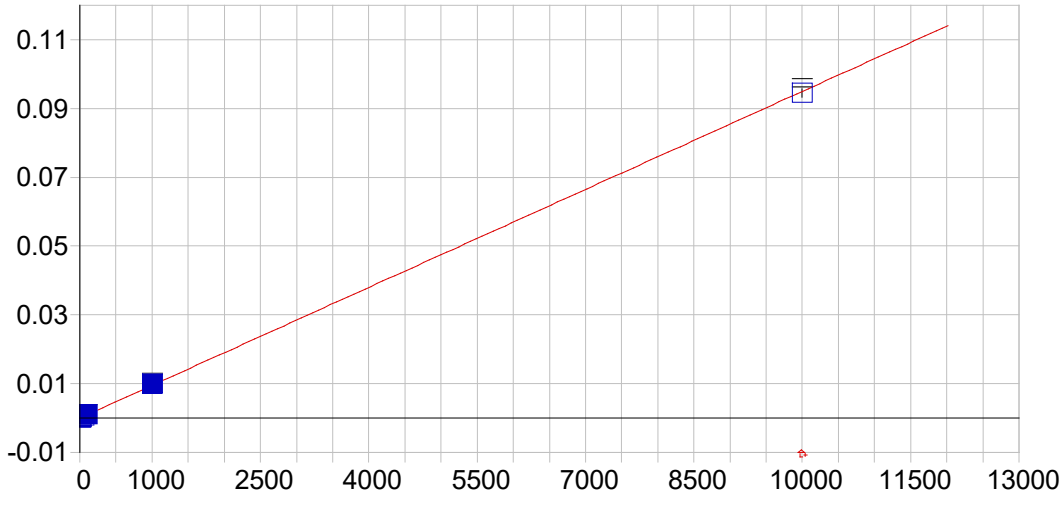


Mg 280.270 {120}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000053	Re-Slope:	1.000000
A1 (Gain):	0.000039	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999420	Status:	OK.
Std Error of Est:	0.000063		
Predicted MDL:	0.017302		
Predicted MQL:	0.057673		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01858	-.019	.000	.00005	.000	1
CalStd9=100	1000.0	1103.6	104.	10.4	.04316	.000	1
CalStd10=10	10000.	9887.1	-113.	-1.13	.38625	.002	1
CalStd8=100	100.00	109.35	9.35	9.35	.00432	.000	1

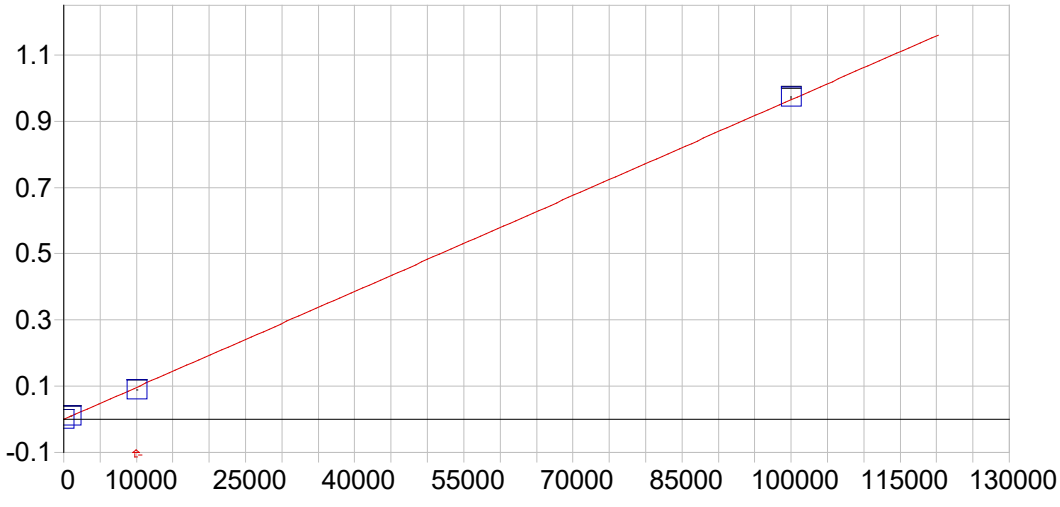


Mn 257.610 {131}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000009	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999873	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.061677		
Predicted MQL:	0.205591		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00213	-.002	.000	-.00000	.000	1
CalStd5=10	10.000	10.780	.780	7.80	.00010	.000	1
CalStd7=50	50.000	53.136	3.14	6.27	.00050	.000	1
CalStd6=20	20.000	21.394	1.39	6.97	.00020	.000	1
CalStd8=100	100.00	103.49	3.49	3.49	.00098	.000	1
CalStd4=5	5.0000	5.7043	.704	14.1	.00005	.000	1
CalStd9=100	1000.0	1044.4	44.4	4.44	.00992	.000	1
CalStd10=10	10000.	9946.1	-53.9	-.539	.09444	.001	1

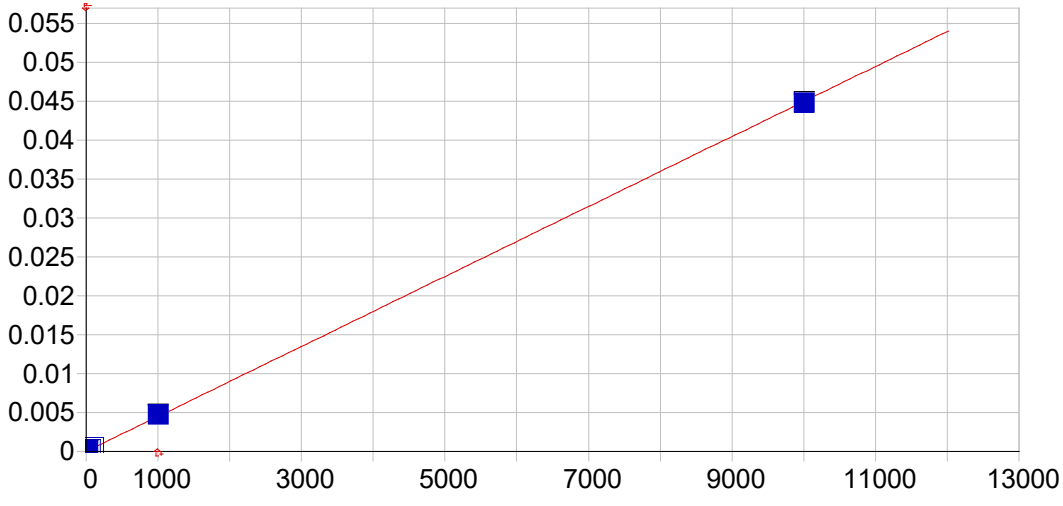


Mn 259.373 {130}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999724	Status:	OK.
Std Error of Est:	0.000107		
Predicted MDL:	0.582115		
Predicted MQL:	1.940382		

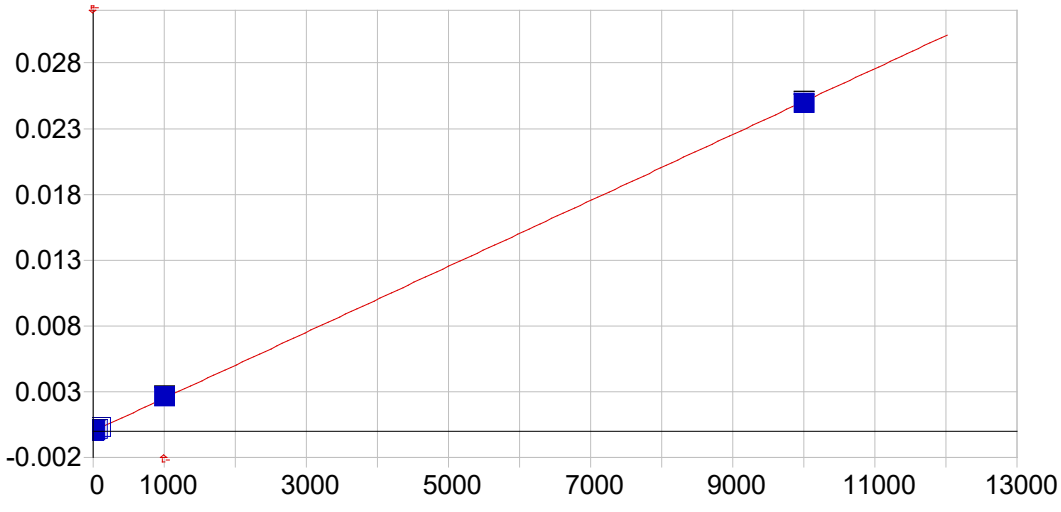
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.08788	.088	.000	.00000	.000	1
CalStd10=10	10000.	9258.9	-741.	-7.41	.08936	.000	1
CalStd9=100	1000.0	978.61	-21.4	-2.14	.00945	.000	1
CalStd12=10	100000.	100760.	762.	.762	.97241	.003	1



Mo 202.030 {466}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000004		Re-Slope:	1.000000	
A1 (Gain):	0.000004		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999892		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.510949				
Predicted MQL:	1.703163				

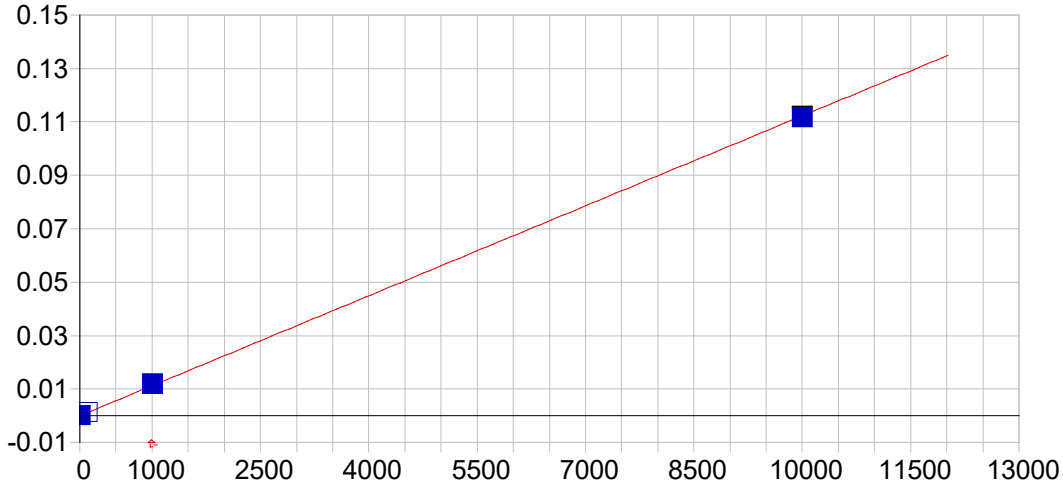
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00153	-.002	.000	.00000	.000	1
CalStd7=50	50.000	52.183	2.18	4.37	.00024	.000	1
CalStd6=20	20.000	21.230	1.23	6.15	.00010	.000	1
CalStd5=10	10.000	10.254	.254	2.54	.00005	.000	1
CalStd8=100	100.00	102.17	2.17	2.17	.00046	.000	1
CalStd4=5	5.0000	5.5731	.573	11.5	.00003	.000	1
CalStd9=100	1000.0	1043.3	43.3	4.33	.00470	.000	1
CalStd10=10	10000.	9950.3	-49.7	-.497	.04477	.000	1



Mo 204.598 {464}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999882		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	1.025727				
Predicted MQL:	3.419090				

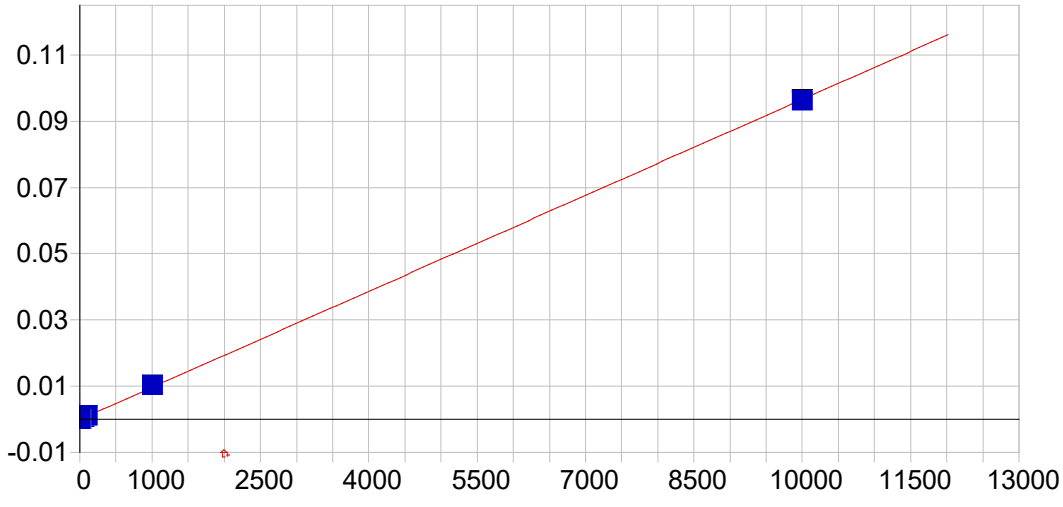
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00201	-.002	.000	.00000	.000	1
CalStd7=50	50.000	52.210	2.21	4.42	.00013	.000	1
CalStd6=20	20.000	20.603	.603	3.01	.00005	.000	1
CalStd5=10	10.000	11.276	1.28	12.8	.00003	.000	1
CalStd8=100	100.00	102.89	2.89	2.89	.00026	.000	1
CalStd4=5	5.0000	5.6579	.658	13.2	.00002	.000	1
CalStd9=100	1000.0	1043.8	43.8	4.38	.00262	.000	1
CalStd10=10	10000.	9948.6	-51.4	-.514	.02493	.000	1



Ni 221.647 {452}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000006		Re-Slope:	1.000000	
A1 (Gain):	0.000011		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999866		Status:	OK.	
Std Error of Est:	0.000009				
Predicted MDL:	0.425359				
Predicted MQL:	1.417864				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00899	-.009	.000	-.00001	.000	1
CalStd10=10	10000.	9945.6	-54.4	-.544	.11166	.000	1
CalStd8=100	100.00	104.56	4.56	4.56	.00117	.000	1
CalStd9=100	1000.0	1049.8	49.8	4.98	.01178	.000	1

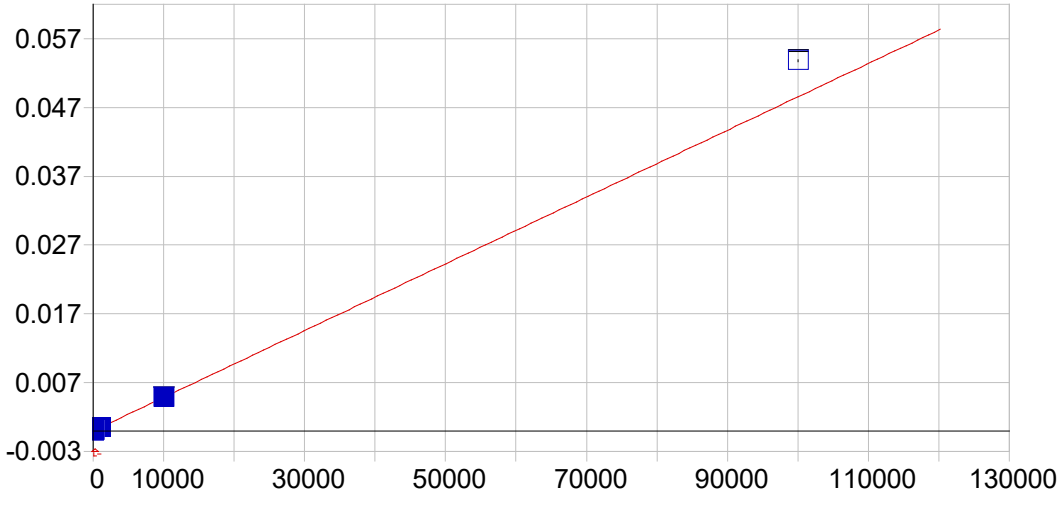


Ni 231.604 {445}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999837	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.458507		
Predicted MQL:	1.528355		

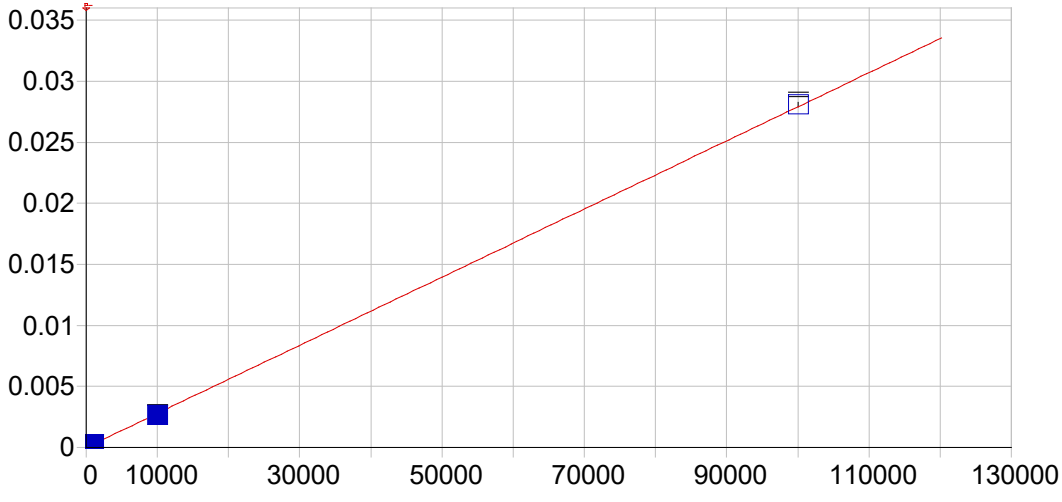
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00037	-.000	.000	-.00000	.000	1
CalStd7=50	50.000	52.914	2.91	5.83	.00051	.000	1
CalStd5=10	10.000	10.907	.907	9.07	.00010	.000	1
CalStd8=100	100.00	104.60	4.60	4.60	.00101	.000	1
CalStd4=5	5.0000	6.2525	1.25	25.1	.00006	.000	1
CalStd9=100	1000.0	1050.0	50.0	5.00	.01013	.000	1
CalStd3=1	1.0000	.87600	-.124	-12.4	.00001	.000	1
CalStd10=10	10000.	9940.6	-59.4	-.594	.09608	.000	1



Pb 216.999 {455}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999970		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	7.299745				
Predicted MQL:	24.332482				

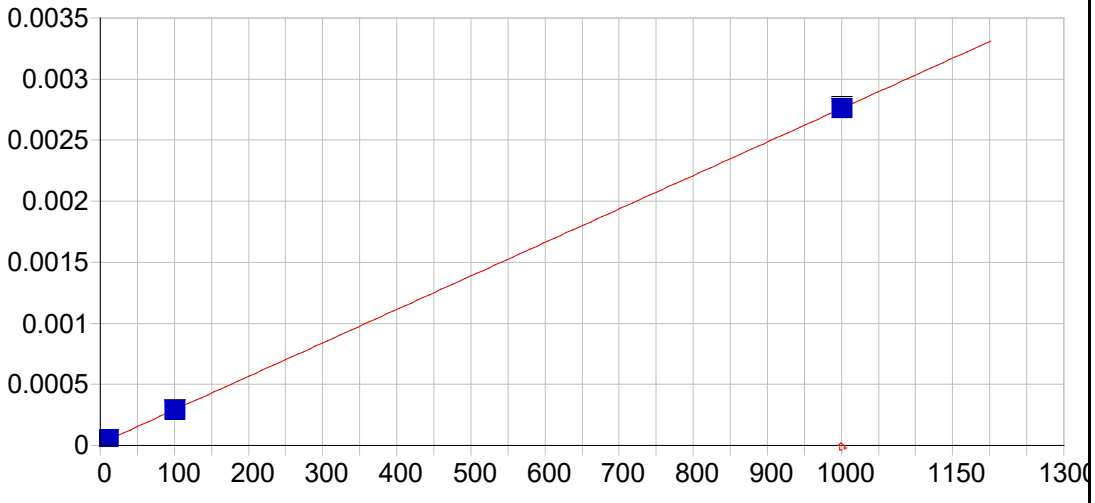
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00412	-.004	.000	.00000	.000	1
CalStd9=100	1000.0	1079.4	79.4	7.94	.00053	.000	1
CalStd10=10	10000.	10015.	15.2	.152	.00488	.000	1
CalStd8=100	100.00	103.08	3.08	3.08	.00005	.000	1
CalStd5=10	10.000	13.126	3.13	31.3	.00001	.000	1
CalStd12=10	100000.	110840.	10800.	10.8	.05380	.000	1



Pb 220.353 {153}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999818		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	1.916183				
Predicted MQL:	6.387276				

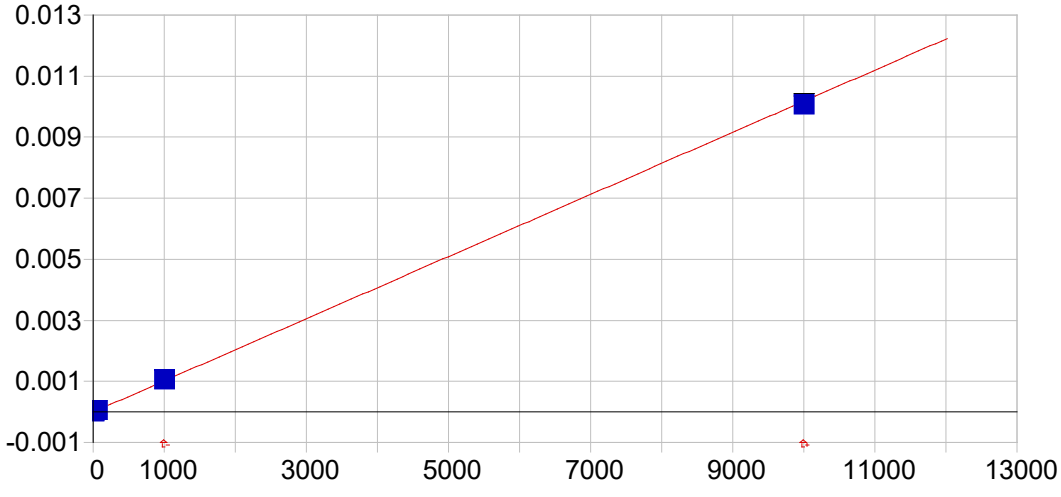
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00644	.006	.000	.00000	.000	1
CalStd9=100	1000.0	982.67	-17.3	-1.73	.00028	.000	1
CalStd10=10	10000.	9396.6	-603.	-6.03	.00262	.000	1
CalStd8=100	100.00	100.71	.709	.709	.00003	.000	1
CalStd12=10	100000.	100620.	620.	.620	.02807	.000	1



Pb 220.353 {453}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000017		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999598		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	1.747476				
Predicted MQL:	5.824919				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00217	-.002	.000	.00002	.000	1
CalStd5=10	10.000	10.351	.351	3.51	.00005	.000	1
CalStd8=100	100.00	98.492	-1.51	-1.51	.00029	.000	1
CalStd4=5	5.0000	7.0739	2.07	41.5	.00004	.000	1
CalStd9=100	1000.0	999.08	-.917	-.092	.00276	.000	1

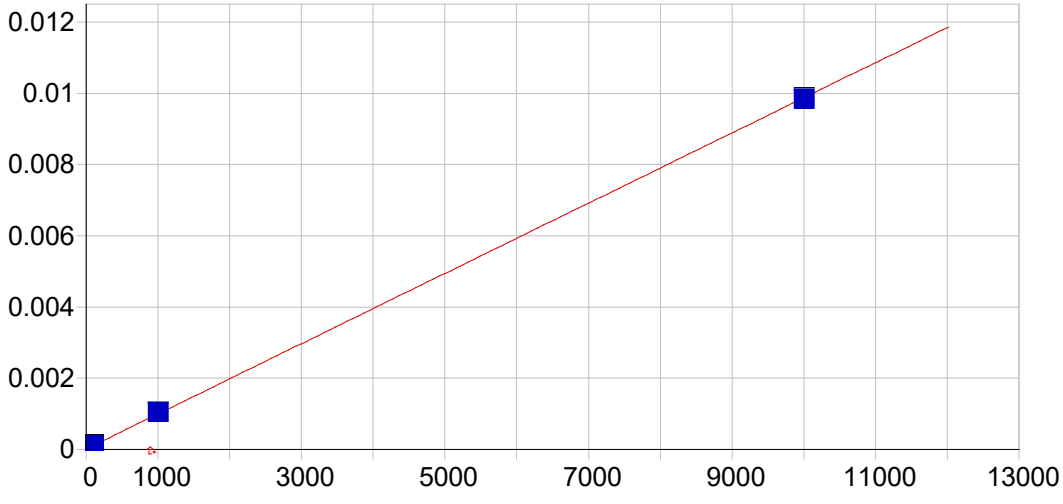


Sb 206.833 {463}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999835	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	2.768049		
Predicted MQL:	9.226829		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.0817	-1.08	.000	-.00000	.000	1
CalStd9=100	1000.0	1027.0	27.0	2.70	.00104	.000	1
CalStd5=10	10.000	8.8123	-1.19	-11.9	.00001	.000	1
CalStd7=50	50.000	49.875	-.125	-.250	.00005	.000	1
CalStd10=10	10000.	9884.4	-116.	-1.16	.01006	.000	1

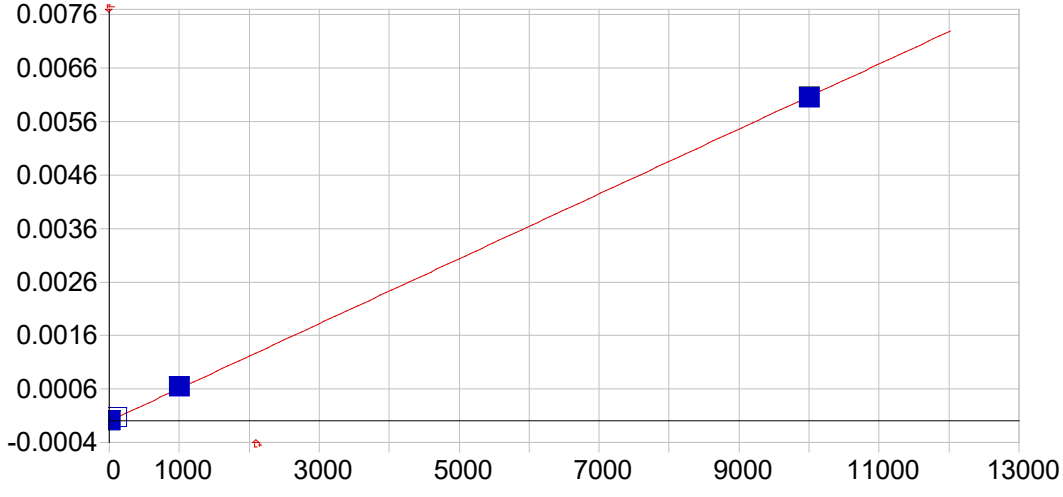


Sb 217.581 {455}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000012	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999908	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.302099		
Predicted MQL:	11.006997		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00144	-.001	.000	.00001	.000	1
CalStd9=100	1000.0	1039.3	39.3	3.93	.00104	.000	1
CalStd6=20	20.000	21.241	1.24	6.21	.00003	.000	1
CalStd5=10	10.000	10.426	.426	4.26	.00002	.000	1
CalStd8=100	100.00	103.87	3.87	3.87	.00011	.000	1
CalStd4=5	5.0000	5.5513	.551	11.0	.00002	.000	1
CalStd10=10	10000.	9954.6	-45.4	-.454	.00983	.000	1

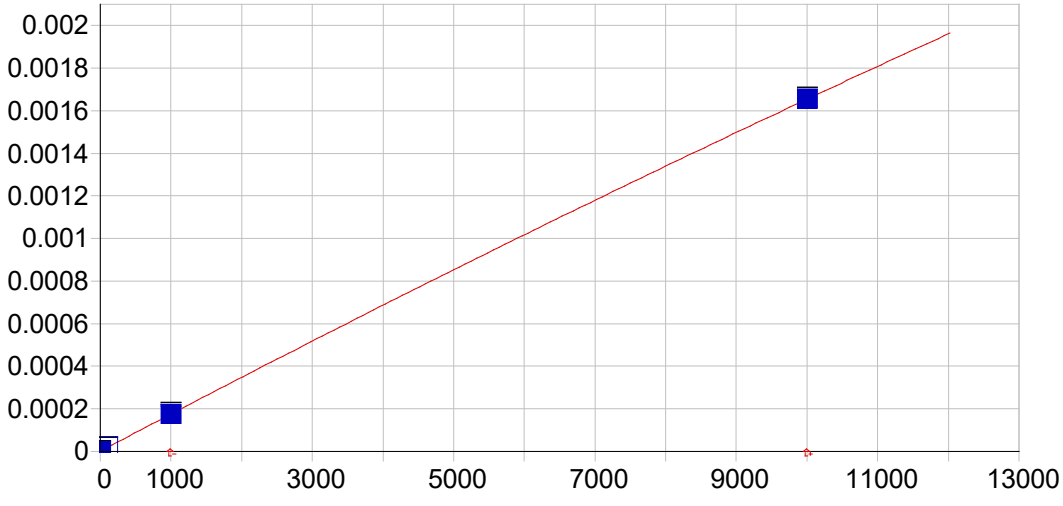


Se 196.090 {472}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999897	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.546972		
Predicted MQL:	11.823242		

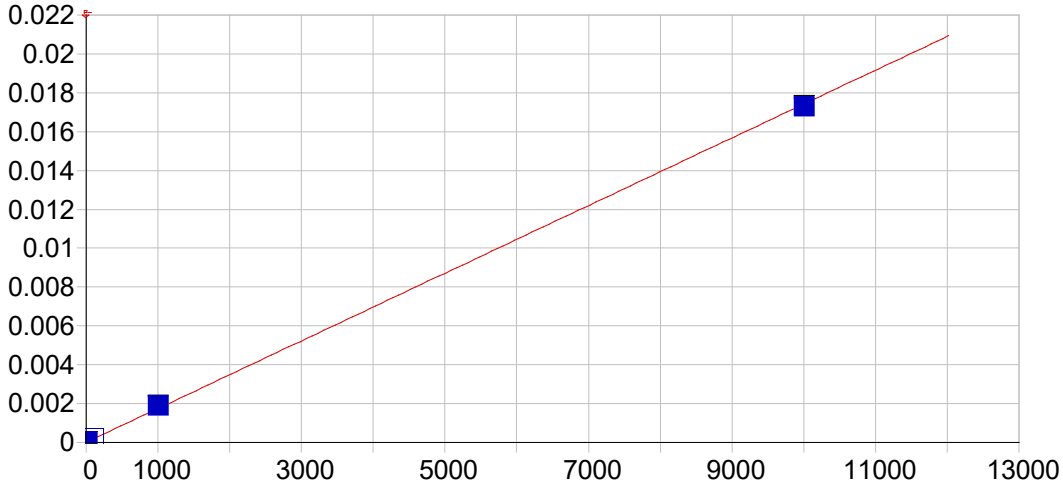
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00060	-.001	.000	.00000	.000	1
CalStd9=100	1000.0	1045.4	45.4	4.54	.00063	.000	1
CalStd5=10	10.000	10.084	.084	.837	.00001	.000	1
CalStd8=100	100.00	101.13	1.13	1.13	.00006	.000	1
CalStd10=10	10000.	9953.4	-46.6	-.466	.00604	.000	1



Se 206.279 {463}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	-0.000000				
n (Exponent):	1.000000				
Correlation:	0.999957		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	17.995433				
Predicted MQL:	59.984775				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00784	-.008	.000	.00000	.000	1
CalStd9=100	1000.0	990.22	-9.78	-.978	.00017	.000	1
CalStd10=10	10000.	10001.	.992	.010	.00166	.000	1
CalStd8=100	100.00	108.81	8.81	8.81	.00002	.000	1

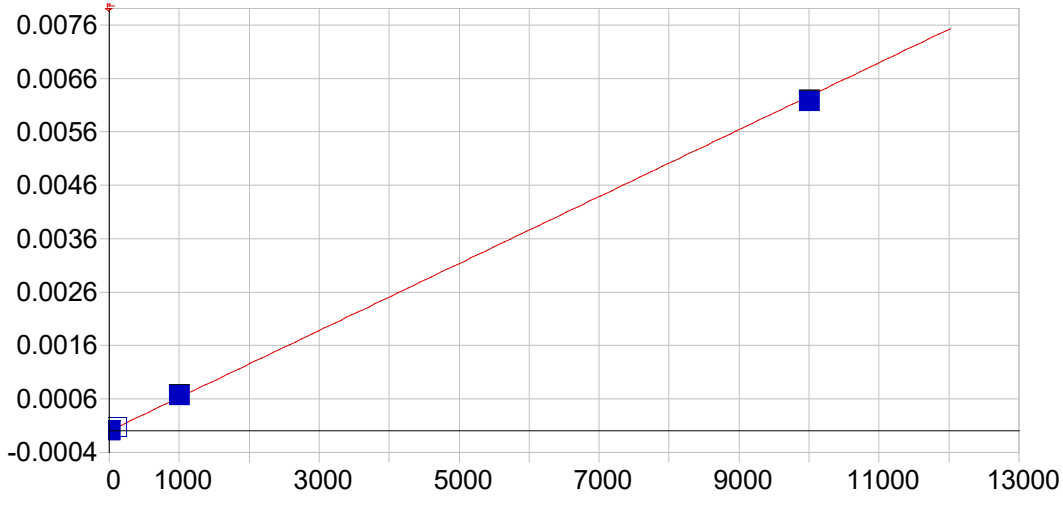


Tl 190.856 {476}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999700	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.780647		
Predicted MQL:	5.935491		

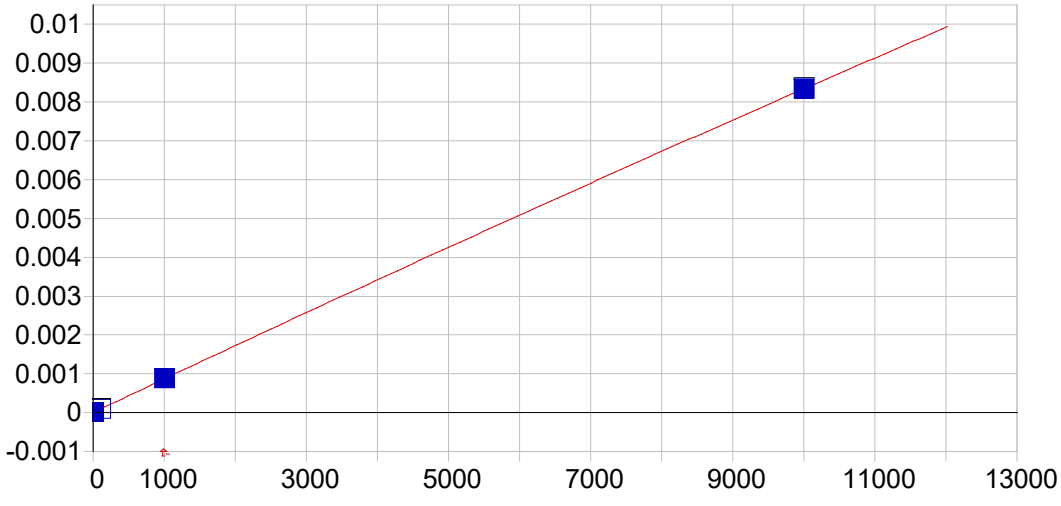
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00200	-.002	.000	.00000	.000	1
CalStd9=100	1000.0	1074.8	74.8	7.48	.00188	.000	1
CalStd8=100	100.00	105.92	5.92	5.92	.00019	.000	1
CalStd5=10	10.000	10.738	.738	7.38	.00002	.000	1
CalStd10=10	10000.	9918.5	-81.5	-.815	.01728	.000	1



Tl 190.856 {477}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000003		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999500		Status:	OK.	
Std Error of Est:	0.000006				
Predicted MDL:	2.505970				
Predicted MQL:	8.353235				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.8820	-2.88	.000	.00000	.000	1
CalStd9=100	1000.0	1057.1	57.1	5.71	.00067	.000	1
CalStd8=100	100.00	103.02	3.02	3.02	.00007	.000	1
CalStd5=10	10.000	6.8691	-3.13	-31.3	.00001	.000	1
CalStd10=10	10000.	9839.4	-161.	-1.61	.00617	.000	1

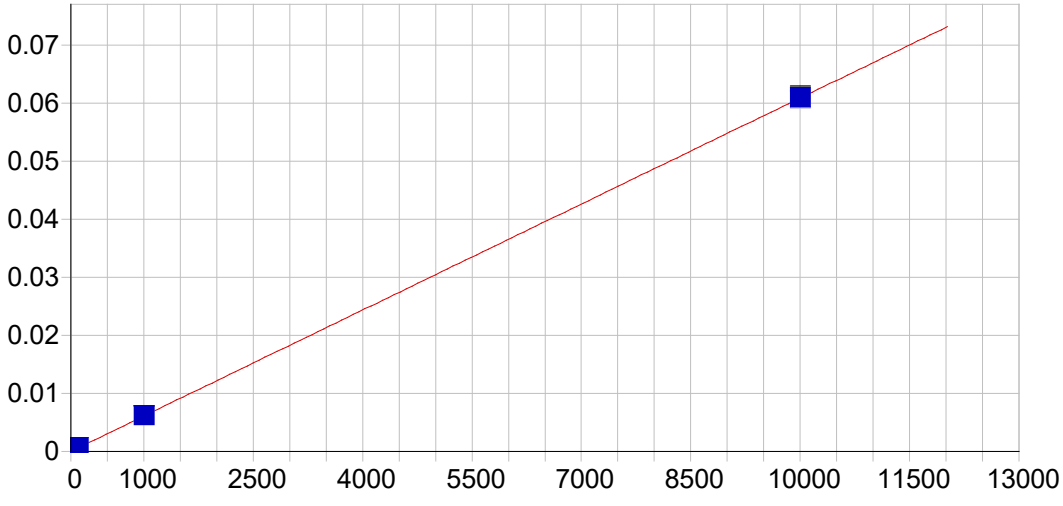


V 290.882 {116}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	8.073617		
Predicted MQL:	26.912058		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.8308	-1.83	.000	.00000	.000	1
CalStd9=100	1000.0	998.89	-1.11	-.111	.00087	.000	1
CalStd10=10	10000.	10000.	.063	.001	.00834	.000	1
CalStd8=100	100.00	100.24	.238	.238	.00009	.000	1

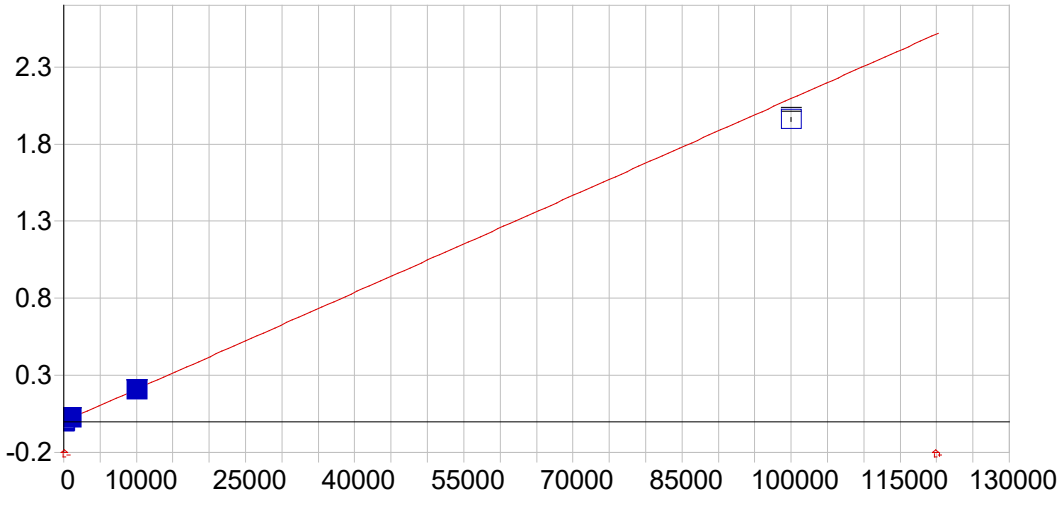


V 292.402 {115}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.374660		
Predicted MQL:	1.248866		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00014	-.000	.000	.00001	.000	1
CalStd7=50	50.000	50.365	.365	.730	.00032	.000	1
CalStd9=100	1000.0	1007.2	7.21	.721	.00612	.000	1
CalStd6=20	20.000	20.122	.122	.611	.00014	.000	1
CalStd5=10	10.000	10.078	.078	.780	.00008	.000	1
CalStd8=100	100.00	98.599	-1.40	-1.40	.00061	.000	1
CalStd10=10	10000.	9993.6	-6.37	-.064	.06059	.000	1

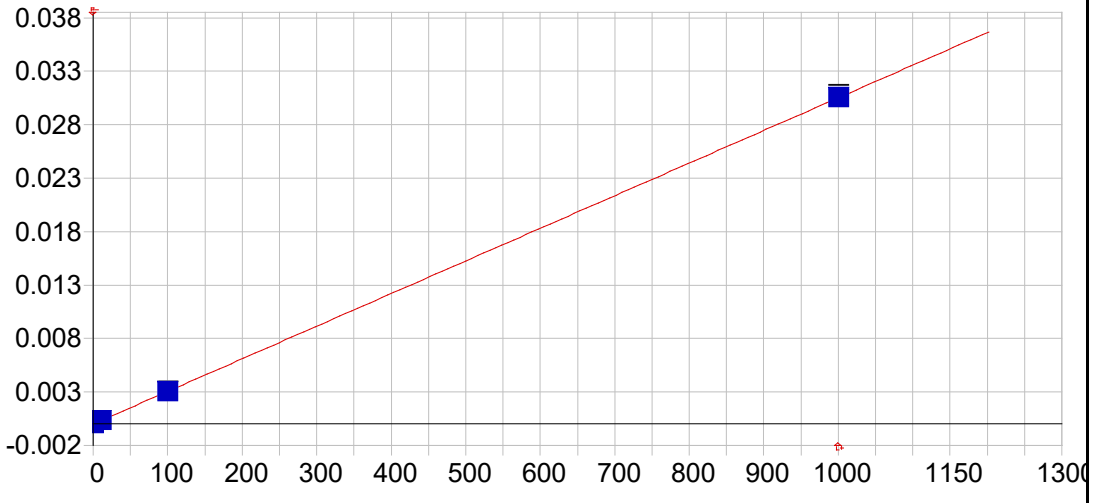


Zn 206.200 {463}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000021	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999265	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.152862		
Predicted MQL:	0.509541		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	9763.8	-236.	-2.36	.20452	.001	1
Blank	.00000	-.37196	-.372	.000	-.00000	.000	1
CalStd9=100	1000.0	1033.1	33.1	3.31	.02165	.000	1
CalStd12=10	100000.	93485.	-6520.	-6.52	1.9581	.012	1
CalStd5=10	10.000	10.398	.398	3.98	.00022	.000	1
CalStd8=100	100.00	102.63	2.63	2.63	.00216	.000	1

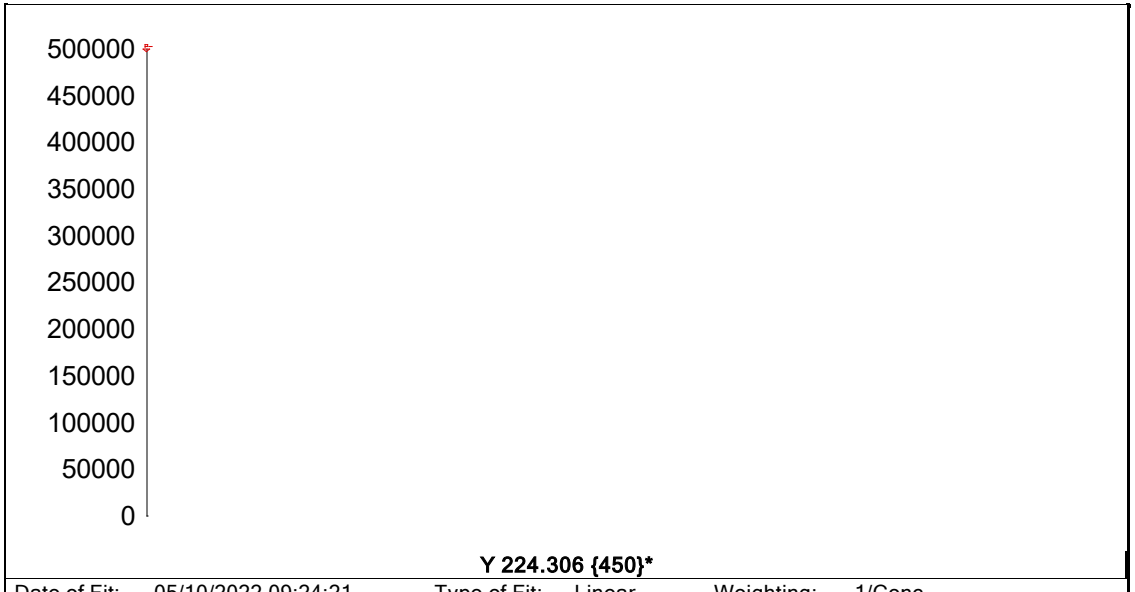


Zn 213.856 {457}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

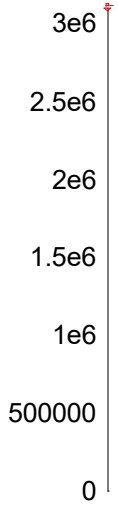
A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000031	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999979	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.116684		
Predicted MQL:	0.388947		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00056	-.001	.000	.00000	.000	1
CalStd9=100	1000.0	1000.1	.138	.014	.03066	.000	1
CalStd5=10	10.000	10.632	.632	6.32	.00033	.000	1
CalStd8=100	100.00	99.232	-.768	-.768	.00304	.000	1



Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

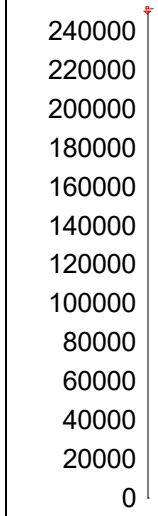
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	452790.	1710.	1



Y 324.228 {104}*

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

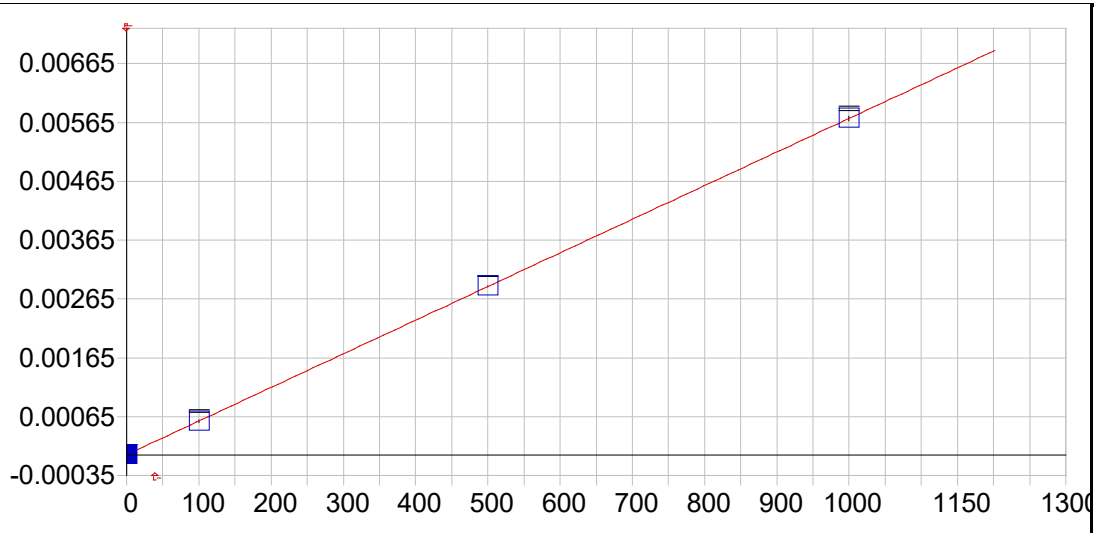
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	2929000.	8640.	1



Y 371.030 { 91}*

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

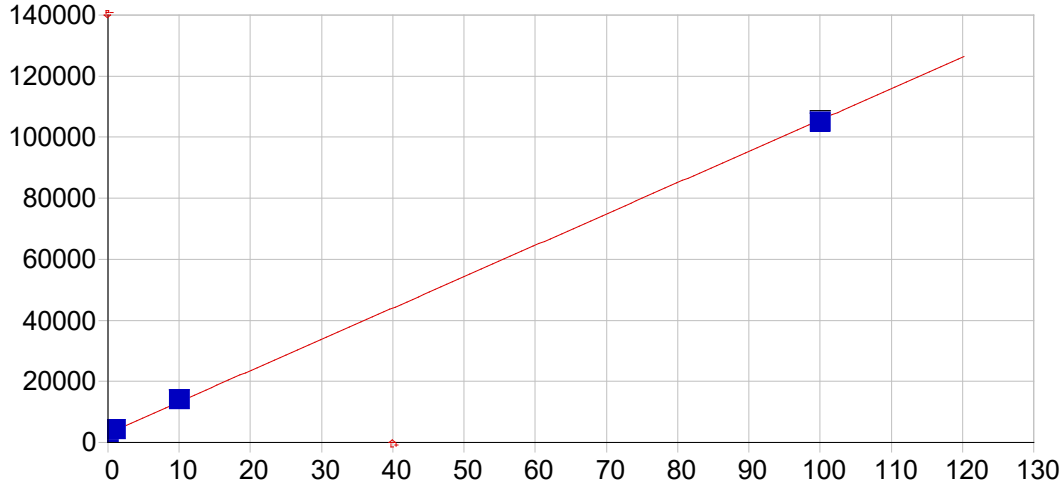
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	234250.	1080.	1



Na 330.237 {102}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000003		Re-Slope:	1.000000	
A1 (Gain):	0.000006		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999997		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	1.938494				
Predicted MQL:	6.461647				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00059	.001	.000	.00000	.000	1
CalStd13=10	100.00	99.208	-.792	-.792	.00057	.000	1
CalibStd15=	1000.0	999.53	-.467	-.047	.00572	.000	1
CalStd14=50	500.00	501.26	1.26	.252	.00287	.000	1

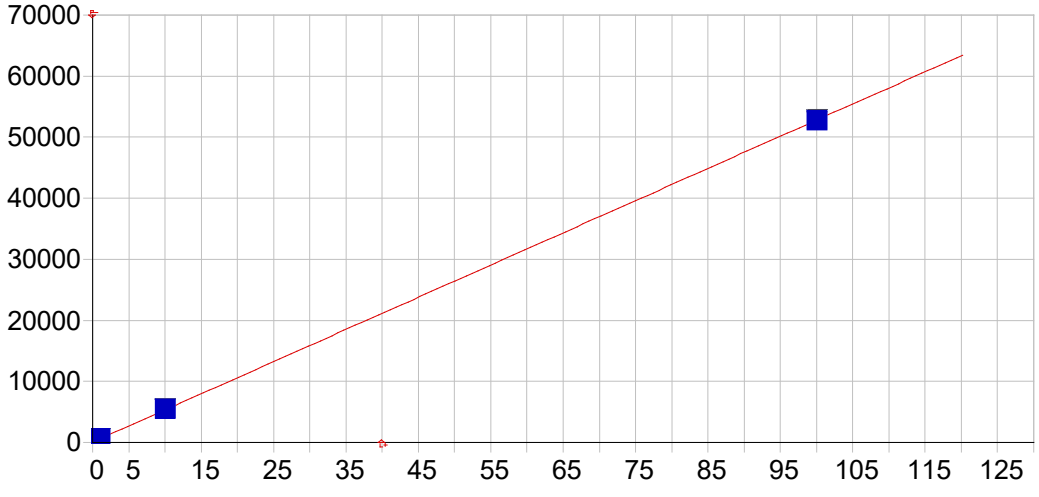


Na 588.995 { 57}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	3014.698306	Re-Slope:	1.000000
A1 (Gain):	1026.036912	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999751	Status:	OK.
Std Error of Est:	10.782376		
Predicted MDL:	0.011862		
Predicted MQL:	0.039538		

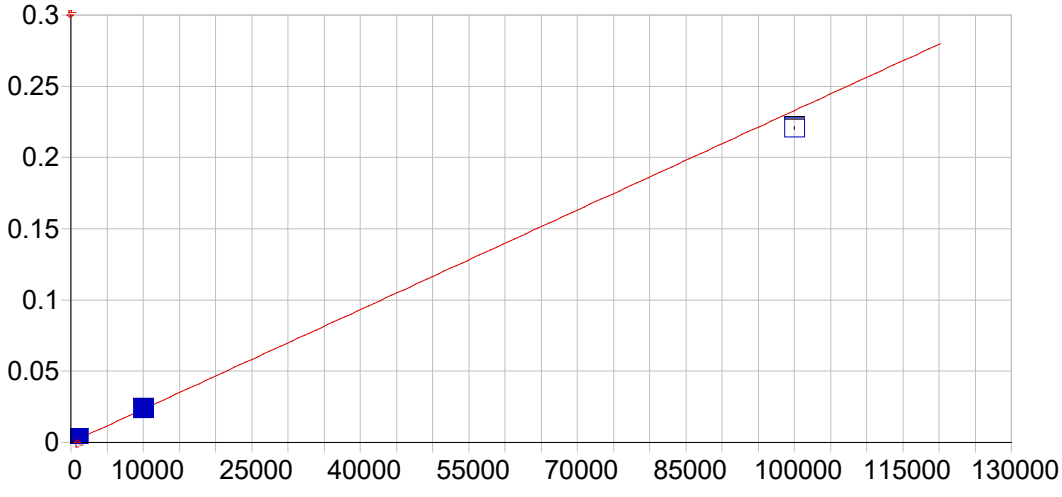
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00017	-.000	.000	3014.5	21.2	1
CalStd9=100	1.0000	1.1118	.112	11.2	4155.7	32.4	1
CalStd10=10	10.000	10.612	.612	6.12	13905.	19.4	1
CalStd13=10	100.00	99.276	-.724	-.724	104900.	341.	1



Na 589.592 { 57}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	48.399591		Re-Slope:	1.000000	
A1 (Gain):	527.457305		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999977		Status:	OK.	
Std Error of Est:	1.689053				
Predicted MDL:	0.014526				
Predicted MQL:	0.048419				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00005	-.000	.000	48.376	8.05	1
CalStd9=100	1.0000	1.0281	.028	2.81	591.09	8.35	1
CalStd10=10	10.000	10.196	.196	1.96	5430.6	13.5	1
CalStd13=10	100.00	99.776	-.224	-.224	52719.	192.	1

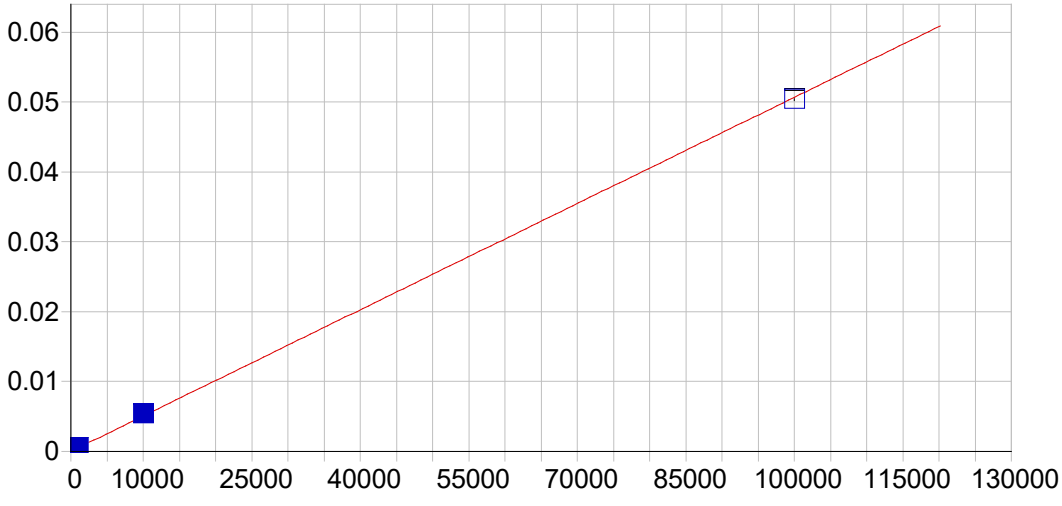


Si 212.412 {458}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000017	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999170	Status:	OK.
Std Error of Est:	0.000081		
Predicted MDL:	1.445412		
Predicted MQL:	4.818039		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.4036	-3.40	.000	.00001	.000	1
CalStd9=100	1000.0	1060.6	60.6	6.06	.00249	.000	1
CalibStd15=	100000.	94784.	-5220.	-5.22	.22079	.001	1
CalStd10=10	10000.	10189.	189.	1.89	.02375	.000	1

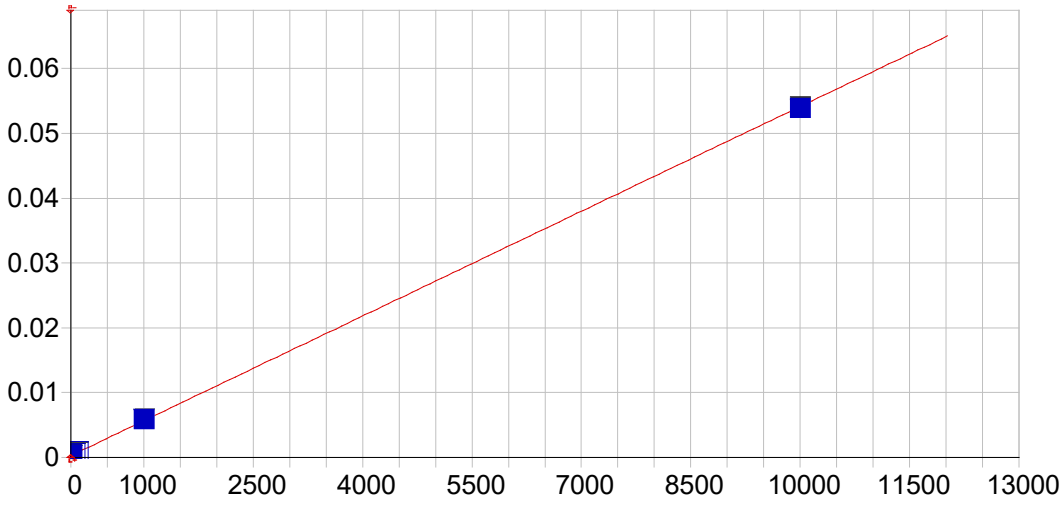


Si 251.611 {134}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999809	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	10.348099		
Predicted MQL:	34.493665		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.14699	-.147	.000	.00001	.000	1
CalStd9=100	1000.0	1100.0	100.0	10.00	.00056	.000	1
CalibStd15=	100000.	99367.	-633.	-.633	.05036	.000	1
CalStd10=10	10000.	10534.	534.	5.34	.00534	.000	1

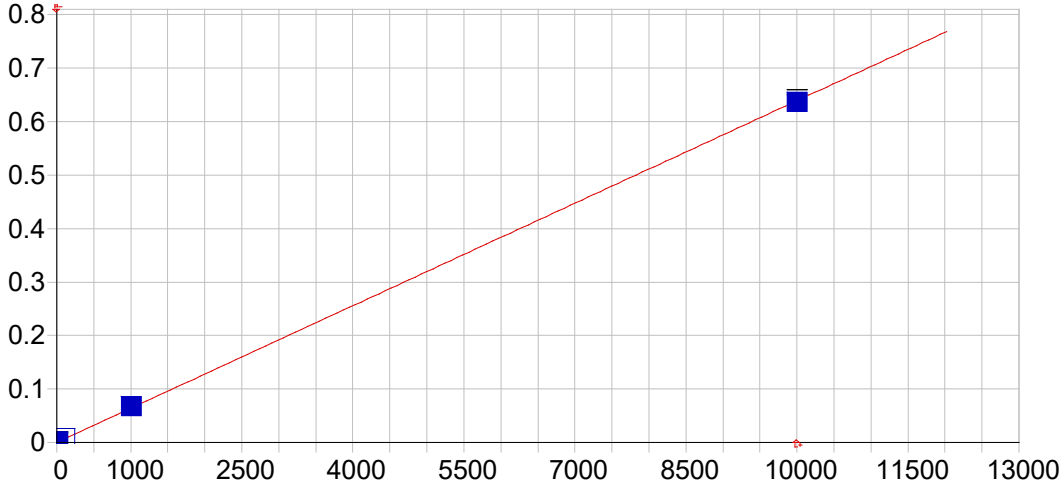


Ti 323.452 {104}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000275	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999609	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	2.281533		
Predicted MQL:	7.605111		

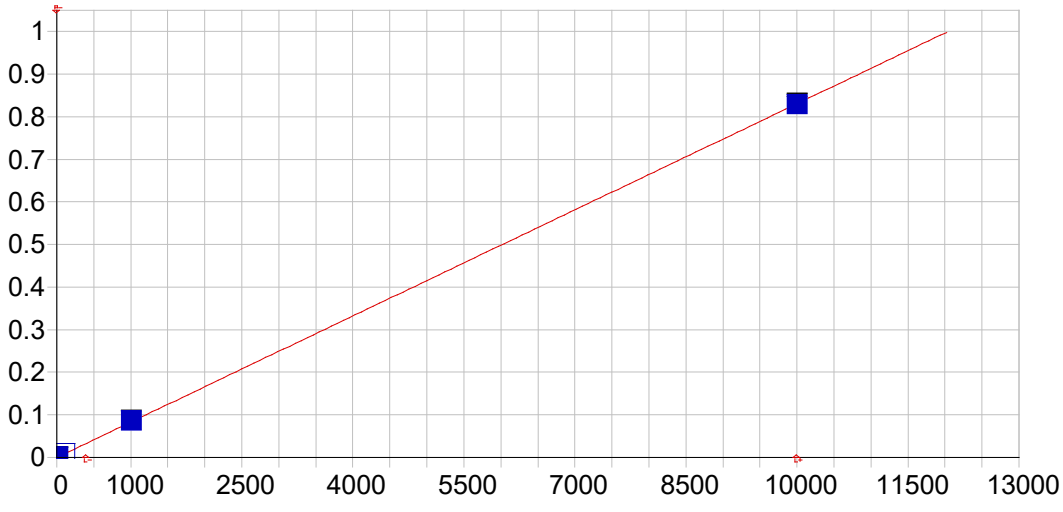
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00771	-.008	.000	.00027	.000	1
CalStd5=10	10.000	14.679	4.68	46.8	.00035	.000	1
CalStd8=100	100.00	105.03	5.03	5.03	.00084	.000	1
CalStd9=100	1000.0	1035.8	35.8	3.58	.00586	.000	1
CalStd10=10	10000.	9942.9	-57.1	-.571	.05385	.000	1
CalStd7=50	50.000	57.355	7.36	14.7	.00058	.000	1
CalStd4=5	5.0000	9.2366	4.24	84.7	.00032	.000	1



Sr 407.771 { 83}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000128		Re-Slope:	1.000000	
A1 (Gain):	0.000064		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999897		Status:	OK.	
Std Error of Est:	0.000004				
Predicted MDL:	0.242595				
Predicted MQL:	0.808650				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00053	-.001	.000	.00013	.000	1
CalStd3=1	1.0000	1.2893	.289	28.9	.00021	.000	1
CalStd4=5	5.0000	5.4962	.496	9.92	.00048	.000	1
CalStd5=10	10.000	10.640	.640	6.40	.00081	.000	1
CalStd8=100	100.00	103.60	3.60	3.60	.00675	.000	1
CalStd9=100	1000.0	1042.1	42.1	4.21	.06672	.000	1
CalStd10=10	10000.	9952.9	-47.1	-.471	.63610	.004	1

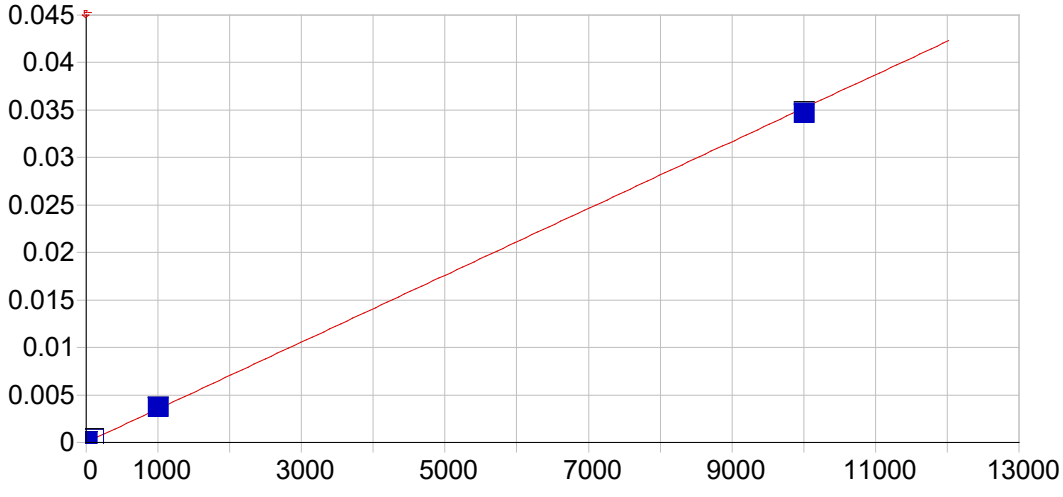


Sr 421.552 { 80}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000075	Re-Slope:	1.000000
A1 (Gain):	0.000083	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.197430		
Predicted MQL:	0.658101		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00007	-.000	.000	.00008	.000	1
CalStd3=1	1.0000	.93923	-.061	-6.08	.00015	.000	1
CalStd4=5	5.0000	5.2744	.274	5.49	.00051	.000	1
CalStd5=10	10.000	10.206	.206	2.06	.00092	.000	1
CalStd8=100	100.00	102.45	2.45	2.45	.00858	.000	1
CalStd9=100	1000.0	1030.6	30.6	3.06	.08566	.001	1
CalStd10=10	10000.	9966.6	-33.4	-.334	.82778	.003	1

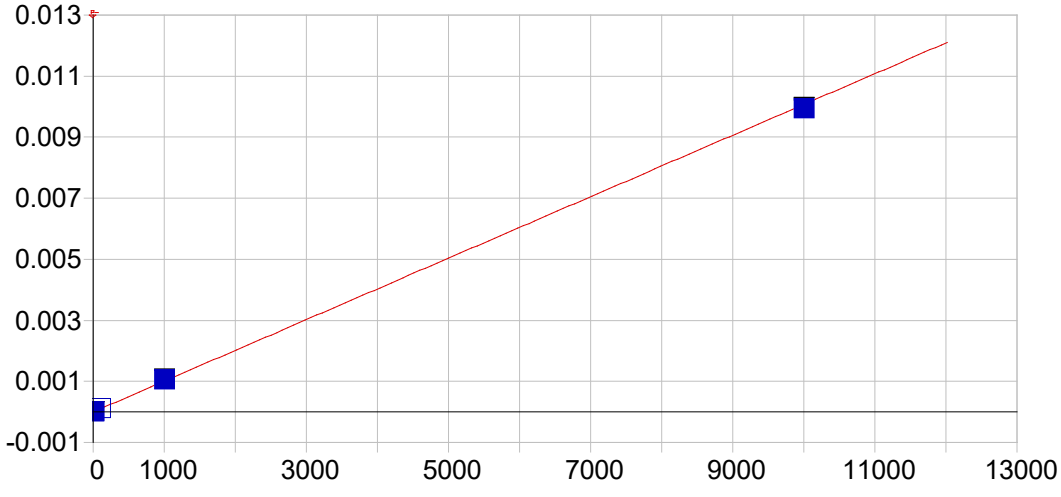


Sn 189.989 {477}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999704	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.633440		
Predicted MQL:	2.111468		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.2926	-1.29	.000	.00000	.000	1
CalStd10=10	10000.	9853.9	-146.	-1.46	.03468	.000	1
CalStd9=100	1000.0	1040.8	40.8	4.08	.00367	.000	1
CalStd8=100	100.00	101.66	1.66	1.66	.00037	.000	1
CalStd5=10	10.000	10.294	.294	2.94	.00005	.000	1

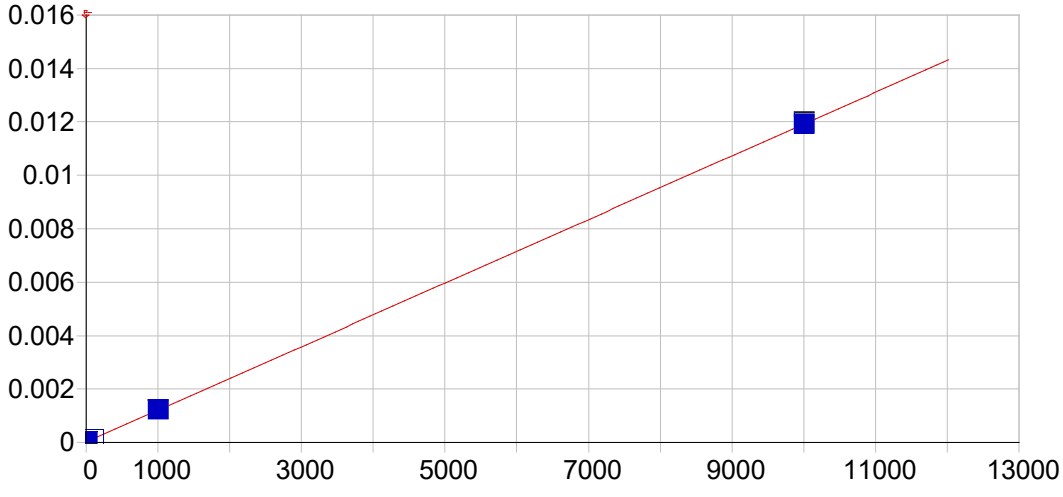


Sn 189.989 {478}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999695	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	1.604221		
Predicted MQL:	5.347403		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.90076	-.901	.000	.00000	.000	1
CalStd10=10	10000.	9863.8	-136.	-1.36	.00993	.000	1
CalStd9=100	1000.0	1044.5	44.5	4.45	.00105	.000	1
CalStd8=100	100.00	102.93	2.93	2.93	.00010	.000	1
CalStd5=10	10.000	10.685	.685	6.85	.00001	.000	1

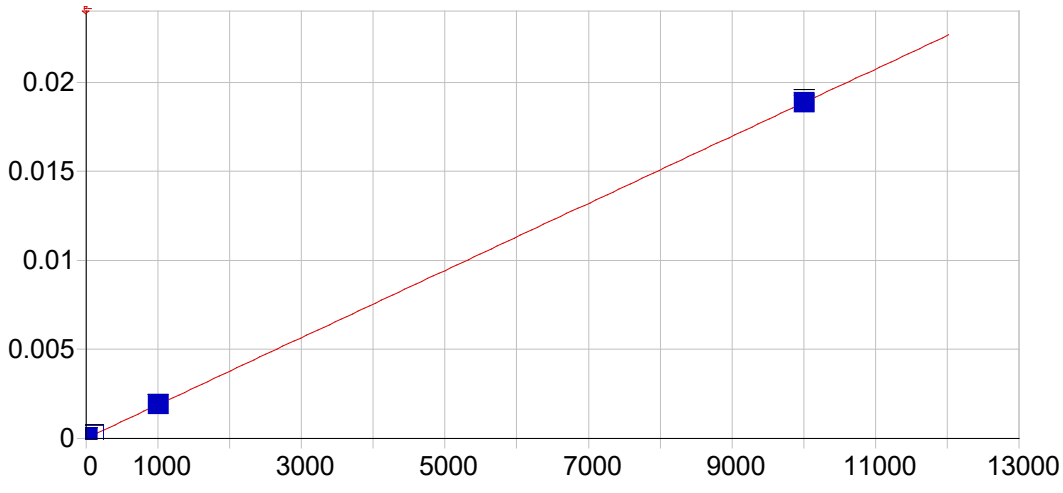


B 249.678 {135}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000012	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.100258		
Predicted MQL:	3.667527		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00030	.000	.000	.00001	.000	1
CalStd8=100	100.00	97.185	-2.81	-2.81	.00013	.000	1
CalStd5=10	10.000	9.9297	-.070	-.703	.00002	.000	1
CalStd9=100	1000.0	1005.2	5.17	.517	.00121	.000	1
CalStd10=10	10000.	9997.7	-2.28	-.023	.01192	.000	1

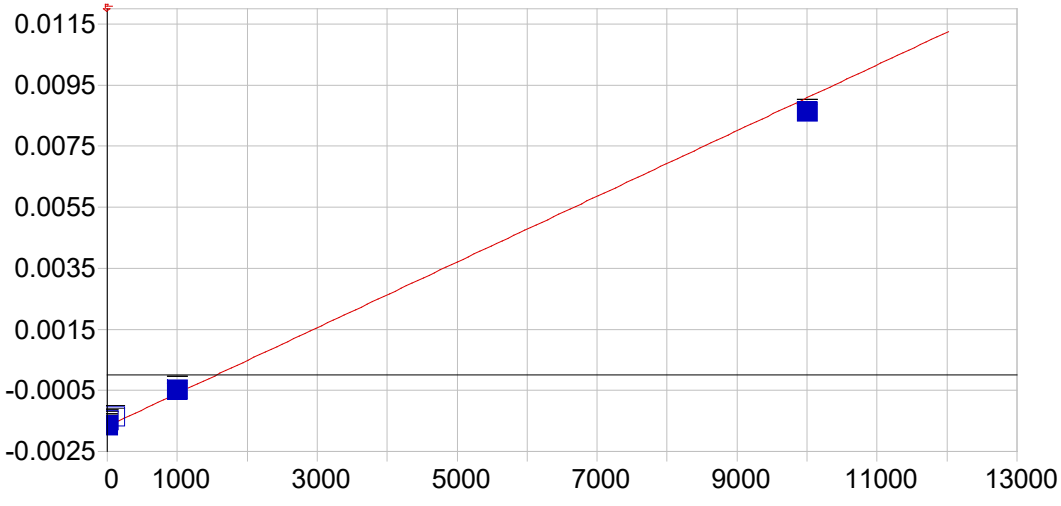


B 249.773 {135}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.609186		
Predicted MQL:	2.030621		

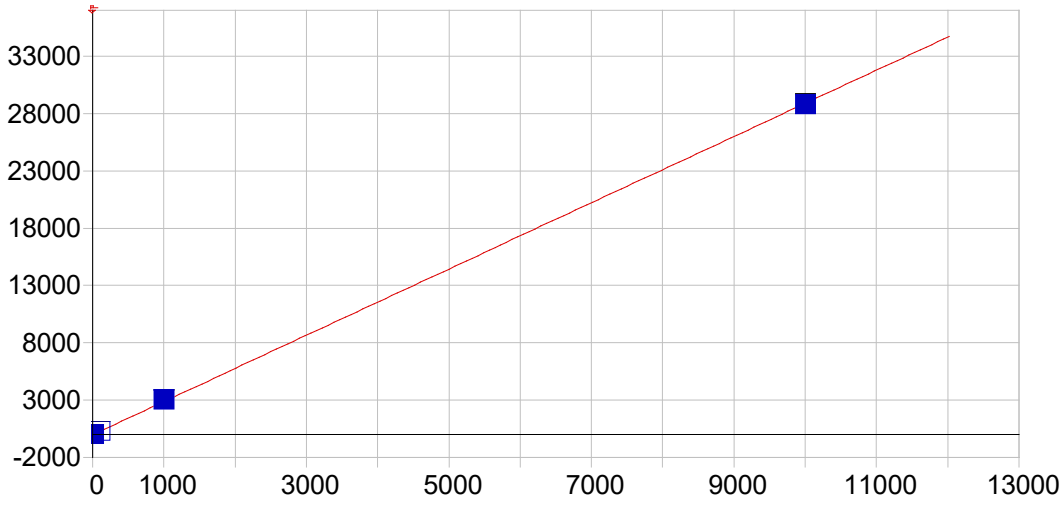
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00022	.000	.000	.00001	.000	1
CalStd8=100	100.00	98.989	-1.01	-1.01	.00019	.000	1
CalStd5=10	10.000	9.8519	-.148	-1.48	.00003	.000	1
CalStd9=100	1000.0	1002.6	2.61	.261	.00190	.000	1
CalStd10=10	10000.	9998.6	-1.45	-.014	.01886	.000	1



Li 610.353 { 55}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.001673		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.887876		Status:	OK.	
Std Error of Est:	0.000008				
Predicted MDL:	49.685459				
Predicted MQL:	165.618197				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.18066	-.181	.000	-.00167	.000	1
CalStd5=10	10.000	172.56	163.	1630.	-.00149	.000	1
CalStd8=100	100.00	275.06	175.	175.	-.00138	.000	1
CalStd9=100	1000.0	1103.1	103.	10.3	-.00049	.000	1
CalStd10=10	10000.	9559.3	-441.	-4.41	.00861	.000	1

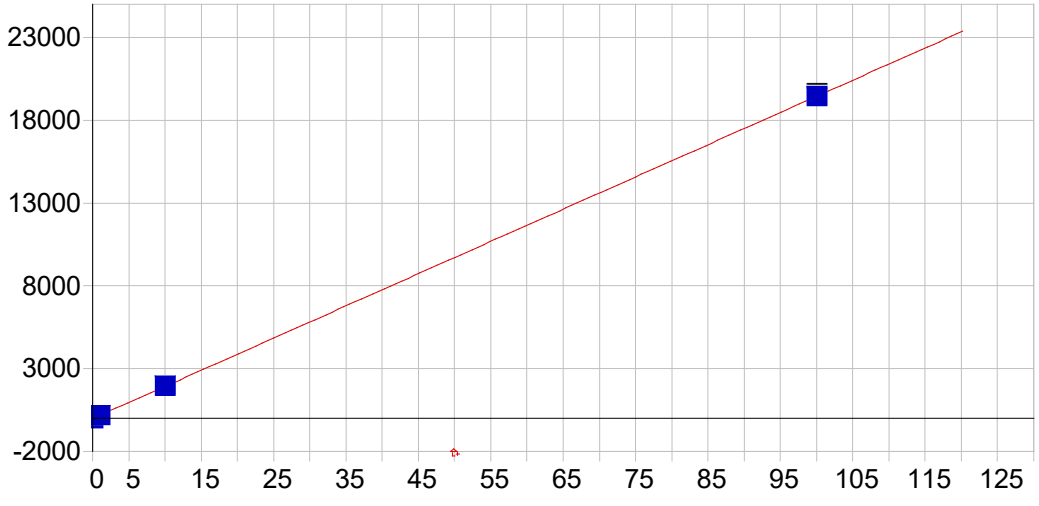


Li 670.776 { 50}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-13.747537	Re-Slope:	1.000000
A1 (Gain):	2.889610	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999871	Status:	OK.
Std Error of Est:	0.630661		
Predicted MDL:	2.402288		
Predicted MQL:	8.007626		

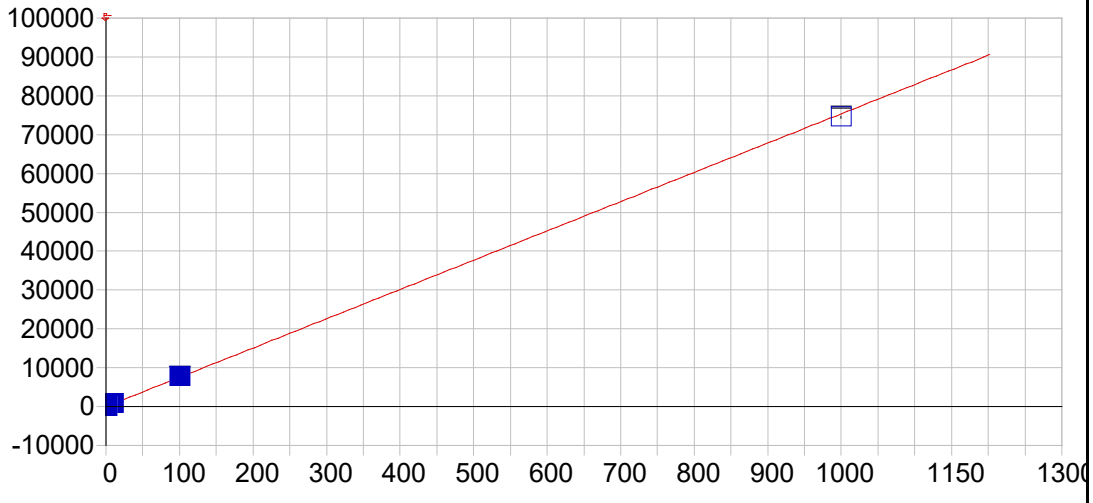
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00250	.002	.000	-13.740	2.63	1
CalStd5=10	10.000	7.1202	-2.88	-28.8	6.8270	6.99	1
CalStd8=100	100.00	99.919	-.081	-.081	274.98	2.54	1
CalStd9=100	1000.0	1043.2	43.2	4.32	3000.8	14.8	1
CalStd10=10	10000.	9959.7	-40.3	-.403	28766.	58.4	1



K 766.490 { 44}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-25.225853		Re-Slope:	1.000000	
A1 (Gain):	194.668728		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999989		Status:	OK.	
Std Error of Est:	0.438948				
Predicted MDL:	0.040705				
Predicted MQL:	0.135685				

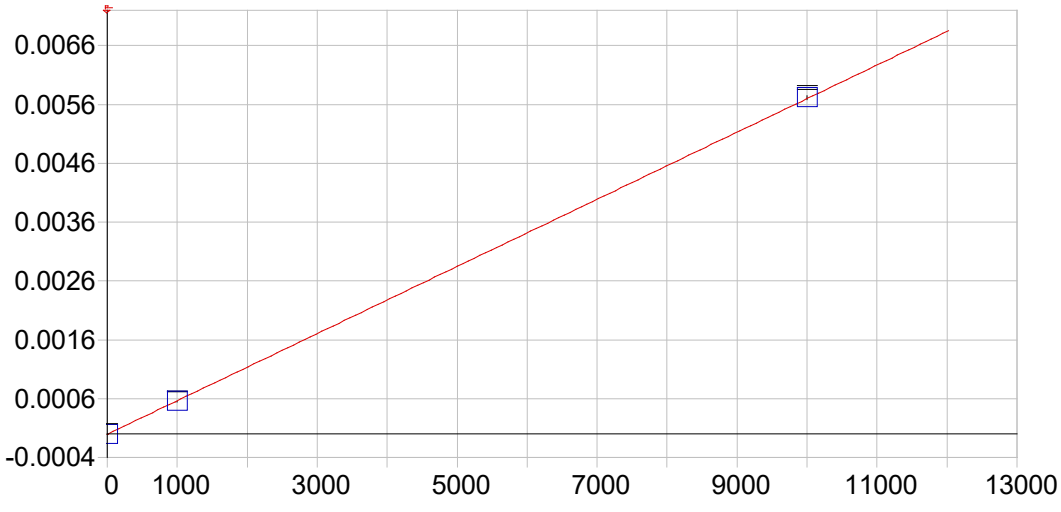
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00001	.000	.000	-25.223	2.97	1
CalStd9=100	1.0000	.97412	-.026	-2.59	164.99	4.93	1
CalStd10=10	10.000	10.133	.133	1.33	1953.1	8.52	1
CalStd13=10	100.00	99.893	-.107	-.107	19479.	118.	1



K 769.896 { 44}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	4.004528		Re-Slope:	1.000000	
A1 (Gain):	75.355169		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999742		Status:	OK.	
Std Error of Est:	37.298057				
Predicted MDL:	0.085581				
Predicted MQL:	0.285271				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.25049	-.250	.000	-14.871	3.63	1
CalStd10=10	10.000	10.494	.494	4.94	795.54	5.40	1
CalibStd15=	1000.0	988.46	-11.5	-1.15	74489.	198.	1
CalStd13=10	100.00	101.48	1.48	1.48	7658.4	34.3	1
CalStd9=100	1.0000	1.0770	.077	7.70	85.234	8.25	1

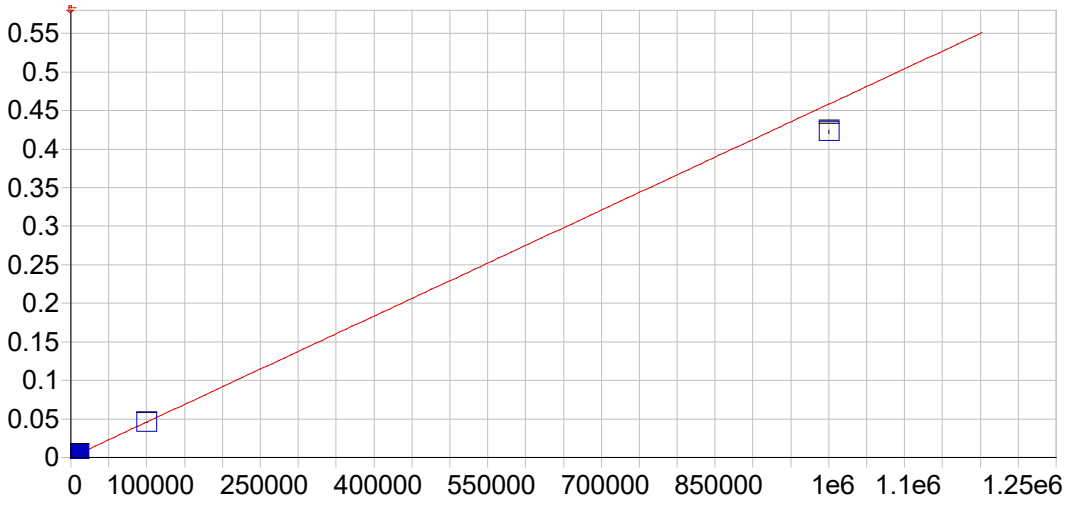


P 177.495 {489}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999961	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	2.251268		
Predicted MQL:	7.504227		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.02522	.025	.000	-.00001	.000	1
CalStd10=10	10000.	10028.	28.0	.280	.00571	.000	1
CalStd9=100	1000.0	971.98	-28.0	-2.80	.00055	.000	1

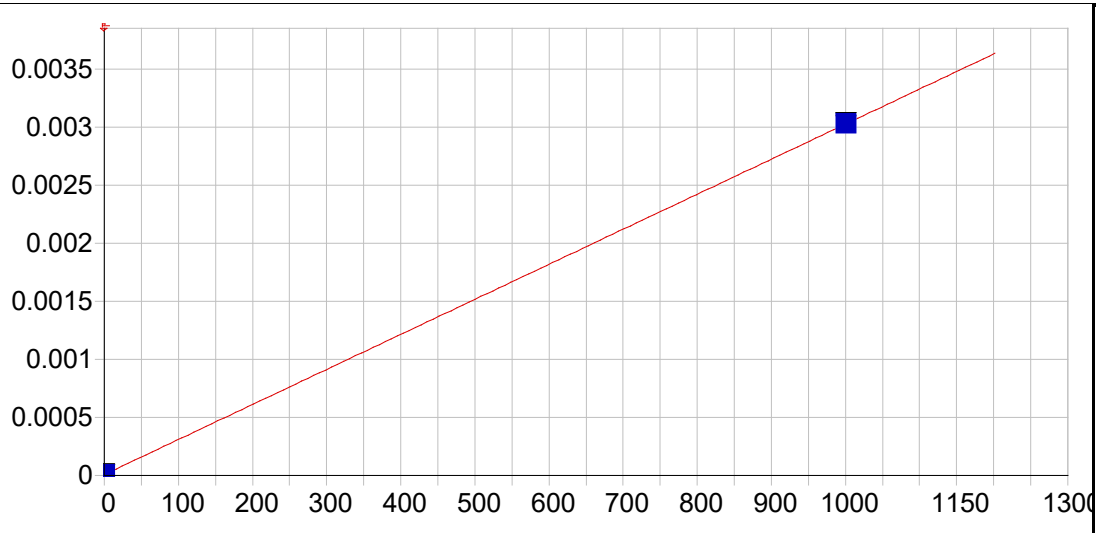


S 182.034 {485}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000019	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	3.717848		
Predicted MQL:	12.392827		

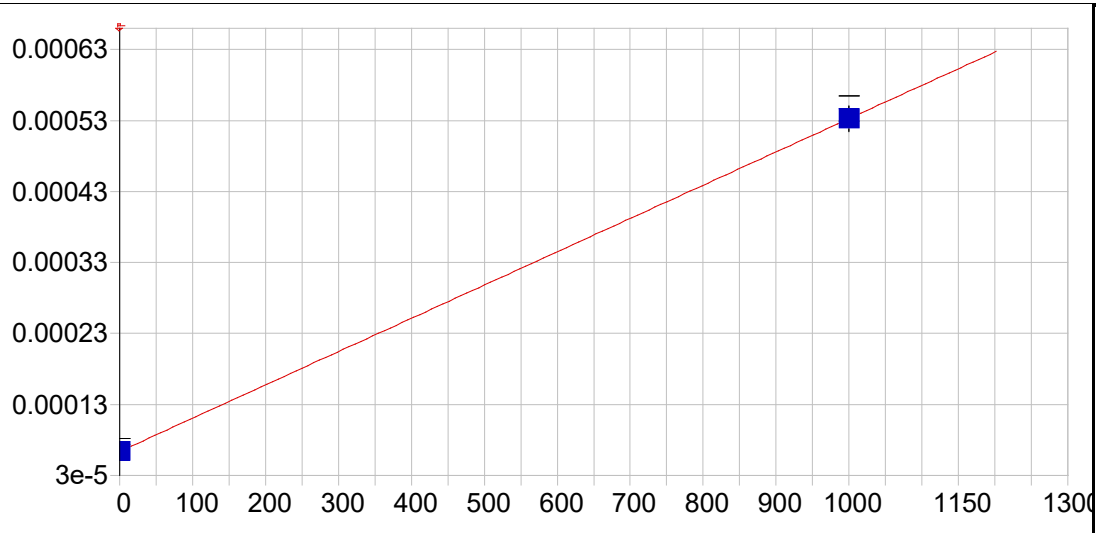
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.04928	.049	.000	.00002	.000	1
CalStd9=100	1000.0	963.13	-36.9	-3.69	.00046	.000	1
CalStd10=10	10000.	9847.4	-153.	-1.53	.00454	.000	1
CalibStd15=	1000000.	921820.	-78200.	-7.82	.42245	.002	1
CalStd13=10	100000.	99419.	-581.	-.581	.04558	.000	1



Hg 184.950 {482}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000008		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.592781				
Predicted MQL:	1.975937				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00001	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00302	.000	1



Ce 404.076 { 83}

Date of Fit:	05/10/2022 09:24:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000064		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	33.453712				
Predicted MQL:	111.512374				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00006	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00053	.000	1

Sample Name: Blank Acquired: 05/09/2022 07:32:55 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3158	Ca3933
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**52.8**	**.000**	**.000**	**.000**	**.000**	**-.000**	**-.000**	**.015**	**-.000**	**.000**	**.000**	**-.000**
Stddev	.000	1.0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	4.16	1.85	12.7	2.75	195.	26.6	19.4	29.2	.685	32.2	6.42	4.92	113.

Elem	Ca3968	Cd2265	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**-.000**	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**	**.000**	**-.000**	**-.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	435.	101.	180.	45.8	44.3	21.5	28.6	60.2	4.48	60.6	340.	11.8	155.

Elem	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**-.000**	**.000**	**.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.01	5.32	111.	27.3	174.	71.9	180.	212.	32.6	223.	8.17	261.	80.5

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na3302	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**-.000**	**.000**	**.000**	**48.4**	**-25.2**	**-14.9**
Stddev	.000	.000	.000	.000	.000	8.1	3.0	3.6
%RSD	39.7	11.6	118.	112.	167.	16.6	11.8	24.4

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**452790.**	**2929000.**	**234250.**
Stddev	1709.	8635.	1079.
%RSD	.37740	.29481	.46046

Sample Name: CalStd2=0.5 Acquired: 05/09/2022 07:40:19 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Be2348	Be3130	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000
%RSD	344.	1.32	30.5	52.4

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**443030.**	**2844100.**	**228550.**
Stddev	1320.	15451.	804.
%RSD	.29795	.54326	.35163

Sample Name: CalStd3=1 Acquired: 05/09/2022 07:47:44 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	5.79	18.7	38.3	.784	5.93	42.3	20.4	20.2	44.9

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**439460.**	**2859000.**	**228880.**
Stddev	2696.	24252.	263.
%RSD	.61356	.84826	.11469

Sample Name: CalStd4=5 Acquired: 05/09/2022 07:55:06 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.57	3.24	7.69	1.01	1.91	10.9	5.24	5.34	8.65	.871	5.04	11.2	4.09

Elem	Pb2203	Sb2175
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	11.6	8.90

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**441920.**	**2820800.**	**228410.**
Stddev	1972.	30558.	214.
%RSD	.44616	1.0833	.09354

Sample Name: CalStd5=10 Acquired: 05/09/2022 08:02:27 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Be2348	Be3130	Cd2265	Cd2288	Co2286	Cr2055
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**102.**	**.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**.001**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	5.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	3.81	5.26	2.22	2.16	10.4	91.8	2.19	6.23	.913	1.65	3.02	2.36	2.25

Elem	Cr2677	Cu2230	Mn2576	Mo2020	Mo2045	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.62	6.30	1.01	1.96	6.84	4.14	39.5	3.14	16.7	11.8	21.2	11.9	2.28

Elem	Zn2062	Zn2138
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	1.75	.957

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**439840.**	**2833300.**	**227180.**
Stddev	3747.	27988.	995.
%RSD	.85200	.98782	.43793

Sample Name: CalStd6=20 Acquired: 05/09/2022 08:09:48 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ba2335	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000
%RSD	.853	.859	1.03	1.37	5.53	1.91

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**439670.**	**2797800.**	**226470.**
Stddev	2959.	18328.	807.
%RSD	.67304	.65509	.35617

Sample Name: CalStd7=50 Acquired: 05/09/2022 08:17:06 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	As1937	As1972	Ca3933	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.009**	**.001**	**.000**	**.001**	**.001**	**.000**	**.001**	**.000**	**.000**	**.001**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	4.69	13.9	.285	1.14	1.78	1.37	1.16	1.42	.548	1.19	.687	1.64	3.94

Elem	V_2924
Units	Cts/S
Avg	**.000**
Stddev	.000
%RSD	.349

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**438030.**	**2794700.**	**228020.**
Stddev	5063.	9273.	325.
%RSD	1.1558	.33181	.14243

Sample Name: CalStd8=100 Acquired: 05/09/2022 08:24:20 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3933	Ca3968	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**572.**	**.000**	**.000**	**.000**	**.000**	**.001**	**.020**	**.001**	**.007**	**.017**	**.008**	**.003**
Stddev	.000	5.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.942	.896	.749	2.12	2.20	3.79	.507	.259	.977	.946	.066	.294	.582

Elem	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Mg2802	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.002**	**.000**	**.001**	**.000**	**.000**	**.004**	**.001**	**.000**	**.000**	**.001**	**.001**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.851	.387	.624	.359	1.05	.279	.952	.968	.748	.852	.805	.389	5.39

Elem	Pb2203	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**	**.002**	**.003**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.56	1.78	3.05	7.65	.222	.932	.351	.636

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**436590.**	**2790200.**	**223890.**
Stddev	2162.	23018.	757.
%RSD	.49520	.82496	.33824

Sample Name: CalStd9=1000 Acquired: 05/09/2022 08:31:24 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be2348	Be3130	Ca3158	Ca3933	Ca3968	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.002**	**.001**	**.001**	**.001**	**.000**	**.007**	**.057**	**.007**	**.069**	**.001**	**.163**	**.073**	*****
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	-----
%RSD	.347	.937	1.22	.816	1.01	.705	.414	.670	.647	1.29	.360	.357	-----

Elem	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.003**	**.017**	**.002**	**.012**	**.003**	**.004**	**.000**	**.001**	**.002**	**.001**	**.000**	**.043**	**.010**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.689	.552	.852	.676	.602	.600	.796	.790	.280	.602	3.38	.717	.786

Elem	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.009**	**.005**	**.003**	**.012**	**.010**	**.001**	**.003**	**.001**	**.001**	**.001**	**.000**	**.002**	**.006**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.285	.638	.602	.539	.670	1.27	.645	.555	.724	.879	4.64	.731	.854

Elem	Zn2062	Zn2138	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.022**	**.031**	**591.**	**165.**	**85.2**
Stddev	.000	.000	8.	5.	8.3
%RSD	.671	.511	1.41	2.99	9.68

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**437810.**	**2779000.**	**225690.**
Stddev	2392.	24189.	1040.
%RSD	.54645	.87041	.46075

Sample Name: CalStd10=10000 Acquired: 05/09/2022 08:38:20 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	As1972	Ba2335	Ba4934	Ca3158	Ca3968	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.005**	**.014**	**.004**	**.068**	**.410**	**.006**	**.706**	**.158**	**.018**	**.112**	**.027**	**.034**	**.004**
Stddev	.000	.000	.000	.000	.001	.000	.012	.001	.000	.001	.000	.000	.000
%RSD	.581	.410	.341	.439	.187	.263	1.63	.366	.640	.451	.767	.323	.701

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.009**	**.023**	**.010**	**.001**	**.386**	**.094**	**.089**	**.045**	**.025**	**.112**	**.096**	**.005**	**.010**
Stddev	.000	.000	.000	.000	.002	.001	.000	.000	.000	.000	.000	.000	.000
%RSD	.315	.208	.327	.749	.535	1.29	.253	.408	.467	.316	.399	.503	.379

Elem	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.010**	**.006**	**.002**	**.017**	**.061**	**.205**	**5430.**	**1950.**	**796.**
Stddev	.000	.000	.000	.000	.000	.001	14.	9.	5.
%RSD	.402	.314	.455	.399	.637	.506	.249	.436	.679

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**434700.**	**2693300.**	**224930.**
Stddev	1870.	19654.	430.
%RSD	.43008	.72975	.19108

Sample Name: CalStd12=100K Acquired: 05/09/2022 08:45:32 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Cr2055	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.14**	**.972**	**.054**	**1.96**
Stddev	.01	.003	.000	.01
%RSD	.708	.279	.295	.635

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**434710.**	**2732600.**	**221950.**
Stddev	1931.	21635.	1258.
%RSD	.44426	.79173	.56657

Sample Name: CalStd13=100000 Acquired: 05/09/2022 08:53:29 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	Na5895	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.055**	**.139**	**.066**	**.040**	**.098**	**.235**	**.106**	**.007**	**.001**	**52700.**	**19500.**
Stddev	.000	.001	.000	.000	.000	.001	.000	.000	.000	192.	118.
%RSD	.298	.452	.398	.473	.363	.373	.218	.271	3.34	.363	.605

Elem	K_7698
Units	Cts/S
Avg	**7660.**
Stddev	34.
%RSD	.448

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**421880.**	**2676200.**	**221410.**
Stddev	1412.	10401.	191.
%RSD	.33482	.38864	.08616

Sample Name: CalStd14=500000 Acquired: 05/09/2022 09:01:01 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.263**	**.686**	**.312**	**.450**	**1.11**	**.495**	**.033**	**.003**
Stddev	.000	.001	.000	.001	.00	.003	.000	.000
%RSD	.110	.209	.085	.191	.344	.656	.226	.198

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**389090.**	**213510.**
Stddev	2633.	528.
%RSD	.67678	.24750

Sample Name: CalibStd15=1000k Acquired: 05/09/2022 09:08:49 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.538**	**1.35**	**.606**	**.862**	**2.08**	**.951**	**.065**	**.006**	**74500.**
Stddev	.002	.02	.003	.002	.03	.004	.000	.000	198.
%RSD	.426	1.16	.417	.175	1.22	.378	.562	.676	.265

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**363820.**	**205870.**
Stddev	1597.	788.
%RSD	.43889	.38275

Sample Name: Ag 1000 Acquired: 05/09/2022 09:17:00 Type: Cal
Method: DOD Calibration Updated 060614(v5023) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382
Units	Cts/S
Avg	**4960.**
Stddev	5.
%RSD	.097

Sample Name: icv Acquired: 05/09/2022 09:31:49 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	As1972	Ba4934	Be3130	Ca3158	Ca3933	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.3**	**48.0**	**12300.**	**2110.**	**2050.**	**51.6**	**11000.**	**9550.**	**48.5**	**520.**	**208.**	**248.**
Stddev	.5	.6	78.	15.	6.	.3	49.	47.	.2	3.	1.	1.
%RSD	1.04	1.35	.635	.700	.280	.580	.445	.488	.482	.497	.492	.598
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Se2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5240.**	**5320.**	**10100.**	**10700.**	**522.**	**516.**	**514.**	**502.**	**478.**	**524.**	**2090.**	**1980.**
Stddev	25.	53.	59.	26.	3.	2.	3.	8.	4.	4.	18.	22.
%RSD	.479	1.00	.582	.248	.513	.410	.501	1.50	.753	.708	.861	1.12
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na3302	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**2010.**	**516.**	**513.**	**512.**	**103.**	**102.**
Stddev	12.	3.	2.	3.	.	.
%RSD	.571	.670	.371	.635	.246	.093
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: icv Acquired: 05/09/2022 09:31:49 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**432500.**	**2659100.**	**216000.**
Stddev	1628.	14114.	1070.
%RSD	.37647	.53079	.49539

Sample Name: ICVLL Acquired: 05/09/2022 09:46:06 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	F **26.6**	**1340.**	**1330.**	**57.5**	**33.3**	**12.8**	**1730.**	**1540.**	**1590.**	**15.9**	**33.2**	**31.7**	**34.0**
Stddev	.8	20.	5.	4.1	.4	.2	8.	2.	2.	.2	.6	.6	.6
%RSD	3.07	1.53	.398	7.04	1.27	1.31	.449	.106	.097	1.22	1.92	1.92	1.64
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	20.0												
Range	30.0%												

Elem	Fe2343	Fe2599	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**987.**	**985.**	**1700.**	**32.7**	**31.1**	**32.8**	**28.7**	**61.0**	**67.4**	**59.8**	**31.5**	**32.8**	**6.23**
Stddev	12.	7.	17.	.4	.3	.7	1.1	3.8	3.6	2.4	.5	.3	.03
%RSD	1.25	.678	1.01	1.23	1.10	2.01	3.71	6.17	5.34	4.08	1.66	1.05	.407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	K_7698
Units	mg/L	mg/L
Avg	**3.70**	**3.74**
Stddev	.04	.05
%RSD	1.01	1.37
Check ?	Chk Pass	Chk Pass
Value		
Range		

Sample Name: ICVLL Acquired: 05/09/2022 09:46:06 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**438110.**	**2758300.**	**217500.**
Stddev	3905.	29901.	483.
%RSD	.89122	1.0840	.22221

Sample Name: icb Acquired: 05/09/2022 10:00:47 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.723**	**-.325**	**-2.12**	**.015**	**.011**	**.806**	**.750**	**.090**	**.192**	**.236**	**-.187**	**.879**	**.248**
Stddev	.529	.556	3.52	.395	.009	.051	.136	.088	.197	.656	.885	.916	.027
%RSD	73.3	171.	166.	2620.	77.8	6.28	18.1	97.5	102.	278.	474.	104.	11.0
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.001**	**-.063**	**.040**	**.842**	**-.648**	**1.28**	**-2.37**	**-.061**	**.340**	**.032**	**.246**	**.182**
Stddev	.033	.295	.726	.437	.572	2.43	1.18	.261	.110	.011	.032	.071
%RSD	2220.	467.	1800.	51.9	88.2	190.	49.8	427.	32.4	34.0	13.1	39.2
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**443350.**	**2773700.**	**219900.**
Stddev	1032.	12021.	297.
%RSD	.23269	.43341	.13505

Sample Name: ICSA Acquired: 05/09/2022 10:15:25 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.093**	**520000.**	**491000.**	**-.026**	**.627**	**.201**	**528000.**	**.998**	**-.329**	**-8.45**	**-1.43**
Stddev	.498	346.	1470.	10.3	.408	.021	487.	.188	.395	.60	1.16
%RSD	535.	.066	.298	39000.	65.1	10.2	.092	18.8	120.	7.08	81.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**524000.**	**479000.**	**497000.**	**527000.**	**-5.06**	**-2.15**	**5.40**	**-.000**	**-3.66**	**-2.63**	**-.733**
Stddev	808.	240.	1750.	1110.	.13	.49	.63	2.97	.95	4.51	1.16
%RSD	.154	.050	.351	.210	2.65	23.0	11.7	1280000.	26.0	171.	158.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**10000.**	**-6.08**	**-.294**	**-.912**	**-.024**
Stddev	53.	.24	.007	.032	.127
%RSD	.529	3.99	2.30	3.47	520.
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Sample Name: ICSA Acquired: 05/09/2022 10:15:25 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**395850.**	**2527700.**	**208460.**
Stddev	1122.	12069.	585.
%RSD	.28340	.47746	.28069

Sample Name: ICSAB Acquired: 05/09/2022 10:22:51 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	Al3961	As1937	Ba2335	Be2348	Ca3158	Cd2288	Co2286	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**456.**	**465.**	**523000.**	**486000.**	**524.**	**527.**	**486.**	**530000.**	**504.**	**504.**	**490.**
Stddev	2.	2.	488.	994.	13.	4.	3.	644.	6.	4.	2.
%RSD	.442	.381	.093	.204	2.53	.703	.519	.122	1.11	.808	.497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Cu2230	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**538.**	**523000.**	**480000.**	**490000.**	**524000.**	**509.**	**505.**	**497.**	**450.**	**507.**	**516.**
Stddev	6.	1270.	475.	4070.	727.	2.	5.	3.	5.	9.	10.
%RSD	1.03	.242	.099	.832	.139	.473	.916	.683	1.00	1.77	1.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na3302	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**494.**	**504.**	**464.**	**507.**	**53.5**	**49.9**	**52.2**
Stddev	4.	3.	5.	5.	1.0	.2	.3
%RSD	.873	.571	.990	.897	1.84	.352	.499
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB Acquired: 05/09/2022 10:22:51 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**400160.**	**2512300.**	**209460.**
Stddev	3546.	14077.	811.
%RSD	.88615	.56032	.38740

Sample Name: ICVLL ag Acquired: 05/09/2022 10:37:17 Type: Unk
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9.87**	**7.08**	**-35.9**	**-2.42**	**.410**	**.016**	**6.65**	**6.82**	**.078**	**.185**	**.285**	**.889**	**58.5**
Stddev	.50	.28	16.9	2.92	.081	.006	.16	.28	.095	.243	.094	1.46	5.9
%RSD	5.06	3.98	46.9	121.	19.9	39.0	2.44	4.13	122.	132.	33.0	164.	10.0

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**4.53**	**.150**	**.370**	**.141**	**-.722**	**.128**	**.726**	**-2.17**	**.168**	**.374**	**.042**	**.226**	**.269**
Stddev	.04	.057	.149	.530	2.26	2.36	.769	.65	.446	.111	.010	.007	.084
%RSD	.957	38.1	40.2	377.	314.	1840.	106.	29.8	265.	29.7	23.0	3.21	31.3

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**436130.**	**2753900.**	**216970.**
Stddev	2827.	11357.	536.
%RSD	.64828	.41238	.24724

Sample Name: ccv1 Acquired: 05/09/2022 11:52:15 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	As1972	Ba4934	Be2348	Ca3158	Ca3933	Ca3968	Cd2288	Co2286	Co2388	Cr2055	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**482.**	**5120.**	**5210.**	**4930.**	**460.**	**5360.**	**4740.**	**4870.**	**481.**	**5120.**	**5090.**	**4950.**	**5100.**
Stddev	2.	23.	39.	12.	2.	7.	13.	14.	2.	27.	19.	25.	31.
%RSD	.417	.449	.745	.247	.472	.135	.277	.280	.315	.518	.382	.499	.616
Check ?	None	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2924	Zn2062	Na3302
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**5160.**	**4920.**	**5070.**	**5100.**	**5100.**	**5130.**	**5030.**	**5140.**	**5020.**	**5000.**	**5160.**	**5000.**	**97.0**
Stddev	20.	16.	32.	70.	25.	28.	23.	33.	32.	22.	22.	20.	.9
%RSD	.377	.323	.635	1.38	.489	.552	.450	.637	.628	.444	.417	.405	.945
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7698
Units	mg/L
Avg	**101.**
Stddev	.
%RSD	.263
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv1 Acquired: 05/09/2022 11:52:15 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**433470.**	**2691800.**	**219110.**
Stddev	1819.	15054.	512.
%RSD	.41964	.55923	.23378

Sample Name: ccv2 Acquired: 05/09/2022 11:58:51 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**46.2**	**52.7**	**506.**	**507.**	**531.**	**50.9**	**487.**	**504.**	**50.3**	**528.**	**508.**	**537.**	**534.**
Stddev	1.0	.7	10.	2.	3.	.6	1.	.	.3	3.	5.	3.	8.
%RSD	2.20	1.27	1.92	.389	.481	1.12	.228	.091	.621	.617	.959	.564	1.42
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Fe2599	Mg2802	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**508.**	**550.**	**527.**	**505.**	**526.**	**539.**	**492.**	**527.**	**526.**	**535.**	**515.**	**512.**	**510.**
Stddev	4.	6.	6.	3.	3.	5.	4.	7.	3.	4.	6.	1.	4.
%RSD	.689	1.18	1.22	.584	.614	.849	.835	1.24	.623	.757	1.13	.290	.688
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L
Avg	**9.86**	**10.4**	**10.6**
Stddev	.02	.1	.1
%RSD	.232	.553	.550
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv2 Acquired: 05/09/2022 11:58:51 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**437110.**	**2755500.**	**218660.**
Stddev	2249.	31581.	678.
%RSD	.51462	1.1461	.31000

Sample Name: ccb Acquired: 05/09/2022 12:05:40 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.002**	**-.337**	**-5.00**	**.200**	**-.003**	**.009**	**-.107**	**-.012**	**.175**	**-.031**	**-1.24**	**-.360**	**-.064**
Stddev	.395	.522	3.30	.133	.007	.039	.211	.092	.057	.335	1.74	.712	.011
%RSD	26300.	155.	65.9	66.8	203.	455.	196.	735.	32.5	1080.	140.	198.	17.2
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.009**	**.560**	**.234**	**-.162**	**-.106**	**1.96**	**-1.35**	**-.079**	**.217**	**.018**	**.508**	**.226**
Stddev	.059	.516	.537	2.25	.990	4.16	.56	.335	.091	.012	.034	.057
%RSD	696.	92.2	229.	1390.	937.	212.	41.1	423.	42.1	70.3	6.76	25.2
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**447280.**	**2857300.**	**224050.**
Stddev	2775.	13781.	1002.
%RSD	.62044	.48231	.44715

Sample Name: lcsw95267 Acquired: 05/09/2022 12:20:04 Type: Unk
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**19.0**	**890.**	**1010.**	**880.**	**876.**	**21.2**	**219000.**	**20.5**	**217.**	**85.6**	**112.**
Stddev	.5	2.	19.	3.	2.	.1	171.	.2	1.	.8	1.
%RSD	2.41	.276	1.89	.356	.279	.436	.078	.779	.370	.882	1.33

Elem	Fe2343	Mg2025	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**436.**	**104000.**	**103000.**	**215.**	**2140.**	**217.**	**201.**	**225.**	**895.**	**855.**	**213.**
Stddev	2.	406.	373.	1.	9.	1.	2.	5.	6.	7.	1.
%RSD	.503	.392	.363	.394	.398	.343	.762	2.11	.621	.839	.593

Elem	Zn2062	Zn2138	Na3302	K_7698
Units	ug/L	ug/L	mg/L	mg/L
Avg	**216.**	**220.**	**105.**	**105.**
Stddev	1.	1.	2.	.
%RSD	.555	.375	2.26	.337

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**415510.**	**2652100.**	**216770.**
Stddev	1688.	11631.	875.
%RSD	.40614	.43857	.40364

Sample Name: mbw95267 Acquired: 05/09/2022 12:27:14 Type: Unk
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.100**	**3.06**	**-4.63**	**.031**	**.012**	**7.74**	**7.80**	**.003**	**.101**	**-.180**	**3.29**	**6.11**	**1.06**
Stddev	.248	.52	2.08	.169	.020	1.12	1.18	.051	.224	.182	.54	.45	.17
%RSD	247.	16.9	45.0	537.	174.	14.5	15.2	1500.	222.	101.	16.4	7.35	16.5

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.032**	**.897**	**-.294**	**.411**	**.282**	**1.76**	**-1.58**	**-.263**	**.713**	**.043**	**.588**	**.468**
Stddev	.059	.367	.415	.592	1.50	1.33	1.83	.439	.082	.006	.051	.073
%RSD	184.	40.9	141.	144.	531.	75.7	116.	167.	11.5	13.5	8.65	15.6

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**435260.**	**2766800.**	**217450.**
Stddev	452.	10675.	913.
%RSD	.10378	.38581	.41973

Sample Name: 1137439 Acquired: 05/09/2022 12:34:38 Type: Unk
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.251**	**286.**	**305.**	**-1.27**	**36.9**	**.133**	**73600.**	**.027**	**1.04**	**3.22**	**1.06**	**690.**
Stddev	.395	2.	26.	2.66	.5	.010	149.	.077	.13	.15	1.78	5.
%RSD	157.	.527	8.58	209.	1.29	7.70	.203	281.	12.3	4.57	167.	.762

Elem	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**664.**	**36200.**	**34100.**	**84.9**	**.812**	**.706**	**2.31**	**-2.33**	**1.55**	**-1.74**	**.457**	**57.4**
Stddev	2.	192.	89.	.4	.455	.617	1.59	3.01	2.72	.49	.189	.2
%RSD	.288	.530	.260	.491	56.1	87.4	68.6	129.	175.	28.2	41.3	.395

Elem	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L
Avg	**28.8**	**2.30**	**2.00**
Stddev	.2	.05	.12
%RSD	.806	2.25	6.12

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**432090.**	**2781900.**	**227490.**
Stddev	2303.	16463.	1026.
%RSD	.53297	.59178	.45113

Sample Name: ccv1 Acquired: 05/09/2022 13:26:20 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	As1972	Ba4934	Be3130	Ca3158	Ca3933	Ca3968	Cd2288	Co2286	Co2388	Cr2055	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**482.**	**5000.**	**5190.**	**4940.**	**495.**	**5270.**	**4760.**	**4880.**	**492.**	**5140.**	**5020.**	**4990.**	**5090.**
Stddev	3.	15.	17.	10.	3.	3.	6.	5.	2.	10.	26.	12.	3.
%RSD	.636	.295	.331	.194	.519	.058	.123	.101	.455	.197	.511	.249	.061
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2924	Zn2062	Na3302
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**5090.**	**4800.**	**4890.**	**5060.**	**5200.**	**5060.**	**5090.**	**5150.**	**5100.**	**5100.**	**5080.**	**5050.**	**98.7**
Stddev	29.	9.	18.	42.	14.	4.	14.	8.	21.	9.	34.	14.	.9
%RSD	.568	.181	.365	.822	.264	.074	.279	.161	.411	.181	.668	.270	.945
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7698
Units	mg/L
Avg	**104.**
Stddev	1.
%RSD	.517
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv1 Acquired: 05/09/2022 13:26:20 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**426290.**	**2705800.**	**223550.**
Stddev	812.	14821.	1469.
%RSD	.19042	.54774	.65725

Sample Name: ccv2 Acquired: 05/09/2022 13:32:58 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**45.6**	**52.6**	**542.**	**489.**	**511.**	**534.**	**49.9**	**484.**	**499.**	**50.7**	**527.**	**498.**	**532.**
Stddev	1.0	.6	7.	10.	3.	2.	.6	1.	1.	.3	4.	6.	4.
%RSD	2.11	1.17	1.24	2.12	.575	.453	1.14	.226	.138	.612	.707	1.21	.736
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Fe2343	Fe2599	Mg2802	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**523.**	**493.**	**541.**	**516.**	**508.**	**528.**	**544.**	**496.**	**525.**	**531.**	**544.**	**502.**	**520.**
Stddev	7.	2.	7.	6.	3.	3.	2.	4.	3.	6.	4.	6.	2.
%RSD	1.34	.493	1.23	1.16	.646	.506	.439	.830	.560	1.05	.643	1.10	.454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	mg/L	mg/L	mg/L
Avg	**508.**	**10.0**	**10.4**	**10.7**
Stddev	3.	.0	.1	.1
%RSD	.665	.455	.559	.597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Sample Name: ccv2 Acquired: 05/09/2022 13:32:58 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**434020.**	**2788500.**	**220180.**
Stddev	1968.	34706.	842.
%RSD	.45348	1.2446	.38242

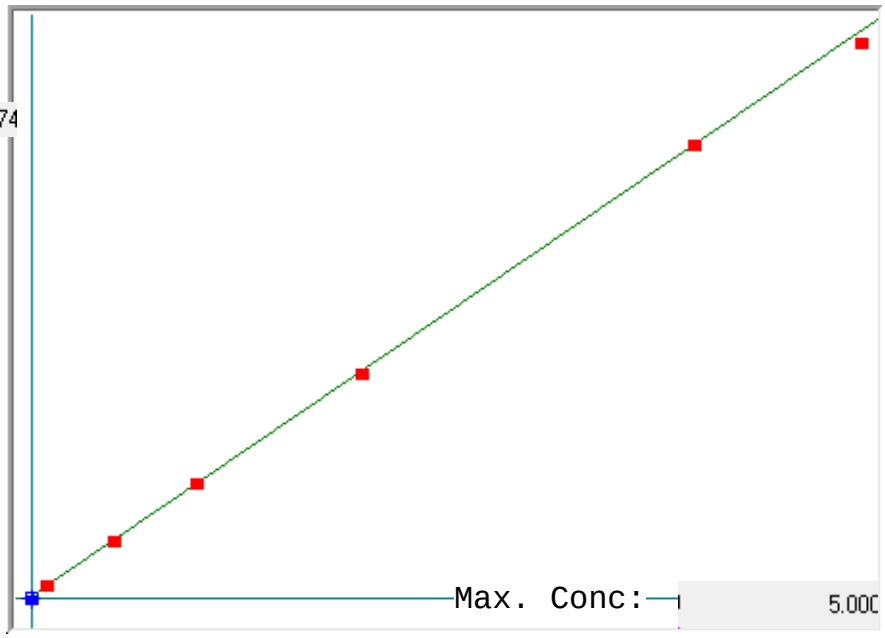
Sample Name: ccb Acquired: 05/09/2022 13:39:45 Type: QC
Method: DOD Calibration Updated 060614(v5023) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.096**	**-.139**	**-3.42**	**.321**	**.007**	**.528**	**.494**	**.021**	**.219**	**.078**	**-.227**	**-.120**	**.015**
Stddev	.354	.321	4.22	.086	.003	.113	.121	.103	.032	.410	.521	.842	.012
%RSD	367.	231.	123.	26.7	40.4	21.4	24.6	479.	14.6	524.	229.	700.	76.8
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**.052**	**.424**	**.158**	**-.760**	**-2.64**	**1.96**	**-.060**	**-.468**	**.416**	**.016**	**.263**	**.197**
Stddev	.041	.304	.338	.926	1.03	2.16	1.38	.371	.038	.008	.050	.067
%RSD	78.1	71.7	214.	122.	39.0	111.	2310.	79.4	9.14	46.8	19.1	34.1
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**444540.**	**2845800.**	**222460.**
Stddev	1815.	17054.	1175.
%RSD	.40830	.59926	.52831

Hg LIQUIDS



A= 0.0000e+000

B= 1.7697e-004

C= -1.5585e-002

Rho= 0.9998995

Accept= Accepted

Accepted Date=

05/04/22 10:19

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
CALIBRATION BLANK	0.000	-0.000	-0.000	87	3.419	84	92	89	84	
0.1	0.100	0.106	0.006	684	3.1 %	658	671	697	713	
0.5	0.500	0.500	-0.000	2911	1.4 %	2849	2901	2935	2960	
1.0	1.000	1.008	0.008	5786	1.4 %	5666	5757	5840	5883	
2.0	2.000	1.977	-0.023	11261	1.9 %	10968	11175	11371	11532	
4.0	4.000	4.015	0.015	22773	1.4 %	22314	22696	22936	23146	
5.0	5.000	4.900	-0.100	27774	1.8 %	27076	27562	28009	28450	

050422W

Method: Hg LIQUIDS Operator: Admin Date of Analysis: 04 May 2022 09:45:51

Sample ID	Date	Element	Units	Extended ID	LT Mean Conc
CALIBRATION BLANK	04 May 2022 09:57:16	Hg			87.250
0.1	04 May 2022 10:00:25	Hg			684.750
0.5	04 May 2022 10:03:37	Hg			2911.250
1.0	04 May 2022 10:06:48	Hg			5786.500
2.0	04 May 2022 10:09:59	Hg			11261.500
4.0	04 May 2022 10:13:09	Hg			22773.000
5.0	04 May 2022 10:16:19	Hg			27774.250
ICV	04 May 2022 10:19:29	Hg			3.023
ICB	04 May 2022 10:25:48	Hg			0.000
LCSW	04 May 2022 10:28:57	Hg			1.907
MBW	04 May 2022 10:35:16	Hg			0.007
1136212	04 May 2022 10:38:25	Hg			-0.003
1137439	04 May 2022 10:41:34	Hg			-0.010
1135451	04 May 2022 10:44:44	Hg			0.007
1135486	04 May 2022 10:47:53	Hg			-0.001
1135487	04 May 2022 10:51:03	Hg			0.005
1135488	04 May 2022 10:54:12	Hg			0.002
1136308	04 May 2022 10:57:23	Hg			0.010
CCV	04 May 2022 11:00:34	Hg			2.772
CCB	04 May 2022 11:06:53	Hg			0.002

050422W DETAILED

Method: Hg LIQUIDS Operator: Admin Date of Analysis: 04 May 2022 09:45:51

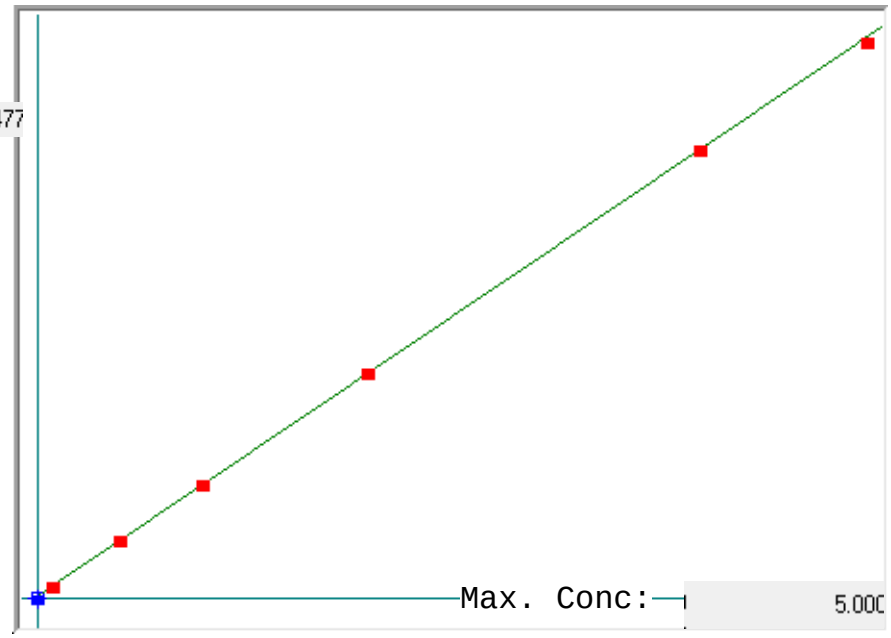
Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CALIBRATION BLANK - 1	04 May 2022 09:57:16	Hg			84	-
CALIBRATION BLANK - 2	04 May 2022 09:57:16	Hg			92	-
CALIBRATION BLANK - 3	04 May 2022 09:57:16	Hg			89	-
CALIBRATION BLANK - 4	04 May 2022 09:57:16	Hg			84	-
0.1 - 1	04 May 2022 10:00:25	Hg			658	-
0.1 - 2	04 May 2022 10:00:25	Hg			671	-
0.1 - 3	04 May 2022 10:00:25	Hg			697	-
0.1 - 4	04 May 2022 10:00:25	Hg			713	-
0.5 - 1	04 May 2022 10:03:37	Hg			2849	-
0.5 - 2	04 May 2022 10:03:37	Hg			2901	-
0.5 - 3	04 May 2022 10:03:37	Hg			2935	-
0.5 - 4	04 May 2022 10:03:37	Hg			2960	-
1.0 - 1	04 May 2022 10:06:48	Hg			5666	-
1.0 - 2	04 May 2022 10:06:48	Hg			5757	-
1.0 - 3	04 May 2022 10:06:48	Hg			5840	-
1.0 - 4	04 May 2022 10:06:48	Hg			5883	-
2.0 - 1	04 May 2022 10:09:59	Hg			10968	-
2.0 - 2	04 May 2022 10:09:59	Hg			11175	-
2.0 - 3	04 May 2022 10:09:59	Hg			11371	-
2.0 - 4	04 May 2022 10:09:59	Hg			11532	-
4.0 - 1	04 May 2022 10:13:09	Hg			22314	-
4.0 - 2	04 May 2022 10:13:09	Hg			22696	-
4.0 - 4	04 May 2022 10:13:09	Hg			23146	-
4.0 - 3	04 May 2022 10:13:09	Hg			22936	-
5.0 - 1	04 May 2022 10:16:19	Hg			27076	-
5.0 - 2	04 May 2022 10:16:19	Hg			27562	-
5.0 - 3	04 May 2022 10:16:19	Hg			28009	-
5.0 - 4	04 May 2022 10:16:19	Hg			28450	-
ICV - 1	04 May 2022 10:19:29	Hg			16723	98.1% 2.944
ICV - 2	04 May 2022 10:19:29	Hg			17057	100.1% 3.003
ICV - 3	04 May 2022 10:19:29	Hg			17326	101.7% 3.051
ICV - 4	04 May 2022 10:19:29	Hg			17579	103.2% 3.095
ICB - 1	04 May 2022 10:25:48	Hg			88	-0.000
ICB - 2	04 May 2022 10:25:48	Hg			79	-0.002
ICB - 3	04 May 2022 10:25:48	Hg			85	-0.001
ICB - 4	04 May 2022 10:25:48	Hg			105	0.003
LCSW - 1	04 May 2022 10:28:57	Hg			10610	1.862
LCSW - 2	04 May 2022 10:28:57	Hg			10779	1.892
LCSW - 3	04 May 2022 10:28:57	Hg			10952	1.923
LCSW - 4	04 May 2022 10:28:57	Hg			11104	1.949
MBW - 1	04 May 2022 10:35:16	Hg			122	0.006
MBW - 2	04 May 2022 10:35:16	Hg			127	0.007
MBW - 3	04 May 2022 10:35:16	Hg			121	0.006
MBW - 4	04 May 2022 10:35:16	Hg			133	0.008
1136212 - 1	04 May 2022 10:38:25	Hg			81	-0.001
1136212 - 2	04 May 2022 10:38:25	Hg			72	-0.003
1136212 - 3	04 May 2022 10:38:25	Hg			69	-0.003
1136212 - 4	04 May 2022 10:38:25	Hg			64	-0.004
1137439 - 1	04 May 2022 10:41:34	Hg			29	-0.010
1137439 - 2	04 May 2022 10:41:34	Hg			34	-0.010
1137439 - 3	04 May 2022 10:41:34	Hg			32	-0.010
1137439 - 4	04 May 2022 10:41:34	Hg			21	-0.012
1135451 - 1	04 May 2022 10:44:44	Hg			120	0.006
1135451 - 2	04 May 2022 10:44:44	Hg			128	0.007
1135451 - 3	04 May 2022 10:44:44	Hg			136	0.008
1135451 - 4	04 May 2022 10:44:44	Hg			136	0.008
1135486 - 1	04 May 2022 10:47:53	Hg			80	-0.001
1135486 - 2	04 May 2022 10:47:53	Hg			77	-0.002
1135486 - 3	04 May 2022 10:47:53	Hg			89	0.000
1135486 - 4	04 May 2022 10:47:53	Hg			94	0.001
1135487 - 1	04 May 2022 10:51:03	Hg			106	0.003
1135487 - 2	04 May 2022 10:51:03	Hg			112	0.004
1135487 - 3	04 May 2022 10:51:03	Hg			124	0.006
1135487 - 4	04 May 2022 10:51:03	Hg			122	0.006
1135488 - 1	04 May 2022 10:54:12	Hg			99	0.002
1135488 - 2	04 May 2022 10:54:12	Hg			97	0.002
1135488 - 3	04 May 2022 10:54:12	Hg			100	0.002
1135488 - 4	04 May 2022 10:54:12	Hg			93	0.001
1136308 - 1	04 May 2022 10:57:23	Hg			136	0.008
1136308 - 2	04 May 2022 10:57:23	Hg			146	0.010
1136308 - 3	04 May 2022 10:57:23	Hg			153	0.011
1136308 - 4	04 May 2022 10:57:23	Hg			151	0.011
CCV - 1	04 May 2022 11:00:34	Hg			15371	90.2% 2.705
CCV - 2	04 May 2022 11:00:34	Hg			15635	91.7% 2.751
CCV - 3	04 May 2022 11:00:34	Hg			15890	93.2% 2.796
CCV - 4	04 May 2022 11:00:34	Hg			16120	94.6% 2.837
CCB - 1	04 May 2022 11:06:53	Hg			92	0.001
CCB - 2	04 May 2022 11:06:53	Hg			100	0.002
CCB - 3	04 May 2022 11:06:53	Hg			107	0.003

050422W DETAILED

Method: Hg LIQUIDS Operator: Admin Date of Analysis: 04 May 2022 09:45:51

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CCB - 4	04 May 2022 11:06:53	Hg			108	0.004

Hg LIQUIDS



A= 0.0000e+000

B= 1.5304e-004

C= -1.6606e-002

Rho= 0.9999778

Accept= Accepted

Accepted Date=

05/04/22 12:22

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
CALIBRATION BLANK	0.000	-0.000	-0.000	108	1.118	107	110	109	108	
0.1	0.100	0.100	0.000	762	2.6 %	733	761	768	788	
0.5	0.500	0.500	0.000	3376	1.5 %	3297	3367	3410	3430	
1.0	1.000	1.013	0.013	6724	1.7 %	6552	6698	6789	6860	
2.0	2.000	2.004	0.004	13201	1.5 %	12911	13158	13313	13425	
4.0	4.000	3.996	-0.004	26220	1.6 %	25678	25983	26398	26821	
5.0	5.000	4.954	-0.046	32477	1.4 %	31851	32276	32708	33073	

050422BW

Method: Hg LIQUIDS Operator: Admin Date of Analysis: 04 May 2022 11:52:33

Sample ID	Date	Element	Units	Extended ID	LT Mean Conc
CALIBRATION BLANK	04 May 2022 12:00:28	Hg			108.500
0.1	04 May 2022 12:03:38	Hg			762.500
0.5	04 May 2022 12:06:49	Hg			3376.000
1.0	04 May 2022 12:10:00	Hg			6724.750
2.0	04 May 2022 12:13:11	Hg			13201.750
4.0	04 May 2022 12:16:22	Hg			26220.000
5.0	04 May 2022 12:19:32	Hg			32477.000
ICV	04 May 2022 12:22:42	Hg			3.125
ICB	04 May 2022 12:29:01	Hg			0.003
LCSW	04 May 2022 12:32:10	Hg			2.175
MBW	04 May 2022 12:38:29	Hg			0.006
1136309	04 May 2022 12:41:38	Hg			0.003
1136389	04 May 2022 12:44:49	Hg			0.002
DUP1136212	04 May 2022 12:48:00	Hg			-0.011
DUP1135486	04 May 2022 12:51:09	Hg			0.002
MSW1136212	04 May 2022 12:54:19	Hg			0.095
MSDW1136212	04 May 2022 12:57:28	Hg			0.505
MSW1135486	04 May 2022 13:00:38	Hg			2.116
CCV	04 May 2022 13:03:47	Hg			3.058
CCB	04 May 2022 13:10:06	Hg			-0.001
MSDW1135486	04 May 2022 13:13:15	Hg			2.136
MSW1136309	04 May 2022 13:16:25	Hg			2.160
MSDW1136309	04 May 2022 13:19:35	Hg			2.195
MSW1136389	04 May 2022 13:22:45	Hg			1.630
MSDW1136389	04 May 2022 13:25:55	Hg			1.627
MBW95279	04 May 2022 13:32:17	Hg			0.004
1135387	04 May 2022 13:35:28	Hg			0.003
1135433	04 May 2022 13:38:37	Hg			0.003
1136525	04 May 2022 13:41:47	Hg			0.009
CCV	04 May 2022 13:44:57	Hg			3.042
CCB	04 May 2022 13:51:16	Hg			0.005
DUP1135433	04 May 2022 13:54:25	Hg			0.003
MSW1135433	04 May 2022 13:57:35	Hg			2.153
MSDW1135433	04 May 2022 14:00:44	Hg			2.193
CCV	04 May 2022 14:03:54	Hg			3.054
CCB	04 May 2022 14:10:13	Hg			0.003

050422BW DETAILED

Method: Hg LIQUIDS Operator: Admin Date of Analysis: 04 May 2022 11:52:33

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CALIBRATION BLANK - 1	04 May 2022 12:00:28	Hg			107	-
CALIBRATION BLANK - 2	04 May 2022 12:00:28	Hg			110	-
CALIBRATION BLANK - 3	04 May 2022 12:00:28	Hg			109	-
CALIBRATION BLANK - 4	04 May 2022 12:00:28	Hg			108	-
0.1 - 1	04 May 2022 12:03:38	Hg			733	-
0.1 - 2	04 May 2022 12:03:38	Hg			761	-
0.1 - 3	04 May 2022 12:03:38	Hg			768	-
0.1 - 4	04 May 2022 12:03:38	Hg			788	-
0.5 - 1	04 May 2022 12:06:49	Hg			3297	-
0.5 - 2	04 May 2022 12:06:49	Hg			3367	-
0.5 - 3	04 May 2022 12:06:49	Hg			3410	-
0.5 - 4	04 May 2022 12:06:49	Hg			3430	-
1.0 - 1	04 May 2022 12:10:00	Hg			6552	-
1.0 - 2	04 May 2022 12:10:00	Hg			6698	-
1.0 - 3	04 May 2022 12:10:00	Hg			6789	-
1.0 - 4	04 May 2022 12:10:00	Hg			6860	-
2.0 - 1	04 May 2022 12:13:11	Hg			12911	-
2.0 - 2	04 May 2022 12:13:11	Hg			13158	-
2.0 - 3	04 May 2022 12:13:11	Hg			13313	-
2.0 - 4	04 May 2022 12:13:11	Hg			13425	-
4.0 - 1	04 May 2022 12:16:22	Hg			25678	-
4.0 - 2	04 May 2022 12:16:22	Hg			25983	-
4.0 - 3	04 May 2022 12:16:22	Hg			26398	-
4.0 - 4	04 May 2022 12:16:22	Hg			26821	-
5.0 - 1	04 May 2022 12:19:32	Hg			31851	-
5.0 - 2	04 May 2022 12:19:32	Hg			32276	-
5.0 - 3	04 May 2022 12:19:32	Hg			32708	-
5.0 - 4	04 May 2022 12:19:32	Hg			33073	-
ICV - 1	04 May 2022 12:22:42	Hg			20151	102.2% 3.067
ICV - 2	04 May 2022 12:22:42	Hg			20408	103.6% 3.107
ICV - 3	04 May 2022 12:22:42	Hg			20601	104.5% 3.136
ICV - 4	04 May 2022 12:22:42	Hg			20944	106.3% 3.189
ICB - 1	04 May 2022 12:29:01	Hg			125	0.003
ICB - 2	04 May 2022 12:29:01	Hg			131	0.003
ICB - 3	04 May 2022 12:29:01	Hg			129	0.003
ICB - 4	04 May 2022 12:29:01	Hg			133	0.004
LCSW - 1	04 May 2022 12:32:10	Hg			14039	2.132
LCSW - 2	04 May 2022 12:32:10	Hg			14232	2.161
LCSW - 3	04 May 2022 12:32:10	Hg			14415	2.189
LCSW - 4	04 May 2022 12:32:10	Hg			14606	2.219
MBW - 1	04 May 2022 12:38:29	Hg			152	0.007
MBW - 2	04 May 2022 12:38:29	Hg			147	0.006
MBW - 3	04 May 2022 12:38:29	Hg			149	0.006
MBW - 4	04 May 2022 12:38:29	Hg			154	0.007
1136309 - 1	04 May 2022 12:41:38	Hg			127	0.003
1136309 - 2	04 May 2022 12:41:38	Hg			123	0.002
1136309 - 3	04 May 2022 12:41:38	Hg			130	0.003
1136309 - 4	04 May 2022 12:41:38	Hg			122	0.002
1136389 - 1	04 May 2022 12:44:49	Hg			117	0.001
1136389 - 2	04 May 2022 12:44:49	Hg			125	0.003
1136389 - 3	04 May 2022 12:44:49	Hg			121	0.002
1136389 - 4	04 May 2022 12:44:49	Hg			127	0.003
DUP1136212 - 1	04 May 2022 12:48:00	Hg			34	-0.011
DUP1136212 - 2	04 May 2022 12:48:00	Hg			40	-0.010
DUP1136212 - 3	04 May 2022 12:48:00	Hg			27	-0.012
DUP1136212 - 4	04 May 2022 12:48:00	Hg			45	-0.010
DUP1135486 - 1	04 May 2022 12:51:09	Hg			117	0.001
DUP1135486 - 2	04 May 2022 12:51:09	Hg			123	0.002
DUP1135486 - 3	04 May 2022 12:51:09	Hg			123	0.002
DUP1135486 - 4	04 May 2022 12:51:09	Hg			116	0.001
MSW1136212 - 1	04 May 2022 12:54:19	Hg			792	0.105
MSW1136212 - 2	04 May 2022 12:54:19	Hg			752	0.098
MSW1136212 - 3	04 May 2022 12:54:19	Hg			705	0.091
MSW1136212 - 4	04 May 2022 12:54:19	Hg			668	0.086
MSDW1136212 - 1	04 May 2022 12:57:28	Hg			3607	0.535
MSDW1136212 - 2	04 May 2022 12:57:28	Hg			3446	0.511
MSDW1136212 - 3	04 May 2022 12:57:28	Hg			3318	0.491
MSDW1136212 - 4	04 May 2022 12:57:28	Hg			3275	0.485
MSW1135486 - 1	04 May 2022 13:00:38	Hg			13818	2.098
MSW1135486 - 2	04 May 2022 13:00:38	Hg			13873	2.107
MSW1135486 - 3	04 May 2022 13:00:38	Hg			13946	2.118
MSW1135486 - 4	04 May 2022 13:00:38	Hg			14111	2.143
CCV - 1	04 May 2022 13:03:47	Hg			19825	100.6% 3.017
CCV - 2	04 May 2022 13:03:47	Hg			20106	102.0% 3.060
CCV - 3	04 May 2022 13:03:47	Hg			20185	102.4% 3.073
CCV - 4	04 May 2022 13:03:47	Hg			20249	102.7% 3.082
CCB - 1	04 May 2022 13:10:06	Hg			105	-0.001
CCB - 2	04 May 2022 13:10:06	Hg			93	-0.002
CCB - 3	04 May 2022 13:10:06	Hg			93	-0.002

050422BW DETAILED

Method: Hg LIQUIDS Operator: Admin Date of Analysis: 04 May 2022 11:52:33

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CCB - 4	04 May 2022 13:10:06	Hg			104	-0.001
MSDW1135486 - 1	04 May 2022 13:13:15	Hg			13793	2.094
MSDW1135486 - 2	04 May 2022 13:13:15	Hg			14011	2.128
MSDW1135486 - 3	04 May 2022 13:13:15	Hg			14176	2.153
MSDW1135486 - 4	04 May 2022 13:13:15	Hg			14289	2.170
MSW1136309 - 1	04 May 2022 13:16:25	Hg			13990	2.124
MSW1136309 - 2	04 May 2022 13:16:25	Hg			14169	2.152
MSW1136309 - 3	04 May 2022 13:16:25	Hg			14328	2.176
MSW1136309 - 4	04 May 2022 13:16:25	Hg			14397	2.187
MSDW1136309 - 1	04 May 2022 13:19:35	Hg			14013	2.128
MSDW1136309 - 2	04 May 2022 13:19:35	Hg			14349	2.179
MSDW1136309 - 3	04 May 2022 13:19:35	Hg			14631	2.223
MSDW1136309 - 4	04 May 2022 13:19:35	Hg			14823	2.252
MSW1136389 - 1	04 May 2022 13:22:45	Hg			10437	1.581
MSW1136389 - 2	04 May 2022 13:22:45	Hg			10667	1.616
MSW1136389 - 3	04 May 2022 13:22:45	Hg			10887	1.650
MSW1136389 - 4	04 May 2022 13:22:45	Hg			11048	1.674
MSDW1136389 - 1	04 May 2022 13:25:55	Hg			10320	1.563
MSDW1136389 - 2	04 May 2022 13:25:55	Hg			10592	1.604
MSDW1136389 - 3	04 May 2022 13:25:55	Hg			10888	1.650
MSDW1136389 - 4	04 May 2022 13:25:55	Hg			11151	1.690
MBW95279 - 1	04 May 2022 13:32:17	Hg			139	0.005
MBW95279 - 2	04 May 2022 13:32:17	Hg			136	0.004
MBW95279 - 3	04 May 2022 13:32:17	Hg			137	0.004
MBW95279 - 4	04 May 2022 13:32:17	Hg			129	0.003
1135387 - 1	04 May 2022 13:35:28	Hg			120	0.002
1135387 - 2	04 May 2022 13:35:28	Hg			130	0.003
1135387 - 3	04 May 2022 13:35:28	Hg			126	0.003
1135387 - 4	04 May 2022 13:35:28	Hg			135	0.004
1135433 - 1	04 May 2022 13:38:37	Hg			126	0.003
1135433 - 2	04 May 2022 13:38:37	Hg			125	0.003
1135433 - 3	04 May 2022 13:38:37	Hg			134	0.004
1135433 - 4	04 May 2022 13:38:37	Hg			131	0.003
1136525 - 1	04 May 2022 13:41:47	Hg			158	0.008
1136525 - 2	04 May 2022 13:41:47	Hg			167	0.009
1136525 - 3	04 May 2022 13:41:47	Hg			176	0.010
1136525 - 4	04 May 2022 13:41:47	Hg			167	0.009
CCV - 1	04 May 2022 13:44:57	Hg			19620	99.5% 2.986
CCV - 2	04 May 2022 13:44:57	Hg			19785	100.4% 3.011
CCV - 3	04 May 2022 13:44:57	Hg			20075	101.9% 3.056
CCV - 4	04 May 2022 13:44:57	Hg			20470	103.9% 3.116
CCB - 1	04 May 2022 13:51:16	Hg			142	0.005
CCB - 2	04 May 2022 13:51:16	Hg			135	0.004
CCB - 3	04 May 2022 13:51:16	Hg			143	0.005
CCB - 4	04 May 2022 13:51:16	Hg			137	0.004
DUP1135433 - 1	04 May 2022 13:54:25	Hg			120	0.002
DUP1135433 - 2	04 May 2022 13:54:25	Hg			125	0.003
DUP1135433 - 3	04 May 2022 13:54:25	Hg			135	0.004
DUP1135433 - 4	04 May 2022 13:54:25	Hg			133	0.004
MSW1135433 - 1	04 May 2022 13:57:35	Hg			13894	2.110
MSW1135433 - 2	04 May 2022 13:57:35	Hg			14124	2.145
MSW1135433 - 3	04 May 2022 13:57:35	Hg			14268	2.167
MSW1135433 - 4	04 May 2022 13:57:35	Hg			14426	2.191
MSDW1135433 - 1	04 May 2022 14:00:44	Hg			14234	2.162
MSDW1135433 - 2	04 May 2022 14:00:44	Hg			14319	2.175
MSDW1135433 - 3	04 May 2022 14:00:44	Hg			14468	2.198
MSDW1135433 - 4	04 May 2022 14:00:44	Hg			14728	2.237
CCV - 1	04 May 2022 14:03:54	Hg			19593	99.4% 2.982
CCV - 2	04 May 2022 14:03:54	Hg			19821	100.6% 3.017
CCV - 3	04 May 2022 14:03:54	Hg			20213	102.6% 3.077
CCV - 4	04 May 2022 14:03:54	Hg			20626	104.7% 3.140
CCB - 1	04 May 2022 14:10:13	Hg			129	0.003
CCB - 2	04 May 2022 14:10:13	Hg			120	0.002
CCB - 3	04 May 2022 14:10:13	Hg			130	0.003
CCB - 4	04 May 2022 14:10:13	Hg			127	0.003

METALS
LOGBOOK
DOCUMENTS

MICP WATER QSM Analytical Run
211581 on 5/10/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138569								MICP WATER QSM				
					ICV					0			
	1138570								MICP WATER QSM				
					ICVLL					0			
	1138571								MICP WATER QSM				
					ICB					0			
	1138572								MICP WATER QSM				
					ICSA					0			
	1138573								MICP WATER QSM				
					ICSAB					0			
	1138574								MICP WATER QSM				
					ICV					0			
	1136456								ICP K TOTAL QSM 5.0				
					LCSW					95236			
	1136456								ICP NA TOTAL QSM 5.0				
					LCSW					95236			
	1136456								ICP TOTAL QSM 5.0				
					LCSW					95236			
	1136455								ICP K TOTAL QSM 5.0				
					MBW					95236			
	1136455								ICP NA TOTAL QSM 5.0				
					MBW					95236			
	1136455								ICP TOTAL QSM 5.0				
					MBW					95236			
169156	1136212		4/26/2022	17:44			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ICP TOTAL QSM 5.0		GW	**4**	
		54IDW								95236			
	1138575								ICP TOTAL QSM 5.0				
					L	1136212				0			
	1136457		4/26/2022	17:44					ICP TOTAL QSM 5.0				
		54IDW			DUP	1136212				95236			
	1136458		4/26/2022	17:44					ICP TOTAL QSM 5.0				
		54IDW			MSW	1136212				95236			
	1136459		4/26/2022	17:44					ICP TOTAL QSM 5.0				
		54IDW			MSDW	1136458				95236			
	1138576								ICP TOTAL QSM 5.0				
					PDSW	1136212				0			
	1138577								MICP WATER QSM				
					CCV1					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpD6B5.tmp

MICP WATER QSM Analytical Run
211581 on 5/10/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138578						MICP WATER QSM				
				CCV2				0			
	1138579						MICP WATER QSM				
				CCB				0			
	1141002						MICP WATER QSM				
				ICV				0			
	1141003						MICP WATER QSM				
				ICVLL				0			
	1141004						MICP WATER QSM				
				ICB				0			
	1141005						MICP WATER QSM				
				ICSA				0			
	1141006						MICP WATER QSM				
				ICSAB				0			
	1141007						MICP WATER QSM				
				ICVLL				0			
	1141008						MICP WATER QSM				
				CCV1				0			
	1141009						MICP WATER QSM				
				CCV2				0			
	1141010						MICP WATER QSM				
				CCB				0			
	1141011						MICP WATER QSM				
				CCV1				0			
	1141012						MICP WATER QSM				
				CCV2				0			
	1141013						MICP WATER QSM				
				CCB				0			

33 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpD6B5.tmp

MICP WATER QSM K&Na Analytical Run
211582 on 5/11/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1141417							MICP WATER QSM K&Na				
				ICV					0			
	1141418							MICP WATER QSM K&Na				
				ICVLL					0			
	1141419							MICP WATER QSM K&Na				
				ICB					0			
	1141420							MICP WATER QSM K&Na				
				ICSA					0			
	1141421							MICP WATER QSM K&Na				
				ICSAB					0			
169156	1136212		4/26/2022 17:44			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ICP K TOTAL QSM 5.0		GW	4	
		54IDW							95236			
169156	1136212		4/26/2022 17:44			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ICP NA TOTAL QSM 5.0		GW	4	
		54IDW							95236			
	1141432							ICP K TOTAL QSM 5.0				
				L	1136212							
	1141433							ICP NA TOTAL QSM 5.0				
				L	1136212							
	1136457		4/26/2022 17:44					ICP K TOTAL QSM 5.0				
		54IDW		DUP	1136212				95236			
	1136457		4/26/2022 17:44					ICP NA TOTAL QSM 5.0				
		54IDW		DUP	1136212				95236			
	1136458		4/26/2022 17:44					ICP K TOTAL QSM 5.0				
		54IDW		MSW	1136212				95236			
	1136458		4/26/2022 17:44					ICP NA TOTAL QSM 5.0				
		54IDW		MSW	1136212				95236			
	1136459		4/26/2022 17:44					ICP K TOTAL QSM 5.0				
		54IDW		MSDW	1136458				95236			
	1136459		4/26/2022 17:44					ICP NA TOTAL QSM 5.0				
		54IDW		MSDW	1136458				95236			
	1141434							ICP K TOTAL QSM 5.0				
				PDSW	1136212							
	1141435							ICP NA TOTAL QSM 5.0				
				PDSW	1136212							
	1141425							MICP WATER QSM K&Na				
				CCV1					0			
	1141426							MICP WATER QSM K&Na				
				CCV2					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp3EBC.tmp

MICP WATER QSM K&Na Analytical Run
211582 on 5/11/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1141427						MICP WATER QSM K&Na				
				CCB				0			

20 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp3EBC.tmp

MICP WATER QSM Analytical Run
211628 on 5/10/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138666							MICP WATER QSM				
					ICV				0			
	1138667							MICP WATER QSM				
					ICVLL				0			
	1138668							MICP WATER QSM				
					ICB				0			
	1138669							MICP WATER QSM				
					ICSA				0			
	1138670							MICP WATER QSM				
					ICSAB				0			
	1138671							MICP WATER QSM				
					ICV				0			
	1138694							MICP WATER QSM				
					CCV1				0			
	1138695							MICP WATER QSM				
					CCV2				0			
	1138696							MICP WATER QSM				
					CCB				0			
	1137454							ICP K TOTAL QSM 5.0				
					LCSW				95267			
	1137454							ICP NA TOTAL QSM 5.0				
					LCSW				95267			
	1137454							ICP TOTAL QSM 5.0				
					LCSW				95267			
	1138672							MICP WATER QSM				
					CCV1				0			
	1138673							MICP WATER QSM				
					CCV2				0			
	1138674							MICP WATER QSM				
					CCB				0			
	1137453							ICP K TOTAL QSM 5.0				
					MBW				95267			
	1137453							ICP NA TOTAL QSM 5.0				
					MBW				95267			
	1137453							ICP TOTAL QSM 5.0				
					MBW				95267			
169227	1137439	49IDW	4/29/2022	09:45		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ICP TOTAL QSM 5.0	95267	GW		**4**

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: Metals C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpC50A.tmp

MICP WATER QSM Analytical Run
211628 on 5/10/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138675						ICP TOTAL QSM 5.0				
				L	1137439			0			
	1137455		4/29/2022 09:45				ICP TOTAL QSM 5.0				
		49IDW		DUP	1137439			95267			
	1137456		4/29/2022 09:45				ICP TOTAL QSM 5.0				
		49IDW		MSW	1137439			95267			
	1137457		4/29/2022 09:45				ICP TOTAL QSM 5.0				
		49IDW		MSDW	1137456			95267			
	1138676						ICP TOTAL QSM 5.0				
				PDSW	1137439			0			
	1138677						MICP WATER QSM				
				CCV1				0			
	1138678						MICP WATER QSM				
				CCV2				0			
	1138679						MICP WATER QSM				
				CCB				0			
	1140978						MICP WATER QSM				
				ICV				0			
	1140979						MICP WATER QSM				
				ICVLL				0			
	1140980						MICP WATER QSM				
				ICB				0			
	1140981						MICP WATER QSM				
				ICSA				0			
	1140982						MICP WATER QSM				
				ICSAB				0			
	1140983						MICP WATER QSM				
				ICVLL				0			
	1140984						MICP WATER QSM				
				CCV1				0			
	1140985						MICP WATER QSM				
				CCV2				0			
	1140986						MICP WATER QSM				
				CCB				0			
	1140987						MICP WATER QSM				
				CCV1				0			
	1140988						MICP WATER QSM				
				CCV2				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpC50A.tmp

MICP WATER QSM Analytical Run
211628 on 5/10/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1140989						MICP WATER QSM				
				CCB				0			

39 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpC50A.tmp

MICP WATER QSM K&Na Analytical Run
211629 on 5/10/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138680								MICP WATER QSM K&Na				
					ICV					0			
	1138681								MICP WATER QSM K&Na				
					ICVLL					0			
	1138682								MICP WATER QSM K&Na				
					ICB					0			
	1138683								MICP WATER QSM K&Na				
					ICSA					0			
	1138684								MICP WATER QSM K&Na				
					ICSAB					0			
	1138697								MICP WATER QSM K&Na				
					CCV1					0			
	1138698								MICP WATER QSM K&Na				
					CCV2					0			
	1138699								MICP WATER QSM K&Na				
					CCB					0			
	1138686								MICP WATER QSM K&Na				
					CCV1					0			
	1138687								MICP WATER QSM K&Na				
					CCV2					0			
	1138688								MICP WATER QSM K&Na				
					CCB					0			
169227	1137439		4/29/2022	09:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ICP K TOTAL QSM 5.0		GW	**4**	
		49IDW								95267			
169227	1137439		4/29/2022	09:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ICP NA TOTAL QSM 5.0		GW	**4**	
		49IDW								95267			
	1141389								ICP K TOTAL QSM 5.0				
					L	1137439							
	1141390								ICP NA TOTAL QSM 5.0				
					L	1137439							
	1137455		4/29/2022	09:45					ICP K TOTAL QSM 5.0				
		49IDW			DUP	1137439				95267			
	1137455		4/29/2022	09:45					ICP NA TOTAL QSM 5.0				
		49IDW			DUP	1137439				95267			
	1137456		4/29/2022	09:45					ICP K TOTAL QSM 5.0				
		49IDW			MSW	1137439				95267			
	1137456		4/29/2022	09:45					ICP NA TOTAL QSM 5.0				
		49IDW			MSW	1137439				95267			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp4F2A.tmp

MICP WATER QSM K&Na Analytical Run
211629 on 5/10/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1137457		4/29/2022	09:45					ICP K TOTAL QSM 5.0				
		49IDW			MSDW	1137456				95267			
	1137457		4/29/2022	09:45					ICP NA TOTAL QSM 5.0				
		49IDW			MSDW	1137456				95267			
	1141391								ICP K TOTAL QSM 5.0				
					PDSW	1137439							
	1141392								ICP NA TOTAL QSM 5.0				
					PDSW	1137439							
	1138691								MICP WATER QSM K&Na				
					CCV1					0			
	1138692								MICP WATER QSM K&Na				
					CCV2					0			
	1138693								MICP WATER QSM K&Na				
					CCB					0			

26 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp4F2A.tmp

MERCURY QSM 5.0 Analytical Run
211699 on 5/5/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1139472								MERCURY QSM 5.0				
					ICV					0			
	1139473								MERCURY QSM 5.0				
					ICB					0			
	1136566								MERCURY TOTAL QSM 5.0				
					LCSW					95243			
	1136565								MERCURY TOTAL QSM 5.0				
					MBW					95243			
169156	1136212		4/26/2022	17:44			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	MERCURY TOTAL QSM 5.0		GW	4	
		54IDW								95243			
169227	1137439		4/29/2022	09:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	MERCURY TOTAL QSM 5.0		GW	4	
		49IDW								95243			
	1139474								MERCURY QSM 5.0				
					CCV					0			
	1139475								MERCURY QSM 5.0				
					CCB					0			
	1139484								MERCURY QSM 5.0				
					ICV					0			
	1139485								MERCURY QSM 5.0				
					ICB					0			
	1136567		4/26/2022	17:44					MERCURY TOTAL QSM 5.0				
		54IDW			DUP	1136212				95243			
	1136568		4/26/2022	17:44					MERCURY TOTAL QSM 5.0				
		54IDW			MSW	1136212				95243			
	1136569		4/26/2022	17:44					MERCURY TOTAL QSM 5.0				
		54IDW			MSDW	1136568				95243			
	1139486								MERCURY QSM 5.0				
					CCV					0			
	1139487								MERCURY QSM 5.0				
					CCB					0			

15 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

PrepWrkSht2
on 5/10/2022

Prep Batch: **95236**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	1136455	MBW	0	ICP K TOTAL QSM 5.0			LIQUID				
	1136455	MBW	0	ICP NA TOTAL QSM 5.0			LIQUID				
	1136455	MBW	0	ICP TOTAL QSM 5.0			LIQUID				
	1136456	LCSW	0	ICP K TOTAL QSM 5.0			LIQUID				
	1136456	LCSW	0	ICP NA TOTAL QSM 5.0			LIQUID				
	1136456	LCSW	0	ICP TOTAL QSM 5.0			LIQUID				
169156	1136212			ICP K TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	54IDW	GROUND WATER	4/26/22	17:44	5/10/22	4
	1136212			ICP NA TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	54IDW	GROUND WATER	4/26/22	17:44	5/10/22	4
	1136212			ICP TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	54IDW	GROUND WATER	4/26/22	17:44	5/10/22	4
	1136457	DUP	1136212	ICP K TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		
	1136457	DUP	1136212	ICP NA TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		
	1136457	DUP	1136212	ICP TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		
	1136458	MSW	1136212	ICP K TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		
	1136458	MSW	1136212	ICP NA TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		
	1136458	MSW	1136212	ICP TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		
	1136459	MSDW	1136458	ICP K TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		
	1136459	MSDW	1136458	ICP NA TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		

PrepWrkSht2
on 5/10/2022

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1136459	MSDW	1136458	ICP TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22 17:44		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpB549.tmp

PrepWrkSht2
on 5/10/2022

Prep Batch: **95267**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1137453	MBW	0	ICP K TOTAL QSM 5.0			LIQUID			
	1137453	MBW	0	ICP NA TOTAL QSM 5.0			LIQUID			
	1137453	MBW	0	ICP TOTAL QSM 5.0			LIQUID			
	1137453	MBW	0	ICP TOTAL QSM 5.0			LIQUID			
	1137454	LCSW	0	ICP K TOTAL QSM 5.0			LIQUID			
	1137454	LCSW	0	ICP NA TOTAL QSM 5.0			LIQUID			
	1137454	LCSW	0	ICP TOTAL QSM 5.0			LIQUID			
	1137454	LCSW	0	ICP TOTAL QSM 5.0			LIQUID			
169227	1137439			ICP K TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	49IDW	GROUND WATER	4/29/22 09:45	5/12/22	4
	1137439			ICP NA TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	49IDW	GROUND WATER	4/29/22 09:45	5/12/22	4
	1137439			ICP TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	49IDW	GROUND WATER	4/29/22 09:45	5/12/22	4
	1137439		0	ICP TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	49IDW	GROUND WATER	4/29/22 09:45	5/12/22	4
	1137455	DUP	1137439	ICP K TOTAL QSM 5.0		49IDW	GROUND WATER	4/29/22 09:45		
	1137455	DUP	1137439	ICP NA TOTAL QSM 5.0		49IDW	GROUND WATER	4/29/22 09:45		
	1137455	DUP	1137439	ICP TOTAL QSM 5.0		49IDW	GROUND WATER	4/29/22 09:45		
	1137456	MSW	1137439	ICP K TOTAL QSM 5.0		49IDW	GROUND WATER	4/29/22 09:45		
	1137456	MSW	1137439	ICP NA TOTAL QSM 5.0		49IDW	GROUND WATER	4/29/22 09:45		

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpAD38.tmp

PrepWrkSht2
on 5/10/2022

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1137456	MSW	1137439	ICP TOTAL QSM 5.0		49IDW	GROUND WATER	4/29/22 09:45		
	1137457	MSDW	1137456	ICP K TOTAL QSM 5.0		49IDW	GROUND WATER	4/29/22 09:45		
	1137457	MSDW	1137456	ICP NA TOTAL QSM 5.0		49IDW	GROUND WATER	4/29/22 09:45		
	1137457	MSDW	1137456	ICP TOTAL QSM 5.0		49IDW	GROUND WATER	4/29/22 09:45		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpAD38.tmp

PrepWrkSht2
on 5/16/2022

Prep Batch: **95243**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	1136565	MBW		MERCURY TOTAL QSM 5.0			LIQUID				
	1136566	LCSW		MERCURY TOTAL QSM 5.0			LIQUID				
169156	1136212			MERCURY TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	54IDW	GROUND WATER	4/26/22	17:44	5/10/22	4
169227	1137439			MERCURY TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	49IDW	GROUND WATER	4/29/22	09:45	5/12/22	4
	1136567	DUP	1136212	MERCURY TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		
	1136568	MSW	1136212	MERCURY TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		
	1136569	MSDW	1136568	MERCURY TOTAL QSM 5.0		54IDW	GROUND WATER	4/26/22	17:44		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpFFBC.tmp

Metals Digestion Bench Sheet

Program: QSM
*Matrix: GW

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA As & Se Liquids

Prep Batch #:	95236
Prep Method:	200.2
Analyst:	NAH
Date:	04/29/2022
Start Time:	10:19

Prep Analyst: BMM
Balance ID:

End Date: 04/29/2022
End Time: 21:04

Reagent:	Ref. #
Nitric Acid:	AB.711
Hydrochloric Acid:	AB.706
Hydrogen Peroxide:	

Digestion Tube Lot #: 3591
Block Used: D2
Cell Position for Temp. Check: 60
Initial-DigestionTemp (ºC,corrected): 94
Final-Digestion Temp (ºC,corrected): 93

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
1136455	(MB)			50.0	50
1136456	(LCS)			50.0	50
1136212				50.0	50
	Comments:				50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
1136457	(DUP)			50.0	50
1136458	(MS)	Parent Sample		50.0	50
1136459	(MSD)	1136212		50.0	50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.1	M15170
0.2	M15277
0.5	M15069
0.5	M15113

LCS Spike Amount (ml)	Spike Ref. #
0.1	M15170
0.2	M15277
0.5	M15069
0.5	M15113

Reviewed x

Metals Digestion Bench Sheet

Program: QSM
*Matrix: GW

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA As & Se Liquids

Prep Batch #:	95267
Prep Method:	200.2
Analyst:	NAH
Date:	05/02/2022
Start Time:	09:24

Prep Analyst: BMM
Balance ID: VOB01

End Date: 05/02/2022
End Time: 20:09

Reagent:	Ref. #
Nitric Acid:	AB.711
Hydrochloric Acid:	AB.706
Hydrogen Peroxide:	AB.709

Digestion Tube Lot #: 3591
Block Used: D2
Cell Position for Temp. Check: 60
Initial-DigestionTemp (ºC,corrected): 93
Final-Digestion Temp (ºC,corrected): 92

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
1137453	(MB)			50.0	50
1137454	(LCS)			50.0	50
1137439				50.0	50
	Comments:				50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
1137455	(DUP)			50.0	50
1137456	(MS)	Parent Sample		50.0	50
1137457	(MSD)	1137439		50.0	50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.1	M15170
0.2	M15277
0.5	M15069
0.5	M15113

LCS Spike Amount (ml)	Spike Ref. #
0.1	M15170
0.2	M15277
0.5	M15069
0.5	M15113

Reviewed x

FMT12-03

Mercury Digestion Bench Sheet

(Prep Methods 7470A & 7471A)

CCV ID: M15388
ICV/LCSW ID: M15389

*Matrix: GW
Balance ID:

Prep Batch #:	95243
Prep Method:	7470A
Analyst:	MDS
Date:	05/03/2022
Start Time:	14:15

7470A= Hg Liquids
7471A= Hg Solids

End Date: 05/03/2022
End Time: 16:15

Digestion Tube Lot #: 10521010
Block Used: A
Cell Position for Temp. Check: B-3
Initial-DigestionTemp (ºC,corrected): 90.8
Final-Digestion Temp (ºC,corrected): 91
Additional KMnO4 added (ml):
Aqua Regia added (ml)
Calibration Stds: M15387

Reagent:	Ref. #
HNO3:	AB.711
H2SO4:	AB.713
NaCl/Hydrox.SO4:	M15393
KMnO4:	M15390
K2S2O8:	M15391
Aqua-Regia:	

	Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
	1136565	(MB)			25.0	25
	1136566	(LCS)			25.0	25
	1136212				25.0	25
	1137439	**Comments:**			25.0	25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
	1136567	(DUP) if applicable			25.0	25
	1136568	(MS)	Parent Sample		25.0	25
	1136569	(MSD)	1136212		25.0	25
Leave >>		(DUP) if applicable				25
blank		(MS)	Parent Sample			25
		(MSD)				25
		(DUP) if applicable				25
		(MS)	Parent Sample			25
if N/A		(MSD)				25

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

A:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #
0.5	100	M15389

B:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #

Reviewed By/Date: X

iCAP 6000 / 6500 Data Review Checklist	Analysis Date: 5/3/22	Data File: 000 results	Date of review: 5/11/22
Cal Std ID: M1523 LIMS #: 211581, 82	Analyst: [illegible]	Reviewer: MOS	Approved? Yes / No
Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)			
Prep Batch Check —			

QC Parameters : 6010 / 200.7 / OSM / Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: r ≥ 0.995 / r > 0.998	✓		✓		
2) ICV: 90-110% / 95-105%	✓		✓		
2) ICVLL: 70-130% / 80-120%	✓		✓		
3) ICB: < 3X IDL / <LOD / <LOQ	✓		✓		
4) ICSA: < ABS LOD	✓		✓		See ICVLL for RR
5) ICSAB: 80-120%	✓		✓		
6) MRL: 70-130% / 80-120%	✓		✓		Ag RR
7) MDL Check: >LOD					
8) CCV1/CCB1 (CCV: 90-110%)	✓		✓		
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO
Prep Batch ID#: 95256 Dig. Meth. 200.2	✓		✓	
LCS - generated limits or project specific limits	✓		✓	
MB - <LOD or ≤ ½ RL	✓		✓	
Spiked samples in batch:				
a) 1136212 matrix = DW	✓		✓	
b) matrix =				
c) matrix =				
PDS: ±15% / 20% / 25% Sample#:				
Prep Batch ID#: Dig. Meth.				
LCS - generated limits or project specific limits				
MB - <LOD or ≤ ½ RL				
Spiked samples in batch:				
a) matrix =				
b) matrix =				
c) matrix =				
PDS: ±15% / 20% / 25% Sample#:				
Prep Batch ID#: Dig. Meth.				
LCS - generated limits or project specific limits				
MB - <LOD or ≤ ½ RL				
Spiked samples in batch:				
a) matrix =				
b) matrix =				
c) matrix =				
PDS: ±15% / 20% / 25% Sample#:				
Prep Batch ID#: Dig. Meth.				
LCS - generated limits or project specific limits				
MB - <LOD or ≤ ½ RL				
Spiked samples in batch:				
a) matrix =				
b) matrix =				
c) matrix =				
PDS: ±15% / 20% / 25% Sample#:				

iCAP 6000 / 6500 Data Review Checklist	Analysis Date: 5/3/22	Data File: 220503w2	Date of review: 5/10/22
Cal Std ID: M15243 LIMS # : 211628, 29	Analyst: [illegible]	Reviewer: MOS	Approved? Yes No
Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)			
Prep Batch Check			

QC Parameters : 6010 / 200.7 / QSM / Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: r ≥ 0.995 / r > 0.998	✓		✓		
2) ICV: (90-110%) / 95-105%	✓		✓		
2) ICVLL: 70-130% (80-120%)	✓		✓		
3) ICB: < 3X IDL / <LOD) <LOQ	✓		✓		
4) ICSA: < ABS LOD	✓		✓		
5) ICSAB: 80-120%	✓		✓		
6) MRL: 70-130% / 80-120%					
7) MDL Check: >LOD					
8) CCV1/CCB1 (CCV: 90-110%)	✓		✓		
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	Comments:
Prep Batch ID#: 95267 Dig. Meth. 200.2	—		✓		
LCS - generated limits or project specific limits	—		✓		
MB - <LOD or ≤ ½ RL	—	✓	✓	✓	Ag >LOD <½RL "B"
Spiked samples in batch:					
a) 117439 matrix = DW	✓		✓		
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: _____					
Prep Batch ID#: _____ Dig. Meth. _____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) _____ matrix = _____					
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: _____					
Prep Batch ID#: _____ Dig. Meth. _____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) _____ matrix = _____					
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: _____					
Prep Batch ID#: _____ Dig. Meth. _____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) _____ matrix = _____					
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: _____					

GFAA / FLAA / CVAA Data Review checklist		Method: 200.9	7000 series AA	245.1 & 245.2	245.7	7470a / 7471a
Instrumentation:	THERMO M SERIES AA			Hydra II Hg ANALYZER		
Analysis Date: 5/4/22	Data File: 050422W, 050422BW	Date Review: 5/6/22		Analyte: Hg		
Cal Std ID: M15387	LIMS #: 211699	Analyst: MOS	Reviewer:	Approved?	Yes	No

Prep Batch Check ✓

Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Calibration Parameters -	YES	NO	YES	NO	Comments:
1) Calibration linearity - r > 0.995	✓		✓		
2) ICV: 90-110% 95-105%	✓				
2) ICVLL: 70-130% 80-120%					
3) ICB: <IDL / <LOD / <LOQ / <½ RL	✓				
6) MRL: 70-130%					
7) CCV1/CCB1- (CCV: 90-110% / 80-120%)	✓				
8) CCV2/CCB2 (CCB: <IDL / <LOD / <LOQ / <½ RL)					
9) CCV3/CCB3					
10) CCV4/CCB4					
11) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	Comments:
Prep Batch ID#: 95243 Dig. Meth. 7470a	✓		—		
LCS - generated limits or project specific limits	✓				
MB - <LOD / <2.2X LOD / ≤ ½RL	✓				
Spiked samples in batch:					
a) 1136212 matrix = GW	✓	✓			Dup invalid → MSD RPD "Y" MS/MSD Failed "M"
b) matrix =					
c) matrix =					
d) matrix =					
e) matrix =					
PDS: ±15% / 20% / 25% Sample#					
MSA Performed? Yes No					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
d) matrix =					
e) matrix =					
PDS: ±15% / 20% / 25% Sample#					
MSA Performed? Yes No					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
d) matrix =					
e) matrix =					
PDS: ±15% / 20% / 25% Sample#					

CT Laboratories, LLC

ICP-6500 Instrument Run Logbook

Date	Time: Start / End	Analyst	Analytes / Sequence I.D.	Method	LIMS # or Sample Description	Nebulizer Pressure (kpa)	Calib. Std ID	Version	Comments
4/13/22	0910 / 0434	[illegible]	041322	DODCal U	211033 211015,16 211031 211086 211032 211074	270	M15243 M15246 M15244	V4993 V4992	M15249,50 M15245,58 M15247
4/14/22	0950 / 2056	[illegible]	041422	DODCal U	211097 211087 211090 211088 211092 211091	270	M15243 M15246 M15244	V4994	M15249,50 M15245,58 M15247
4/15/22	1022 / 2124	[illegible]	041522	DODCal U	211114,15 C09,10A 211113 211120 211125 211147	240	M15243 M15246 M15244	V4997	M15249,50 M15245,58 M15247
4/18/22	1254 / 2103	[illegible]	041822	DODCal U	211190 211148,49	260	M15243 M15246 M15244	V4998	M15249,50 M15245,58 M15247
4/19/22	1111 / 1823	[illegible]	041922	DODCal U	211219 211218	250	M15243 M15246 M15244	V5000	M15249,50 M15245,58 M15247
4/20/22	1252 / 2010	[illegible]	042022	DODCal U	211113 211279 211278	250	M15243 M15246 M15244	V5002	M15249,50 M15245,58 M15247
4/25/22	0940 / 0323	[illegible]	042522	DODCal W	211306,307 211358,359 211350,51 211360 211098 211383 211358 211304,02 211092 211359	240	M15243 M15246 M15244	V5006,07 V5005	M15249,50 M15245,58 M15247
4/26/22	1233 / 0039	[illegible]	042622	DODCal U	211379,80,81 211098 211358 211360 211378,80,81 211098 211358 211359 211188,89 211424,25, 211385	240	M15243 M15246 M15244	V5011 V5009 V5008	M15249,50 M15245,58 M15247
4/27/22	0934 / 1720	[illegible]	042722	DODCal U	211481 211480	240	M15243 M15246 M15244	V5012	M15249,50,48 M15247,55,5
4/28/22	1251 / 2345	[illegible]	042822	DODCal U	211379 211511 2 211527 211521 211510	240	M15243 M15246 M15244	V5014	M15249,50,4 M15247,55
4/29/22	0944 / 2219	[illegible]	042922	DODCal U	211559 211544 211586 211540 211543 211542 211485	240	M15243 M15246 M15244	V5015	M15249,15250 M15245,58 M15247
5/3/22	0944 / 0113	[illegible]	050322	DODCal U	211559 211584 211608,29 211582,81 211652 211583 211661	240	M15243 M15246 M15244	V5019	M15249,50,4 M15245,58 M15247

Comments: _____

_____

Checked By / Date: _____

CT Laboratories, LLC

ICP-6500 Instrument Run Logbook

Date	Time: Start / End	Analyst	Analytes / Sequence I.D.	Method	LIMS # or Sample Description	Nebulizer Pressure (kpa)	Calib. Std ID	Version V5023	Comments
5/9/22	0732/0822	[signature]	050922	DODCal W	211673 211814 211711 211759 211675 211758 211760 211763 211762 211782 211764 211761 211678	220	M15243 M15246 M15244	M15243 M15246 M15244	M15249, 50, 48 M15245, 58 M15247
5/10/22	1103 / 2151	[signature]	051022	DODCal W	211671 211660 211581, 82 211584 211863, 67, 211841, 211833 211873 211857, 211882	220	M15243 M15246 M15244	V5025 V5024	
5/18/22	/								
	/								
	/								
	/								
	/								
	/								
	/								
	/								
	/								
	/								

Comments: _____

_____

Checked By / Date: _____

CT Laboratories

Mercury Analyzer Instrument Run Log

Instrument ID: Cetac M-6000A

Analysis Date	Start Time	End Time	Analyst	LIMS Run # (s)	Method File ID #	Cal. Std. ID #	Lamp Current (mA)	Analysis Tube Lot #	Comments
4/6/22	0852	0952	MDS	210763	0406225	M15344	7.221	J533110-2104	$SnCl_2$: M15351
4/13/22	0914	1421	MDS	211064 ~~210~~ 211059, 211060, 211061, 211062, 211063	041322W	M15354	7.243	J533110-2104	$SnCl_2$: M15361
4/14/22	0953	1122	MDS	211066, 211065	041422S	M15354	7.163	J533110-2104	$SnCl_2$: M15361
4/20/22	0900	1218	MDS	211257, 211244, 211246, 211248 211261, 211260, 211256, 211253,	042022W	M15367	7.368	J533110-2104	$SnCl_2$: M15373
4/20/22	1231	1440	MDS	211252	042022BW	M15367	7.343	J533110-2104	$SnCl_2$: M15373
4/21/22	0900	1501	MDS	211259 211245, 211250, 211251, 211253, 211254	042122W	M15367	7.454	J533110-2104	$SnCl_2$: M15373
4/22/22	0829	0958	MDS	211340, 211341, 211342, 211343	042222S	M15367	7.442	J533110-2104	$SnCl_2$: M15373
4/27/22	1009	1116	MDS	211341, 211482	042722S	M15376	7.497	J533110-2104	$SnCl_2$: M15383
4/27/22	1135	1345	MDS	211260, 211493, 211494, 211495, 211496	042722W	M15376	7.523	J533110-2104	$SnCl_2$: M15383
5/4/22	0957	1144	MDS	211699, 211700, 211701	050422W	M15387	7.813	J533110-2104	$SnCl_2$: M15394
5/4/22	1200	1410	MDS	211699, 211700, 211701, 211702	050422BW	M15387	7.688	J533110-2104	$SnCl_2$: M15394
5/5/22	0853	1000	MDS	211703	050522S	M15387	7.651	J533110-2104	$SnCl_2$: M15394
5/11/22	0949	1431	MDS	211903, 211904 211898, 211899, 211900, 211901, 211902,	051122W	M15401	8.045	J533110-2104	$SnCl_2$: M15407
5/18/22	0922	1429	MDS	212106, 212107, 212108, 212109	051822S	M15408	7.964	J533110-2104	$SnCl_2$: M15415

Reviewed By/Date:_____

Type	Date/Time	Message	User name	Application	Sequence Name
	05/03/2022 11:00:23	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	05/03/2022 11:08:48	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	05/03/2022 11:16:15	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	05/03/2022 11:24:36	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	05/03/2022 11:33:18	Running Ag 1000 (15)	NAH	Analyst	S_DOD Calibration
	05/03/2022 11:40:53	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	05/03/2022 11:48:31	Running icv (16)	NAH	Analyst	S_DOD Calibration
	05/03/2022 11:55:49	Running icv (16)	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:03:06	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:10:47	Running icb (17)	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:18:27	Running icb (17)	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:19:37	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:21:49	Autosampler Run Started	NAH	Analyst	
	05/03/2022 12:21:49	Sequence Started	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:22:10	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:22:38	Closing will close the method and all associated samples.	NAH	Analyst	
	05/03/2022 12:29:50	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:37:31	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:45:12	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	05/03/2022 12:52:53	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	05/03/2022 13:00:34	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	05/03/2022 13:08:13	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	05/03/2022 13:15:39	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	05/03/2022 13:22:59	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	05/03/2022 13:30:07	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	05/03/2022 13:37:59	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	05/03/2022 13:46:24	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	05/03/2022 13:53:50	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	05/03/2022 14:02:15	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	05/03/2022 14:10:56	Running Ag 1000 (15)	NAH	Analyst	S_DOD Calibration
	05/03/2022 14:18:36	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	05/03/2022 14:26:16	Running icv (16)	NAH	Analyst	S_DOD Calibration
	05/03/2022 14:28:33	Closing will close the method and all associated samples.	NAH	Analyst	
	05/03/2022 14:33:33	Running icv (16)	NAH	Analyst	S_DOD Calibration
	05/03/2022 14:40:51	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	05/03/2022 14:48:26	Running icb (17)	NAH	Analyst	S_DOD Calibration
	05/03/2022 14:56:07	Running icb (17)	NAH	Analyst	S_DOD Calibration
	05/03/2022 15:03:49	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	05/03/2022 15:11:26	Running ICSA (20)	NAH	Analyst	S_DOD Calibration
	05/03/2022 15:19:35	Running ICSAB (21)	NAH	Analyst	S_DOD Calibration
	05/03/2022 15:27:15	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	05/03/2022 15:34:55	Running ICV LL ag (1)	NAH	Analyst	S_DOD Calibration
	05/03/2022 15:42:36	Running lcsw95236 (2)	NAH	Analyst	S_DOD Calibration
	05/03/2022 15:49:51	Running mbw95236 (3)	NAH	Analyst	S_DOD Calibration
	05/03/2022 15:57:30	Running 1136212 (4)	NAH	Analyst	S_DOD Calibration
	05/03/2022 16:05:19	Running l1136212 (5)	NAH	Analyst	S_DOD Calibration
	05/03/2022 16:13:24	Running dup1136212 (6)	NAH	Analyst	S_DOD Calibration
	05/03/2022 16:21:13	Running msw1136212 (7)	NAH	Analyst	S_DOD Calibration
	05/03/2022 16:28:17	Running msdw1136212 (8)	NAH	Analyst	S_DOD Calibration
	05/03/2022 16:35:21	Running pdsw1136212 (9)	NAH	Analyst	S_DOD Calibration
	05/03/2022 16:42:24	Running lcsw95234 (10)	NAH	Analyst	S_DOD Calibration
	05/03/2022 16:49:37	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	05/03/2022 16:56:39	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/03/2022 17:03:37	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/03/2022 17:11:18	Running mbw95234 (11)	NAH	Analyst	S_DOD Calibration
	05/03/2022 17:19:00	Running 1136444 (12)	NAH	Analyst	S_DOD Calibration
	05/03/2022 17:26:25	Running msw1136444 (13)	NAH	Analyst	S_DOD Calibration
	05/03/2022 17:33:38	Running msdw1136444 (14)	NAH	Analyst	S_DOD Calibration
	05/03/2022 17:40:53	Running pdsw1136444 (15)	NAH	Analyst	S_DOD Calibration
	05/03/2022 17:48:09	Running lcsw95233 (16)	NAH	Analyst	S_DOD Calibration
	05/03/2022 17:55:30	Running mbw95233 (17)	NAH	Analyst	S_DOD Calibration
	05/03/2022 18:03:10	Running 1136312 (18)	NAH	Analyst	S_DOD Calibration
	05/03/2022 18:11:10	Running 1136316 (19)	NAH	Analyst	S_DOD Calibration
	05/03/2022 18:19:05	Running 1136320 (20)	NAH	Analyst	S_DOD Calibration
	05/03/2022 18:27:18	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	05/03/2022 18:34:18	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/03/2022 18:41:16	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/03/2022 18:48:58	Running 1136389 (21)	NAH	Analyst	S_DOD Calibration
	05/03/2022 18:56:50	Running 1136441 (22)	NAH	Analyst	S_DOD Calibration
	05/03/2022 19:04:45	Running msw1136441 (23)	NAH	Analyst	S_DOD Calibration
	05/03/2022 19:11:57	Running msdw1136441 (24)	NAH	Analyst	S_DOD Calibration
	05/03/2022 19:19:13	Running pdsw1136441 (25)	NAH	Analyst	S_DOD Calibration
	05/03/2022 19:26:16	Running 1137499 (26)	NAH	Analyst	S_DOD Calibration
	05/03/2022 19:33:49	Running msw1137499 (27)	NAH	Analyst	S_DOD Calibration
	05/03/2022 19:41:07	Running msdw1137499 (28)	NAH	Analyst	S_DOD Calibration
	05/03/2022 19:48:25	Running lcsw95266 (29)	NAH	Analyst	S_DOD Calibration
	05/03/2022 19:55:43	Running mbw95266 (30)	NAH	Analyst	S_DOD Calibration
	05/03/2022 20:03:23	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	05/03/2022 20:10:23	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/03/2022 20:17:21	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/03/2022 20:25:02	Running 1136732 (31)	NAH	Analyst	S_DOD Calibration
	05/03/2022 20:32:45	Running 1136764 (32)	NAH	Analyst	S_DOD Calibration
	05/03/2022 20:40:23	Running 1136774 (33)	NAH	Analyst	S_DOD Calibration
	05/03/2022 20:48:30	Running 1136775 (34)	NAH	Analyst	S_DOD Calibration
	05/03/2022 20:56:41	Running 1136779 (35)	NAH	Analyst	S_DOD Calibration
	05/03/2022 21:04:47	Running 1136777 (36)	NAH	Analyst	S_DOD Calibration
	05/03/2022 21:12:58	Running msw1136777 (37)	NAH	Analyst	S_DOD Calibration
	05/03/2022 21:20:31	Running msdw1136777 (38)	NAH	Analyst	S_DOD Calibration
	05/03/2022 21:28:02	Running pdsw1139777 (39)	NAH	Analyst	S_DOD Calibration
	05/03/2022 21:35:19	Running lcsw95267 (40)	NAH	Analyst	S_DOD Calibration
	05/03/2022 21:42:32	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	05/03/2022 21:49:33	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/03/2022 21:56:31	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/03/2022 22:04:12	Running mbw95267 (41)	NAH	Analyst	S_DOD Calibration
	05/03/2022 22:11:53	Running 1137439 (42)	NAH	Analyst	S_DOD Calibration
	05/03/2022 22:19:41	Running l1137439 (43)	NAH	Analyst	S_DOD Calibration
	05/03/2022 22:27:42	Running dup1137439 (44)	NAH	Analyst	S_DOD Calibration
	05/03/2022 22:35:30	Running msw1137439 (45)	NAH	Analyst	S_DOD Calibration
	05/03/2022 22:42:33	Running msdw1137439 (46)	NAH	Analyst	S_DOD Calibration
	05/03/2022 22:49:36	Running pdsw1137439 (47)	NAH	Analyst	S_DOD Calibration
	05/03/2022 22:56:41	Running lcsw1 (48)	NAH	Analyst	S_DOD Calibration
	05/03/2022 23:03:51	Running mbw1 (49)	NAH	Analyst	S_DOD Calibration
	05/03/2022 23:11:33	Running 1136768 (50)	NAH	Analyst	S_DOD Calibration
	05/03/2022 23:19:51	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	05/03/2022 23:26:52	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/03/2022 23:33:51	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/03/2022 23:41:31	Running msw1136768 (51)	NAH	Analyst	S_DOD Calibration
	05/03/2022 23:49:20	Running vess b 3238 (52)	NAH	Analyst	S_DOD Calibration
	05/03/2022 23:57:08	Running lcsw95220 (53)	NAH	Analyst	S_DOD Calibration
	05/04/2022 00:04:30	Running mbw95220 (54)	NAH	Analyst	S_DOD Calibration
	05/04/2022 00:12:12	Running 1135451 (55)	NAH	Analyst	S_DOD Calibration
	05/04/2022 00:20:09	Running 1135486 (56)	NAH	Analyst	S_DOD Calibration
	05/04/2022 00:27:47	Running 1135487 (57)	NAH	Analyst	S_DOD Calibration
	05/04/2022 00:35:33	Running 1135488 (58)	NAH	Analyst	S_DOD Calibration
	05/04/2022 00:43:11	Running 1136308 (59)	NAH	Analyst	S_DOD Calibration
	05/04/2022 00:51:14	Running 1136309 (60)	NAH	Analyst	S_DOD Calibration
	05/04/2022 00:59:18	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	05/04/2022 01:06:19	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/04/2022 01:13:17	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/04/2022 01:20:58	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	05/04/2022 01:28:35	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	05/04/2022 01:35:38	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	05/04/2022 01:42:38	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	05/04/2022 01:50:19	Plasma off	NAH	iTEVA Control Center	
	05/04/2022 01:50:20	Plasma extinguished successfully	NAH	Analyst	
	05/04/2022 01:50:22	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	05/04/2022 06:47:08	Plasma On	NAH	iTEVA Control Center	
	05/04/2022 06:47:14	Plasma ignition successful	NAH	Analyst	
	05/04/2022 08:00:52	E9000 - : Plasma went out unexpectedly; please refer to error messages	NAH	iTEVA Control Center	
	05/04/2022 10:00:49	Plasma ignition successful	NAH	Analyst	
	05/04/2022 10:01:03	E1133 - : Plasma went out during the exposure; please refer to error me	NAH	Analyst	
	05/04/2022 10:02:01	Plasma ignition successful	NAH	Analyst	
	05/04/2022 12:13:53	Sequence Started	NAH	Analyst	S_DOD Calibration
	05/04/2022 12:13:53	Autosampler Run Started	NAH	Analyst	
	05/04/2022 12:14:13	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	05/04/2022 12:15:04	Closing will close the method and all associated samples.	NAH	Analyst	
	05/04/2022 12:21:43	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	05/04/2022 12:23:06	Unable to calculate IEC factors. Not enough standards or concentration	NAH	Analyst	
	05/04/2022 12:29:26	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	05/04/2022 12:36:56	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	05/04/2022 12:44:31	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	05/04/2022 12:45:55	Unable to calculate IEC factors. Not enough standards or concentration	NAH	Analyst	
	05/04/2022 12:47:06	Unable to calculate IEC factors. Not enough standards or concentration	NAH	Analyst	
	05/04/2022 12:52:10	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	05/04/2022 12:59:45	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	05/04/2022 13:07:07	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	05/04/2022 13:14:19	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	05/04/2022 13:21:16	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	05/04/2022 13:29:19	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	05/04/2022 13:37:36	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	05/04/2022 13:39:47	Closing will close the method and all associated samples.	NAH	Analyst	
	05/04/2022 13:45:26	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	05/04/2022 13:54:08	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	05/04/2022 14:01:41	Closing will close the method and all associated samples.	NAH	Analyst	
	05/04/2022 14:03:17	Running Ag 1000 (15)	NAH	Analyst	S_DOD Calibration
	05/04/2022 14:10:48	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	05/04/2022 14:18:15	Running icv (16)	NAH	Analyst	S_DOD Calibration
	05/04/2022 14:25:23	Running icv (16)	NAH	Analyst	S_DOD Calibration
	05/04/2022 14:32:33	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	05/04/2022 14:39:52	Running icb (17)	NAH	Analyst	S_DOD Calibration
	05/04/2022 14:47:21	Running icb (17)	NAH	Analyst	S_DOD Calibration
	05/04/2022 14:54:51	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	05/04/2022 15:02:09	Running ICSA (20)	NAH	Analyst	S_DOD Calibration
	05/04/2022 15:10:29	Running ICSAB (21)	NAH	Analyst	S_DOD Calibration
	05/04/2022 15:18:26	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	05/04/2022 15:25:55	Running ICV LL ag (1)	NAH	Analyst	S_DOD Calibration
	05/04/2022 15:33:25	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	05/04/2022 15:40:44	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	05/04/2022 15:48:06	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/04/2022 15:54:57	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/04/2022 16:02:28	Plasma extinguished successfully	NAH	Analyst	
	05/04/2022 16:02:30	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	05/06/2022 06:52:00	Plasma ignition successful	NAH	Analyst	
	05/06/2022 14:37:33	Plasma extinguished successfully	NAH	Analyst	
	05/09/2022 06:40:45	Plasma On	NAH	iTEVA Control Center	
	05/09/2022 06:40:50	Plasma ignition successful	NAH	Analyst	
	05/09/2022 07:32:34	Sequence Started	NAH	Analyst	S_DOD Calibration
	05/09/2022 07:32:34	Autosampler Run Started	NAH	Analyst	
	05/09/2022 07:32:55	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	05/09/2022 07:40:19	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	05/09/2022 07:47:44	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	05/09/2022 07:55:06	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	05/09/2022 08:02:27	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	05/09/2022 08:09:48	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	05/09/2022 08:17:06	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	05/09/2022 08:24:20	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	05/09/2022 08:31:24	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	05/09/2022 08:38:20	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	05/09/2022 08:45:32	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	05/09/2022 08:53:29	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	05/09/2022 09:01:01	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	05/09/2022 09:08:49	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	05/09/2022 09:17:00	Running Ag 1000 (15)	NAH	Analyst	S_DOD Calibration
	05/09/2022 09:24:25	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	05/09/2022 09:31:49	Running icv (16)	NAH	Analyst	S_DOD Calibration
	05/09/2022 09:38:57	Running icv (16)	NAH	Analyst	S_DOD Calibration
	05/09/2022 09:46:06	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	05/09/2022 09:53:24	Running icb (17)	NAH	Analyst	S_DOD Calibration
	05/09/2022 10:00:47	Running icb (17)	NAH	Analyst	S_DOD Calibration
	05/09/2022 10:08:10	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	05/09/2022 10:15:25	Running ICSA (20)	NAH	Analyst	S_DOD Calibration
	05/09/2022 10:22:51	Running ICSAB (21)	NAH	Analyst	S_DOD Calibration
	05/09/2022 10:29:55	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	05/09/2022 10:37:17	Running ICVLL ag (1)	NAH	Analyst	S_DOD Calibration
	05/09/2022 10:44:41	Running lcss zn (2)	NAH	Analyst	S_DOD Calibration
	05/09/2022 10:51:27	Running mbszn (3)	NAH	Analyst	S_DOD Calibration
	05/09/2022 10:58:51	Running 1130577 (4)	NAH	Analyst	S_DOD Calibration
	05/09/2022 11:06:34	Running 1030577 (5)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	05/09/2022 11:14:18	Running 1030577 (6)	NAH	Analyst	S_DOD Calibration
	05/09/2022 11:22:02	Running mss1030577 (7)	NAH	Analyst	S_DOD Calibration
	05/09/2022 11:29:01	Running 1133268 (8)	NAH	Analyst	S_DOD Calibration
	05/09/2022 11:36:46	Running 1133268 (9)	NAH	Analyst	S_DOD Calibration
	05/09/2022 11:44:30	Running 1133268 (10)	NAH	Analyst	S_DOD Calibration
	05/09/2022 11:52:15	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	05/09/2022 11:58:51	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/09/2022 12:05:40	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/09/2022 12:13:04	Running mss1133268 (11)	NAH	Analyst	S_DOD Calibration
	05/09/2022 12:20:04	Running lcsw95267 (12)	NAH	Analyst	S_DOD Calibration
	05/09/2022 12:27:14	Running mbw95267 (13)	NAH	Analyst	S_DOD Calibration
	05/09/2022 12:34:38	Running 1137439 (14)	NAH	Analyst	S_DOD Calibration
	05/09/2022 12:42:10	Running lcsw95233 (15)	NAH	Analyst	S_DOD Calibration
	05/09/2022 12:49:19	Running mbw95233 (16)	NAH	Analyst	S_DOD Calibration
	05/09/2022 12:56:43	Running 1136389 (17)	NAH	Analyst	S_DOD Calibration
	05/09/2022 13:04:17	Running lcsw95236 (18)	NAH	Analyst	S_DOD Calibration
	05/09/2022 13:11:25	Running mbw95236 (19)	NAH	Analyst	S_DOD Calibration
	05/09/2022 13:18:48	Running 1136212 (20)	NAH	Analyst	S_DOD Calibration
	05/09/2022 13:26:20	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	05/09/2022 13:32:58	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/09/2022 13:39:45	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/09/2022 13:47:10	Running lcsw95274 (21)	NAH	Analyst	S_DOD Calibration
	05/09/2022 13:54:19	Running mbw95274 (22)	NAH	Analyst	S_DOD Calibration
	05/09/2022 14:01:44	Running 1138097 (23)	NAH	Analyst	S_DOD Calibration
	05/09/2022 14:09:25	Running msw1138097 (24)	NAH	Analyst	S_DOD Calibration
	05/09/2022 14:16:51	Running msdw1138097 (25)	NAH	Analyst	S_DOD Calibration
	05/09/2022 14:24:18	Running pdsw1138097 (26)	NAH	Analyst	S_DOD Calibration
	05/09/2022 14:31:24	Running 1139106 (27)	NAH	Analyst	S_DOD Calibration
	05/09/2022 14:39:13	Running lcsw95316 (28)	NAH	Analyst	S_DOD Calibration
	05/09/2022 14:46:22	Running mbw95316 (29)	NAH	Analyst	S_DOD Calibration
	05/09/2022 14:53:46	Running 1138553 (30)	NAH	Analyst	S_DOD Calibration
	05/09/2022 15:01:52	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	05/09/2022 15:08:20	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/09/2022 15:15:09	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/09/2022 15:22:33	Running msw1138553 (31)	NAH	Analyst	S_DOD Calibration
	05/09/2022 15:30:13	Running msdw1138553 (32)	NAH	Analyst	S_DOD Calibration
	05/09/2022 15:37:55	Running pdsw1138553 (33)	NAH	Analyst	S_DOD Calibration
	05/09/2022 15:45:26	Running 1138554 (34)	NAH	Analyst	S_DOD Calibration
	05/09/2022 15:52:59	Running 1138555 (35)	NAH	Analyst	S_DOD Calibration
	05/09/2022 16:00:49	Running 1138622 (36)	NAH	Analyst	S_DOD Calibration
	05/09/2022 16:08:25	Running 1138623 (37)	NAH	Analyst	S_DOD Calibration
	05/09/2022 16:16:02	Running 1138624 (38)	NAH	Analyst	S_DOD Calibration
	05/09/2022 16:23:39	Running 1138626 (39)	NAH	Analyst	S_DOD Calibration
	05/09/2022 16:31:17	Running 1138641 (40)	NAH	Analyst	S_DOD Calibration
	05/09/2022 16:38:53	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	05/09/2022 16:45:28	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	05/09/2022 16:52:16	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	05/09/2022 16:59:42	Running 1138642 (41)	NAH	Analyst	S_DOD Calibration
	05/09/2022 17:07:18	Running 1138643 (42)	NAH	Analyst	S_DOD Calibration
	05/09/2022 17:15:00	Running 1138899 (43)	NAH	Analyst	S_DOD Calibration
	05/09/2022 17:22:42	Running 1139105 (44)	NAH	Analyst	S_DOD Calibration
	05/09/2022 17:30:14	Running msw1139105 (45)	NAH	Analyst	S_DOD Calibration

Standard Log #:	M15411	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/17/2022	Expiration Date:	06/17/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15412	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/17/2022	Expiration Date:	06/17/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M15305 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15413	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/17/2022	Expiration Date:	05/18/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.715 in a hood.		

Standard Log #:	M15414	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/18/2022	Expiration Date:	06/18/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15415	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/18/2022	Expiration Date:	06/18/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15408	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/17/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15409	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/17/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15410	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/17/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15404	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/10/2022	Expiration Date:	06/10/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15405	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/10/2022	Expiration Date:	06/10/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M15305 and brought up to volume.		

Standard Log #:	M15406	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/11/2022	Expiration Date:	06/11/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15407	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/11/2022	Expiration Date:	06/11/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15401	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/10/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15402	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/10/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15403	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/10/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15395	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10,000 ug/mL
Date Received:	05/03/2022	Lot #:	1154439-14
Expiration Date (if any):	10/2023	Catalog #:	4400-10M544

Standard ID#:	M15396	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10,000 ug/mL
Date Received:	05/03/2022	Lot #:	1191653-5
Expiration Date (if any):	10/2023	Catalog #:	4400-10M311

Standard ID#:	M15397	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 ug/mL
Date Received:	05/03/2022	Lot #:	1144484-28
Expiration Date (if any):	10/2023	Catalog #:	4400-10M11

Standard ID#:	M15398	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	05/03/2022	Lot #:	1197533-32
Expiration Date (if any):	10/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15399	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 ug/mL
Date Received:	05/03/2022	Lot #:	1112960-63
Expiration Date (if any):	10/2023	Catalog #:	4400-10M91

Standard ID#:	M15400	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Mod.
Date Received:	05/04/2022	Lot #:	276712
Expiration Date (if any):	07/31/2023	Catalog #:	39043

Standard Log #:	M15390	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/03/2022	Expiration Date:	06/03/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15391	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/03/2022	Expiration Date:	06/03/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M15305 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15392	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/03/2022	Expiration Date:	05/04/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.711 in a hood.		

Standard Log #:	M15393	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/04/2022	Expiration Date:	06/04/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15394	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/04/2022	Expiration Date:	06/04/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15387	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/03/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15388	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/03/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15389	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/03/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15385	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/02/2022	Expiration Date:	05/02/2023
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15384. Dilute to 20 L and mix.		

Standard Log #:	M15386	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/02/2022	Expiration Date:	05/02/2023
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15384. Dilute to 20 L and mix.		

Standard Log #:	M15382	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/27/2022	Expiration Date:	05/27/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15383	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/27/2022	Expiration Date:	05/27/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

Standard Log #:	M15384	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	04/27/2022	Expiration Date:	09/27/2022
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC310 and brought up to volume.		

Standard Log #:	M15379	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/26/2022	Expiration Date:	05/26/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15380	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/26/2022	Expiration Date:	05/26/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M15305 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15381	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/26/2022	Expiration Date:	04/27/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.711 in a hood.		

		Instrument:	HydraII
Standard Log #:	M15376	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/26/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15377	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/26/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15378	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/26/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15374	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/21/2022	Expiration Date:	05/21/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15375	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/21/2022	Expiration Date:	05/21/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.711 in a hood.		

Standard Log #:	M15372	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/20/2022	Expiration Date:	05/20/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15373	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/20/2022	Expiration Date:	05/20/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15307 and brought up to volume.		

Standard Log #:	M15370	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/19/2022	Expiration Date:	05/19/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15371	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/19/2022	Expiration Date:	05/19/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M15305 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15367	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/19/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15368	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/19/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15369	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/19/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15366	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/18/2022	Expiration Date:	04/18/2023
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15153. Dilute to 20 L and mix.		

Standard Log #:	M15365	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	04/15/2022	Expiration Date:	08/31/2022
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M15008 and **10 mL** Mg (10,000 mg/L) M15174 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M15362	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/13/2022	Expiration Date:	04/13/2023
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M15316 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15363	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/13/2022	Expiration Date:	04/13/2023
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M15316 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15364	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/13/2022	Expiration Date:	04/13/2023
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M15317 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M15357	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/12/2022	Expiration Date:	05/12/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15358	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/12/2022	Expiration Date:	05/12/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15359	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/12/2022	Expiration Date:	04/13/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.711 in a hood.		

Standard Log #:	M15360	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/13/2022	Expiration Date:	05/13/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15361	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/13/2022	Expiration Date:	05/13/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15354	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/12/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15355	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/12/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15356	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/12/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15352	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	04/06/2022	Expiration Date:	04/06/2023
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.711 in a hood.		

Standard ID#:	M15353	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	04/06/2022	Lot #:	1-129AJ
Expiration Date (if any):	04/30/2022	Catalog #:	XCTWI-1-500

Standard Log #:	M15347	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/04/2022	Expiration Date:	05/04/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15348	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/04/2022	Expiration Date:	05/04/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15349	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/04/2022	Expiration Date:	04/05/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.711 in a hood.		

Standard Log #:	M15350	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/05/2022	Expiration Date:	05/05/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15351	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/05/2022	Expiration Date:	05/05/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15344	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/04/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15345	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/04/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15346	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/04/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M15342	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	03/29/2022	Expiration Date:	02/2023
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M152027 0.5 **mL** 10000 mg/L Cu M15021 5.0 **mL** 1000 mg/L Co M15019 5.0 **mL** 1000 mg/L Mo M15170 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15343	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	03/29/2022	Expiration Date:	07/2022
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M15095 5.0 **mL** 10000 mg/L Ti M14674 brought up to volume with milli-Q H_2O.		

Standard Log #:	M15338	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/29/2022	Expiration Date:	04/29/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15339	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/29/2022	Expiration Date:	03/29/2023
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15153. Dilute to 20 L and mix.		

		Instrument:	ICP 6500
Standard Log #:	M15340	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	03/29/2022	Expiration Date:	02/2023
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M15023 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15341	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	03/29/2022	Expiration Date:	09/2022
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M14772 5.0 **mL** 1000 mg/L Be M15091 5.0 **mL** 1000 mg/L Sn M14774 brought up to volume with milli-Q H_2O.		

Standard Log #:	M15333	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/28/2022	Expiration Date:	04/28/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15334	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/28/2022	Expiration Date:	04/28/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15335	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/28/2022	Expiration Date:	03/29/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.711 in a hood.		

Standard Log #:	M15336	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/29/2022	Expiration Date:	04/29/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15337	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/29/2022	Expiration Date:	04/29/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15330	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/28/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15331	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/28/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15332	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/28/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP
Standard Log #:	M15329	Standard:	Pb ICV
Analyst:	NAH	Concentrations:	500 ug/L (Pb)
Prep Date:	03/21/2022	Expiration Date:	06/23
Prep:	Into a 1 L volumetric flask, pipetted **0.5 mL** Pb (1000 mg/L) M15289 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

		Instrument:	ICP 6500
Standard Log #:	M15326	Standard:	Pb ICAL
Analyst:	NAH	Concentrations:	10,100, 1000, and 10,000, 100,000 µg/L (Pb)
Prep Date:	03/21/2022	Expiration Date:	03/2023
Prep:	Into four, 1 L volumetric flasks, pipetted the following from Pb (10000 µg/mL) M15045 and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) *10 µg/L std.* - **0.001mL** *100 µg/L std.* - **0.01mL** 1000 µg/L std - **0.10 mL** *10,000 µg/L std.* - **1.0 mL** 100,000 µg/L std -**10.0 mL**		

		Instrument:	ICP 6500
Standard Log #:	M15327	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Pb
Prep Date:	03/21/2022	Expiration Date:	03/23
Prep:	Into a 1 L volumetric flask, pipetted 0.5 **mL** 10,000 mgL M15045 Pb and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15328	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 ug/L** Pb,
Prep Date:	03/21/2022	Expiration Date:	03/23
Prep:	Into a 1 L volumetric flask, pipetted .05 **mL** ml 10,000 mg/L M15045 Pb and brought up to volume with milli-Q H_2O.		

Standard Log #:	M15321	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/22/2022	Expiration Date:	04/22/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15322	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/22/2022	Expiration Date:	04/22/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15323	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/22/2022	Expiration Date:	03/23/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.711 in a hood.		

Standard Log #:	M15324	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/23/2022	Expiration Date:	04/23/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15325	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/23/2022	Expiration Date:	04/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15318	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/22/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15319	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/22/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15320	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/22/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15316	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	03/18/2022	Lot #:	T2-MEB716384
Expiration Date (if any):		Catalog #:	CTI-SPK-1

Standard ID#:	M15317	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/Spike
Date Received:	03/18/2022	Lot #:	T2-MEB716383
Expiration Date (if any):		Catalog #:	CTI-GFCAL-1

Standard Log #:	M15311	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/15/2022	Expiration Date:	04/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15312	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/15/2022	Expiration Date:	04/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15313	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/15/2022	Expiration Date:	03/16/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15314	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/16/2022	Expiration Date:	04/16/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15315	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/16/2022	Expiration Date:	04/16/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15308	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/15/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15309	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/15/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15310	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/15/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15305	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate 99%
Date Received:	03/10/2022	Lot #:	A0426185
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M15306	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	03/10/2022	Lot #:	M012-04
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M15307	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	03/10/2022	Lot #:	M012-04
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M15300	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/08/2022	Expiration Date:	04/08/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15301	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/08/2022	Expiration Date:	04/08/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15302	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/08/2022	Expiration Date:	03/09/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15303	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/09/2022	Expiration Date:	04/09/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15304	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/09/2022	Expiration Date:	04/09/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15297	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/08/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15298	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/08/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15299	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/08/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15296	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/07/2022	Expiration Date:	03/07/2023
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15153. Dilute to 20 L and mix.		

		Instrument:	GFAA
Standard Log #:	M15292	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/07/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15293	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/07/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15294	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/07/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M15295	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/07/2022	Expiration Date:	03/07/2023
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15153. Dilute to 20 L and mix.		

Standard Log #:	M15291	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	03/04/2022	Expiration Date:	01/2023

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M15222	1000	0.01
As	2	M15223	1000	0.1
Pb	2	M15045	10000	0.01
Sb	2	M15220	1000	0.1
Se	2	M15217	1000	0.1
Tl	2	M15221	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M15290	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	03/04/2022	Expiration Date:	01/2023

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M15223	10,000
Pb	0.1	10,000	M15045	10,000
Tl	1	1000	M15221	10,000
Se	1	1000	M15217	10,000
Sb	1	1000	M15220	10,000
Ag	0.1	1000	M15222	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard ID#:	M15286	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	03/02/2022	Lot #:	211029
Expiration Date (if any):	04/30/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15287	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 ug/mL
Date Received:	03/02/2022	Lot #:	1055526-35
Expiration Date (if any):	01/2023	Catalog #:	4400-10M521

Standard ID#:	M15288	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 ug/mL
Date Received:	03/02/2022	Lot #:	1137797-18
Expiration Date (if any):	06/2023	Catalog #:	4400-10M411

Standard ID#:	M15289	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 1000 ug/mL
Date Received:	03/02/2022	Lot #:	1046594-72
Expiration Date (if any):	06/2023	Catalog #:	S4400-1000281

Standard Log #:	M15281	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/01/2022	Expiration Date:	04/01/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15282	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/01/2022	Expiration Date:	03/02/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15283	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/02/2022	Expiration Date:	04/02/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15284	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/02/2022	Expiration Date:	04/02/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15285	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/02/2022	Expiration Date:	04/02/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15278	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/01/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15279	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/01/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15280	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/01/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15277	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/28/2022	Lot #:	58-137CR
Expiration Date (if any):	02/28/2023	Catalog #:	XSPIKE-1-250

Standard Log #:	M15275	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/23/2022	Expiration Date:	03/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15276	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/23/2022	Expiration Date:	03/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15270	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/21/2022	Expiration Date:	03/21/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15271	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/21/2022	Expiration Date:	02/22/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15272	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/22/2022	Expiration Date:	03/22/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15273	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/22/2022	Expiration Date:	03/22/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

Standard ID#:	M15274	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/23/2022	Lot #:	1-021JA
Expiration Date (if any):	02/28/2023	Catalog #:	XCTWI-5-500

		Instrument:	HydraII
Standard Log #:	M15267	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/21/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15268	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/21/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15269	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/21/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15263	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/15/2022	Expiration Date:	03/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M15264 and brought up to volume.		

Standard Log #:	M15264	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/15/2022	Expiration Date:	03/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15265	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/16/2022	Expiration Date:	03/16/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15266	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/16/2022	Expiration Date:	03/16/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15260	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/15/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15261	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/15/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15262	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/15/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15259	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	100 mg/mL Custom Standard
Date Received:	02/11/2022	Lot #:	58-054CR
Expiration Date (if any):	02/28/2023	Catalog #:	XCTWI-4-500

Standard Log #:	M15254	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/09/2022	Expiration Date:	03/09/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15255	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/09/2022	Expiration Date:	03/09/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15256	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/09/2022	Expiration Date:	02/10/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15257	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/10/2022	Expiration Date:	03/10/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15258	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/10/2022	Expiration Date:	03/10/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15251	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/09/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15252	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/09/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15253	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/09/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15250	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 10 ICVLL
Date Received:	02/08/2022	Lot #:	.01 mls m15222 into 1000 ml vol.
Expiration Date (if any):	06/2023	Catalog #:	

MRL BASE STD M15249 Analyst NAH

Prep Date 02/08/2022

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M15222	1000	1	07/2022
Al	400	M15112	10000	2	xx
Ba	10	M14772	1000	0.5	xx
Be	4	M15091	1000	0.2	xx
Cd	5	M15098	1000	0.25	xx
Co	10	M15019	1000	0.5	xx
Cr	10	M15027	10000	0.05	xx
Cu	10	M15021	10000	0.05	xx
Mg	500	M15174	10000	2.5	xx
Mn	10	M15023	10000	0.05	xx
Mo	10	M15170	1000	0.5	xx
Ni	10	M15095	1000	0.5	xx
Pb	10	M15045	10000	0.05	xx
Sb	20	M15229	1000	1	xx
V	10	M15020	1000	0.5	xx
Zn	10	M15114	10000	0.05	xx
K	1000	M15173	10000	5	xx
Na	1000	M15172	10000	5	xx
As	20	M15223	1000	1	xx
Ca	500	M15026	10000	2.5	xx
Fe	300	M15169	10000	1.5	xx
Se	20	M15217	1000	1	xx
Tl	20	M15221	1000	1	xx
Si	100	M15171	1000	5	xx
B	20	M14966	1000	1	xx
Li	20	M14681	1000	1	xx
W	50	Mxxxxxxx	1000	2.5	xx
Ti	10	M14674	1000	0.5	xx
Sr	10	M14775	1000	0.5	xx
Sn	50	M14774	1000	2.5	xx
S	300	M15025	10000	1.5	xx

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M15248	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	02/08/2022	Expiration Date:	07/2022
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M15068 and 15 **mL** 10000 mg/L Fe M15169 5.0 **mL** 1000 mg/L V M15020 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15246	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/0/2022	Expiration Date:	07/2022
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M15167, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M15068, **0.5 mL** Mo (1000 mg/L) M15022, **0.5 mL** B (1000 mg/L) M14966, **0.5 mL** Sr (1000 mg/L) M14775, **0.5 mL** Li (1000 mg/L) M14681, **0.5 mL** Sn (1000 mg/L) M14774, **0.5 mL** Ti (1000 mg/L) M14674, **0.5 mL** W (1000 mg/L) Mxxxxxxx, **0.5 mL** Si (1000 mg/L) M15219,**0.5 mL** S (10000 mg/L) M14677, **0.5 mL** K (10000 mg/L) M15116, and **0.5 mL** K (10000 mg/L) Na M15097		

		Instrument:	ICP 6500
Standard Log #:	M15247	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	02/08/2022	Expiration Date:	11/2022
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M15068, **15 mL** Fe (10,000 mg/L) M15169, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M15134, **2.5 mLs Na 10,000 ug/mL** M15172, **2.5 mLs k 10,000 ug/mL** M15173 **2.5 mLs S 10,000 ug/mL** M15025, **0.5 mls Si 1000 ug/mL** M15088 and brought up to volume with milli-Q .		

		Instrument:	ICP 6500
Standard Log #:	M15244	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn, Si. **100,000 ug/L** K, Na, S. **500 µg/L** Ag, Be, Cd
Prep Date:	02/08/2022	Expiration Date:	07/2022
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn Si) M15134,M15 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) 0.5 ml M150 10 mls of 10,000 mgL M15173 K, M15172 Na, M15025 S and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15245	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 ug/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn, Si. **10,000 ug/L** K, Na, S **50 ug/L** Ag, Be, Cd
Prep Date:	02/08/2022	Expiration Date:	07/2022
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15134 and 0.5 **mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) .05 ml M152 and .5 ml M15171 Si and 1 ml 10,000 mg/L M15173 K, M15172 Na, M15025 S and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15243	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	02/08/2022	Expiration Date:	11/2022

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15134, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) 1ml M15098,M and **1 mL** of Si (1000 mg/L) M15171 and 1 mL M14682 Ce and 1 ml M15108 Hg and 0.1 ml of 10,000 mg/L M15173 K and M15172 Na and M15025 S and M15166 P. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M15021, **10 mL** of Mn (10,000 mg/L) M15023, **10 mL** of Cr (10,000 mg/L) M15027, **10 mL** Pb (10,000 mg/L) M15045, **10 mL** of Zn (10,000 mg/L) M15114.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M15174, **10 mL** of Fe (10,000 mg/L) M15169, **10 mL** of Ca (10,000 mg/L) M15026 and **10 mL** Al (10,000 mg/L) M15112,10 mL of Na (10000) M15172, 10 mL K (10,000) M15173, 10 mL S (10,000) M15025,10 mL P (10,1000), M15166 10 mL Si (1000) M15171.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L),**50 mL** of Al (10,000 mg/L), 50 mL of Na (10,000), 50 mL of K (10,000).
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) **100 mL** of Al (10,000 mg/L),100 mL of Na (10,000 mg/L)100 mL of K (10,000 mg/L) 100 mL S (10,000 mg/L) 100 ml of P (10,000 mg/L).

Standard Log #:	M15242	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL Spike Soln
Prep Date:	02/08/2022	Expiration Date:	07/2022

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M15222	1000	2
Al	800	M15112	**10000**	4
As	40	M15223	1000	2
Ba	20	M14772	1000	1
Be	8	M15091	1000	0.4
Ca	1000	M15026	**10000**	5
Cd	10	M15098	1000	0.5
Co	20	M15019	1000	1
Cr	20	M15027	**10000**	0.1
Cu	20	M15021	**10000**	0.1
Fe	600	M15169	**10000**	3
Mg	1000	M15174	**10000**	5
Mn	20	M15023	**10000**	0.1
Mo	20	M15170	1000	1
Ni	20	M15095	1000	1
Pb	20	M15045	**10000**	0.1
Sb	40	M15220	1000	2
Se	40	M15217	1000	2
Tl	40	M15221	1000	2
V	20	M15020	1000	1
Zn	20	M15114	**10000**	0.1
Na	10000	M15172	**10000**	50
K	10000	M15173	**10000**	50
B	40	M14966	1000	2
Si	200	M15171	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M15025	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M15241	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ solid QSM
Prep Date:	02/08/2022	Expiration Date:	07/2022

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M15222	1000	2
Al	800	M15112	**10000**	4
As	40	M15223	1000	2
Ba	40	M14772	1000	2
Be	8	M15091	1000	0.4
Ca	1000	M15026	**10000**	5
Cd	10	M15098	1000	0.5
Co	20	M15019	1000	1
Cr	20	M15027	**10000**	0.1
Cu	20	M15021	**10000**	0.1
Fe	600	M15169	**10000**	3
Mg	1000	M15174	**10000**	5
Mn	20	M15023	**10000**	0.1
Mo	20	M15170	1000	1
Ni	20	M15095	1000	1
Pb	20	M15045	**10000**	0.1
Sb	40	M15220	1000	2
Se	40	M15217	1000	2
Tl	40	M15221	1000	2
V	20	M15020	1000	1
Zn	20	M15114	**10000**	0.1
Na	10000	M15172	**10000**	50
K	10000	M15173	**10000**	50
B	40	M14966	1000	2
Si	200	M15171	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M15025	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M15240	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ water QSM
Prep Date:	02/08/2022	Expiration Date:	07/2022

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M15222	1000	0.25
Al	120	M15112	**10000**	0.6
As	40	M15223	1000	2
Ba	4	M14772	1000	0.2
Be	8	M15091	1000	0.4
Ca	100	M15026	**10000**	0.5
Cd	2	M15098	1000	0.1
Co	5	M15019	1000	0.25
Cr	5	M15027	**10000**	0.025
Cu	40	M15021	**10000**	0.2
Fe	80	M15169	**10000**	0.4
Mg	40	M15174	**10000**	0.2
Mn	5	M15023	**10000**	0.025
Mo	5	M15170	1000	0.25
Ni	5	M15095	1000	0.25
Pb	20	M15045	**10000**	0.1
Sb	20	M15220	1000	1.0
Se	20	M15217	1000	2
Tl	40	M15221	1000	2
V	5	M15020	1000	0.25
Zn	20	M15114	**10000**	0.1
Na	700	M15172	**10000**	3.5
K	500	M15173	**10000**	2.5
B	40	M14966	1000	2
Si	200	M15171	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M15025	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M15236	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/25/2022	Expiration Date:	02/25/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15237	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/25/2022	Expiration Date:	02/25/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15238	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/26/2022	Expiration Date:	02/26/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15239	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/26/2022	Expiration Date:	02/26/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15233	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/25/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15234	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/25/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15235	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/25/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15232	Vendor:	Alfa Aesar Specpure
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Mod
Date Received:	01/18/2022	Lot #:	276713
Expiration Date (if any):	07/31/2023	Catalog #:	39043

Standard Log #:	M15227	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/18/2022	Expiration Date:	02/18/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15228	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/18/2022	Expiration Date:	02/18/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15229	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/18/2022	Expiration Date:	01/19/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15230	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/19/2022	Expiration Date:	02/19/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15231	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/19/2022	Expiration Date:	02/19/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15224	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/18/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15225	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/18/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15226	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/18/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15217	Vendor:	CPI
Analyst:	NAH	Chemical:	Se 1000 mg/L
Date Received:	01/13/2022	Lot #:	1135995-21
Expiration Date (if any):	06/2023	Catalog #:	S4400-1000491

Standard ID#:	M15218	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	01/13/2022	Lot #:	1157358-14
Expiration Date (if any):	06/2023	Catalog #:	4400-10M671

Standard ID#:	M15219	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	01/13/2022	Lot #:	211029
Expiration Date (if any):	04/30/2022	Catalog #:	S4400-1000504F

Standard ID#:	M15220	Vendor:	CPI
Analyst:	NAH	Chemical:	Sb 1000 mg/L
Date Received:	1/13/2022	Lot #:	1129139-6
Expiration Date (if any):	06/2023	Catalog #:	S4400-100023

Standard ID#:	M15221	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	01/13/2022	Lot #:	1025512-61
Expiration Date (if any):	01/2023	Catalog #:	S4400-1000581

Standard ID#:	M15222	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 1000 mg/L
Date Received:	01/13/2022	Lot #:	1106123-69
Expiration Date (if any):	06/2023	Catalog #:	S4400-1000511

Standard ID#:	M15223	Vendor:	CPI
Analyst:	NAH	Chemical:	As 1000 mg/L
Date Received:	01/13/2022	Lot #:	1103713-64
Expiration Date (if any):	06/2023	Catalog #:	S4400-100031

Standard Log #:	M15213	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/11/2022	Expiration Date:	02/11/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15214	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/11/2022	Expiration Date:	02/11/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15215	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/12/2022	Expiration Date:	02/12/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15216	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/12/2022	Expiration Date:	02/12/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15210	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/11/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15211	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/11/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15212	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/11/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15205	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/04/2022	Expiration Date:	02/04/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15206	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/04/2022	Expiration Date:	02/04/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15207	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/04/2022	Expiration Date:	01/05/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15208	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/05/2022	Expiration Date:	02/05/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15209	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/05/2022	Expiration Date:	02/05/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15202	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/04/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15203	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/04/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15204	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/04/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M15199	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/03/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15200	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/03/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15201	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/03/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M15194	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/28/2021	Expiration Date:	01/28/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15195	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/28/2021	Expiration Date:	01/28/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15196	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/28/2021	Expiration Date:	12/29/2021
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15197	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/29/2021	Expiration Date:	01/29/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15198	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/29/2021	Expiration Date:	01/29/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15191	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/28/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15192	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/28/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15193	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/28/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15186	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/20/2021	Expiration Date:	01/20/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15187	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/20/2021	Expiration Date:	01/20/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15188	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/20/2021	Expiration Date:	12/21/2021
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15189	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/21/2021	Expiration Date:	01/21/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15190	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/21/2021	Expiration Date:	01/21/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15183	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/20/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15184	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/20/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15185	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/20/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15180	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/15/2021	Expiration Date:	01/15/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15181	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/15/2021	Expiration Date:	01/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

Standard Log #:	M15182	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	12/20/2021	Expiration Date:	12/20/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15153. Dilute to 20 L and mix.		

Standard Log #:	M15178	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/14/2021	Expiration Date:	01/14/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15179	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/14/2021	Expiration Date:	01/14/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15175	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/14/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15176	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/14/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15177	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/14/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15169	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	10,000 ug/mL Iron
Date Received:	12/13/2021	Lot #:	1034257-77
Expiration Date (if any):	06/13/2023	Catalog #:	4400-10M261

Standard ID#:	M15170	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	1,000 ug/mL Molybdenum
Date Received:	12/13/2021	Lot #:	1138256-5
Expiration Date (if any):	06/13/2023	Catalog #:	S4400-1000343

Standard ID#:	M15171	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	1,000 ug/mL Silicon
Date Received:	12/13/2021	Lot #:	1198119-3
Expiration Date (if any):	06/13/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15172	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	10,000 ug/mL Sodium
Date Received:	12/13/2021	Lot #:	1122472-6
Expiration Date (if any):	06/13/2023	Catalog #:	4400-10M521

Standard ID#:	M15173	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	10,000 ug/mL Potassium
Date Received:	12/13/2021	Lot #:	1137797-18
Expiration Date (if any):	06/13/2023	Catalog #:	4400-10M411

Standard ID#:	M15174	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	10,000 ug/mL Magnesium
Date Received:	12/13/2021	Lot #:	1075232-54
Expiration Date (if any):	06/13/2023	Catalog #:	4400-10M311

Standard ID#:	M15164	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/10/2021	Lot #:	L259-10
Expiration Date (if any):	N/A	Catalog #:	LC251701

Standard ID#:	M15165	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/10/2021	Lot #:	L259-10
Expiration Date (if any):	N/A	Catalog #:	LC251701

Standard ID#:	M15166	Vendor:	SPEX CERTIPREP
Analyst:	BMM	Chemical:	10,000 ug/mL Phosphorus
Date Received:	12/13/2021	Lot #:	AR18-111PY
Expiration Date (if any):	12/30/2022	Catalog #:	PLP9-3Y

Standard ID#:	M15167	Vendor:	SPEX CERTIPREP
Analyst:	BMM	Chemical:	CUSTOM ASSURANCE STANDARD
Date Received:	12/13/2021	Lot #:	57-204CR
Expiration Date (if any):	12/30/2022	Catalog #:	XSPIKE-1-250

Standard ID#:	M15168	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	1,000 ug/mL Silicon
Date Received:	12/13/2021	Lot #:	1198119-3
Expiration Date (if any):	06/13/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15163	Vendor:	Decon Labs
Analyst:	NAH	Chemical:	Dri-Clean lab detergent
Date Received:	12/08/2021	Lot #:	1J519
Expiration Date (if any):	----------	Catalog #:	2502

Standard Log #:	M15158	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/07/2021	Expiration Date:	01/07/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15159	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/07/2021	Expiration Date:	01/07/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15160	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/07/2021	Expiration Date:	12/08/2021
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15161	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/08/2021	Expiration Date:	01/08/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15056 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15162	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/08/2021	Expiration Date:	01/08/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15155	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/07/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15156	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/07/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15157	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/07/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15153	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	12/01/2021	Expiration Date:	05/01/2022
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC310 and brought up to volume.		

Standard Log #:	M15154	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	12/01/2021	Expiration Date:	12/01/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14946. Dilute to 20 L and mix.		

Standard Log #:	M15148	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/30/2021	Expiration Date:	12/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15149	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/30/2021	Expiration Date:	12/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15150	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/30/2021	Expiration Date:	12/01/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15151	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/01/2021	Expiration Date:	01/01/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15056 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15152	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/01/2021	Expiration Date:	01/01/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15145	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/30/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15146	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/30/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15147	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/30/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15144	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	11/29/2021	Lot #:	A0431536
Expiration Date (if any):		Catalog #:	198530010

Standard ID#:	M15143	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	11/22/2021	Lot #:	2123812-500
Expiration Date (if any):	05/31/2023	Catalog #:	HP10M67-1-500

Standard Log #:	M15138	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/16/2021	Expiration Date:	12/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15139	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/16/2021	Expiration Date:	12/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15140	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/16/2021	Expiration Date:	11/17/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15141	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/17/2021	Expiration Date:	12/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15056 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15142	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/17/2021	Expiration Date:	12/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15058 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15135	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/16/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15136	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/16/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15137	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/16/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15134	Vendor:	SpexCertiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/11/2021	Lot #:	1-040EL
Expiration Date (if any):	11/20/2022	Catalog #:	XCTWI-5-500

Standard Log #:	M15129	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/10/2021	Expiration Date:	12/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15130	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/10/2021	Expiration Date:	12/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15131	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/10/2021	Expiration Date:	11/11/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15132	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/11/2021	Expiration Date:	12/11/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15133	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/11/2021	Expiration Date:	12/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15058 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15126	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/10/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15127	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/10/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15128	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/10/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15124	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/04/2021	Expiration Date:	12/04/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15125	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/05/2021	Expiration Date:	12/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

Standard Log #:	M15121	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/03/2021	Expiration Date:	12/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15122	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/03/2021	Expiration Date:	12/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15123	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/03/2021	Expiration Date:	11/04/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard ID#:	M15117	Vendor:	SPEX CertiPrep
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/03/2021	Lot #:	CL12-145HGY
Expiration Date (if any):	10/30/2022	Catalog #:	CLHG4-2Y

		Instrument:	HydraII
Standard Log #:	M15118	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/03/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15119	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/03/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15120	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/03/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15112	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1144484-5
Expiration Date (if any):	04/2023	Catalog #:	4400-10M11

Standard ID#:	M15113	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 mg/L
Date Received:	10/25/2021	Lot #:	KD37797-20
Expiration Date (if any):	04/2023	Catalog #:	4400-10M411-500

Standard ID#:	M15114	Vendor:	CPI
Analyst:	NAH	Chemical:	ZN 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1149838-4
Expiration Date (if any):	04/2023	Catalog #:	S4400-10M681

Standard ID#:	M15115	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1157358-4
Expiration Date (if any):	04/2023	Catalog #:	4400-10M671

Standard ID#:	M15116	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1137797-18
Expiration Date (if any):	04/2023	Catalog #:	4400-10M411

		Instrument:	GFAA
Standard Log #:	M15109	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/25/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15110	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/25/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15111	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/25/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M15108	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	10/21/2021	Lot #:	1084154-49
Expiration Date (if any):	01/22/2023	Catalog #:	S4400-1000331

Standard Log #:	M15103	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/19/2021	Expiration Date:	11/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15104	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/19/2021	Expiration Date:	11/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15105	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/19/2021	Expiration Date:	10/20/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15106	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/20/2021	Expiration Date:	11/20/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15107	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/20/2021	Expiration Date:	11/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15058 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15100	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15101	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15102	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/19/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15099	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	10/15/2021	Expiration Date:	02/2022

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M14623	1000	0.01
As	2	M14621	1000	0.1
Pb	2	M15045	10000	0.01
Sb	2	M14622	1000	0.1
Se	2	M14624	1000	0.1
Tl	2	M14626	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M15094	Vendor:	CPI
Analyst:	NAH	Chemical:	MG 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1075232-5
Expiration Date (if any):	09/2022	Catalog #:	4400-10M311

Standard ID#:	M15095	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	10/14/2021	Lot #:	1049780-73
Expiration Date (if any):	03/2023	Catalog #:	S4400-1000361

Standard ID#:	M15096	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	10/14/2021	Lot #:	1047570-102
Expiration Date (if any):	03/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15097	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1055526-35
Expiration Date (if any):	11/2022	Catalog #:	4400-10M521

Standard ID#:	M15098	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	10/14/2021	Lot #:	1080470-23
Expiration Date (if any):	01/2023	Catalog #:	S4400-100081

Standard ID#:	M15090	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1079898-11
Expiration Date (if any):	01/2023	Catalog #:	S4400-10M391

Standard ID#:	M15091	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	10/14/2021	Lot #:	1072683-57
Expiration Date (if any):	01/2023	Catalog #:	S4400-100051

Standard ID#:	M15092	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1072921-23
Expiration Date (if any):	01/2023	Catalog #:	4400-10M91

Standard ID#:	M15093	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1034257-71
Expiration Date (if any):	03/2023	Catalog #:	4400-10M261

Standard Log #:	M15086	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/13/2021	Expiration Date:	11/13/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15087	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/13/2021	Expiration Date:	11/13/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14949 and brought up to volume.		

Standard ID#:	M15088	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/L
Date Received:	10/13/2021	Lot #:	1047570-102
Expiration Date (if any):	03/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15089	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	10/13/2021	Lot #:	57-130CR
Expiration Date (if any):	10/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M15083	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/12/2021	Expiration Date:	11/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15084	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/12/2021	Expiration Date:	11/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15085	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/12/2021	Expiration Date:	10/13/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

		Instrument:	HydraII
Standard Log #:	M15080	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/12/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15081	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/12/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15082	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/12/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15079	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	8 µg/L As 10 µg/L Pb 8 µg/L Sb 16 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	10/11/2021	Expiration Date:	02/2022

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M14621	10,000
Pb	0.1	10,000	M15045	10,000
Tl	1	1000	M14626	10,000
Se	1	1000	M14624	10,000
Sb	1	1000	M14622	10,000
Ag	0.1	1000	M14623	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	0.8	10,000	8
Pb	1.0	10,000	10
Tl	1.0	10,000	10
Se	1.6	10,000	16
Sb	0.8	10,000	8
Ag	0.6	1000	0.6

Standard Log #:	M15074	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/05/2021	Expiration Date:	11/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15075	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/05/2021	Expiration Date:	11/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15076	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/05/2021	Expiration Date:	10/06/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15077	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/06/2021	Expiration Date:	11/06/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15078	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/06/2021	Expiration Date:	11/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15071	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/05/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15072	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/05/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15073	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/05/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15067	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/04/2021	Expiration Date:	08/20/2022
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M15008 and **10 mL** Mg (10,000 mg/L) M14739 and brought up to volume.		

Standard ID#:	M15068	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Interference A
Date Received:	10/4/2021	Lot #:	18-102WLX
Expiration Date (if any):	09/22	Catalog #:	INT-A1

Standard ID#:	M15069	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	10/04/2021	Lot #:	1-181-PC
Expiration Date (if any):	09/30/2022	Catalog #:	XCTWI-1-500

MRL BASE STD M15066 Analyst NAH

Prep Date 10/04/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	02/22
Al	400	M15098	10000	2	02/23
Ba	10	M14772	1000	0.5	09/22
Be	4	M15203	1000	0.2	09/22
Cd	5	M14201	1000	0.25	09/22
Co	10	M15019	1000	0.5	02/23
Cr	10	M15027	10000	0.05	02/23
Cu	10	M15021	10000	0.05	02/23
Mg	500	M14739	10000	2.5	08/22
Mn	10	M15023	10000	0.05	02/23
Mo	10	M15022	1000	0.5	02/23
Ni	10	M14196	1000	0.5	xx
Pb	10	M15045	10000	0.05	03/23
Sb	20	M14622	1000	1	02/22
V	10	M15020	1000	0.5	02/23
Zn	10	M14197	10000	0.05	xx
K	1000	M14887	10000	5	11/22
Na	1000	M14969	10000	5	01/23
As	20	M14621	1000	1	02/22
Ca	500	M15026	10000	2.5	02/23
Fe	300	M15024	10000	1.5	02/23
Se	20	M14624	1000	1	02/22
Tl	20	M14626	1000	1	02/22
Si	100	M14968	1000	5	01/23
B	20	M14966	1000	1	01/23
Li	20	M14681	1000	1	07/22
W	50	xxxxx	1000	2.5	xxxxx
Ti	10	M14674	1000	0.5	07/22
Sr	10	M14683	1000	0.5	07/22
Sn	50	M14774	1000	2.5	09/22
S	300	M14773	10000	1.5	09/22

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M15064	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **15 mL** Fe (10,000 mg/L) M15204, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15028 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15065	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833 and **15 mL** Fe (10000 mg/L) M15024 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15061	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15028 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15062	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15028 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15063	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14988, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **0.5 mL** Mo (1000 mg/L) M15022, **0.5 mL** B (1000 mg/L) M14966, **0.5 mL** Sr (1000 mg/L) M14683, **0.5 mL** Li (1000 mg/L) M14681, **0.5 mL** Sn (1000 mg/L) M14774 and **0.5 mL** Ti (1000 mg/L) M14674.		

		Instrument:	ICP 6500
Standard Log #:	M15060	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	10/14/2021	Expiration Date:	01/30/2022
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15828, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **1 mL** of Si (1000 mg/L) M14968 and 1 mL M14682 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M15046. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M15021, **10 mL** of Mn (10,000 mg/L) M15023, **10 mL** of Cr (10,000 mg/L) M15027, **10 mL** Pb (10,000 mg/L) M15045, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14969. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14739, **10 mL** of Fe (10,000 mg/L) M15024, **10 mL** of Ca (10,000 mg/L) M14740 and **10 mL** Al (10,000 mg/L) M14737. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

Standard Log #:	M15059	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	09/29/2021	Expiration Date:	10/29/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14946. Dilute to 20 L and mix.		

Standard ID#:	M15057	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	09/23/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M15058	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	09/23/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M15056	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	09/22/2021	Lot #:	A0428169
Expiration Date (if any):		Catalog #:	198531000

Standard Log #:	M15051	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/20/2021	Expiration Date:	10/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15052	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/20/2021	Expiration Date:	10/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15053	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/20/2021	Expiration Date:	09/21/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15054	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/21/2021	Expiration Date:	10/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15055	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/21/2021	Expiration Date:	10/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15048	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15049	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15050	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/20/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15047	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	09/09/2021	Expiration Date:	09/09/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14964. Dilute to 20 L and mix.		

Standard ID#:	M15045	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10,000 mg/L
Date Received:	09/15/2021	Lot #:	1035677-18
Expiration Date (if any):	03/2023	Catalog #:	4400-10M281

Standard ID#:	M15046	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,1000 mg/L
Date Received:	09/15/2021	Lot #:	1137797-13
Expiration Date (if any):	03/2023	Catalog #:	4400-10M411-500

Standard Log #:	M15040	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/14/2021	Expiration Date:	10/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15041	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/14/2021	Expiration Date:	10/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15042	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/14/2021	Expiration Date:	09/15/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15043	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/15/2021	Expiration Date:	10/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15044	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/15/2021	Expiration Date:	10/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15037	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15038	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15039	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/14/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15032	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/01/2021	Expiration Date:	10/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15033	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/01/2021	Expiration Date:	10/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15034	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/01/2021	Expiration Date:	09/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15035	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/02/2021	Expiration Date:	10/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15036	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/02/2021	Expiration Date:	10/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14940 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15029	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/01/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15030	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/01/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15031	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/01/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15023	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10,000 mg/L
Date Received:	08/30/2021	Lot #:	985851-80
Expiration Date (if any):	02/2023	Catalog #:	S4400-10M321

Standard ID#:	M15024	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1034257-71
Expiration Date (if any):	02/2023	Catalog #:	4400-10M261

Standard ID#:	M15025	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1050965-59
Expiration Date (if any):	02/2023	Catalog #:	4400-10M544

Standard ID#:	M15026	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1072921-23
Expiration Date (if any):	02/2023	Catalog #:	4400-10M91

Standard ID#:	M15027	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1076194-26
Expiration Date (if any):	02/2023	Catalog #:	S4400-10M121

Standard ID#:	M15028	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	NAH	Lot #:	17-023AB
Expiration Date (if any):	AUG 30,2022	Catalog #:	XCTWI-5-500

Standard ID#:	M15018	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1077245-48
Expiration Date (if any):	02/2023	Catalog #:	4400-10M11

Standard ID#:	M15019	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	08/30/2021	Lot #:	1107088-1
Expiration Date (if any):	02/2023	Catalog #:	S4400-1000131

Standard ID#:	M15020	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	08/30/2021	Lot #:	1055682-88
Expiration Date (if any):	02/2023	Catalog #:	S4400-1000651

Standard ID#:	M15021	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1063159-57
Expiration Date (if any):	02/2023	Catalog #:	S4400-10M141

Standard ID#:	M15022	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	08/30/2021	Lot #:	1075718-15
Expiration Date (if any):	02/2023	Catalog #:	S4400-1000343

Standard Log #:	M15013	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/24/2021	Expiration Date:	09/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15014	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/24/2021	Expiration Date:	09/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15015	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/24/2021	Expiration Date:	08/25/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15016	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/25/2021	Expiration Date:	09/25/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15017	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/25/2021	Expiration Date:	09/25/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15010	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/24/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15011	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/24/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15012	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/24/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15009	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	08/23/2021	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

Standard ID#:	M15008	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Palladium Matrix Modifier
Date Received:	08/19/2021	Lot #:	2113302-100
Expiration Date (if any):	08/31/2022	Catalog #:	HP1900-100

Standard Log #:	M15003	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15004	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15005	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	08/19/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15006	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15007	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15000	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/18/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15001	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/18/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15002	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/18/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14997	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	08/13/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14998	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	08/13/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14999	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	08/13/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14992	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/10/2021	Expiration Date:	09/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14993	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/10/2021	Expiration Date:	09/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14994	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/10/2021	Expiration Date:	08/11/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14995	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/11/2021	Expiration Date:	09/11/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14996	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/11/2021	Expiration Date:	09/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14989	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/10/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14990	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/10/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14991	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/10/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14987	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/09/2021	Lot #:	5-190MF
Expiration Date (if any):	08/30/2022	Catalog #:	XCTWI-1-500

Standard ID#:	M14988	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/09/2021	Lot #:	5-189MF
Expiration Date (if any):	08/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14982	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	09/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14983	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	09/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14984	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	08/04/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14985	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/04/2021	Expiration Date:	09/04/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14986	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/04/2021	Expiration Date:	09/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14979	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/03/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14980	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/03/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14981	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/03/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14978	Vendor:	Enviromental Express
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	05/20/2021	Lot #:	400175-1116-T
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14973	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	08/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14974	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	08/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14975	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	07/28/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14976	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/29/2021	Expiration Date:	08/29/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14977	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2021	Expiration Date:	08/29/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14970	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/27/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14971	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/27/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14972	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/27/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14966	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 10,000 mg/L
Date Received:	07/27/2021	Lot #:	1101946-16
Expiration Date (if any):	01/2023	Catalog #:	S4400-100074

Standard ID#:	M14967	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 mk/L
Date Received:	07/27/2021	Lot #:	1109477-26
Expiration Date (if any):	01/2023	Catalog #:	4400-10M671

Standard ID#:	M14968	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	07/27/2021	Lot #:	1047570-64
Expiration Date (if any):	01/2023	Catalog #:	S4400-1000504F

Standard ID#:	M14969	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000
Date Received:	07/27/2021	Lot #:	1055526-35
Expiration Date (if any):	01/2023	Catalog #:	4400-10M521

		Instrument:	CETAC
Standard Log #:	M14963	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/21/2021	Expiration Date:	08/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

Standard Log #:	M14964	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/22/2021	Expiration Date:	07/22/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14964. Dilute to 20 L and mix.		

Standard Log #:	M14965	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	07/23/2021	Expiration Date:	07/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.704 and brought up to volume.		

Standard Log #:	M14959	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	08/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14960	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	08/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14961	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	07/21/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14962	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/21/2021	Expiration Date:	08/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14956	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14957	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14958	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/20/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14955	Vendor:	GFS Chemicals
Analyst:	NAH	Chemical:	AMCO Clear 2.0 NTU
Date Received:	07/16/2021	Lot #:	21150075
Expiration Date (if any):	07/22/2022	Catalog #:	8008

Standard Log #:	M14950	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	08/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14951	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	08/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14952	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	07/15/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14953	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/15/2021	Expiration Date:	08/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14954	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/15/2021	Expiration Date:	08/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14947	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14948	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14949	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/14/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14944	Standard:	ICV Std.
Analyst:	nah	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	07/09/2021	Expiration Date:	08/2022
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14874, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **0.5 mL** Mo (1000 mg/L) M14888, **0.5 mL** B (1000 mg/L) M14675, **0.5 mL** Sr (1000 mg/L) M14683, **0.5 mL** Li (1000 mg/L) M14681, **0.5 mL** Sn (1000 mg/L) M14774, **0.5 mL** Ti (1000 mg/L) M14674, **0.5 mL** W (1000 mg/L) XXXXXXX, **0.5 mL** Si (1000 mg/L) M14680, **0.5 mL** S (10000 mg/L) M14570, **0.5 mL** K (10000 mg/L) M14887, and **0.5 mL** Na (10000 mg/L) M14736		

Standard Log #:	M14945	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/12/2021	Expiration Date:	07/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14946	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	07/14/2021	Expiration Date:	12/14/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC272 and brought up to volume.		

Standard ID#:	M14939	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	07/09/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14940	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	07/09/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14941	Vendor:	GFS
Analyst:	NAH	Chemical:	AMCO Clear 0.1 ntu
Date Received:	07/12/2021	Lot #:	Returned to manufacturer
Expiration Date (if any):	not used	Catalog #:	not used

		Instrument:	ICP 6500
Standard Log #:	M14942	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	07/09/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14833 and 15 **mL** 10000 mg/L Fe M14676 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14943	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	07/09/2021	Expiration Date:	12/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **15 mL** Fe (10,000 mg/L) M14676, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14788, **2.5 mLs Na 10,000 ug/mL** M14736 **,2.5 mLs k 10,000 ug/mL** M14370 **2.5 mLs S 10,000 ug/mL** M14677, **0.5 mls Si 1000 ug/mL** M14735 and brought up to volume with milli-Q .		

Standard Log #:	M14938	Reagent:	TCLP EXTRACTION FLUID #2
Analyst:	BMM	pH:	2.88 ± 0.05
Prep Date:	07/08/2021	Expiration Date:	07/08/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703. Dilute to 20 L and mix.		

Standard Log #:	M14933	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	08/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14934	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	08/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14935	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	07/08/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14936	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/08/2021	Expiration Date:	08/08/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14937	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/08/2021	Expiration Date:	08/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14930	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/07/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14931	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/07/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14932	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/07/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14925	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14926	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14927	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	07/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14928	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14929	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14922	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/30/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14923	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/30/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14924	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/30/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14921	Vendor:	LabChem
Analyst:	NAH	Chemical:	Turbidity Standard(Formazin) 4000NT
Date Received:	06/25/2021	Lot #:	L147-07
Expiration Date (if any):	06/08/2022	Catalog #:	LC26290

		Instrument:	ICP 6500
Standard Log #:	M14919	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M14205 0.5 **mL** 10000 mg/L Cu M14199 5.0 **mL** 1000 mg/L Co M14204 5.0 **mL** 1000 mg/L Mo M14888 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14920	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M14196 5.0 **mL** 10000 mg/L Ti M14674 brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M14916	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/23/2021	Expiration Date:	07/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14917	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M14200 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14918	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M14772 5.0 **mL** 10000 mg/L Be M14203 5.0 **mL** 10000 mg/L Sn M14774 brought up to volume with milli-Q H_2O.		

Standard Log #:	M14912	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	07/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14913	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	07/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14914	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	06/23/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14915	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/23/2021	Expiration Date:	07/23/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14909	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/22/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14910	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/22/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14911	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/22/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14904	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	07/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14905	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	07/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14906	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	06/17/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14907	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/17/2021	Expiration Date:	07/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14908	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/17/2021	Expiration Date:	07/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

Standard Log #:	M14903	Instrument:	ICP 6500
Analyst:	NAH	Standard:	Dissolved MDL Verificaion
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	2.7	M14623	1000	0.135
Al	10	M14736	**10000**	.05
As	20	M14621	1000	1
Ba	2	M14772	1000	0.1
Be	1	M14203	1000	0.05
Ca	50	M14740	**10000**	0.25
Cd	0.5	M14201	1000	.025
Co	2.5	M14204	1000	0.125
Cr	5	M14205	**10000**	.025
Cu	10	M14199	**10000**	.05
Fe	40	M14738	**10000**	0.2
Mg	25	M14676	**10000**	0.125
Mn	3	M14200	**10000**	.015
Mo	2.5	M14888	1000	0.125
Ni	3	M14196	1000	0.15
Pb	20	M14202	**10000**	0.1
Sb	10	M14622	1000	0.5
Se	20	M14624	1000	1
Tl	20	M14626	1000	1
V	3	M14198	1000	0.15
Zn	5	M14197	**10000**	0.025
Na	150	M14736	**10000**	0.75
K	150	M14741	**10000**	0.75
B	20	M14675	1000	1
Si	200	M14735	1000	10
Li	10	M14681	1000	0.5
Sr	20	M14775	1000	1
Sn	20	M14774	1000	1
Ti	5	M14674	1000	0.25
S	200	M14773	**10000**	10

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14902	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL spike Soln.
Prep Date:	06/16/2021	Expiration Date:	09//2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M14623	1000	2
Al	800	M14736	**10000**	4
As	40	M14621	1000	2
Ba	20	M14772	1000	1
Be	8	M14203	1000	0.4
Ca	1000	M14740	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14738	**10000**	3
Mg	1000	M14676	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14888	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M14622	1000	2
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14736	**10000**	50
K	10000	M14741	**10000**	50
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14901	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ Solid QSM
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M14623	1000	2
Al	800	M14736	**10000**	4
As	40	M14621	1000	2
Ba	40	M14772	1000	2
Be	8	M14203	1000	0.4
Ca	1000	M14740	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14738	**10000**	3
Mg	1000	M14676	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14888	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M14622	1000	2
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14736	**10000**	50
K	10000	M14741	**10000**	50
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14900	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ water QSM
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M14623	1000	0.25
Al	120	M14737	**10000**	0.6
As	40	M14621	1000	2
Ba	4	M14772	1000	0.2
Be	8	M14203	1000	0.4
Ca	100	M14740	**10000**	0.5
Cd	2	M14201	1000	0.1
Co	5	M14204	1000	0.25
Cr	5	M14205	**10000**	0.025
Cu	40	M14199	**10000**	0.2
Fe	80	M14738	**10000**	0.4
Mg	40	M14676	**10000**	0.2
Mn	5	M14200	**10000**	0.025
Mo	5	M14888	1000	0.25
Ni	5	M14196	1000	0.25
Pb	20	M14202	**10000**	0.1
Sb	20	M14622	1000	1.0
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	5	M14198	1000	0.25
Zn	20	M14197	**10000**	0.1
Na	700	M14736	**10000**	3.5
K	500	M14741	**10000**	2.5
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14897	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14898	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14899	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14892	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	07/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14893	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	07/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14894	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	06/09/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14895	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/09/2021	Expiration Date:	07/09/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14896	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/09/2021	Expiration Date:	07/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14889	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/08/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14890	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/08/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14891	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/08/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14886	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	06/04/2021	Lot #:	Y20F051
Expiration Date (if any):		Catalog #:	88944

Standard ID#:	M14887	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	06/04/2021	Lot #:	1053109-69
Expiration Date (if any):	11/2022	Catalog #:	4400-10M411500

Standard ID#:	M14888	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06/04/2021	Lot #:	1075718-15
Expiration Date (if any):	11/2022	Catalog #:	S4400-1000343

Standard Log #:	M14885	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14883	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14884	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14878	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	07/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14879	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	07/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14880	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	06/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14881	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/02/2021	Expiration Date:	07/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14882	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/02/2021	Expiration Date:	07/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14875	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14876	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14877	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/01/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14874	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/24/2021	Lot #:	16-115AB
Expiration Date (if any):	05/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M14869	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	06/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14870	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	06/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14871	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	05/19/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14872	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/19/2021	Expiration Date:	06/19/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14873	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/19/2021	Expiration Date:	06/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14866	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/18/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14867	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/18/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14868	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/18/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14865	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	05/12/2021	Expiration Date:	09/30/2021
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M14508 and **10 mL** Mg (10,000 mg/L) M14676 and brought up to volume.		

Standard Log #:	M14860	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	06/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14861	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	06/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14862	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	05/12/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14863	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/12/2021	Expiration Date:	06/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14864	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/12/2021	Expiration Date:	06/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14857	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14858	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14859	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14854	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14855	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14856	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14850	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14851	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14852	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	05/05/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14853	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14847	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/04/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14848	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/04/2021	Expiration Date:	05/02/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14849	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/04/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14846	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	04/29/2021	Lot #:	400175-1081-AG
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

		Instrument:	CETAC
Standard Log #:	M14842	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14843	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/19/2021	Expiration Date:	04/19/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard ID#:	M14844	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14845	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M14838	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14839	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14840	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	04/28/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14841	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14835	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14836	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14837	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14832	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard ID#:	M14833	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	04/21/2021	Lot #:	18-102WLX
Expiration Date (if any):	04/30/2022	Catalog #:	INT-A1

Standard ID#:	M14834	Vendor:	Custom Assurance Std
Analyst:	NAH	Chemical:	Ca 20000 Mg,Na 10000: THardness
Date Received:	04/21/2021	Lot #:	16-022AB
Expiration Date (if any):	04/30/2022	Catalog #:	XCTIWI-1-500

Standard Log #:	M14828	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14829	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14830	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	04/21/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14831	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14825	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14826	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14827	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/20/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14824	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14821	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14395 , **15 mL** Fe (10,000 mg/L) M14738 , **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 , **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14788 , **2.5 mLs Na 10,000 ug/mL** M14736 ,**2.5 mLs k 10,000 ug/mL** 14625 **2.5 mLs S 10,000 ug/mL** M14570 , **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14822	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14395 and 15 **mL** 10000 mg/L Fe M14738 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.	

		Instrument:	ICP 6500
Standard Log #:	M14823	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.	

MRL BASE STD M14820 Analyst NAH

Prep Date 04/15/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	XX
Al	400	M14737	10000	2	XX
Ba	10	M14772	1000	0.5	XX
Be	4	M14203	1000	0.2	09/21
Cd	5	M14740	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14676	10000	2.5	XX
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14684	1000	0.5	XX
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	XX
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14741	10000	5	XX
Na	1000	M14736	10000	5	XX
As	20	M14621	1000	1	XX
Ca	500	M14740	10000	2.5	XX
Fe	300	M14738	10000	1.5	XX
Se	20	M14624	1000	1	XX
Tl	20	M14674	1000	1	XX
Si	100	M14735	1000	5	XX
B	20	M14675	1000	1	09/21
Li	20	M14681	1000	1	XX
W	50	MXXX	1000	2.5	XXXXX
Ti	10	M14674	1000	0.5	XX
Sr	10	M14775	1000	0.5	XX
Sn	50	M14774	1000	2.5	XX
S	300	M14773	10000	1.5	XX

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M14815	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14816	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14817	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	04/15/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14818	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14819	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14812	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14813	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14814	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/14/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14811	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	04/13/2021	Expiration Date:	09/2021
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **1 mL** of Si (1000 mg/L) M14477. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14736. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14676, **10 mL** of Fe (10,000 mg/L) M14676, **10 mL** of Ca (10,000 mg/L) M14740 and **10 mL** Al (10,000 mg/L) M14478. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	GFAA
Standard Log #:	M14808	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14809	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14810	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14803	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14804	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14805	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	04/07/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14806	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14807	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14800	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14801	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14802	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/06/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14799	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	04/06/2021	Lot #:	A0417285
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M14797	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	04/05/2021	Lot #:	S2-MEB703691
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-SPK-1

Standard ID#:	M14798	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	04/05/2021	Lot #:	S2-MEB703690
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-GFCAL-1

Standard Log #:	M14792	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	04/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14793	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	03/31/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14794	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

Standard Log #:	M14795	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14796	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14789	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14790	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14791	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/30/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14787	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Phosphorus 10,000 mg/L
Date Received:	03/29/2021	Lot #:	AR18-111PY
Expiration Date (if any):	3/29/2022	Catalog #:	PLP9-3Y

Standard ID#:	M14788	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/29/2021	Lot #:	4-070MF
Expiration Date (if any):	03/29/2021	Catalog #:	XCTWI-5-500

Standard Log #:	M14786	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/25/2021	Expiration Date:	03/25/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14785	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	03/24/2021	Expiration Date:	08/24/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC208 and brought up to volume.		

Standard Log #:	M14780	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14781	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14782	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	03/24/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14783	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14784	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14777	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14778	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14779	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/23/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14772	Vendor:	CPI
Analyst:	NAH	Chemical:	Ba 1000 mg/mL
Date Received:	03/22/2021	Lot #:	994634-134
Expiration Date (if any):	09/2022	Catalog #:	S4400-100041

Standard ID#:	M14773	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/mL
Date Received:	03/22/2021	Lot #:	1050965-34
Expiration Date (if any):	09/2022	Catalog #:	4400-10M544

Standard ID#:	M14774	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1066479-21
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000613

Standard ID#:	M14775	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1096004-1
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000531

Standard ID#:	M14776	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/23/2021	Lot #:	56-049CR
Expiration Date (if any):	03/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M14767	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14768	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	03/17/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14769	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14770	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14771	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14764	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14765	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14766	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14763	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	TCLP Acid Washed Filters
Date Received:	01/05/21	Lot #:	400182-0364-T
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

Standard Log #:	M14758	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	04/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14759	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	03/10/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14760	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14761	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14762	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14755	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14756	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14757	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14754	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Mod.
Date Received:	03/04/2021	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

		Instrument:	GFAA
Standard Log #:	M14751	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14752	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14753	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14748	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14749	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14750	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/02/2021	Expiration Date:	03/02/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14745	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14746	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14747	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	03/02/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14742	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14743	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14744	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/01/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14740	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Calcium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1072921-23
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M91

Standard ID#:	M14741	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Potassium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1053109-37
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M411

Standard ID#:	M14735	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Silicon 1000 µg/mL
Date Received:	02/25/2021	Lot #:	1047570-64
Expiration Date (if any):	08/20/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14736	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Sodium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1055526-35
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M521

Standard ID#:	M14737	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Aluminum 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1077245-17
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M11

Standard ID#:	M14738	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Iron 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1034257-40
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M261

Standard ID#:	M14739	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Magnesium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1075232-5
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M311

Standard Log #:	M14731	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14732	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14733	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14734	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14728	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14729	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14730	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14725	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14726	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14727	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14720	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14721	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14722	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14723	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard ID#:	M14724	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Potassium Permanganate
Date Received:	02/08/2021	Lot #:	201466
Expiration Date (if any):	Suggested Retest 04/202	Catalog #:	P279

		Instrument:	HydraII
Standard Log #:	M14717	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14718	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14719	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14713	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14714	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14715 (1) & (2)	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	02/3/2021	Lot #:	2023715-500
Expiration Date (if any):	08/31/2022	Catalog #:	10M67-1-500

Standard ID#:	M14716	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Phosphorus 10000 mg/L
Date Received:	02/08/2021	Lot #:	AR18-111PY
Expiration Date (if any):	02/28/2022	Catalog #:	PLP9--3Y

Standard Log #:	M14708	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14709	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14710	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	02/03/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14711	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14712	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14705	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14706	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14707	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/02/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14702	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/27/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14703	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14704	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14699	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14700	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14701	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/28/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14696	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14697	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14698	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14694	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) N/A **3.2 mL** of As (1000 mg/L) M14621 **3.2 mL** of Se (1000 mg/L) M14624 **0.08 mL** of Pb (10,000 mg/L) M14202 **1.0 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14695	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M14622 **1.0 mL** of As (1000 mg/L) M14621 **2.0 mL** of Se (1000 mg/L) M14624 **0.045 mL** of Pb (10,000 mg/L) M14202 **0.4 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14689	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14690	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14691	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	01/20/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14692	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14693	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14686	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14687	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14688	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/19/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14680	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	01/15/2021	Lot #:	1047870-29
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14681	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	01/15/2021	Lot #:	104768-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000291

Standard ID#:	M14682	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	01/15/2021	Lot #:	S4400-1000101
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000101

Standard ID#:	M14683	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	01/15/2021	Lot #:	1096004-1
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000531

Standard ID#:	M14684	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	01/15/2021	Lot #:	1075718-2
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000343

Standard ID#:	M14685	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	01/18/2021	Lot #:	XCTWI-4-500
Expiration Date (if any):	01/30/2022	Catalog #:	14-242AB

Standard ID#:	M14674	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	01/15/2021	Lot #:	1038255-27
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000623

Standard ID#:	M14675	Vendor:	CPI
Analyst:	NAH	Chemical:	B 1000 mg/L
Date Received:	01/15/2021	Lot #:	1024903-65
Expiration Date (if any):	07/2022	Catalog #:	S4400-100074

Standard ID#:	M14676	Vendor:	CPI
Analyst:	NAH	Chemical:	M 10000 mg/L
Date Received:	01/15/2021	Lot #:	1013353
Expiration Date (if any):	07/2022	Catalog #:	4400-10M311

Standard ID#:	M14677	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	01/15/2021	Lot #:	1050965-25
Expiration Date (if any):	07/2022	Catalog #:	4400-10M544

Standard ID#:	M14678	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	01/15/2021	Lot #:	1079898-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-10M391

Standard ID#:	M14679	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	01/15/2021	Lot #:	1034527-40
Expiration Date (if any):	07/2022	Catalog #:	4400-10M261

Standard Log #:	M14673	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/13/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M14623	1000	0.01
As	2	M14621	1000	0.1
Pb	2	M14202	10000	0.01
Sb	2	M14622	1000	0.1
Se	2	M14624	1000	0.1
Tl	2	M14626	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14670	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14671	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

Standard Log #:	M14672	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	01/12/2021	Expiration Date:	01/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14667	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14668	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14669	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	01/12/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14664	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14665	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14666	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14663	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	8 µg/L As 10 µg/L Pb 8 µg/L Sb 16 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	01/06/2021	Expiration Date:	09/2021

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M14621	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14626	10,000
Se	1	1000	M14624	10,000
Sb	1	1000	M14622	10,000
Ag	0.1	1000	M14623	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	0.8	10,000	8
Pb	1.0	10,000	10
Tl	1.0	10,000	10
Se	1.6	10,000	16
Sb	0.8	10,000	8
Ag	0.6	1000	0.6

		Instrument:	GFAA
Standard Log #:	M14660	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14661	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14662	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

MRL BASE STD M14659 Analyst NAH

Prep Date 01/04/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	02/22
Al	400	M14478	10000	2	02/22
Ba	10	M14568	1000	0.5	05/22
Be	4	M14203	1000	0.2	09/21
Cd	5	M14201	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14472	10000	2.5	02/22
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14569	1000	0.5	05/22
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	02/22
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14436	10000	5	02/22
Na	1000	M14559	10000	5	02/22
As	20	M14621	1000	1	02/22
Ca	500	M14476	10000	2.5	02/22
Fe	300	M14470	10000	1.5	02/22
Se	20	M14624	1000	1	02/22
Tl	20	M14626	1000	1	02/22
Si	100	M14435	1000	5	02/22
B	20	M14131	1000	1	07/21
Li	20	M14127	1000	1	07/21
W	50	xxxxxxxx	1000	2.5	xxxxxx
Ti	10	M14009	1000	0.5	04/21
Sr	10	M14007	1000	0.5	04/21
Sn	50	M14008	1000	2.5	04/21
S	300	M14570	10000	1.5	05/22

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M14658	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	1/04/2021	Expiration Date:	03/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **15 mL** Fe (10,000 mg/L) M14470, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14628, **2.5 mLs Na 10,000 ug/mL** M14473 ,**2.5 mLs k 10,000 ug/mL** M14436 **2.5 mLs S 10,000 ug/mL** M14570, **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14656	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14639, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **0.5 mL** Mo (1000 mg/L) M14569, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) xxxxxxx, **0.5 mL** Si (1000 mg/L) M14567, **0.5 mL** S (10000 mg/L) M14372, **0.5 mL** K (10000 mg/L) M14436, and **0.5 mL** Na (10000 mg/L) M14559		

		Instrument:	ICP 6500
Standard Log #:	M14657	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14359 and 15 **mL** 10000 mg/L Fe M14470 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M1359 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14655	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	01/04/2021	Expiration Date:	03/30/2021

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14628, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14435 and 1 mL M13859 Ce
0.25 ug/L Std. - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14559.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M14472, **10 mL** of Fe (10,000 mg/L) M14470, **10 mL** of Ca (10,000 mg/L) M14476 and **10 mL** Al (10,000 mg/L) M14478.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L)
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)

INORGANIC
CLP FORMS
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136208
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 11:35
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.9		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.30	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	45		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136208
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 16:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136205
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 10:52
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.9		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136205
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 15:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136205
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 15:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136204
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 14:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136204
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 14:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.57	H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	51		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136203
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/29/2022 08:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120	M	4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136203
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 13:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136203
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 14:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.82	H	0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137438
Analytical Method:	EPA 9056A	Date Received:	04/30/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211602	Analysis Date/Time	05/02/2022 10:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	63		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137438
Analytical Method:	EPA 9060A	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/05/2022 11:16
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137438
Analytical Method:	EPA 9056A	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211602	Analysis Date/Time	04/30/2022 12:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	9.9		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.5		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136216
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 13:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.3	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.78		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	3.4		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136216
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 18:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136215
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/29/2022 01:48
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14797-55-8	Nitrate Nitrogen	6.5		0.60	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136215
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 13:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.3		1.0	1.5	3.0	3.0
14808-79-8	Sulfate	35		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136215
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 18:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136217
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 14:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	12		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.0		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136217
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 15:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	74		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136217
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 19:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.50	J	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136674
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 16:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.6	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	4.1	M	0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136674
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 21:02
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 410.4	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211650	Analysis Date/Time	05/03/2022 13:32
Analytical Prep Batch #:	95270	Prep. Date/Time:	05/03/2022 08:31
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	85		18	50	75	75

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 9040C	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211639	Analysis Date/Time	05/02/2022 15:20
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.61		0.1	0.1	0.1	0.1

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136672
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 15:43
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.41		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	3.0		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136672
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 20:27
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136214
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 12:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.6	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.35	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	13		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136214
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 17:42
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136673
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 16:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.2		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	4.6		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136673
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 20:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136206
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 11:06
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.40		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	69		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136206
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 15:48
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136213
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 12:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.4		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	53		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136213
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 17:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136207
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/29/2022 01:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	67		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136207
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 11:20
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.39	J	0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136207
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 16:02
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136588
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 14:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.2		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136588
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 15:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	80		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136588
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 19:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136671
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 15:14
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.2		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136671
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 15:28
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	82		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136671
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 20:16
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 9040C	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211555	Analysis Date/Time	04/28/2022 15:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.37		0.1	0.1	0.1	0.1

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 410.4	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211565	Analysis Date/Time	04/29/2022 16:52
Analytical Prep Batch #:	95239	Prep. Date/Time:	04/29/2022 09:05
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	160		18	50	75	75

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136211
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211613	Analysis Date/Time	05/02/2022 10:53
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	60		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136211
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 12:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.13	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	31		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136211
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 17:07
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134805
Analytical Method:	EPA 9060A	Date Received:	04/26/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211530	Analysis Date/Time	04/28/2022 10:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	78		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134805
Analytical Method:	EPA 9060A	Date Received:	04/26/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 13:20
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134805
Analytical Method:	EPA 9056A	Date Received:	04/26/2022
Dilution Factor:	1.0000	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211440	Analysis Date/Time	04/26/2022 19:08
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.30	J	0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134805
Analytical Method:	EPA 9056A	Date Received:	04/26/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211440	Analysis Date/Time	04/26/2022 19:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	72		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136209
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211613	Analysis Date/Time	05/02/2022 10:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	82		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136209
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 11:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.5		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.73		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136209
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 16:37
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134804
Analytical Method:	EPA 9060A	Date Received:	04/26/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211530	Analysis Date/Time	04/28/2022 10:12
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	83		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134804
Analytical Method:	EPA 9060A	Date Received:	04/26/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 12:22
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134804
Analytical Method:	EPA 9056A	Date Received:	04/26/2022
Dilution Factor:	1.0000	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211440	Analysis Date/Time	04/26/2022 17:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.5		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.64		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33	M	0.80	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136210
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211613	Analysis Date/Time	05/02/2022 10:40
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	83		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136210
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 12:03
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.75		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136210
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 16:52
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211440

Lab Sample ID: 1135344

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/11/22	13:30	15.00	13.51	90	90	110
Nitrate Nitrogen	4/11/22	13:30	3.50	3.443	98	90	110
Sulfate	4/11/22	13:30	25.00	23.73	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211592 Lab Sample ID: 1143758

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/26/22	08:16	15.00	13.70	91	90	110
Nitrate Nitrogen	4/26/22	08:16	3.50	3.489	100	90	110
Sulfate	4/26/22	08:16	25.00	23.72	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211565 Lab Sample ID: 1137654

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	4/29/22 16:52	400.0	401.8	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211650 Lab Sample ID: 1138178

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	5/3/22	13:32	400.0	394.6	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211696 Lab Sample ID: 1140057

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/27/22	11:14	50.0	49.82	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211440

Lab Sample ID: 1135214

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/26/22	12:11	15.00	13.88	93	90	110
Nitrate Nitrogen	4/26/22	12:11	3.500	3.546	101	90	110
Sulfate	4/26/22	12:11	25.00	24.00	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211440

Lab Sample ID: 1135217

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/26/22	16:06	15.00	13.83	92	90	110
Nitrate Nitrogen	4/26/22	16:06	3.500	3.536	101	90	110
Sulfate	4/26/22	16:06	25.00	23.97	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211440 Lab Sample ID: 1135226

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/26/22	19:44	15.00	13.70	91	90	110
Nitrate Nitrogen	4/26/22	19:44	3.500	3.511	100	90	110
Sulfate	4/26/22	19:44	25.00	23.78	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211565

Lab Sample ID: 1137656

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	4/29/22	16:52	400.0	389.8	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211565

Lab Sample ID: 1137658

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	4/29/22	16:52	400.0	392.2	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211650

Lab Sample ID: 1138180

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	5/3/22	13:32	400.0	392.2	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211650

Lab Sample ID: 1138182

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	5/3/22	13:32	400.0	392.2	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211602

Lab Sample ID: 1138735

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/30/22	12:02	15.00	14.98	100	90	110
Nitrate Nitrogen	4/30/22	12:02	3.50	3.705	106	90	110
Sulfate	4/30/22	12:02	25.00	22.99	92	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211602

Lab Sample ID: 1138741

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/30/22	13:56	15.00	15.06	100	90	110
Nitrate Nitrogen	4/30/22	13:56	3.50	3.735	107	90	110
Sulfate	4/30/22	13:56	25.00	23.87	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211602

Lab Sample ID: 1138743

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	5/2/22	08:57	15.00	14.25	95	90	110
Nitrate Nitrogen	5/2/22	08:57	3.50	3.659	105	90	110
Sulfate	5/2/22	08:57	25.00	23.43	94	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211602

Lab Sample ID: 1138748

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	5/2/22	10:08	15.00	14.40	96	90	110
Nitrate Nitrogen	5/2/22	10:08	3.50	3.682	105	90	110
Sulfate	5/2/22	10:08	25.00	23.68	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211602

Lab Sample ID: 1138750

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	5/2/22	11:09	15.00	14.37	96	90	110
Nitrate Nitrogen	5/2/22	11:09	3.50	3.681	105	90	110
Sulfate	5/2/22	11:09	25.00	23.91	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211592

Lab Sample ID: 1139743

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/29/22	14:03	15.00	14.75	98	90	110
Nitrate Nitrogen	4/29/22	14:03	3.50	3.782	108	90	110
Sulfate	4/29/22	14:03	25.00	24.47	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211592

Lab Sample ID: 1139746

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/29/22	17:08	15.00	14.84	99	90	110
Nitrate Nitrogen	4/29/22	17:08	3.50	3.760	107	90	110
Sulfate	4/29/22	17:08	25.00	24.32	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211592

Lab Sample ID: 1139751

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/29/22	19:44	15.00	14.99	100	90	110
Nitrate Nitrogen	4/29/22	19:44	3.50	3.783	108	90	110
Sulfate	4/29/22	19:44	25.00	24.71	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211613

Lab Sample ID: 1139918

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
	5/2/22	09:41	50.0	48.66	97	90	110
Total Inorganic Carbon	5/2/22	09:41	50.0	48.66	97	90	110
Total Organic Carbon	5/2/22	09:41	50.0	48.66	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211613 Lab Sample ID: 1139921

ICAL Calibration #: ICAL0590 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
	5/2/22	11:06	50.0	49.89	100	90	110
Total Inorganic Carbon	5/2/22	11:06	50.0	49.89	100	90	110
Total Organic Carbon	5/2/22	11:06	50.0	49.89	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211696

Lab Sample ID: 1139923

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	5/4/22	11:38	50.0	48.53	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211696

Lab Sample ID: 1139931

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	5/4/22	14:49	50.0	47.13	94	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211696

Lab Sample ID: 1139934

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	5/4/22	18:18	50.0	47.18	94	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211696

Lab Sample ID: 1139936

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	5/4/22	21:20	50.0	48.21	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211697

Lab Sample ID: 1139943

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	5/4/22	14:49	50.0	47.13	94	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211697

Lab Sample ID: 1139946

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	5/4/22	18:18	50.0	47.18	94	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211697

Lab Sample ID: 1139951

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	5/4/22	21:20	50.0	48.21	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211534

Lab Sample ID: 1139965

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/28/22	10:23	15.00	14.41	96	90	110
Nitrate Nitrogen	4/28/22	10:23	3.50	3.565	102	90	110
Sulfate	4/28/22	10:23	25.00	24.17	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211534

Lab Sample ID: 1139967

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/28/22	13:14	15.00	14.70	98	90	110
Nitrate Nitrogen	4/28/22	13:14	3.50	3.611	103	90	110
Sulfate	4/28/22	13:14	25.00	24.34	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211534

Lab Sample ID: 1139973

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/28/22	16:19	15.00	14.70	98	90	110
Nitrate Nitrogen	4/28/22	16:19	3.50	3.591	103	90	110
Sulfate	4/28/22	16:19	25.00	24.12	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211530 Lab Sample ID: 1140048

ICAL Calibration #: ICAL0590 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
	4/28/22	09:28	50.0	49.79	100	90	110
Total Inorganic Carbon	4/28/22	09:28	50.0	49.79	100	90	110
Total Organic Carbon	4/28/22	09:28	50.0	49.79	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211530 Lab Sample ID: 1140051

ICAL Calibration #: ICAL0590 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
	4/28/22	10:39	50.0	50.06	100	90	110
Total Inorganic Carbon	4/28/22	10:39	50.0	50.06	100	90	110
Total Organic Carbon	4/28/22	10:39	50.0	50.06	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211697

Lab Sample ID: 1140070

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	5/5/22	10:31	50.0	49.66	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211697

Lab Sample ID: 1140072

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	5/5/22	13:51	50.0	46.41	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211534

Lab Sample ID: 1140132

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/29/22	01:05	15.00	14.64	98	90	110
Nitrate Nitrogen	4/29/22	01:05	3.50	3.631	104	90	110
Sulfate	4/29/22	01:05	25.00	24.16	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211534

Lab Sample ID: 1140134

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/29/22	02:16	15.00	14.75	98	90	110
Nitrate Nitrogen	4/29/22	02:16	3.50	3.631	104	90	110
Sulfate	4/29/22	02:16	25.00	24.73	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211534

Lab Sample ID: 1140136

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/29/22	08:10	15.00	14.78	99	90	110
Nitrate Nitrogen	4/29/22	08:10	3.50	3.627	104	90	110
Sulfate	4/29/22	08:10	25.00	23.99	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 4

SDG No.: 169098

Analytical Run #: 211534

Lab Sample ID: 1140138

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/29/22	11:01	15.00	14.90	99	90	110
Nitrate Nitrogen	4/29/22	11:01	3.50	3.636	104	90	110
Sulfate	4/29/22	11:01	25.00	24.31	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211565

Lab Sample ID: 1137655

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	04/29/2022 16:52	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211650

Lab Sample ID: 1138179

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	05/03/2022 13:32	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211696

Lab Sample ID: 1140058

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/27/2022 11:28	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211440

Lab Sample ID: 1135345

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/11/2022 14:34	0.4397	U	1.0	1.5
Nitrate Nitrogen	04/11/2022 14:34	0	U	0.12	0.20
Sulfate	04/11/2022 14:34	0.5356	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211592

Lab Sample ID: 1143759

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/26/2022 08:35	0.6519	U	1.0	1.5
Nitrate Nitrogen	04/26/2022 08:35	0	U	0.12	0.20
Sulfate	04/26/2022 08:35	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211440 Lab Sample ID: 1135219

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/26/2022 16:25	0.3858	U	1.0	1.5
Nitrate Nitrogen	04/26/2022 16:25	0	U	0.12	0.20
Sulfate	04/26/2022 16:25	0.5290	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211440 Lab Sample ID: 1135228

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/26/2022 20:02	0.3881	U	1.0	1.5
Nitrate Nitrogen	04/26/2022 20:02	0	U	0.12	0.20
Sulfate	04/26/2022 20:02	0.5365	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211565

Lab Sample ID: 1137657

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	04/29/2022 16:52	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211565

Lab Sample ID: 1137659

Analytical Prep Batch #

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	04/29/2022 16:52	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211650

Lab Sample ID: 1138181

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	05/03/2022 13:32	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211650

Lab Sample ID: 1138183

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	05/03/2022 13:32	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211613

Lab Sample ID: 1139922

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
	05/02/2022 11:20	0	U	0.5	1.5
Total Inorganic Carbon	05/02/2022 11:20	0	U	0.5	1.5
Total Organic Carbon	05/02/2022 11:20	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211696

Lab Sample ID: 1139935

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	05/04/2022 18:31	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211696 Lab Sample ID: 1139937

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL0590 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	05/04/2022 21:34	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211697

Lab Sample ID: 1139947

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	05/04/2022 18:31	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211697

Lab Sample ID: 1139952

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL0590

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	05/04/2022 21:34	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211530 Lab Sample ID: 1140052

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL0590 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
	04/28/2022 10:53	0	U	0.5	1.5
Total Inorganic Carbon	04/28/2022 10:53	0	U	0.5	1.5
Total Organic Carbon	04/28/2022 10:53	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211696

Lab Sample ID: 1140060

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	05/04/2022 15:16	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211697

Lab Sample ID: 1140071

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	05/05/2022 10:58	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211697

Lab Sample ID: 1140073

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	05/05/2022 14:05	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211602 Lab Sample ID: 1138742

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/30/2022 14:10	0.5497	U	1.0	1.5
Nitrate Nitrogen	04/30/2022 14:10	0	U	0.12	0.20
Sulfate	04/30/2022 14:10	0.8302		0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211602 Lab Sample ID: 1138744

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	05/02/2022 09:11	0.6230	U	1.0	1.5
Nitrate Nitrogen	05/02/2022 09:11	0	U	0.12	0.20
Sulfate	05/02/2022 09:11	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211602 Lab Sample ID: 1138749

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	05/02/2022 10:22	0.5884	U	1.0	1.5
Nitrate Nitrogen	05/02/2022 10:22	0	U	0.12	0.20
Sulfate	05/02/2022 10:22	0.8811		0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211602 Lab Sample ID: 1138751

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	05/02/2022 11:23	0.5588	U	1.0	1.5
Nitrate Nitrogen	05/02/2022 11:23	0	U	0.12	0.20
Sulfate	05/02/2022 11:23	0.8190		0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211592 Lab Sample ID: 1139747

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/29/2022 17:22	0	U	1.0	1.5
Nitrate Nitrogen	04/29/2022 17:22	0	U	0.12	0.20
Sulfate	04/29/2022 17:22	0.8078		0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211592 Lab Sample ID: 1139752

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/29/2022 19:58	0.6049	U	1.0	1.5
Nitrate Nitrogen	04/29/2022 19:58	0	U	0.12	0.20
Sulfate	04/29/2022 19:58	0.7889	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211534 Lab Sample ID: 1139966

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/28/2022 10:38	0.6607	U	1.0	1.5
Nitrate Nitrogen	04/28/2022 10:38	0	U	0.12	0.20
Sulfate	04/28/2022 10:38	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211534 Lab Sample ID: 1139974

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/28/2022 16:33	0.6731	U	1.0	1.5
Nitrate Nitrogen	04/28/2022 16:33	0	U	0.12	0.20
Sulfate	04/28/2022 16:33	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211534

Lab Sample ID: 1140133

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/29/2022 01:19	0.5609	U	1.0	1.5
Nitrate Nitrogen	04/29/2022 01:19	0	U	0.12	0.20
Sulfate	04/29/2022 01:19	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211534

Lab Sample ID: 1140135

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/29/2022 02:30	0.5798	U	1.0	1.5
Nitrate Nitrogen	04/29/2022 02:30	0	U	0.12	0.20
Sulfate	04/29/2022 02:30	0.7962	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211534 Lab Sample ID: 1140137

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/29/2022 08:24	0.6056	U	1.0	1.5
Nitrate Nitrogen	04/29/2022 08:24	0	U	0.12	0.20
Sulfate	04/29/2022 08:24	0.7956	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211534 Lab Sample ID: 1140139

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/29/2022 11:32	0.6306	U	1.0	1.5
Nitrate Nitrogen	04/29/2022 11:32	0	U	0.12	0.20
Sulfate	04/29/2022 11:32	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211440 Lab Sample ID: 1135216

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/26/2022 12:47	0.3897	U	1.0	1.5
Nitrate Nitrogen	04/26/2022 12:47	0	U	0.12	0.20
Sulfate	04/26/2022 12:47	0.5311	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211565 Lab Sample ID: 1136533

Analytical Prep Batch # 95239 Preparation Date/Time: 04/29/2022 09:05

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total COD	04/29/2022 16:52	0	U	18	37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211650 Lab Sample ID: 1138063

Analytical Prep Batch # 95270 Preparation Date/Time: 05/03/2022 08:31

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total COD	05/03/2022 13:32	0	U	18	37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211613 Lab Sample ID: 1139920

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL0590 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
	05/02/2022 10:08	0	U	0.5	1.5
Total Inorganic Carbon	05/02/2022 10:08	0	U	0.5	1.5
Total Organic Carbon	05/02/2022 10:08	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211696 Lab Sample ID: 1139925

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL0590 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	05/04/2022 12:04	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211697 Lab Sample ID: 1139945

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL0590 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	05/04/2022 15:16	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211530 Lab Sample ID: 1140050

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL0590 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
	04/28/2022 09:55	0	U	0.5	1.5
Total Inorganic Carbon	04/28/2022 09:55	0	U	0.5	1.5
Total Organic Carbon	04/28/2022 09:55	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211602 Lab Sample ID: 1138737

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/30/2022 12:31	0.6361	U	1.0	1.5
Nitrate Nitrogen	04/30/2022 12:31	0	U	0.12	0.20
Sulfate	04/30/2022 12:31	0.7902	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211592 Lab Sample ID: 1139745

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/29/2022 14:31	0.5769	U	1.0	1.5
Nitrate Nitrogen	04/29/2022 14:31	0	U	0.12	0.20
Sulfate	04/29/2022 14:31	0.7930	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

SDG No.: 169098

Analytical Run #: 211534 Lab Sample ID: 1139969

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/28/2022 13:43	0.6847	U	1.0	1.5
Nitrate Nitrogen	04/28/2022 13:43	0	U	0.12	0.20
Sulfate	04/28/2022 13:43	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1135224	Parent Sample No.:	1134804
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211440	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	04/26/2022	Analysis Time: --------	18:31

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	13.7		6.5		8.00	90			
Nitrate Nitrogen	88-111	2.60		0.64		2.00	98			
Sulfate	87-112	39.1		33		8.00	76			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1136536	Parent Sample No.:	1136212
Analytical Prep Batch #	95239	Analytical Preparation Date/Time:	04/29/2022 09:05
Analytical Run #:	211565	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 04/29/2022 Analysis Time: -------- 16:52

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
COD	90-110	306		160		148	99		SP

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1138066	Parent Sample No.:	1137439
Analytical Prep Batch #	95270	Analytical Preparation Date/Time:	05/03/2022 08:31
Analytical Run #:	211650	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 13:32

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
COD	90-110	234		85		148	101		SP

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139927	Parent Sample No.:	1134804
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211696	ICAL Calibration #:	ICAL0590

Analysis Type *Initial Analysis* Analysis Date: ----- 05/04/2022 Analysis Time: -------- 12:54

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	48.9		BDL	U	50.0	98		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description: **13MW5**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139929	Parent Sample No.:	1136203
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211696	ICAL Calibration #:	ICAL0590

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/04/2022 Analysis Time: -------- 14:07

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	47.1		BDL	U	50.0	94		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139949	Parent Sample No.:	1136588
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211697	ICAL Calibration #:	ICAL0590

Analysis Type	*Initial Analysis*	Analysis Date: -----	05/04/2022	Analysis Time: --------	19:51

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	47.4		BDL	U	50.0	95		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1138739	Parent Sample No.:	1137438
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211602	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	04/30/2022	Analysis Time: --------	13:27

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	17.2		9.9		8.0	91		IC
Nitrate Nitrogen	88-111	4.63		2.5		2.0	106		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1138739	Parent Sample No.:	1137438
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211602	ICAL Calibration #:	

Analysis Type	*Re-Analysis #1*	Analysis Date: -----	05/02/2022	Analysis Time: --------	09:40

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Sulfate	87-112	94.8		63		40.0	80		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description: **48MW7**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139749	Parent Sample No.:	1136674
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211592	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 04/29/2022 Analysis Time: -------- 17:50

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	9.09		1.6	J	8.0	94		IC	
Nitrate Nitrogen	88-111	3.24		1.1		2.0	107		IC	
Sulfate	87-112	10.6		4.1		8.0	81		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139971	Parent Sample No.:	1136203
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211534	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	04/28/2022	Analysis Time: --------	15:08

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	12.4		5.0		8.0	92		IC
Nitrate Nitrogen	88-111	2.95		0.82		2.0	106		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139971	Parent Sample No.:	1136203
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211534	ICAL Calibration #:	

Analysis Type	*Re-Analysis #1*	Analysis Date: -----	04/29/2022	Analysis Time: --------	09:07

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Sulfate	87-112	153		120		40.0	82		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1135225	Parent Sample No.:	1135224
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211440	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	04/26/2022	Analysis Time: --------	18:50

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	13.9		6.5		8.00	92			
Nitrate Nitrogen	88-111	2.65		0.64		2.00	100			
Sulfate	87-112	39.3		33		8.00	79			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **54IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solids for Sample:
Concentration Units: mg/L
Sample No: 1136537
Parent Sample No.: 1136536
Analytical Prep Batch #: 95239
Analytical Preparation Date/Time: 04/29/2022 09:05
Analytical Run #: 211565
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 04/29/2022 Analysis Time: -------- 16:52

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
COD	90-110	306		160		148	99		SP

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **49IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solids for Sample:
Concentration Units: mg/L
Sample No: 1138067
Parent Sample No.: 1138066
Analytical Prep Batch #: 95270
Analytical Preparation Date/Time: 05/03/2022 08:31
Analytical Run #: 211650
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/03/2022 Analysis Time: -------- 13:32

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
COD	90-110	229		85		148	97		SP

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **13MW5**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139930	Parent Sample No.:	1139929
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211696	ICAL Calibration #:	ICAL0590

Analysis Type: *Initial Analysis* Analysis Date: ----- 05/04/2022 Analysis Time: -------- 14:19

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	47.2		BDL	U	50.0	94		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139950	Parent Sample No.:	1139949
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211697	ICAL Calibration #:	ICAL0590

Analysis Type *Initial Analysis* Analysis Date: ----- 05/04/2022 Analysis Time: -------- 20:03

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	48.2		BDL	U	50.0	96		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1140061	Parent Sample No.:	1139927
Analytical Prep Batch #		Analytical Preparation Date/Time:	
Analytical Run #:	211696	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	05/04/2022	Analysis Time: --------	13:07

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	48.4		BDL	U	50.0	97		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1138740	Parent Sample No.:	1138739
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211602	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 04/30/2022 Analysis Time: -------- 13:42

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	17.2		9.9		8.0	91		IC
Nitrate Nitrogen	88-111	4.65		2.5		2.0	108		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1138740	Parent Sample No.:	1138739
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211602	ICAL Calibration #:	

Analysis Type	*Re-Analysis #1*	Analysis Date: -----	05/02/2022	Analysis Time: --------	09:54

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Sulfate	87-112	94.4		63		40.0	78		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **48MW7**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139750	Parent Sample No.:	1139749
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211592	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	04/29/2022	Analysis Time: --------	18:05

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	9.02		1.6	J	8.0	93		IC	
Nitrate Nitrogen	88-111	3.24		1.1		2.0	107		IC	
Sulfate	87-112	10.4		4.1		8.0	79		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139972	Parent Sample No.:	1139971
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211534	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 04/28/2022 Analysis Time: -------- 15:22

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	12.3		5.0		8.0	91		IC
Nitrate Nitrogen	88-111	2.93		0.82		2.0	106		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	LIQUID	SDG No.:	169098
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1139972	Parent Sample No.:	1139971
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	211534	ICAL Calibration #:	

Analysis Type	*Re-Analysis #1*	Analysis Date: -----	04/29/2022	Analysis Time: --------	09:21

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Sulfate	87-112	156		120		40.0	90		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54MW13

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 211440

ICAL Calibration #:

Sample #: 1135223

Parent Sample #: 1134804

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/26/2022	18:13	10	6.5		6.46		1		
Nitrate Nitrogen	04/26/2022	18:13	10	0.64		0.644		1		
Sulfate	04/26/2022	18:13	10	33		32.7		1		

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 95239

Analytical Run #: 211565

ICAL Calibration #:

Sample #: 1136535

Parent Sample #: 1136212

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim	RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
COD	04/29/2022 16:52	20	160		159		1		SP

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: S.U.

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 211555

ICAL Calibration #:

Sample #: 1137194

Parent Sample #: 1136212

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
pH	04/28/2022	15:00	1	7.37		7.37		0		ELEC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

49IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 95270

Analytical Run #: 211650

ICAL Calibration #:

Sample #: 1138065

Parent Sample #: 1137439

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim	RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
COD	05/03/2022 13:32	20	85		80.2		6		SP

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

49IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: S.U.

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 211639

ICAL Calibration #:

Sample #: 1138141

Parent Sample #: 1137439

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
pH	05/02/2022	15:20	1	7.61		7.62		0		ELEC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

54MW13

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 211696

ICAL Calibration #: ICAL0590

Sample #: 1139926

Parent Sample #: 1134804

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	05/04/2022	12:36	20	0.5	U	0.5	U	0		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

13MW5

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 211696

ICAL Calibration #: ICAL0590

Sample #: 1139928

Parent Sample #: 1136203

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	05/04/2022	13:49	20	0.5	U	0.5	U	0		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

50MW2

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 211697

ICAL Calibration #: ICAL0590

Sample #: 1139948

Parent Sample #: 1136588

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	05/04/2022	19:32	20	0.5	U	0.5	U	0		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48MW1

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID
SDG No.: 169098

% Solid for Sample:
Concentration Units: mg/L

Analytical Prep Batch # 1
Analytical Preparation Date/Time 0

Analytical Run #: 211602
ICAL Calibration #:

Sample #: 1138738
Parent Sample #: 1137438

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/30/2022	13:13	10	9.9		9.86		0		IC
Nitrate Nitrogen	04/30/2022	13:13	10	2.5		2.55		2		IC

Analytical Prep Batch # 2
Analytical Preparation Date/Time 0

Analytical Run #: 211602
ICAL Calibration #:

Sample #: 1138738
Parent Sample #: 1137438

Analysis Type *Re-Analysis #1*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Sulfate	05/02/2022	09:25	10	63		61.0		3		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48MW7

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID

SDG No.: 169098

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 211592

ICAL Calibration #:

Sample #: 1139748

Parent Sample #: 1136674

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/29/2022	17:36	10	1.6	J	1.65	J	3		IC
Nitrate Nitrogen	04/29/2022	17:36	10	1.1		1.09		1		IC
Sulfate	04/29/2022	17:36	10	4.1		3.90		5		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

13MW5

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID
SDG No.: 169098

% Solid for Sample:
Concentration Units: mg/L

Analytical Prep Batch # 1
Analytical Preparation Date/Time 0

Analytical Run #: 211534
ICAL Calibration #:

Sample #: 1139970
Parent Sample #: 1136203

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/28/2022	14:54	10	5.0		5.03		1		IC
Nitrate Nitrogen	04/28/2022	14:54	10	0.82		0.822		0		IC

Analytical Prep Batch # 2
Analytical Preparation Date/Time 0

Analytical Run #: 211534
ICAL Calibration #:

Sample #: 1139970
Parent Sample #: 1136203

Analysis Type *Re-Analysis #1*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Sulfate	04/29/2022	08:53	10	120		120		0		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **54MW13**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 211440
ICAL Calibration #:
Sample #: 1135225
Parent Sample #: 1135224

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/26/2022	18:50	15	13.7		13.9		2		
Nitrate Nitrogen	04/26/2022	18:50	15	2.60		2.65		2		
Sulfate	04/26/2022	18:50	15	39.1		39.3		1		

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **54IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 95239
Analytical Preparation Date/Time: 04/29/2022 09:05
Analytical Run #: 211565
ICAL Calibration #:
Sample #: 1136537
Parent Sample #: 1136536

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
COD	04/29/2022	16:52	20	306		306		0		SP

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **49IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 95270
Analytical Preparation Date/Time: 05/03/2022 08:31
Analytical Run #: 211650
ICAL Calibration #:
Sample #: 1138067
Parent Sample #: 1138066

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
COD	05/03/2022	13:32	20	234		229		2		SP

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **13MW5**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 211696
ICAL Calibration #: ICAL0590
Sample #: 1139930
Parent Sample #: 1139929

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	05/04/2022	14:19	20	47.1		47.2		0		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **50MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 211697
ICAL Calibration #: ICAL0590
Sample #: 1139950
Parent Sample #: 1139949

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	05/04/2022	20:03	20	47.4		48.2		2		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **54MW13**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 211696
ICAL Calibration #:
Sample #: 1140061
Parent Sample #: 1139927

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	05/04/2022	13:07	20	48.9		48.4		1		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **48MW1**

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

Matrix: LIQUID | SDG No.: 169098

% Solid for Sample: | Concentration Units: mg/L

Analytical Prep Batch #: 0 | Analytical Preparation Date/Time:

Analytical Run #: 211602 | ICAL Calibration #:

Sample #: 1138740 | Parent Sample #: 1138739

Analysis Type: *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/30/2022	13:42	15	17.2		17.2		0		IC
Nitrate Nitrogen	04/30/2022	13:42	15	4.63		4.65		0		IC

Analytical Prep Batch #: 0 | Analytical Preparation Date/Time:

Analytical Run #: 211602 | ICAL Calibration #:

Sample #: 1138740 | Parent Sample #: 1138739

Analysis Type: *Re-Analysis #1*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Sulfate	05/02/2022	09:54	15	94.8		94.4		0		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **48MW7**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 211592
ICAL Calibration #:
Sample #: 1139750
Parent Sample #: 1139749

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/29/2022	18:05	15	9.09		9.02		1		IC
Nitrate Nitrogen	04/29/2022	18:05	15	3.24		3.24		0		IC
Sulfate	04/29/2022	18:05	15	10.6		10.4		2		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **13MW5**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix: LIQUID
SDG No.: 169098
% Solid for Sample:
Concentration Units: mg/L

Analytical Prep Batch # 0
Analytical Preparation Date/Time
Analytical Run #: 211534
ICAL Calibration #:
Sample #: 1139972
Parent Sample #: 1139971

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/28/2022	15:22	15	12.4		12.3		0		IC
Nitrate Nitrogen	04/28/2022	15:22	15	2.95		2.93		0		IC

Analytical Prep Batch # 0
Analytical Preparation Date/Time
Analytical Run #: 211534
ICAL Calibration #:
Sample #: 1139972
Parent Sample #: 1139971

Analysis Type *Re-Analysis #1*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Sulfate	04/29/2022	09:21	15	153		156		2		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211440

Sample No.:#: 1135215

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	04/26/2022 12:29	87-111	13.85		15.00	92		
Nitrate Nitrogen	04/26/2022 12:29	88-111	3.507		3.500	100		
Sulfate	04/26/2022 12:29	87-112	24.20		25.00	97		

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211565 Sample No.:#: 1136534

Analytical Prep Batch #: 95239 Preparation Date/Time: 04/29/2022 09:05

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
COD	04/29/2022 16:52	90-110	404.2		400.0	101		SP

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211650 Sample No.:#: 1138064

Analytical Prep Batch #: 95270 Preparation Date/Time: 05/03/2022 08:31

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
COD	05/03/2022 13:32	90-110	394.6		400.0	99		SP

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211613

Sample No.:#: 1139919

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL0590

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
	05/02/2022 09:54	85-111	48.64		50.0	97		TOC
Total Inorganic Carbon	05/02/2022 09:54	85-111	48.64		50.0	97		TOC
Total Organic Carbon	05/02/2022 09:54	85-111	48.64		50.0	97		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211696

Sample No.:#: 1139924

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL0590

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	05/04/2022 11:51	85-111	48.33		50.0	97		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211697

Sample No.:#: 1139944

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL0590

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	05/04/2022 15:03	85-111	47.48		50.0	95		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211530

Sample No.:#: 1140049

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL0590

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
	04/28/2022 09:41	85-111	49.87		50.0	100		TOC
Total Inorganic Carbon	04/28/2022 09:41	85-111	49.87		50.0	100		TOC
Total Organic Carbon	04/28/2022 09:41	85-111	49.87		50.0	100		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211602

Sample No.:#: 1138736

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	04/30/2022 12:16	87-111	15.01		15.00	100		IC
Nitrate Nitrogen	04/30/2022 12:16	88-111	3.704		3.50	106		IC
Sulfate	04/30/2022 12:16	87-112	23.46		25.00	94		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211592

Sample No.:#: 1139744

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	04/29/2022 14:17	87-111	14.49		15.00	97		IC
Nitrate Nitrogen	04/29/2022 14:17	88-111	3.721		3.50	106		IC
Sulfate	04/29/2022 14:17	87-112	24.63		25.00	99		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54

LCS Source: SPEX and Ultra

SDG No.: 169098

Concentration Units: mg/L

Analytical Run #: 211534

Sample No.:#: 1139968

Analytical Prep Batch #: 0

Preparation Date/Time:

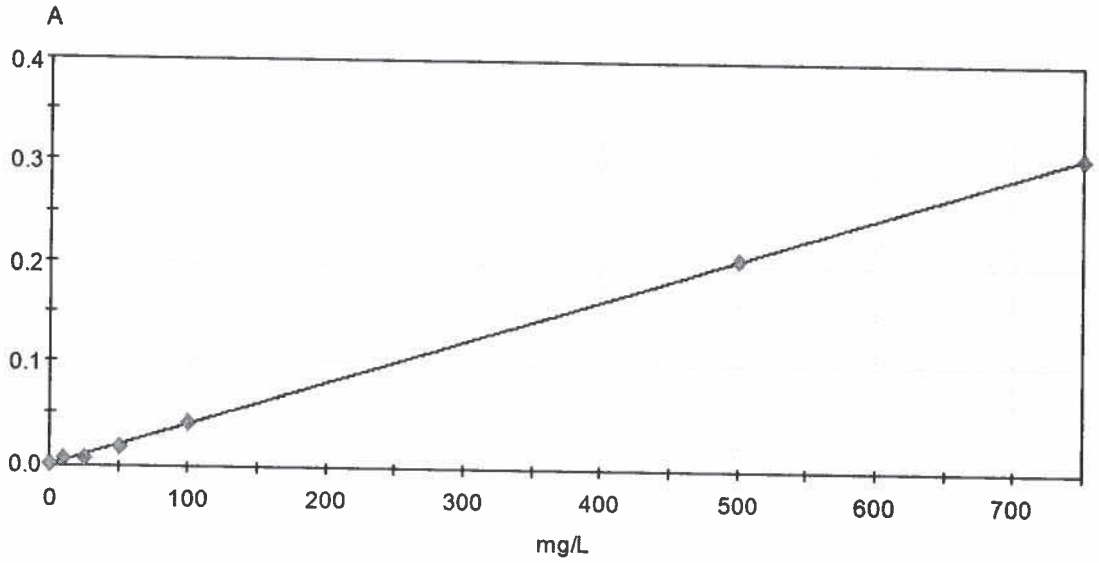
ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	04/28/2022 13:28	87-111	14.58		15.00	97		IC
Nitrate Nitrogen	04/28/2022 13:28	88-111	3.553		3.50	102		IC
Sulfate	04/28/2022 13:28	87-112	24.46		25.00	98		IC

INORGANIC
CLP FORMS
DOCUMENTS

Method:	W52634.mqa (600 nm)
Last modified:	04/12/2022 15:08:02 by CTLABORATORIES\SPEC
Spectrophotometer:	GENESYS 30
Serial number:	9A1W117104
Firmware:	104
Autozero:	04/29/2022 16:49:21
Measured:	04/29/2022 16:52:37 by CTLABORATORIES\SPEC
Result filename:	211565 DATA.rqa

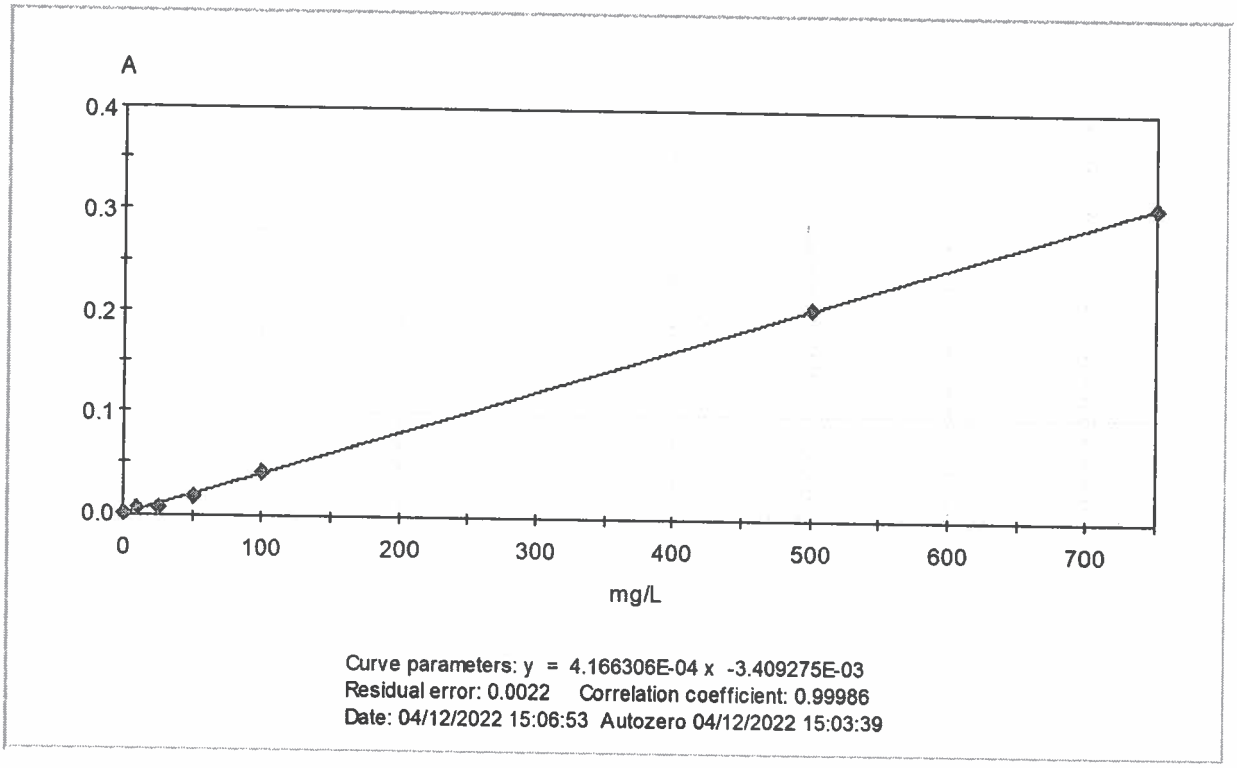


Curve parameters: y = 4.166306E-04 x -3.409275E-03
Residual error: 0.0022 Correlation coefficient: 0.99986
Date: 04/12/2022 15:06:53 Autozero 04/12/2022 15:03:39

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]
ICV	1	0.164	401.8
ICB	1	-0.005	-3.8
CCV	1	0.159	389.8
CCB	1	-0.005	-3.8
1136534	1	0.165	404.2
1136533	1	-0.005	-3.8
1136212	1	0.063	159.4
1136212DUP	1	0.063	159.4
1136212MS	1	0.124	305.8
1136212MSD	1	0.124	305.8
CCV	1	0.160	392.2
CCB	1	-0.005	-3.8

RCB
5/2/22

Method:	W52634.mqa (600 nm)
Last modified:	04/12/2022 15:08:02 by CTLABORATORIES\SPEC
Spectrophotometer:	GENESYS 30
Serial number:	9A1W117104
Firmware:	104
Autozero:	05/03/2022 13:28:37
Measured:	05/03/2022 13:32:08 by CTLABORATORIES\SPEC
Result filename:	211650 DATA.rqa

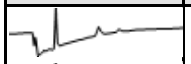
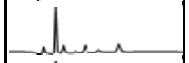
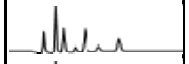
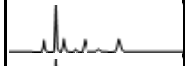
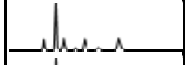
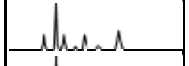
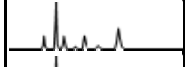
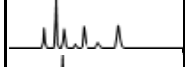
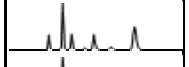


Curve parameters: y = 4.166306E-04 x -3.409275E-03
Residual error: 0.0022 Correlation coefficient: 0.99986
Date: 04/12/2022 15:06:53 Autozero 04/12/2022 15:03:39

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]
ICV	1	0.161	394.6
ICB	1	-0.008	-11.0
CCV	1	0.160	392.2
CCB	1	-0.009	-13.4
1138064	1	0.161	394.6
1138063	1	-0.008	-11.0
1137439	1	0.032	85.0
1137439DUP	1	0.030	80.2
1137439MS	1	0.094	233.8
1137439MSD	1	0.092	229.0
CCV	1	0.160	392.2
CCB	1	-0.008	-11.0

RCB
5/3/22

Sequence: 041122 - IC4083A
Last Update Operator: aquion

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	STD1	1.0000	Calibration Standard	1	2	5000	Anions 1.0	IC4083A	Finished
	STD2	1.0000	Calibration Standard	2	3	5000	Anions 1.0	IC4083A	Finished
	STD3	1.0000	Calibration Standard	3	4	5000	Anions 1.0	IC4083A	Finished
	STD4	1.0000	Calibration Standard	4	5	5000	Anions 1.0	IC4083A	Finished
	STD5	1.0000	Calibration Standard	5	6	5000	Anions 1.0	IC4083A	Finished
	STD6	1.0000	Calibration Standard	6	7	5000	Anions 1.0	IC4083A	Finished
	STD7	1.0000	Calibration Standard	7	8	5000	Anions 1.0	IC4083A	Finished
	STD8	1.0000	Calibration Standard	8	9	5000	Anions 1.0	IC4083A	Finished
	STD9	1.0000	Calibration Standard	9	10	5000	Anions 1.0	IC4083A	Finished
	ICV	1.0000	Unknown		14	5000	Anions	IC4083A	Finished
	ICB	1.0000	Unknown		18	5000	Anions	IC4083A	Finished

Calibration Concentrations

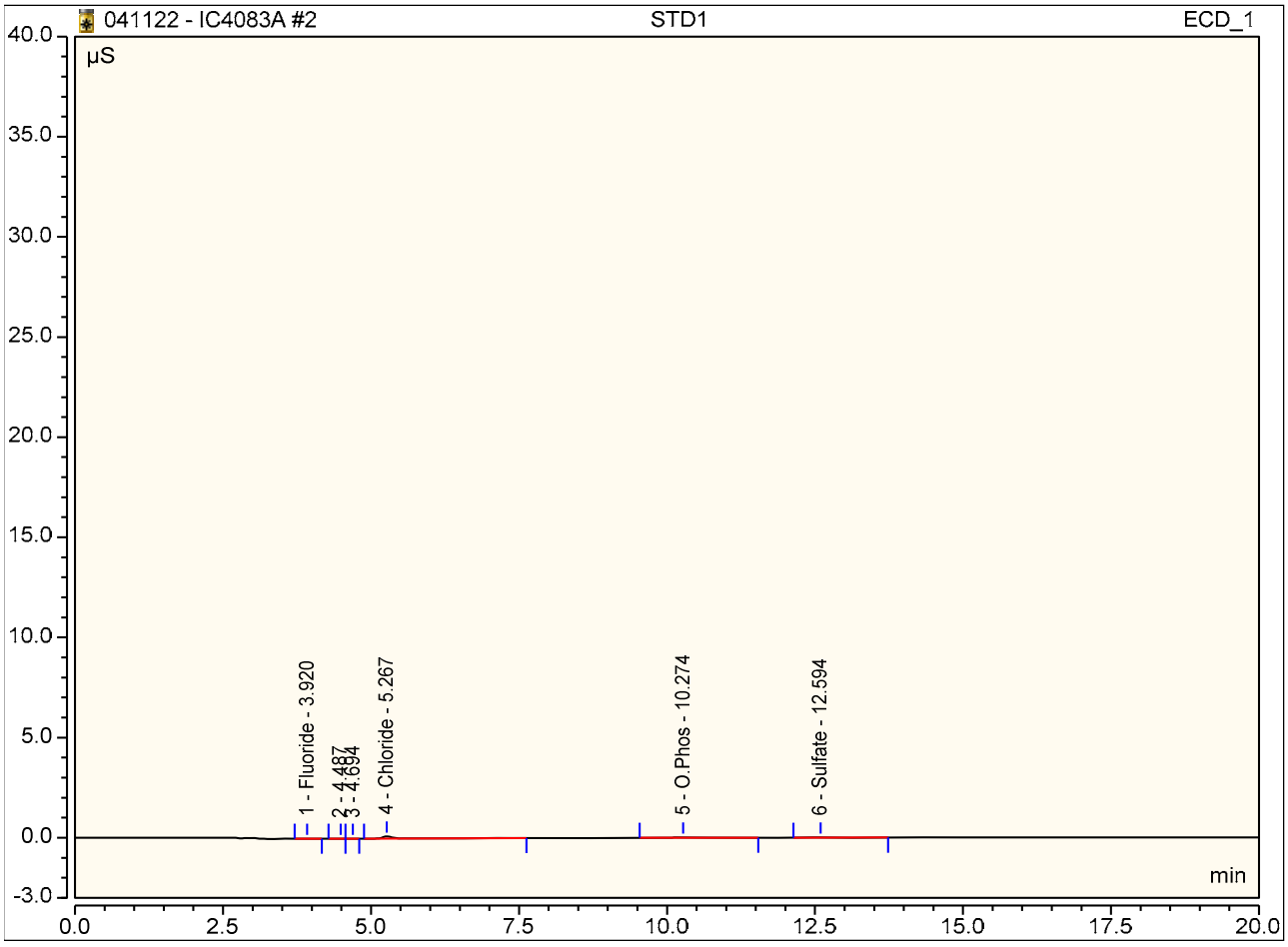
Instrument:AQUION 4	Cal. File:	IC4083A			ICV	IC4077 IC4080		Analyst/Date: TMG 04/11/2022		
Analyte	Cal Level 1 (mg/L)	Cal Level 2 (mg/L)	Cal Level 3 (mg/L)	Cal Level 4 (mg/L)	Cal Level 5 (mg/L)	Cal Level 6 (mg/L)	Cal Level 7 (mg/L)	Cal Level 8 (mg/L)	Cal Level 9 (mg/L)	ICV (mg/L)
Fluoride	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Chloride	0.0	0.5	0.75	1.0	5.0	10.0	20.0	30.0	40.0	15.0
Bromide	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrite	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrate	0.0	0.1	0.30	0.5	1.0	2.0	5.0	7.0		3.5
O-Phoshorous	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Sulfate	0.0	0.5	0.75	1.0	5.0	10.0	30.0	50.0	70.0	25.0

RJ 05/05/2022

Peak Integration Report

Sample Name:	**STD1**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 09:27**	*Run Time:*	**20.00**

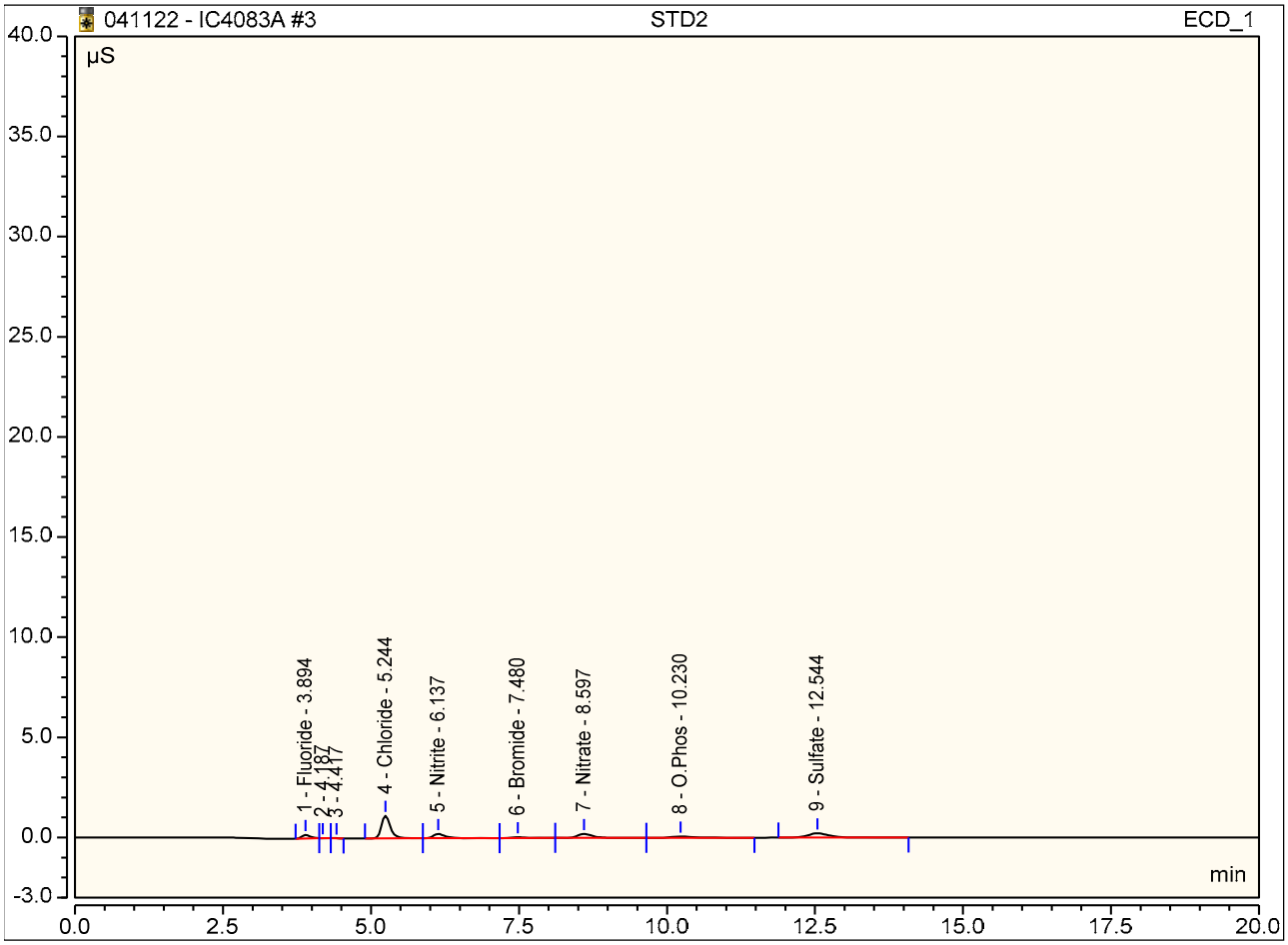
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.92	Fluoride	0.001	0.005	0.0508
4	5.27	Chloride	0.024	0.105	0.4541
5	10.27	O.Phos	0.011	0.023	0.0721
6	12.59	Sulfate	0.004	0.008	0.5401



Peak Integration Report

Sample Name:	**STD2**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 09:47**	*Run Time:*	**20.00**

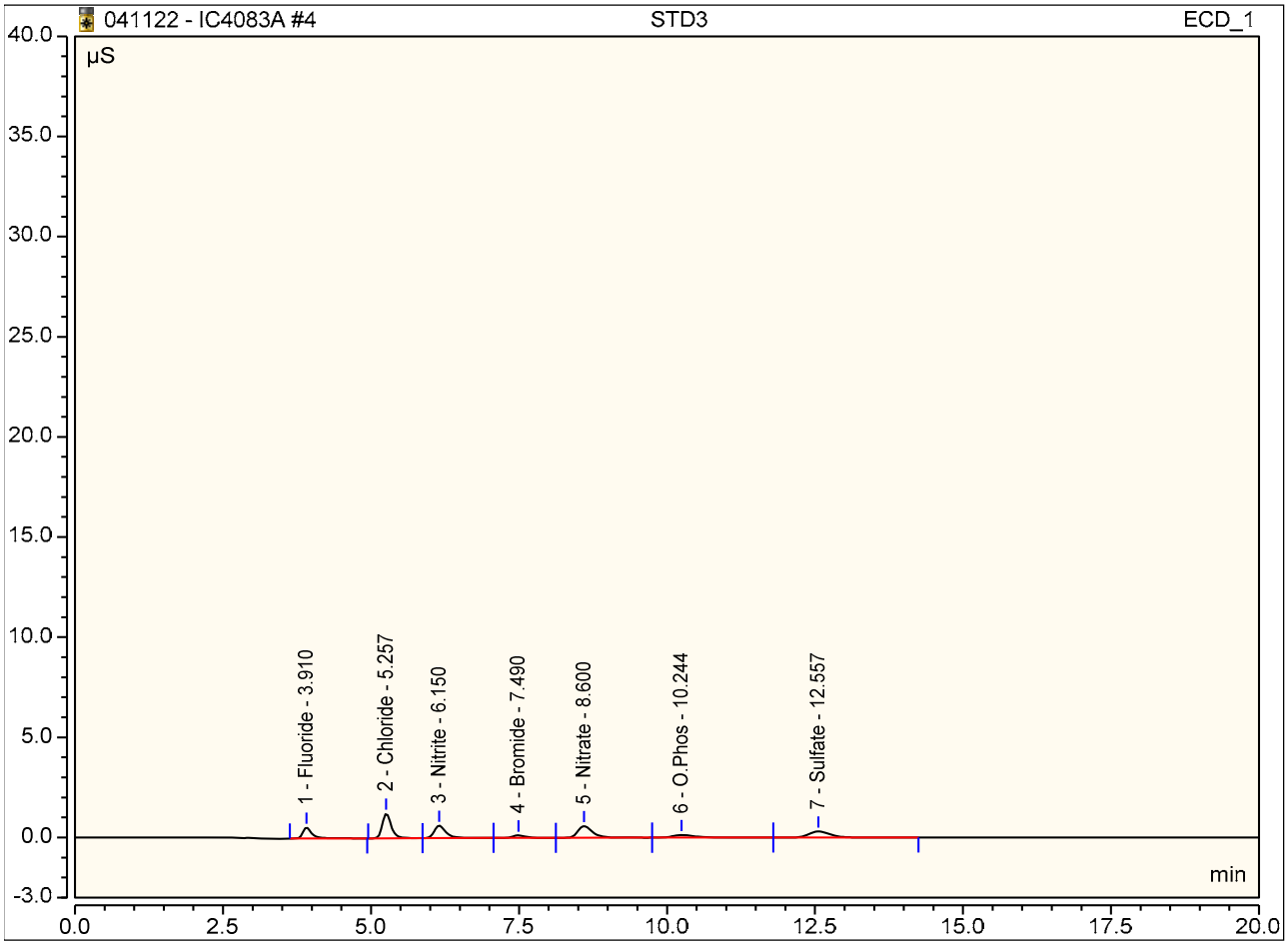
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.89	Fluoride	0.027	0.178	0.1199
4	5.24	Chloride	0.200	1.134	1.0325
5	6.14	Nitrite	0.048	0.212	0.1239
6	7.48	Bromide	0.011	0.043	0.1100
7	8.60	Nitrate	0.059	0.203	0.1671
8	10.23	O.Phos	0.028	0.065	0.1554
9	12.54	Sulfate	0.091	0.216	0.9711



Peak Integration Report

Sample Name:	**STD3**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 10:07**	*Run Time:*	**20.00**

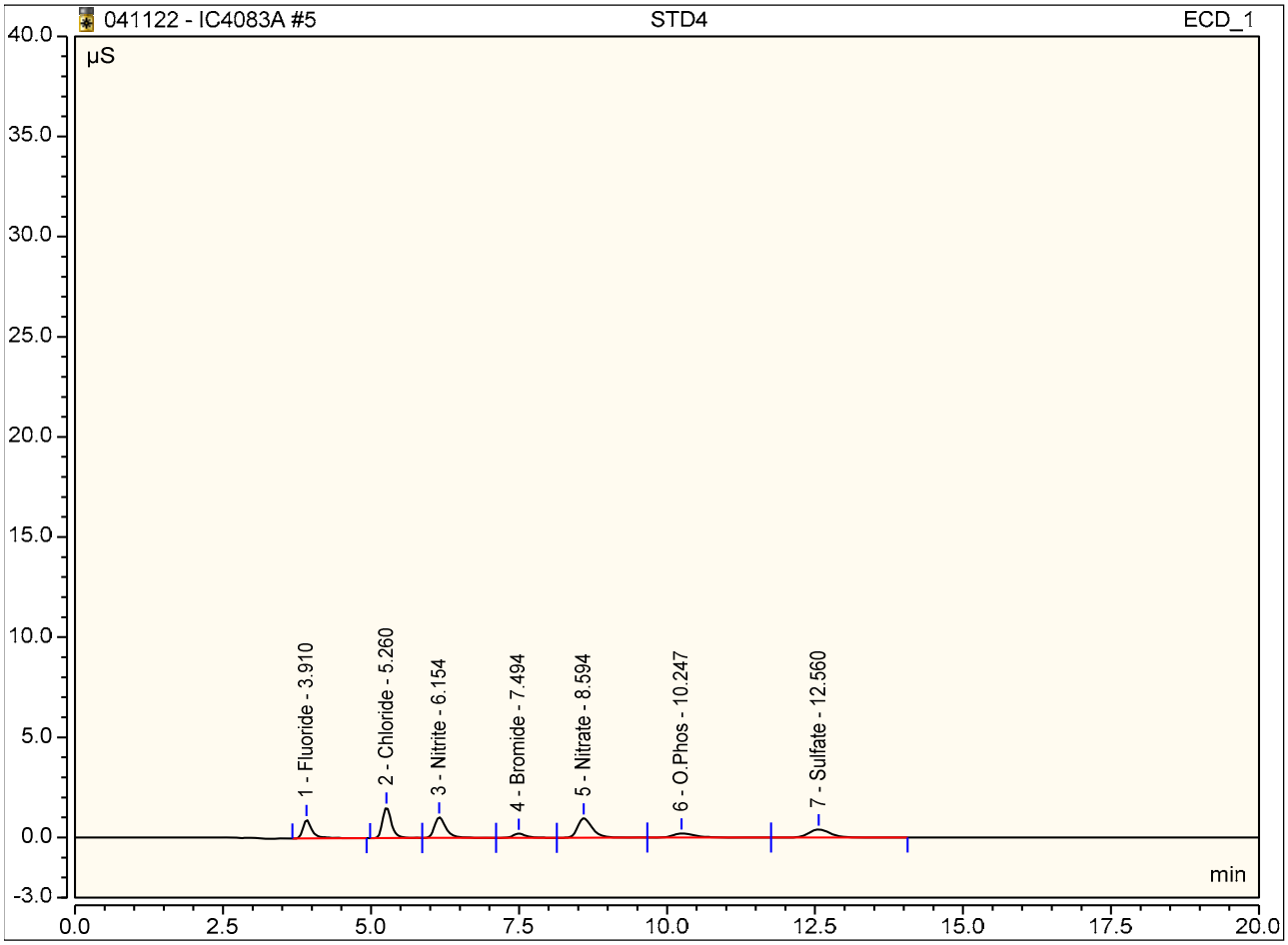
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.91	Fluoride	0.104	0.551	0.3222
2	5.26	Chloride	0.218	1.236	1.0927
3	6.15	Nitrite	0.141	0.619	0.3118
4	7.49	Bromide	0.030	0.123	0.3033
5	8.60	Nitrate	0.169	0.585	0.3420
6	10.24	O.Phos	0.059	0.133	0.3096
7	12.56	Sulfate	0.132	0.313	1.1764



Peak Integration Report

Sample Name:	**STD4**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 10:27**	*Run Time:*	**20.00**

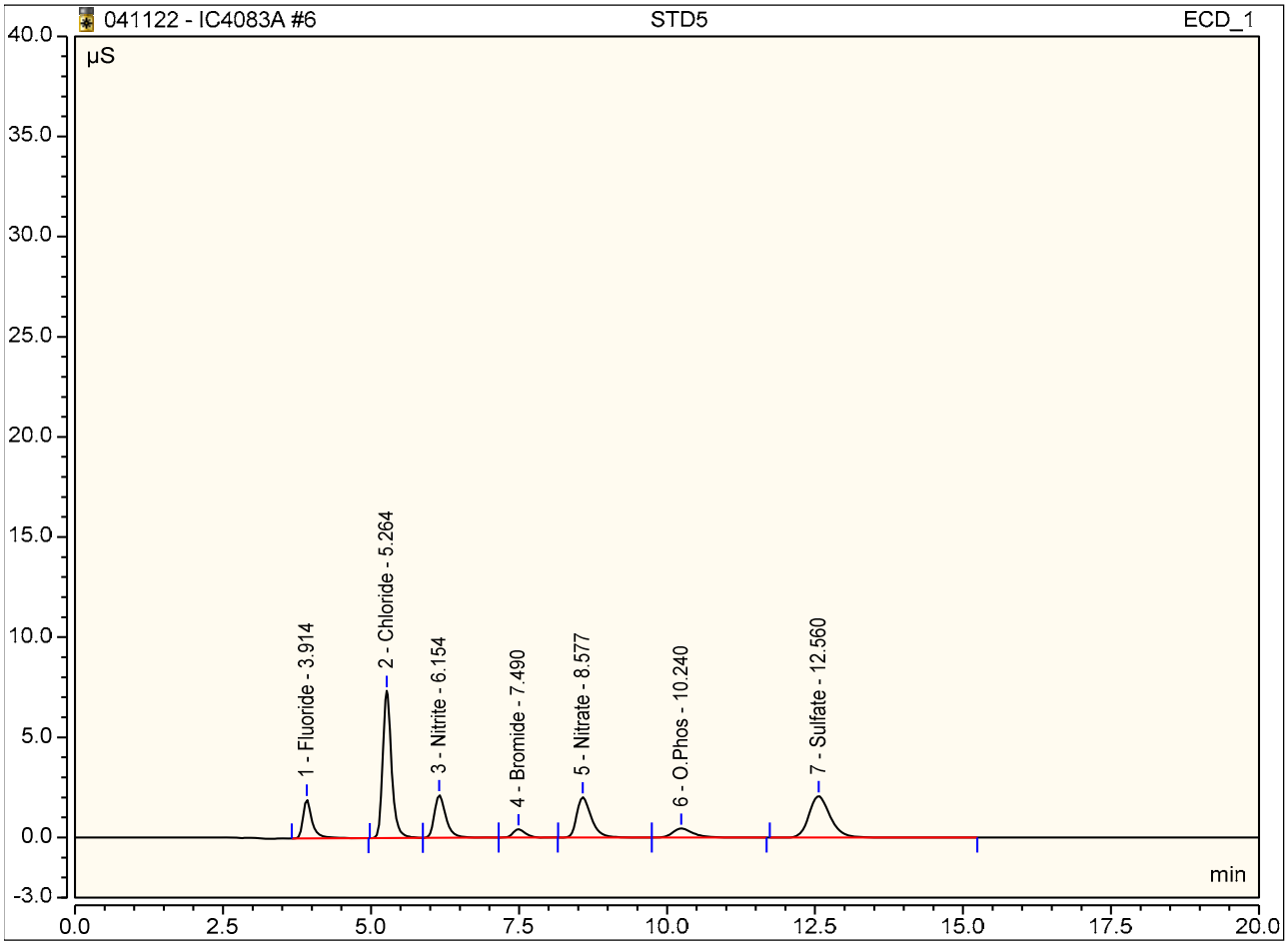
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.91	Fluoride	0.173	0.923	0.5036
2	5.26	Chloride	0.271	1.532	1.2680
3	6.15	Nitrite	0.236	1.030	0.5038
4	7.49	Bromide	0.050	0.204	0.5010
5	8.59	Nitrate	0.279	0.970	0.5179
6	10.25	O.Phos	0.092	0.213	0.4772
7	12.56	Sulfate	0.172	0.410	1.3735



Peak Integration Report

Sample Name:	**STD5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 10:48**	*Run Time:*	**20.00**

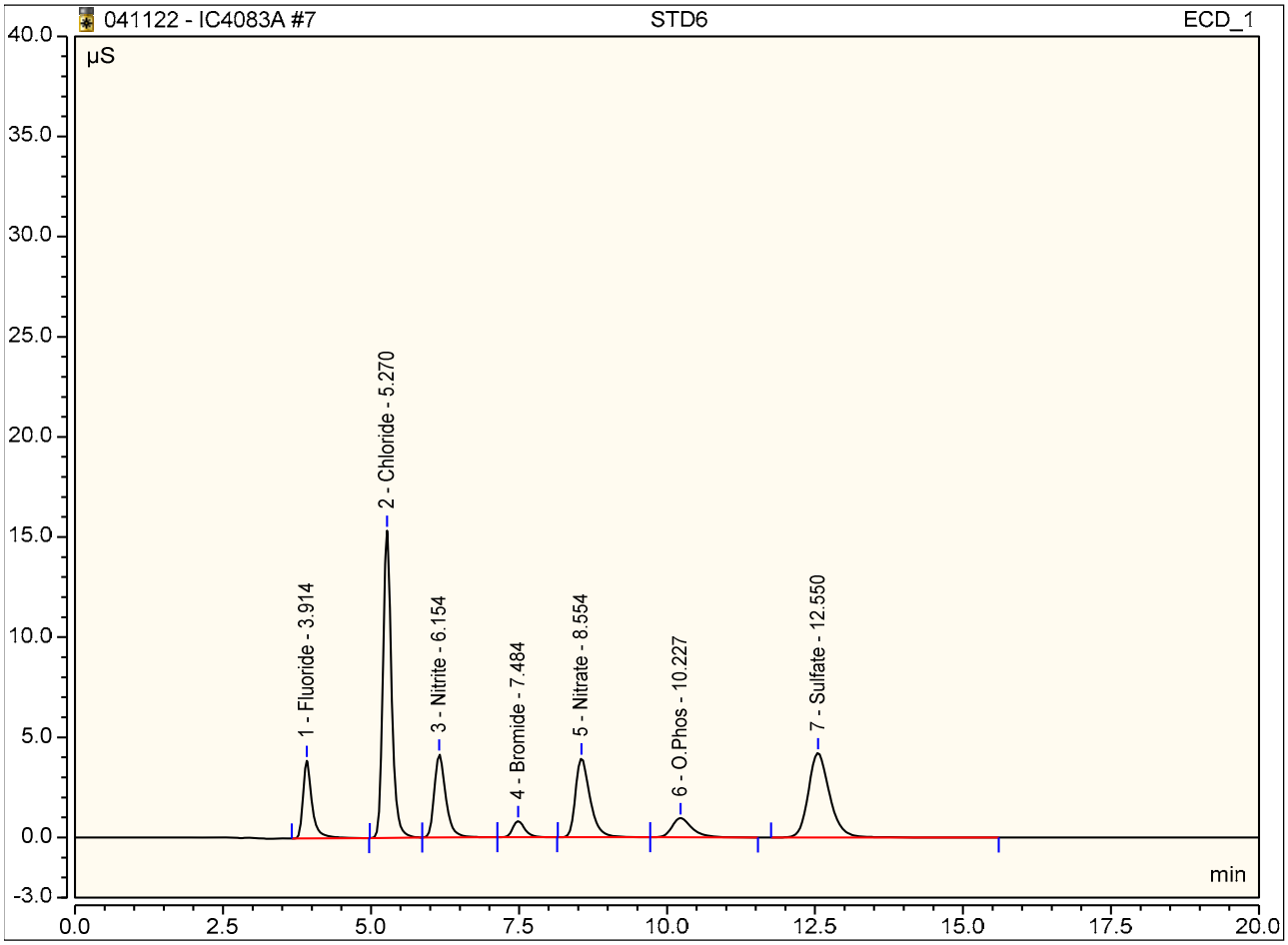
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.91	Fluoride	0.354	1.942	0.9782
2	5.26	Chloride	1.265	7.347	4.5416
3	6.15	Nitrite	0.485	2.133	1.0079
4	7.49	Bromide	0.102	0.420	1.0209
5	8.58	Nitrate	0.580	2.012	0.9959
6	10.24	O.Phos	0.185	0.456	0.9383
7	12.56	Sulfate	0.869	2.071	4.8214



Peak Integration Report

Sample Name:	**STD6**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 11:08**	*Run Time:*	**20.00**

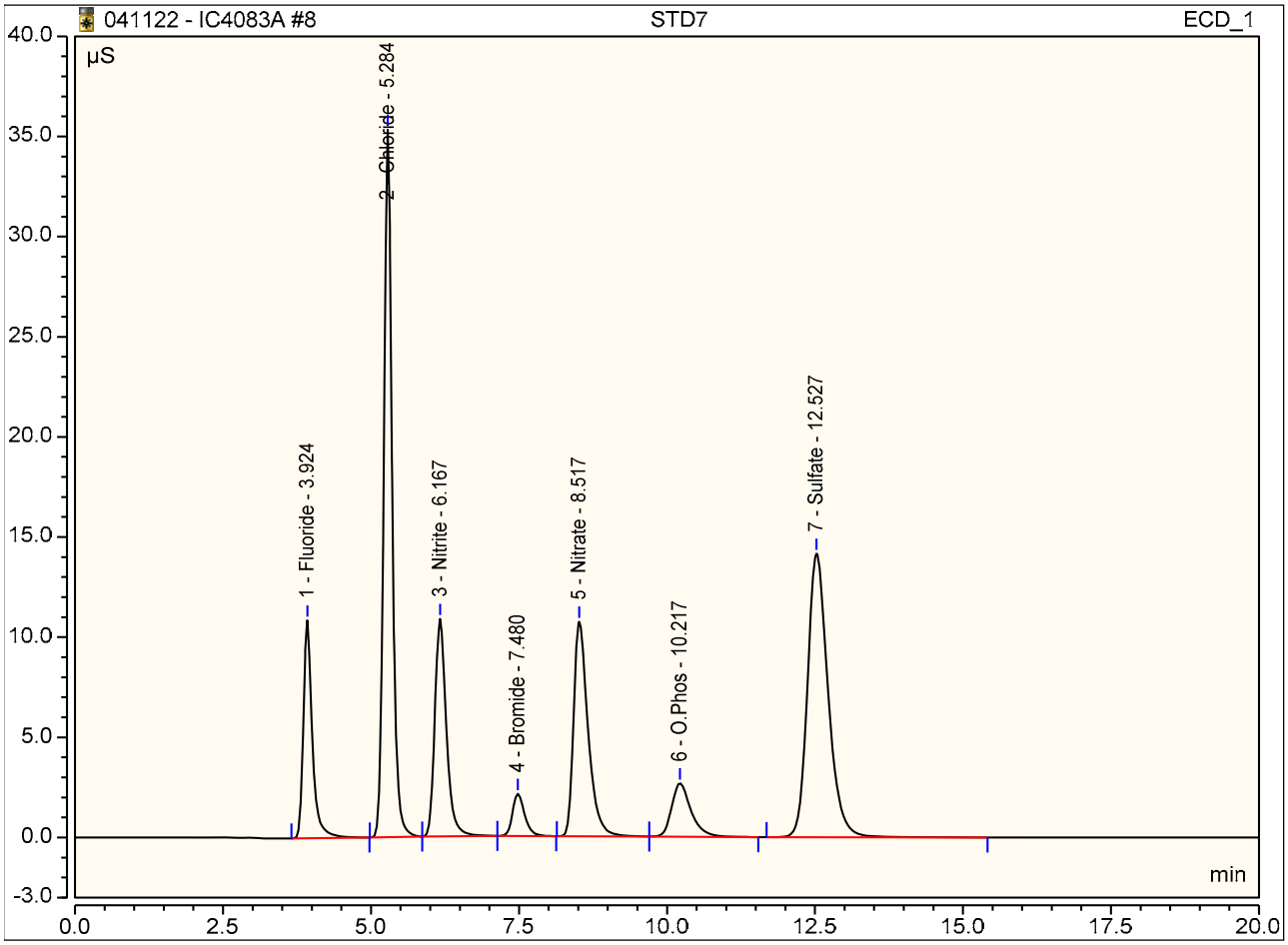
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.91	Fluoride	0.694	3.884	1.8717
2	5.27	Chloride	2.574	15.345	8.8517
3	6.15	Nitrite	0.939	4.150	1.9263
4	7.48	Bromide	0.195	0.809	1.9493
5	8.55	Nitrate	1.128	3.941	1.8679
6	10.23	O.Phos	0.376	0.958	1.8907
7	12.55	Sulfate	1.750	4.210	9.1773



Peak Integration Report

Sample Name:	**STD7**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 11:28**	*Run Time:*	**20.00**

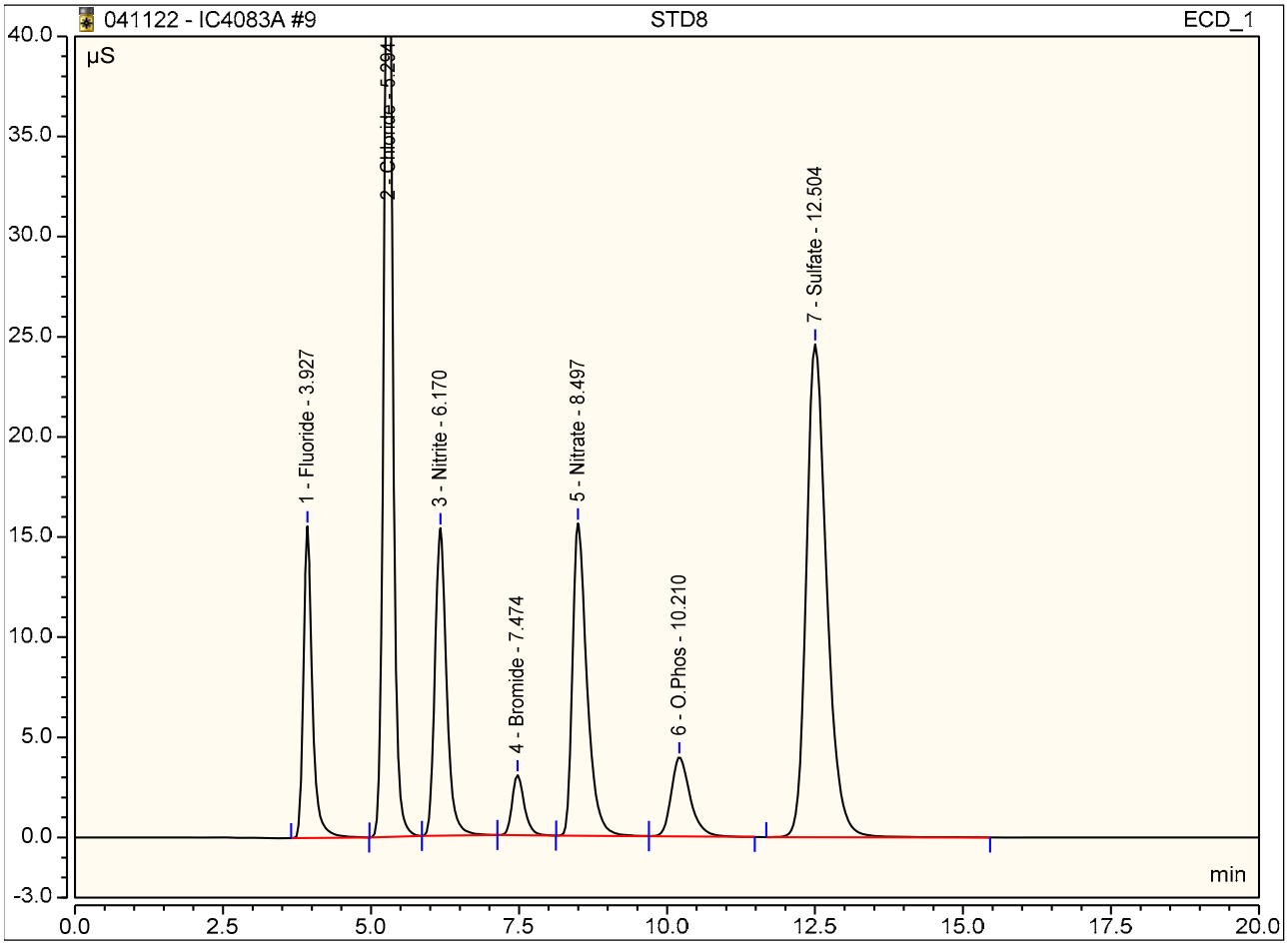
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.92	Fluoride	1.905	10.877	5.0536
2	5.28	Chloride	5.815	35.327	19.5301
3	6.17	Nitrite	2.471	10.869	5.0264
4	7.48	Bromide	0.503	2.102	5.0156
5	8.52	Nitrate	3.041	10.716	4.9121
6	10.22	O.Phos	1.011	2.665	5.0567
7	12.53	Sulfate	5.712	14.162	28.7813



Peak Integration Report

Sample Name:	**STD8**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 11:48**	*Run Time:*	**20.00**

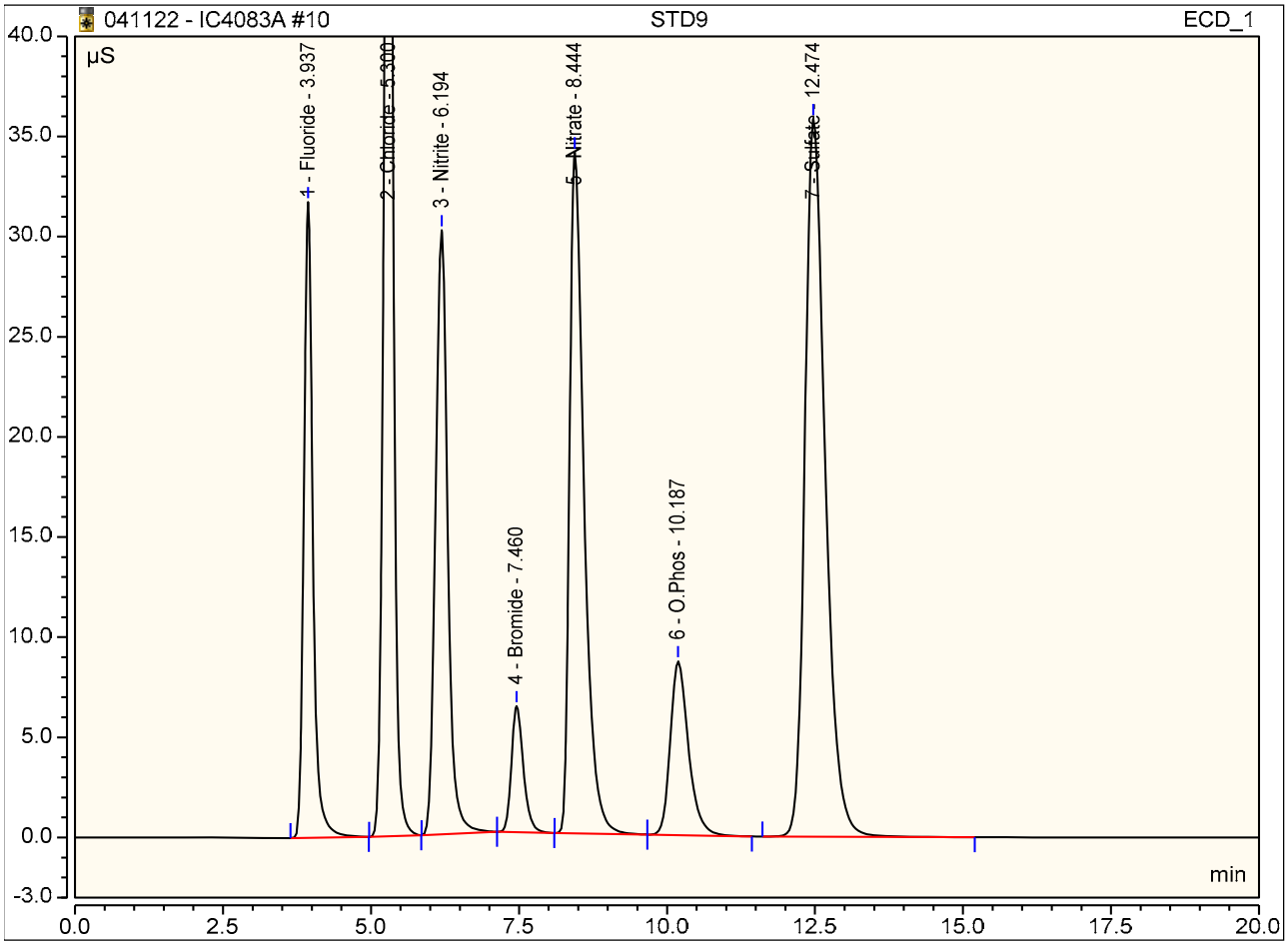
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.93	Fluoride	2.717	15.561	7.1878
2	5.29	Chloride	8.896	53.860	29.6784
3	6.17	Nitrite	3.517	15.355	7.1440
4	7.47	Bromide	0.714	2.995	7.1136
5	8.50	Nitrate	4.415	15.589	7.0971
6	10.21	O.Phos	1.465	3.953	7.3214
7	12.50	Sulfate	9.838	24.609	49.1936



Peak Integration Report

Sample Name:	**STD9**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 12:08**	*Run Time:*	**20.00**

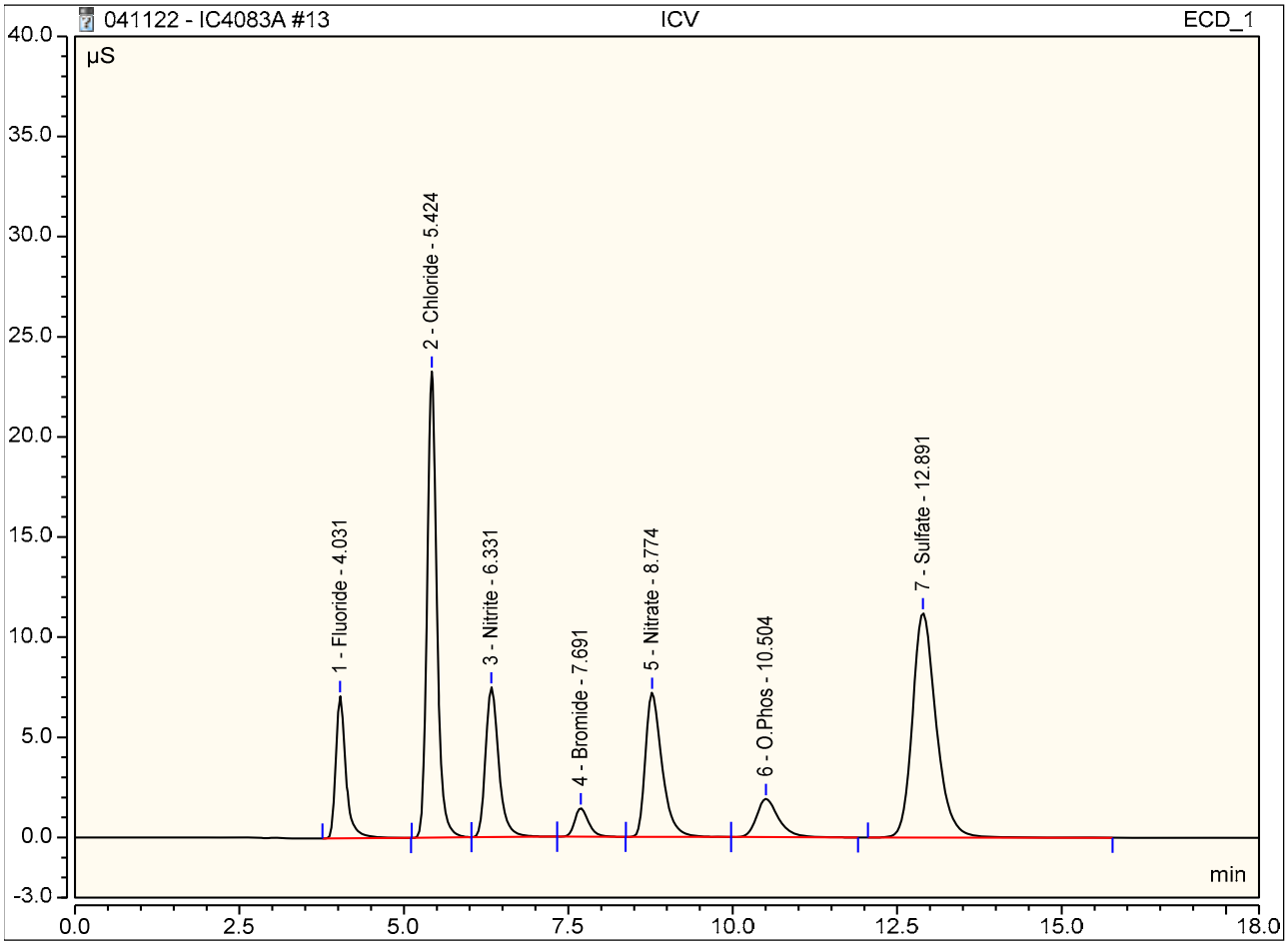
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.94	Fluoride	5.599	31.745	14.7622
2	5.30	Chloride	12.273	73.119	40.8007
3	6.19	Nitrite	7.180	30.163	14.5558
4	7.46	Bromide	1.474	6.295	14.6885
5	8.44	Nitrate	9.649	34.001	15.4239
6	10.19	O.Phos	3.093	8.686	15.4418
7	12.47	Sulfate	14.290	35.833	71.2153



Peak Integration Report

Sample Name:	**ICV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 13:30**	*Run Time:*	**18.00**

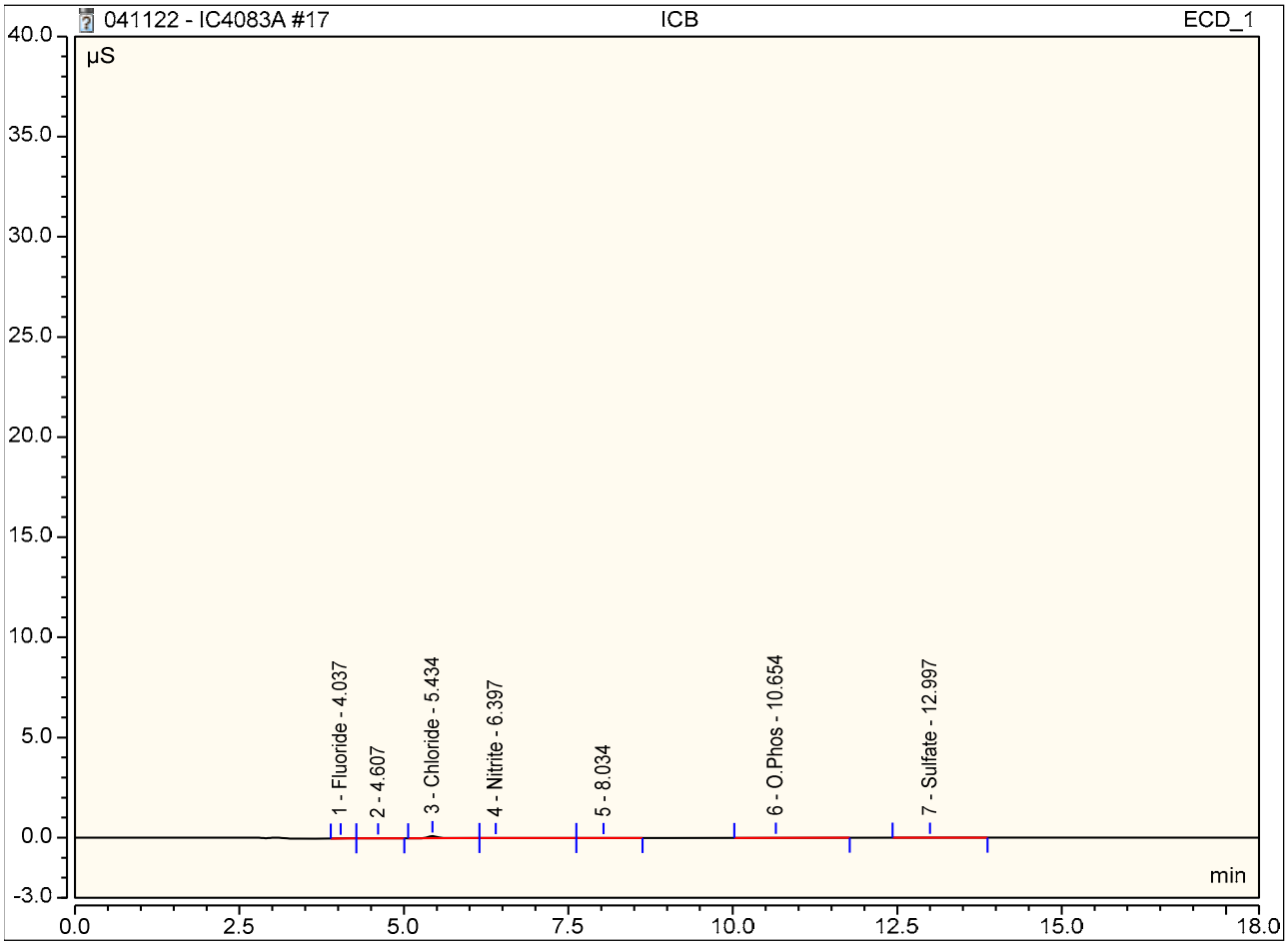
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	1.272	7.107	3.3920
2	5.42	Chloride	3.988	23.280	13.5114
3	6.33	Nitrite	1.743	7.475	3.5533
4	7.69	Bromide	0.353	1.423	3.5169
5	8.77	Nitrate	2.118	7.203	3.4426
6	10.50	O.Phos	0.743	1.906	3.7220
7	12.89	Sulfate	4.690	11.208	23.7252



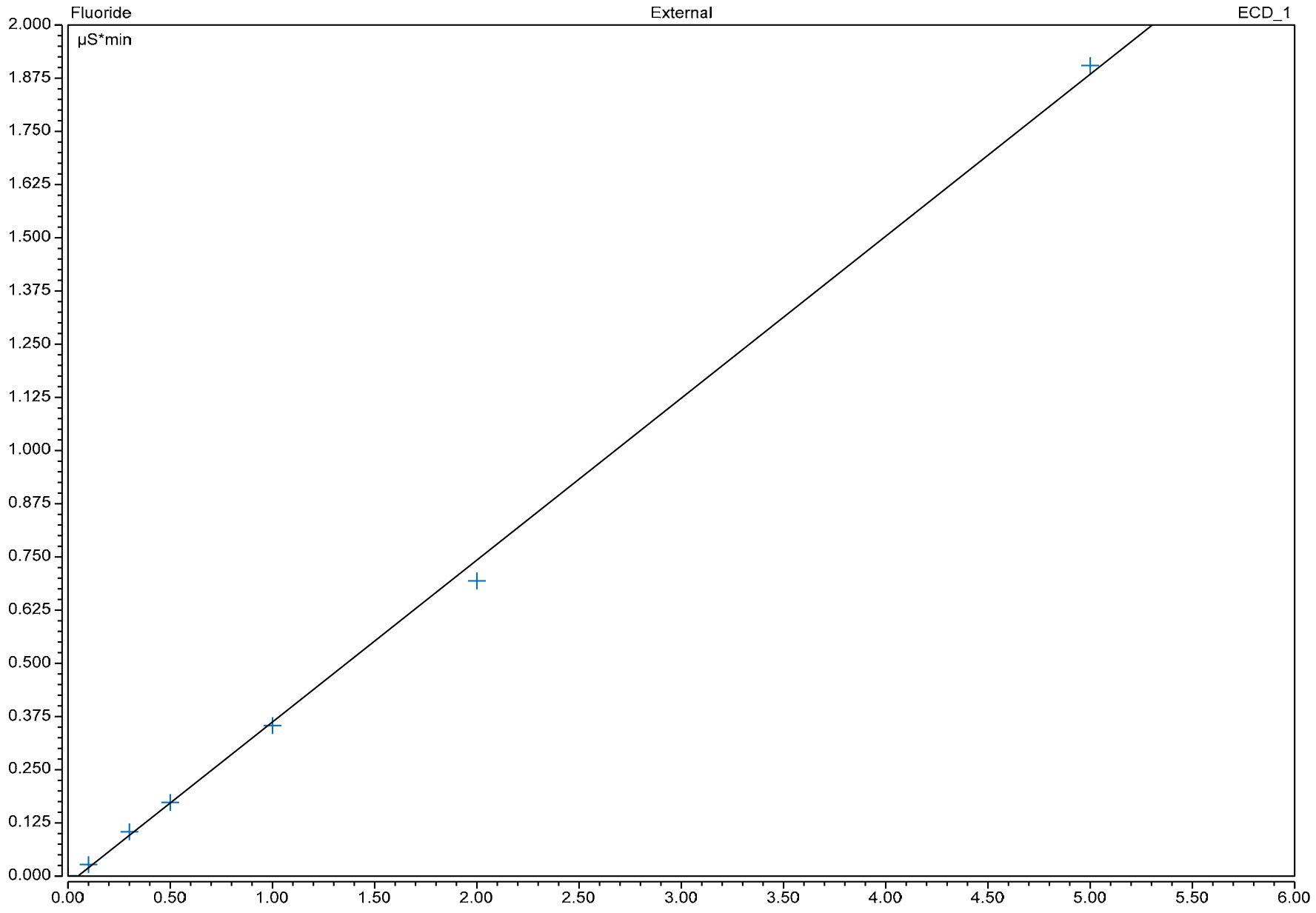
Peak Integration Report

Sample Name:	**ICB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**aquion**
Inj. Date / Time:	**11-Apr-2022 / 14:34**	*Run Time:*	**18.00**

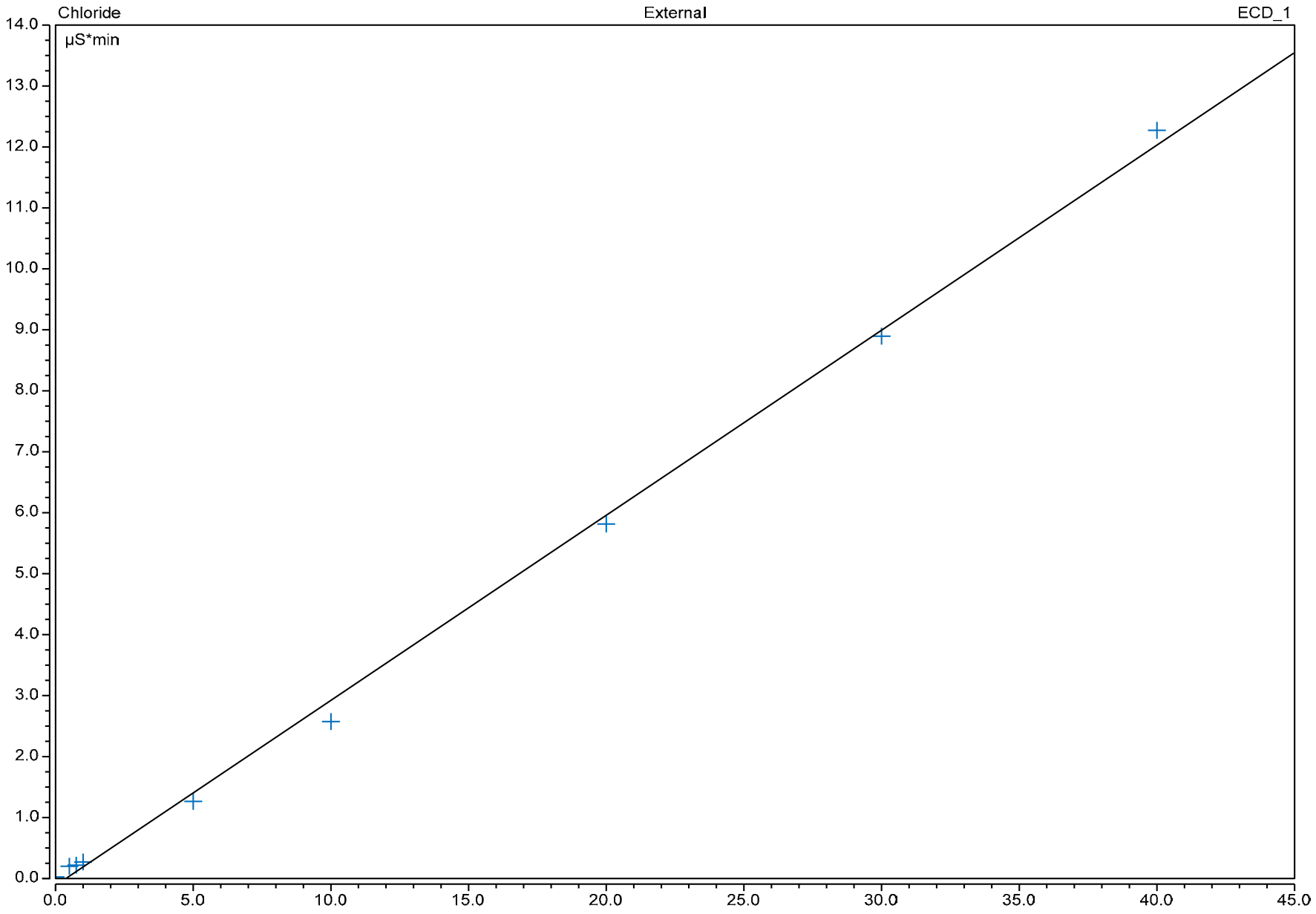
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	0.001	0.004	0.0503
3	5.43	Chloride	0.020	0.102	0.4397
4	6.40	Nitrite	0.001	0.001	0.0280
6	10.65	O.Phos	0.005	0.009	0.0420
7	13.00	Sulfate	0.003	0.006	0.5356



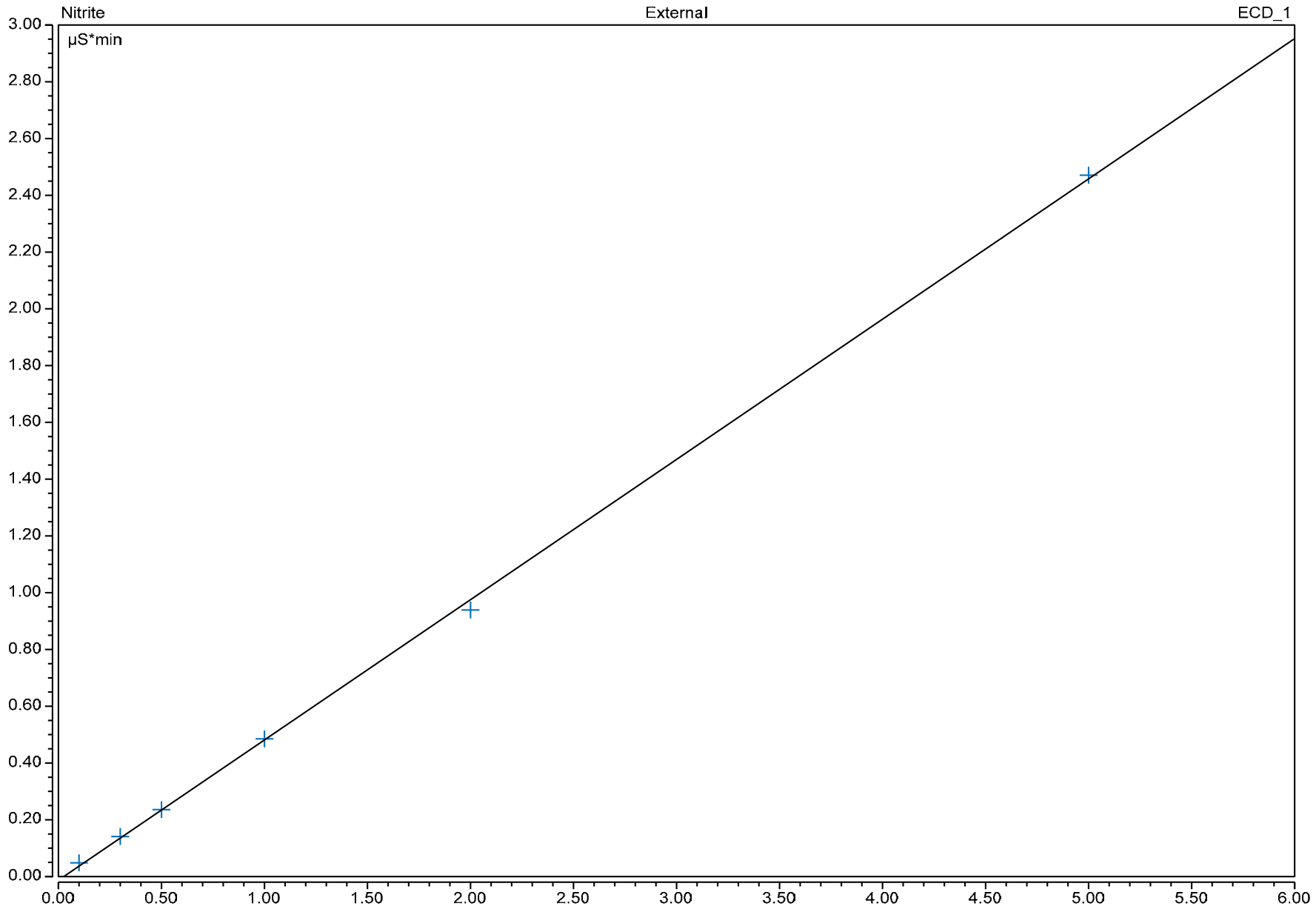
Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	Fluoride	Lin, WithOffset	Area	7	5.5819	0.99878	-0.0185	0.3805	0.0000
2	Chloride	Lin, WithOffset	Area	9	5.8328	0.99819	-0.1136	0.3036	0.0000
3	Nitrite	Lin, WithOffset	Area	6	2.8537	0.99960	-0.0129	0.4941	0.0000
4	Bromide	Lin, WithOffset	Area	6	1.9626	0.99980	-0.0005	0.1004	0.0000
5	Nitrate	Lin, WithOffset	Area	7	4.1303	0.99905	-0.0463	0.6286	0.0000
6	O.Phos	Lin, WithOffset	Area	7	5.9443	0.99854	-0.0032	0.2005	0.0000
7	*Sulfate*	*Lin, WithOffset*	*Area*	*9*	*4.7518*	*0.99903*	*-0.1055*	*0.2021*	*0.0000*
Maximum					**5.9443**	0.99980			
Minimum					1.9626	**0.99819**			


Fluoride
External
ECD_1
µS*min
2.000
1.875
1.750
1.625
1.500
1.375
1.250
1.125
1.000
0.875
0.750
0.625
0.500
0.375
0.250
0.125
0.000
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00

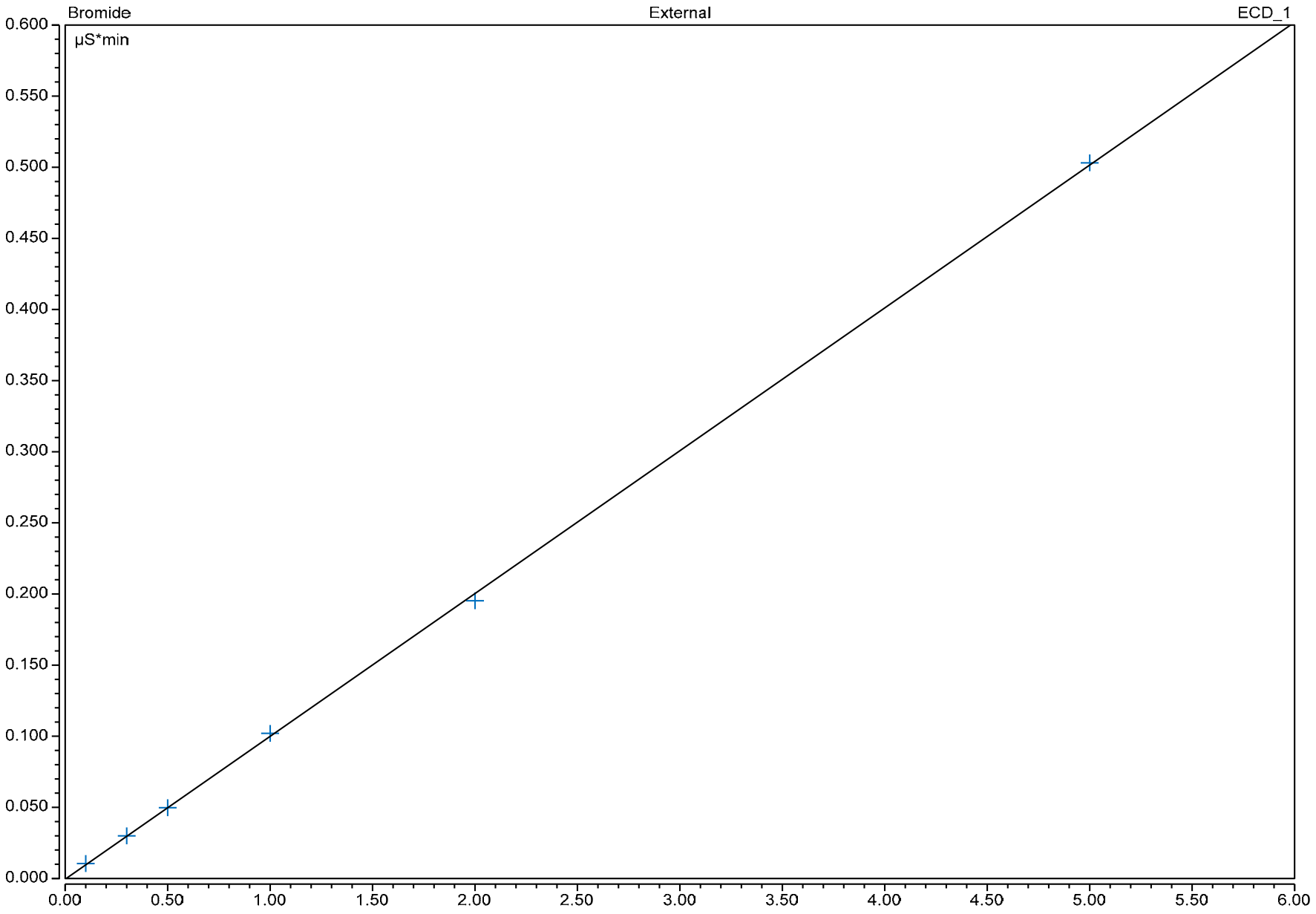
RJ 05/05/2022


Chloride
External
ECD_1
µS*min
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0

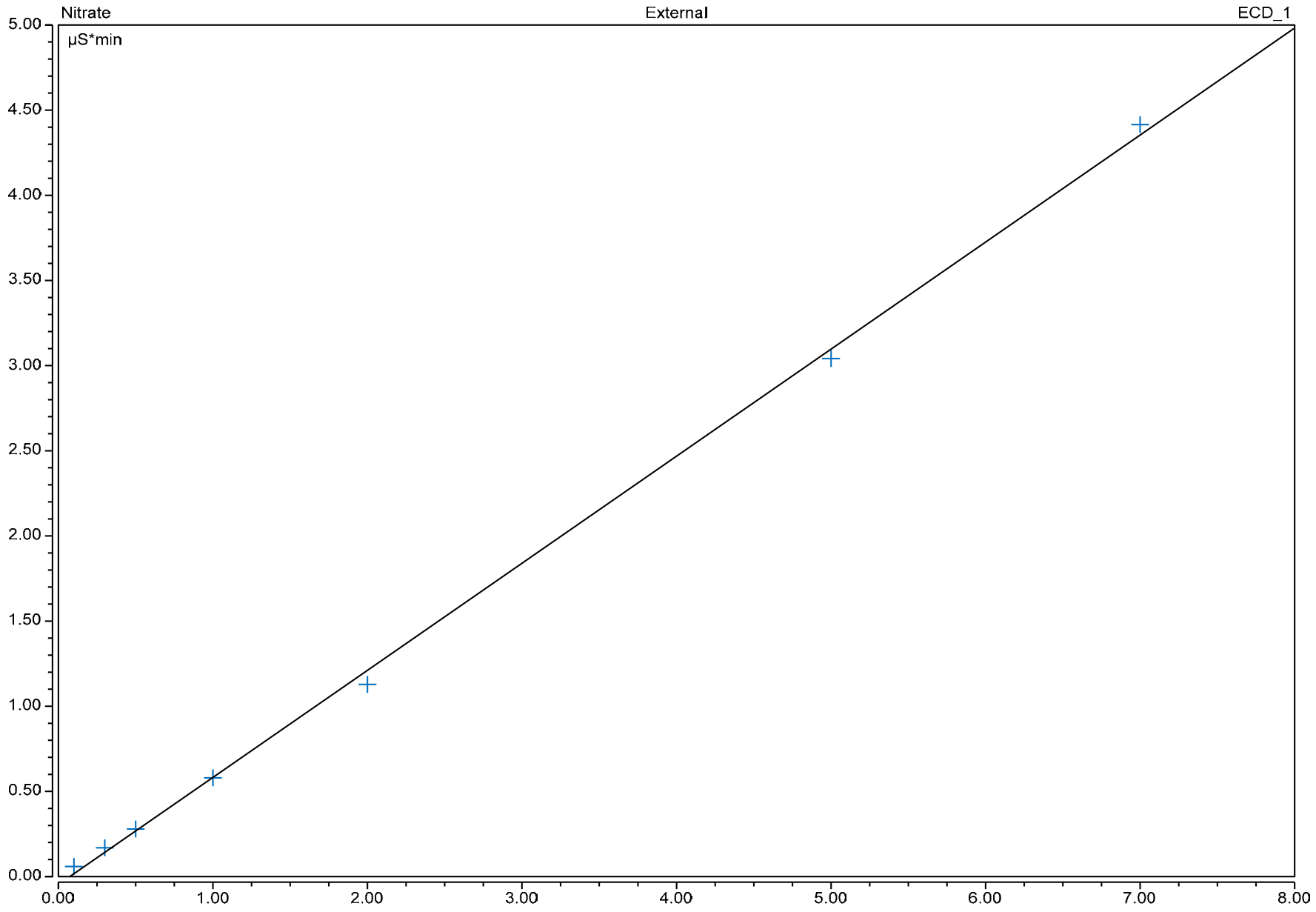
RJ 05/05/2022


Nitrite
External
ECD_1
µS*min
3.00
2.80
2.60
2.40
2.20
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00

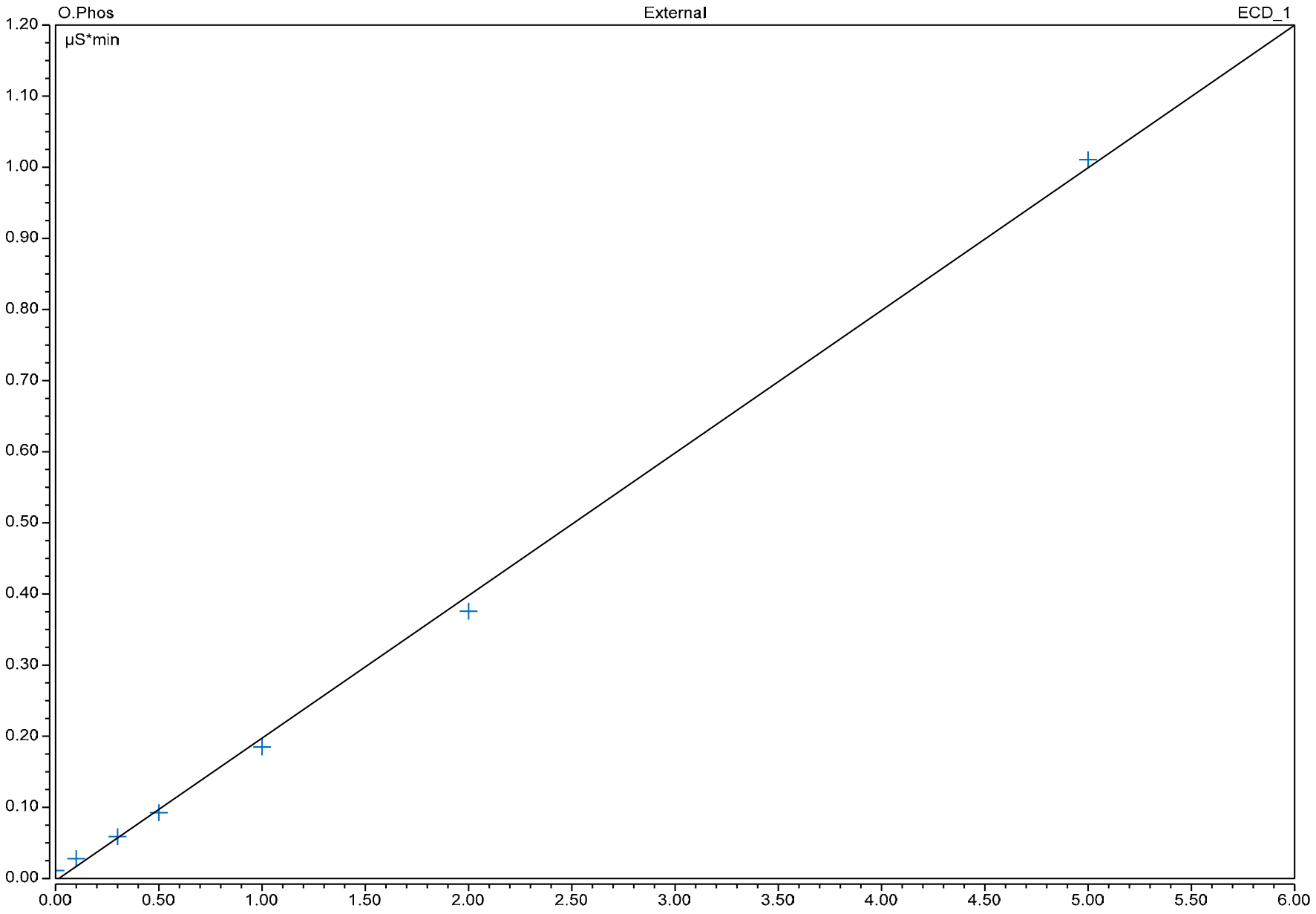
RJ 05/05/2022


Bromide
External
ECD_1
µS*min
0.600
0.550
0.500
0.450
0.400
0.350
0.300
0.250
0.200
0.150
0.100
0.050
0.000
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00

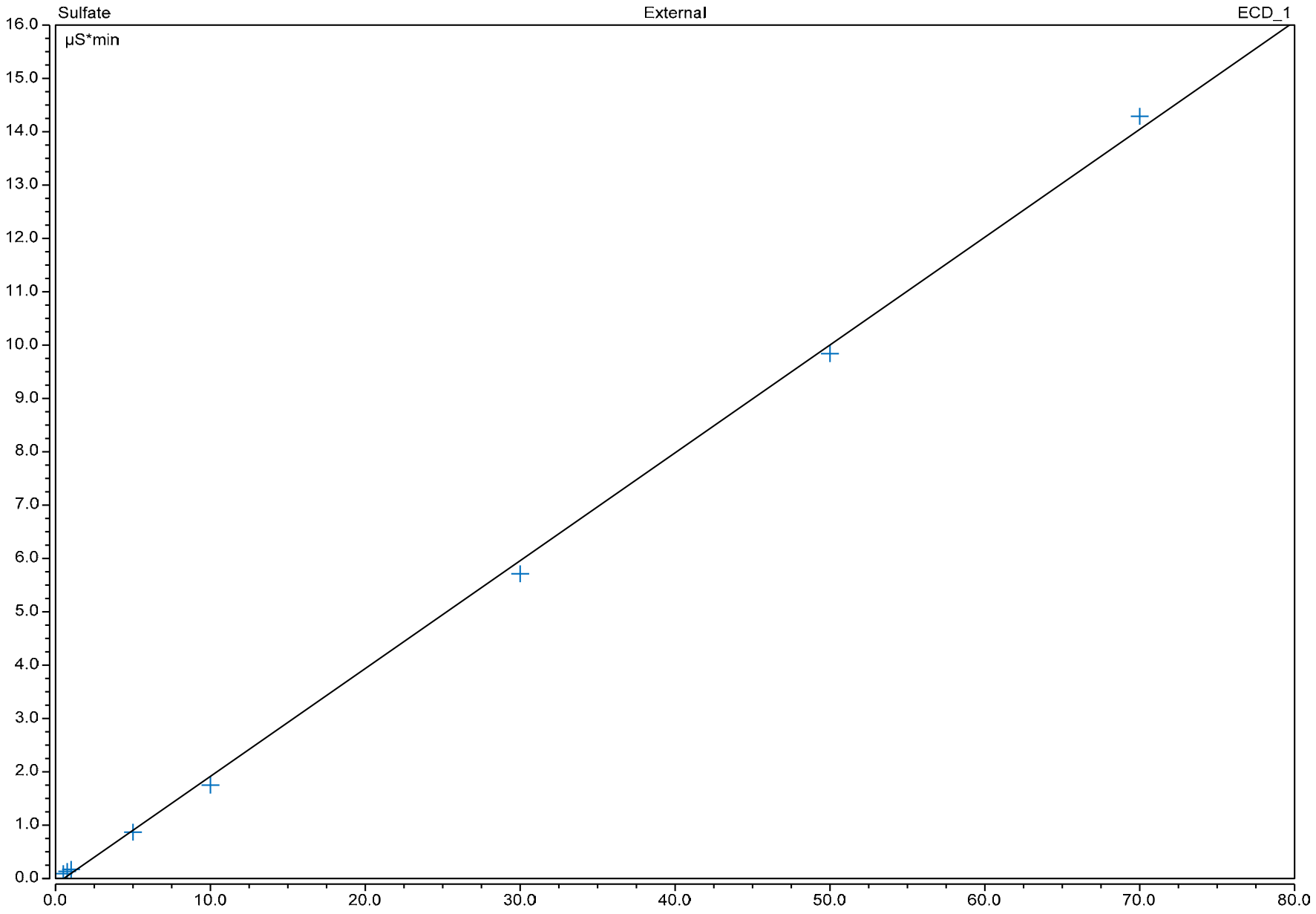
RJ 05/05/2022


Nitrate
External
ECD_1
µS*min
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00

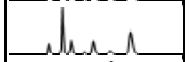
RJ 05/05/2022

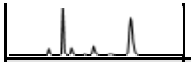
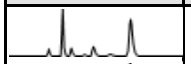
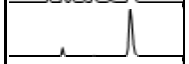
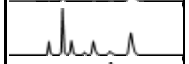
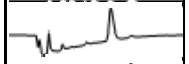
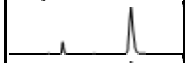
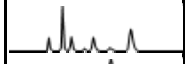
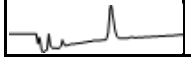

O.Phos
External
ECD_1
µS*min
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00

RJ 05/05/2022


Sulfate
External
ECD_1
µS*min
16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0

RJ 05/05/2022

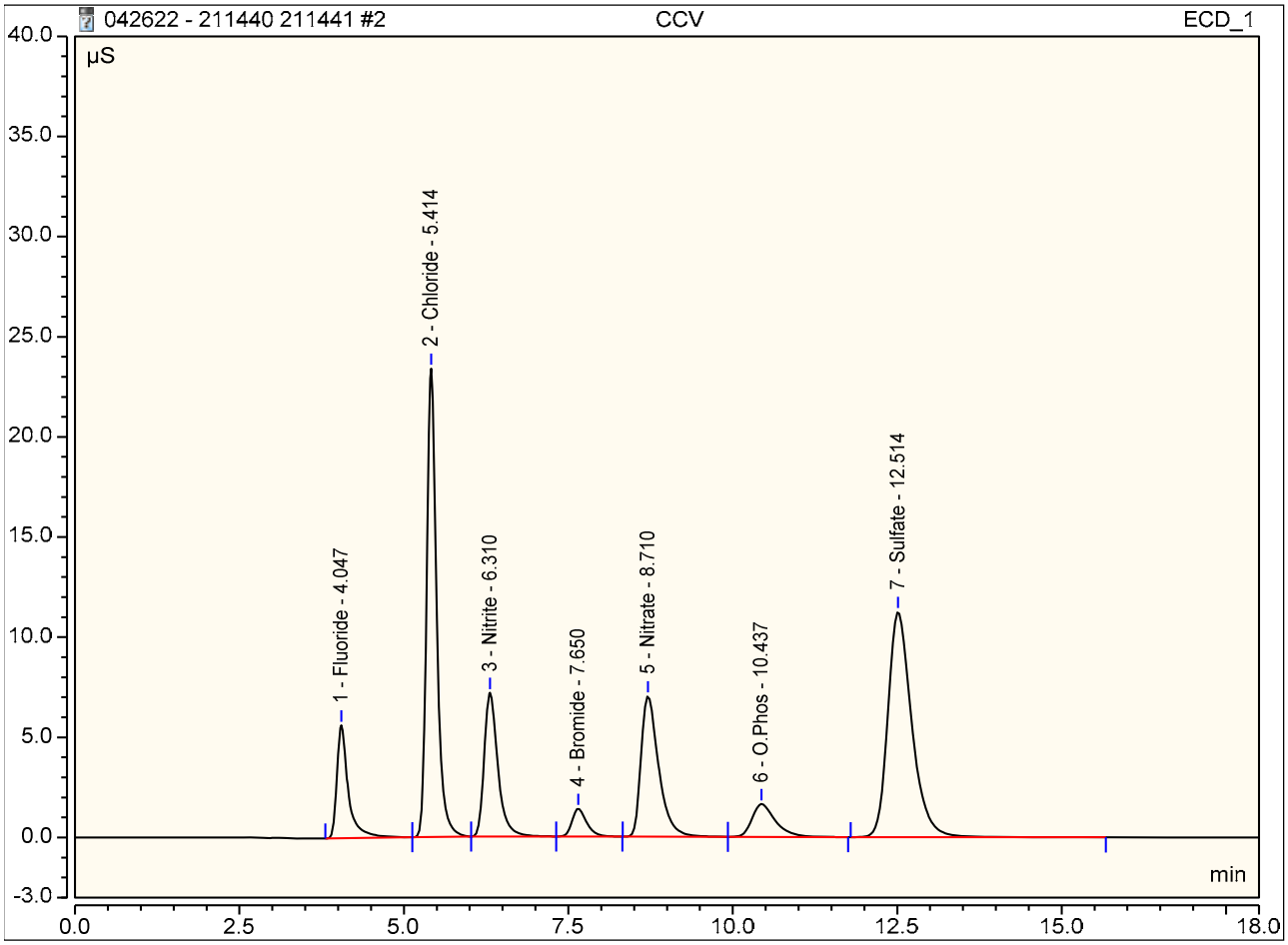
ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		2	5000	Anions	IC4083A	Finished
	LCSW	1.0000	Unknown		3	5000	Anions	IC4083A	Finished
	MBW	1.0000	Unknown		4	5000	Anions	IC4083A	Finished
	CCV	1.0000	Unknown		15	5000	Anions	IC4083A	Finished
	CCB	1.0000	Unknown		16	5000	Anions	IC4083A	Finished
	1134804	1.0000	Unknown		21	5000	Anions	IC4083A	Finished
	DUP1134804	1.0000	Unknown		22	5000	Anions	IC4083A	Finished

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	MSW1134804	1.0000	Unknown		23	5000	Anions	IC4083A	Finished
	MSDW1134804	1.0000	Unknown		24	5000	Anions	IC4083A	Finished
	1134805	1.0000	Unknown		25	5000	Anions	IC4083A	Finished
	1134805X5	1.0000	Unknown		26	5000	Anions	IC4083A	Finished
	CCV	1.0000	Unknown		27	5000	Anions	IC4083A	Finished
	CCB	1.0000	Unknown		28	5000	Anions	IC4083A	Finished
									
									
									

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 12:11**	*Run Time:*	**18.00**

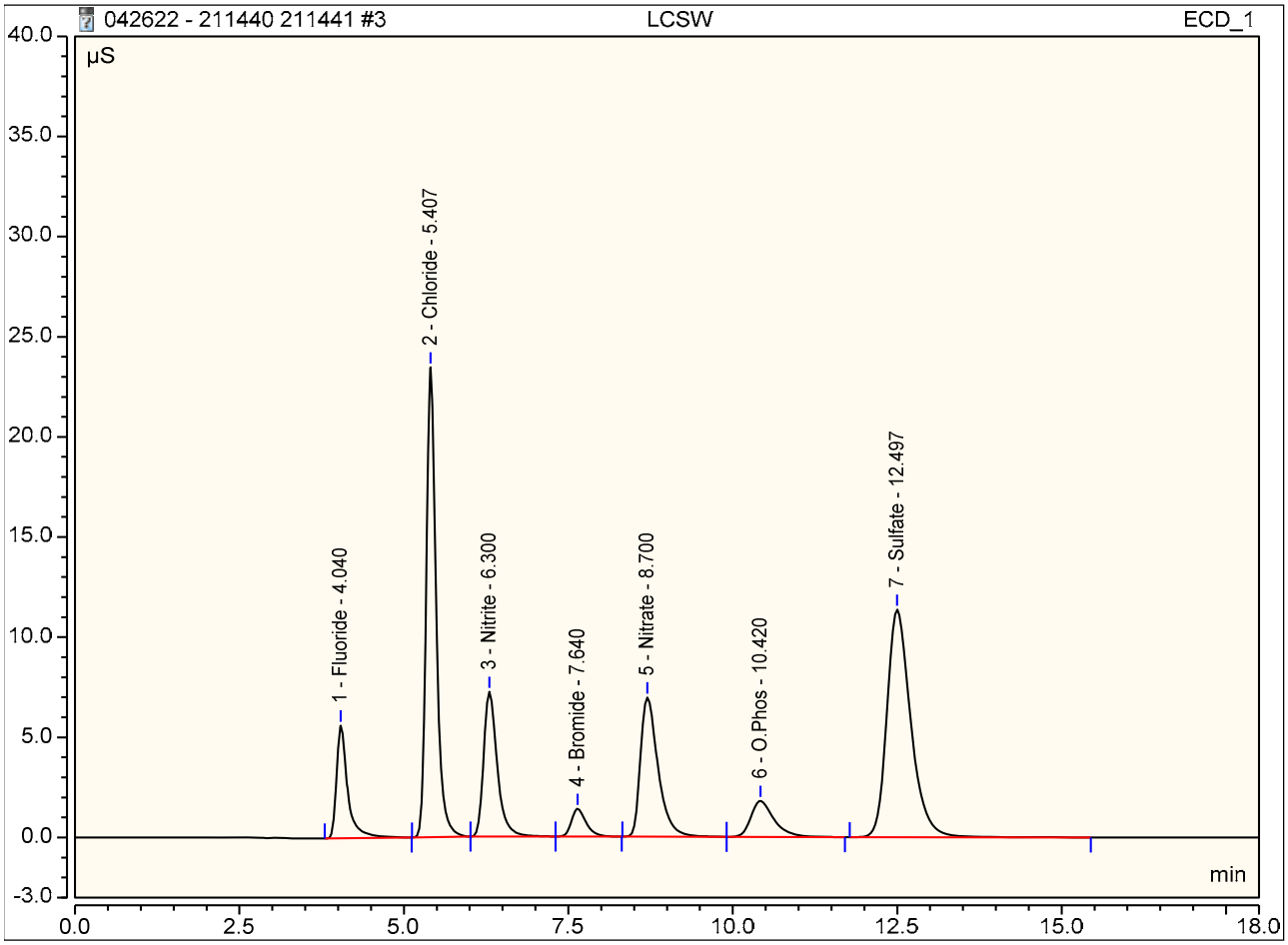
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.05	Fluoride	1.140	5.631	3.0456
2	5.41	Chloride	4.099	23.392	13.8757
3	6.31	Nitrite	1.735	7.174	3.5365
4	7.65	Bromide	0.360	1.388	3.5925
5	8.71	Nitrate	2.183	7.018	3.5462
6	10.44	O.Phos	0.679	1.638	3.4002
7	12.51	Sulfate	4.745	11.257	23.9956



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 12:29**	*Run Time:*	**18.00**

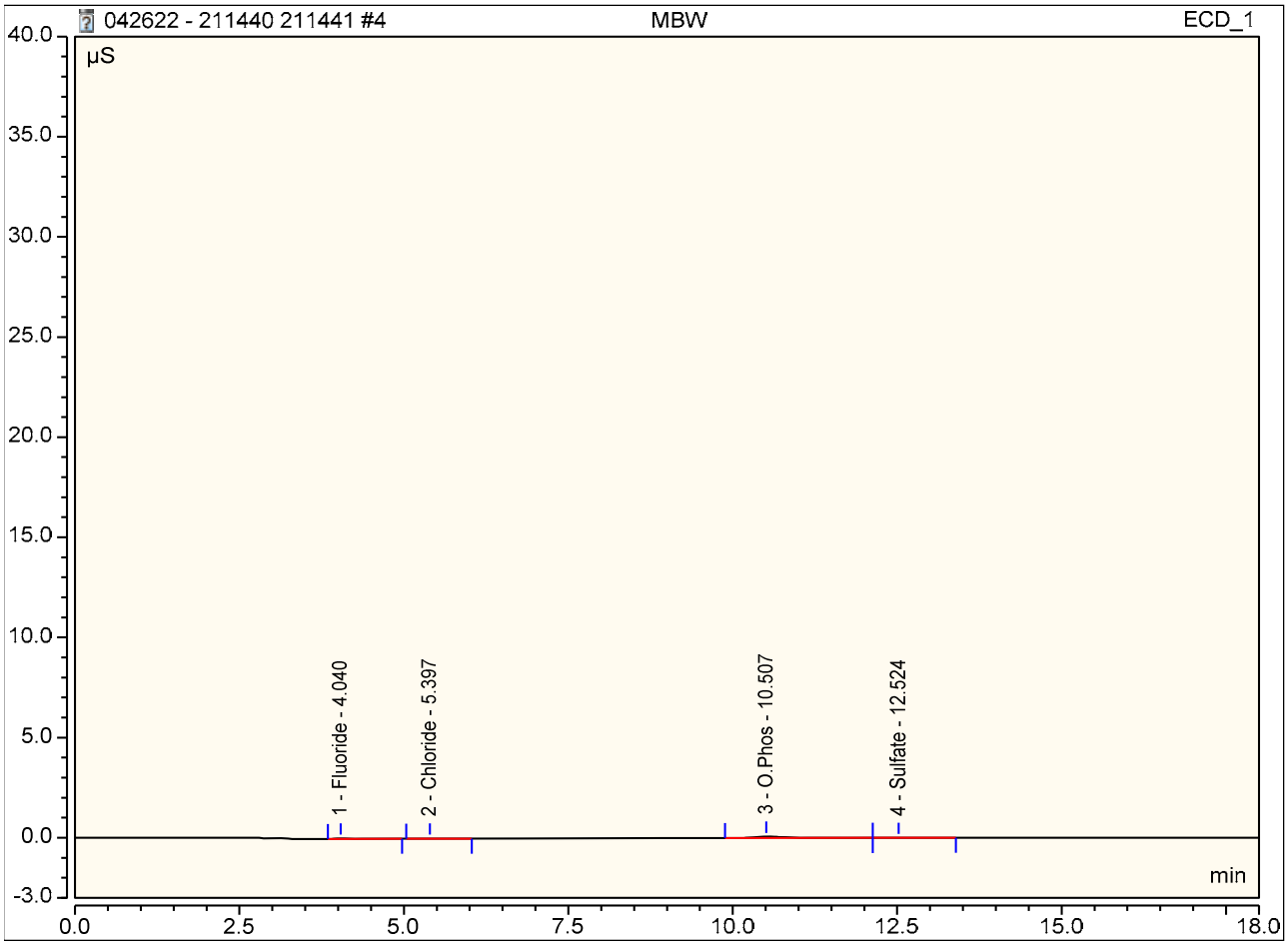
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	1.111	5.633	2.9670
2	5.41	Chloride	4.090	23.464	13.8457
3	6.30	Nitrite	1.739	7.234	3.5458
4	7.64	Bromide	0.359	1.388	3.5781
5	8.70	Nitrate	2.158	6.955	3.5074
6	10.42	O.Phos	0.732	1.800	3.6656
7	12.50	Sulfate	4.786	11.362	24.2013



Peak Integration Report

Sample Name:	**MBW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 12:47**	*Run Time:*	**18.00**

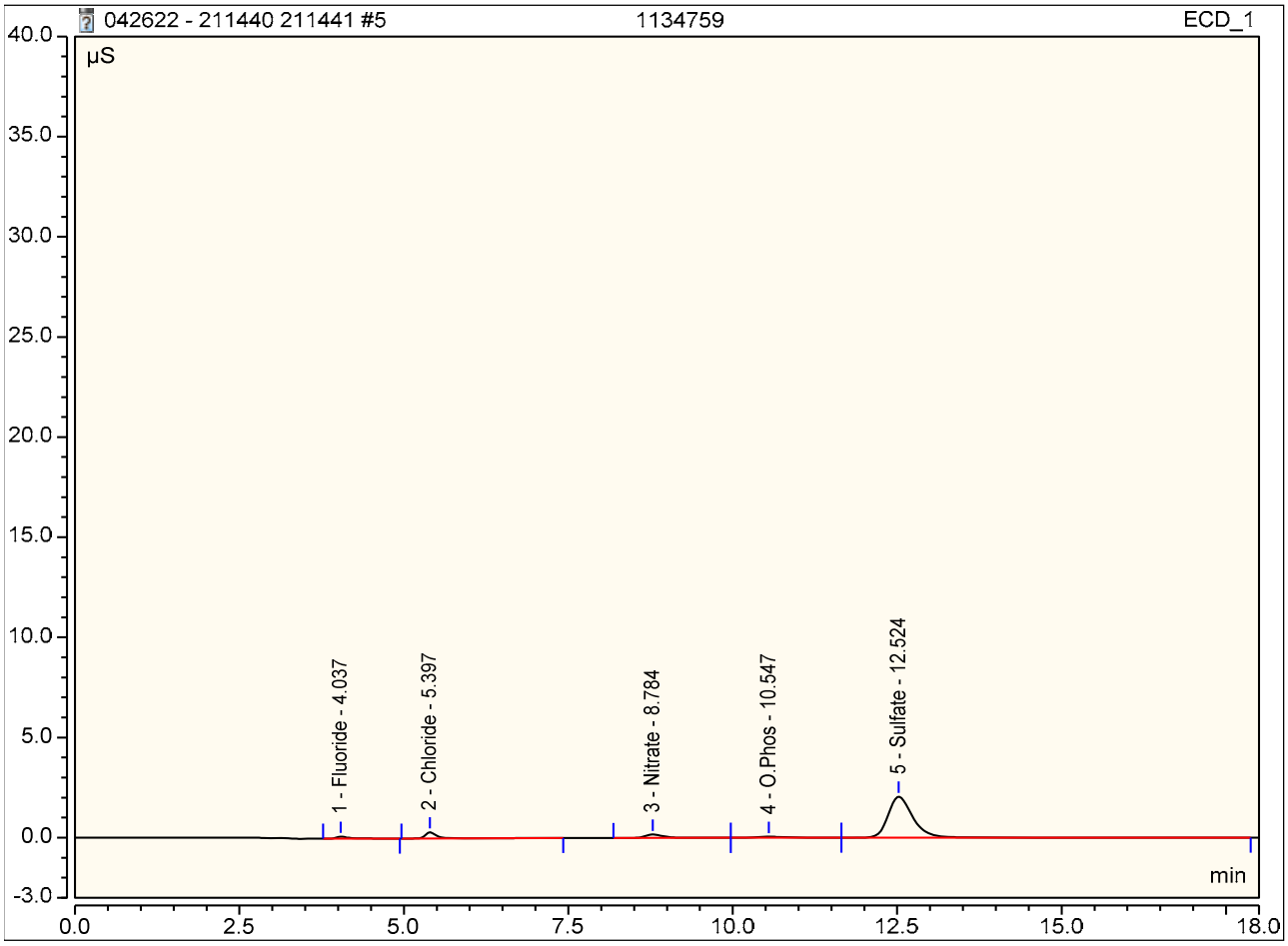
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	0.008	0.028	0.0706
2	5.40	Chloride	0.005	0.021	0.3897
3	10.51	O.Phos	0.040	0.072	0.2180
4	12.52	Sulfate	0.002	0.004	0.5311



Peak Integration Report

Sample Name:	**1134759**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 13:06**	*Run Time:*	**18.00**

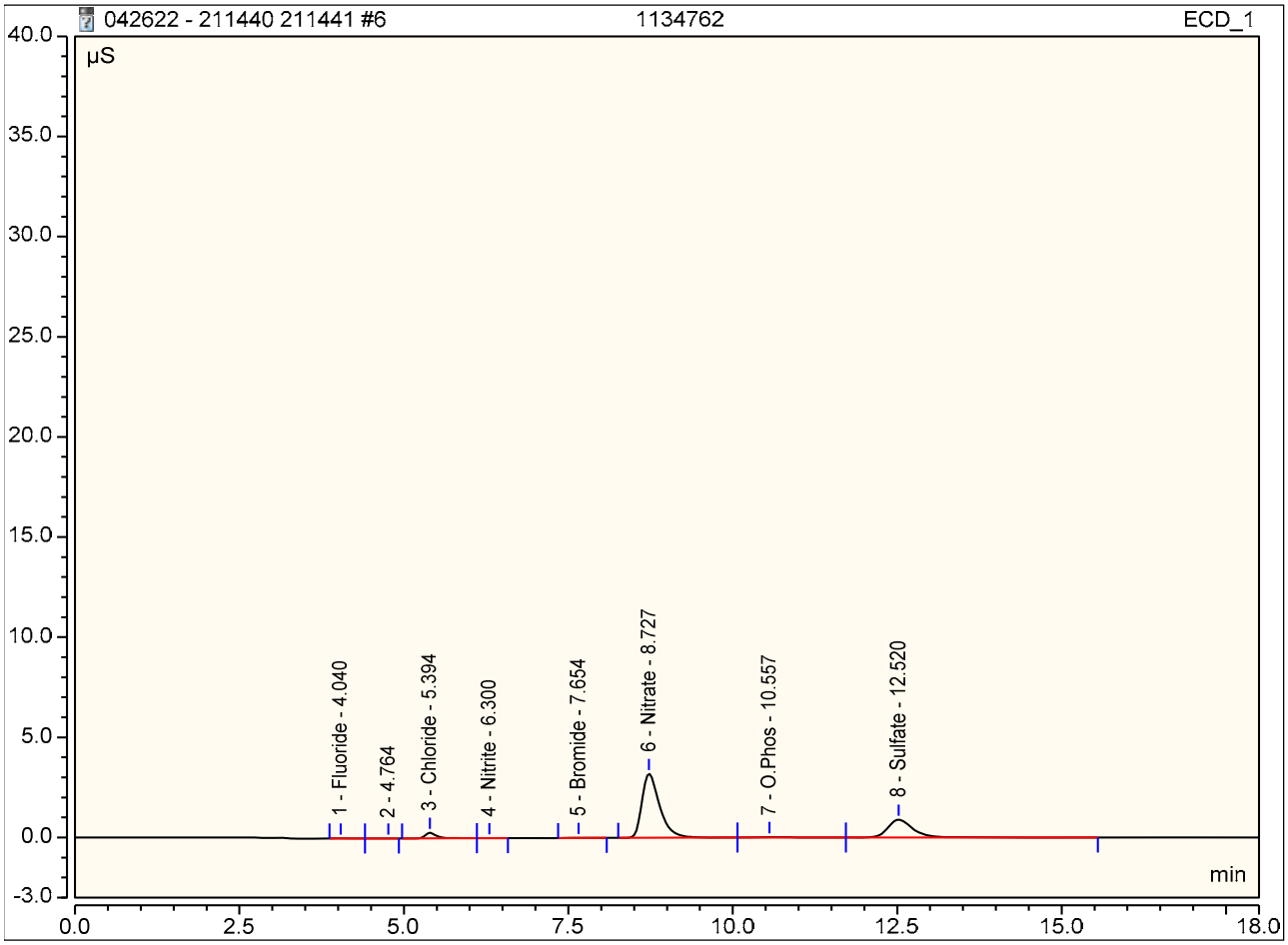
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	0.025	0.104	0.1153
2	5.40	Chloride	0.067	0.309	0.5932
3	8.78	Nitrate	0.053	0.166	0.1572
4	10.55	O.Phos	0.027	0.049	0.1528
5	12.52	Sulfate	0.910	2.053	5.0230



Peak Integration Report

Sample Name:	**1134762**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 13:24**	*Run Time:*	**18.00**

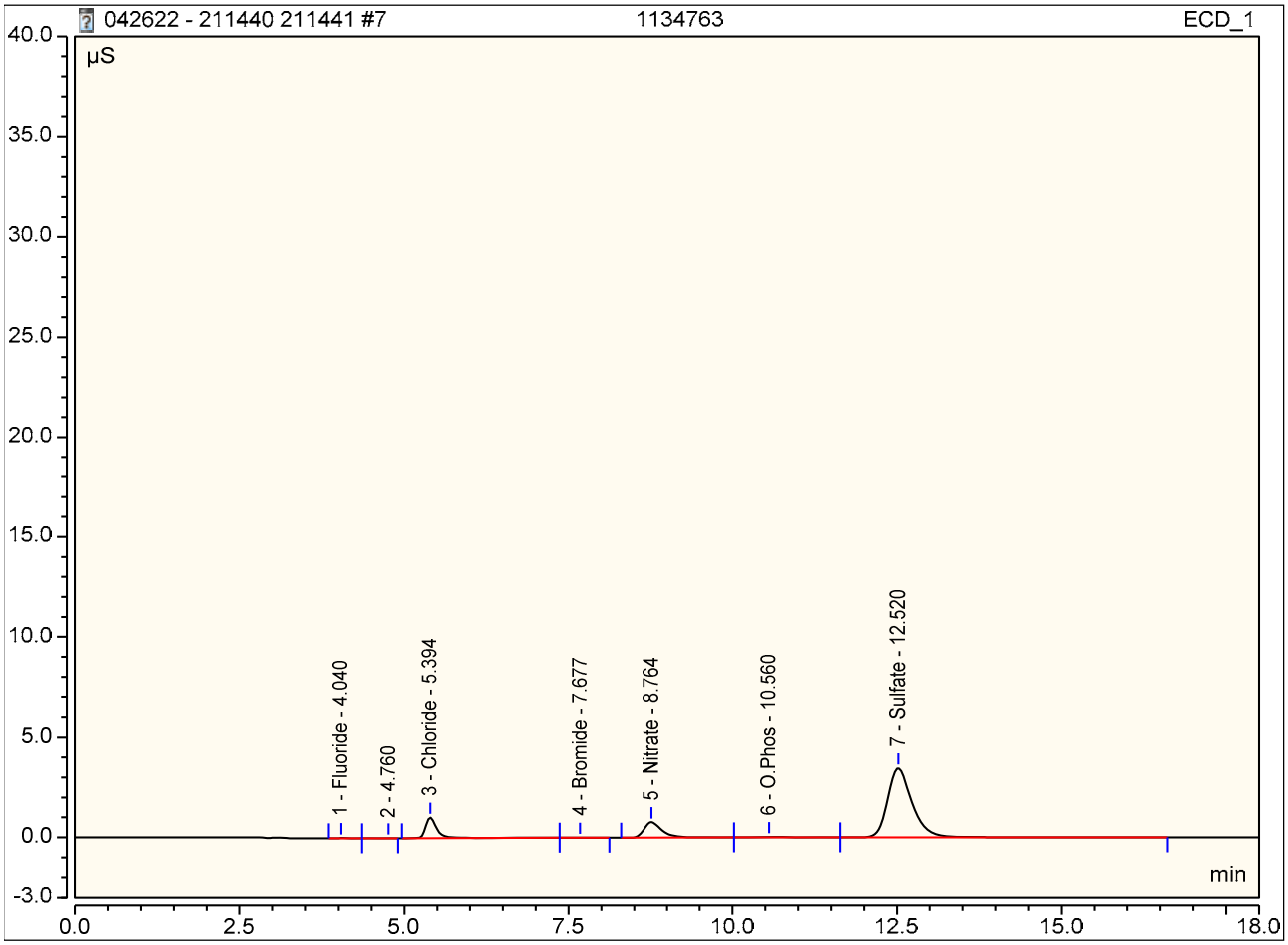
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	0.002	0.010	0.0540
3	5.39	Chloride	0.055	0.279	0.5543
4	6.30	Nitrite	0.000	0.002	0.0272
5	7.65	Bromide	0.001	0.004	0.0145
6	8.73	Nitrate	1.000	3.198	1.6643
7	10.56	O.Phos	0.015	0.028	0.0918
8	12.52	Sulfate	0.398	0.893	2.4921



Peak Integration Report

Sample Name:	**1134763**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 13:42**	*Run Time:*	**18.00**

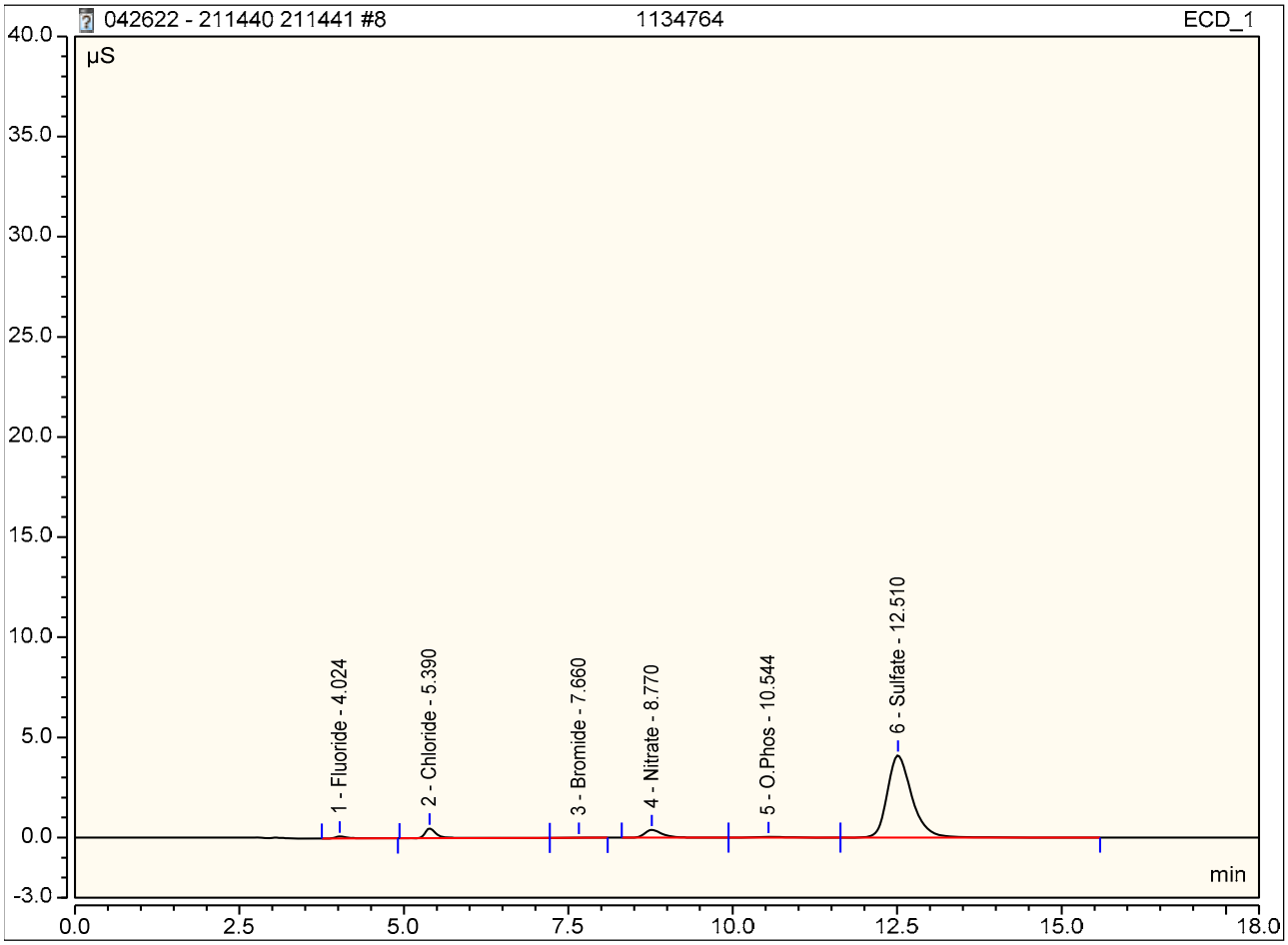
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	0.001	0.008	0.0523
3	5.39	Chloride	0.205	1.030	1.0477
4	7.68	Bromide	0.001	0.003	0.0123
5	8.76	Nitrate	0.243	0.773	0.4599
6	10.56	O.Phos	0.012	0.022	0.0758
7	12.52	Sulfate	1.513	3.472	8.0066



Peak Integration Report

Sample Name:	**1134764**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 14:00**	*Run Time:*	**18.00**

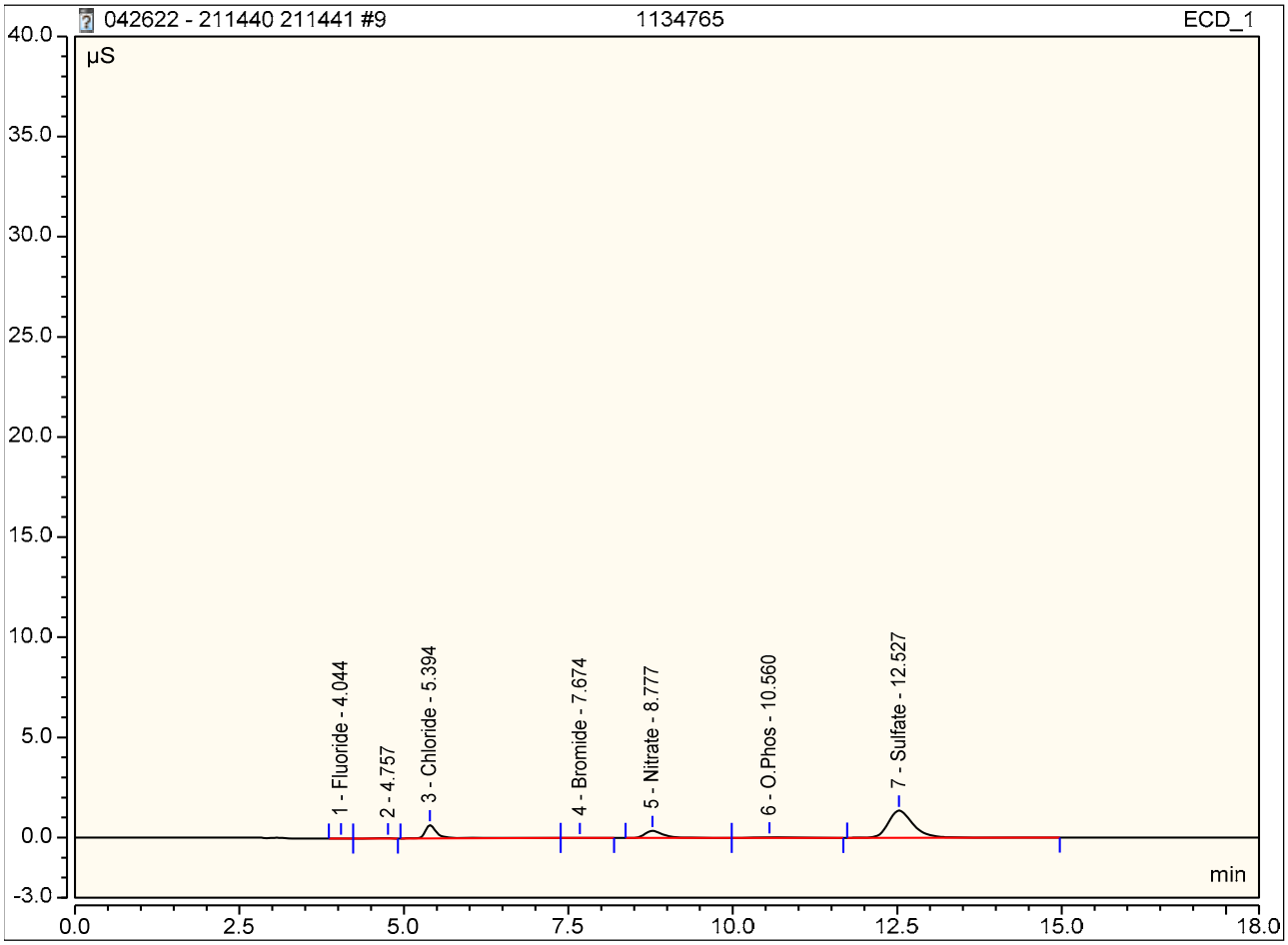
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.02	Fluoride	0.025	0.101	0.1138
2	5.39	Chloride	0.105	0.492	0.7212
3	7.66	Bromide	0.001	0.003	0.0142
4	8.77	Nitrate	0.121	0.388	0.2663
5	10.54	O.Phos	0.019	0.034	0.1108
6	12.51	Sulfate	1.770	4.102	9.2797



Peak Integration Report

Sample Name:	**1134765**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 14:18**	*Run Time:*	**18.00**

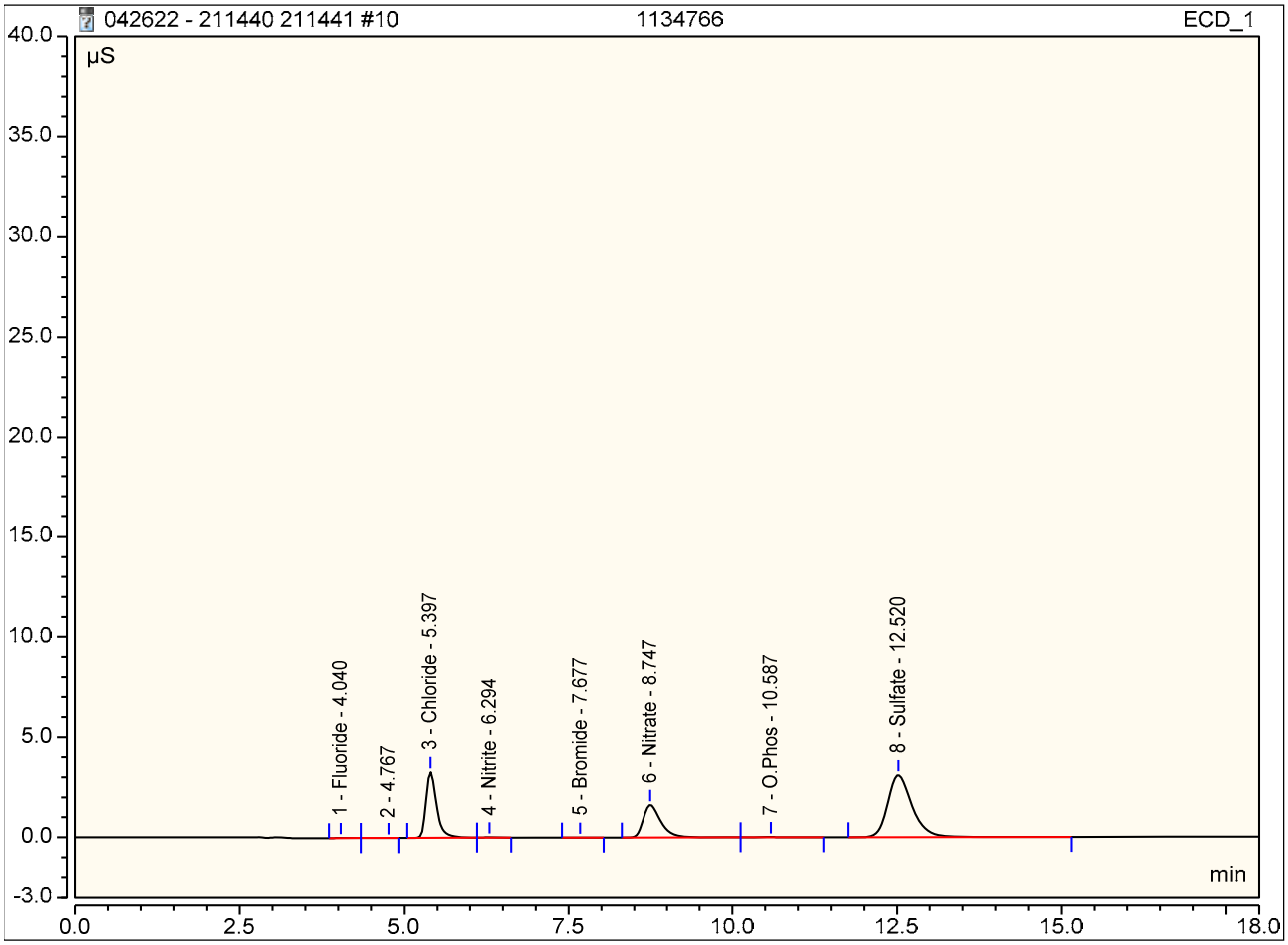
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	0.001	0.005	0.0509
3	5.39	Chloride	0.135	0.659	0.8198
4	7.67	Bromide	0.001	0.003	0.0131
5	8.78	Nitrate	0.110	0.351	0.2491
6	10.56	O.Phos	0.013	0.024	0.0819
7	12.53	Sulfate	0.592	1.357	3.4505



Peak Integration Report

Sample Name:	**1134766**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 14:36**	*Run Time:*	**18.00**

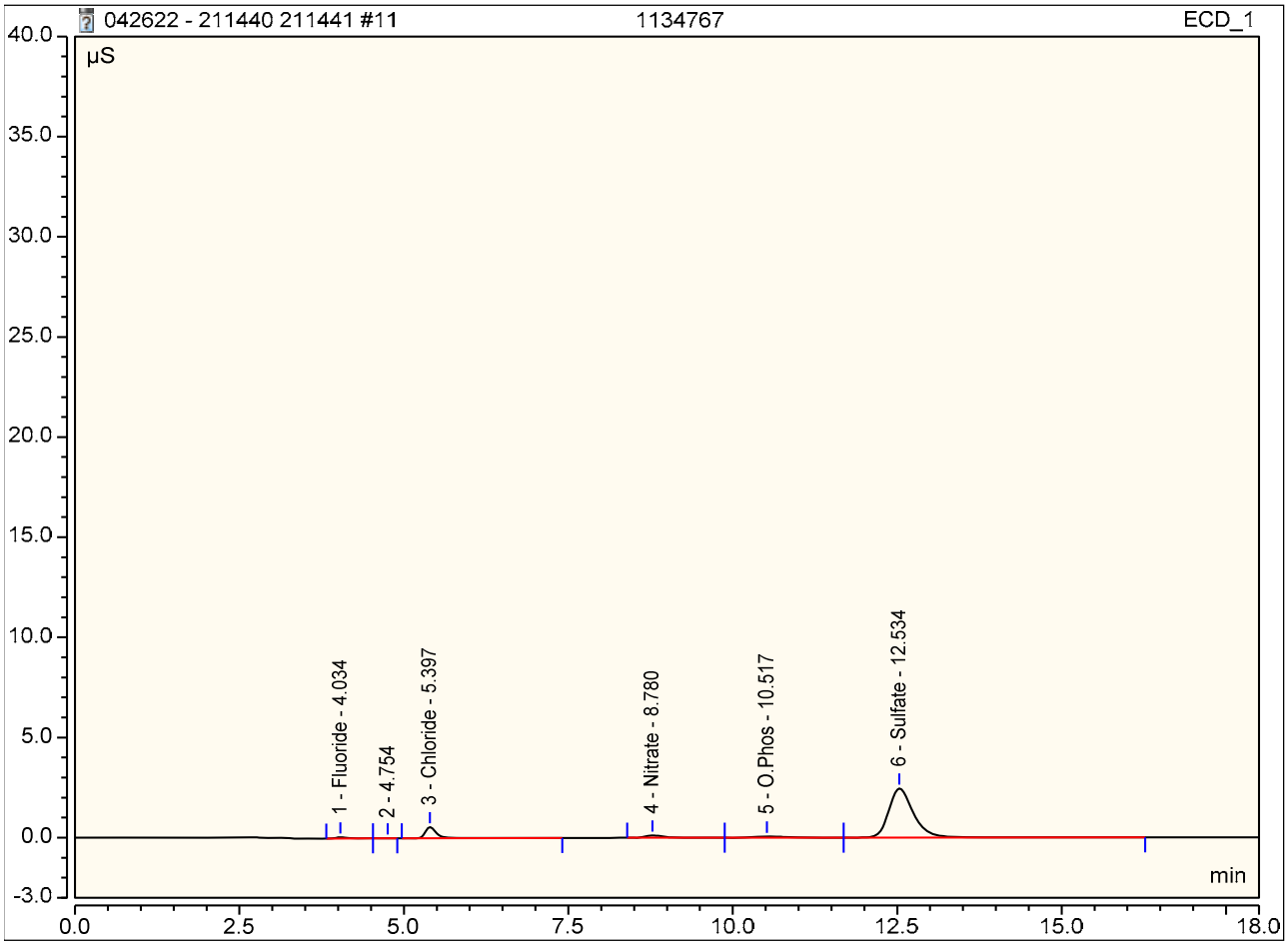
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	0.002	0.009	0.0528
3	5.40	Chloride	0.618	3.297	2.4104
4	6.29	Nitrite	0.003	0.017	0.0333
5	7.68	Bromide	0.001	0.002	0.0106
6	8.75	Nitrate	0.510	1.632	0.8852
7	10.59	O.Phos	0.007	0.014	0.0531
8	12.52	Sulfate	1.348	3.112	7.1895



Peak Integration Report

Sample Name:	**1134767**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 14:54**	*Run Time:*	**18.00**

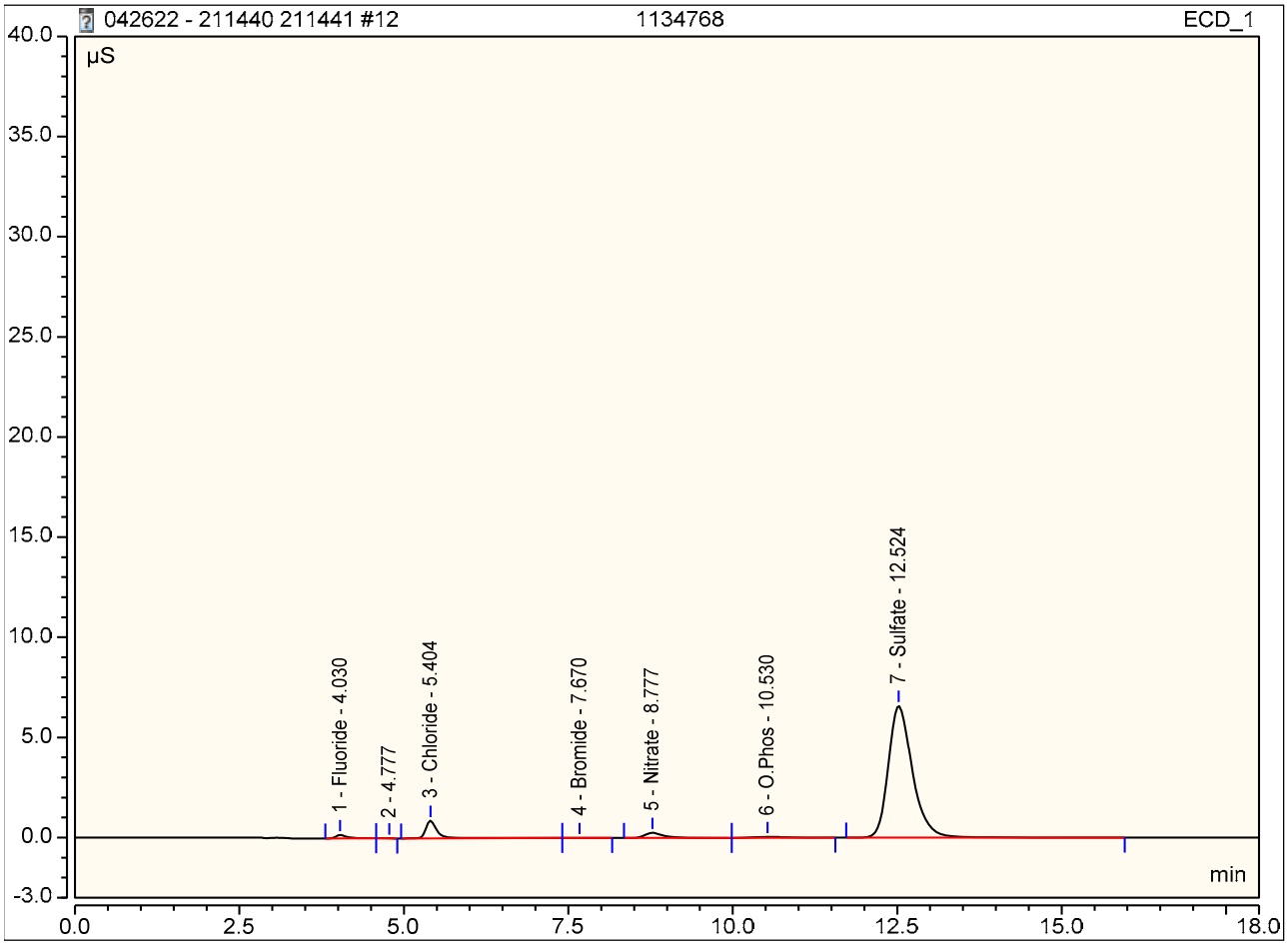
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.011	0.054	0.0763
3	5.40	Chloride	0.115	0.564	0.7542
4	8.78	Nitrate	0.037	0.118	0.1332
5	10.52	O.Phos	0.030	0.056	0.1671
6	12.53	Sulfate	1.066	2.449	5.7973



Peak Integration Report

Sample Name:	**1134768**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 15:12**	*Run Time:*	**18.00**

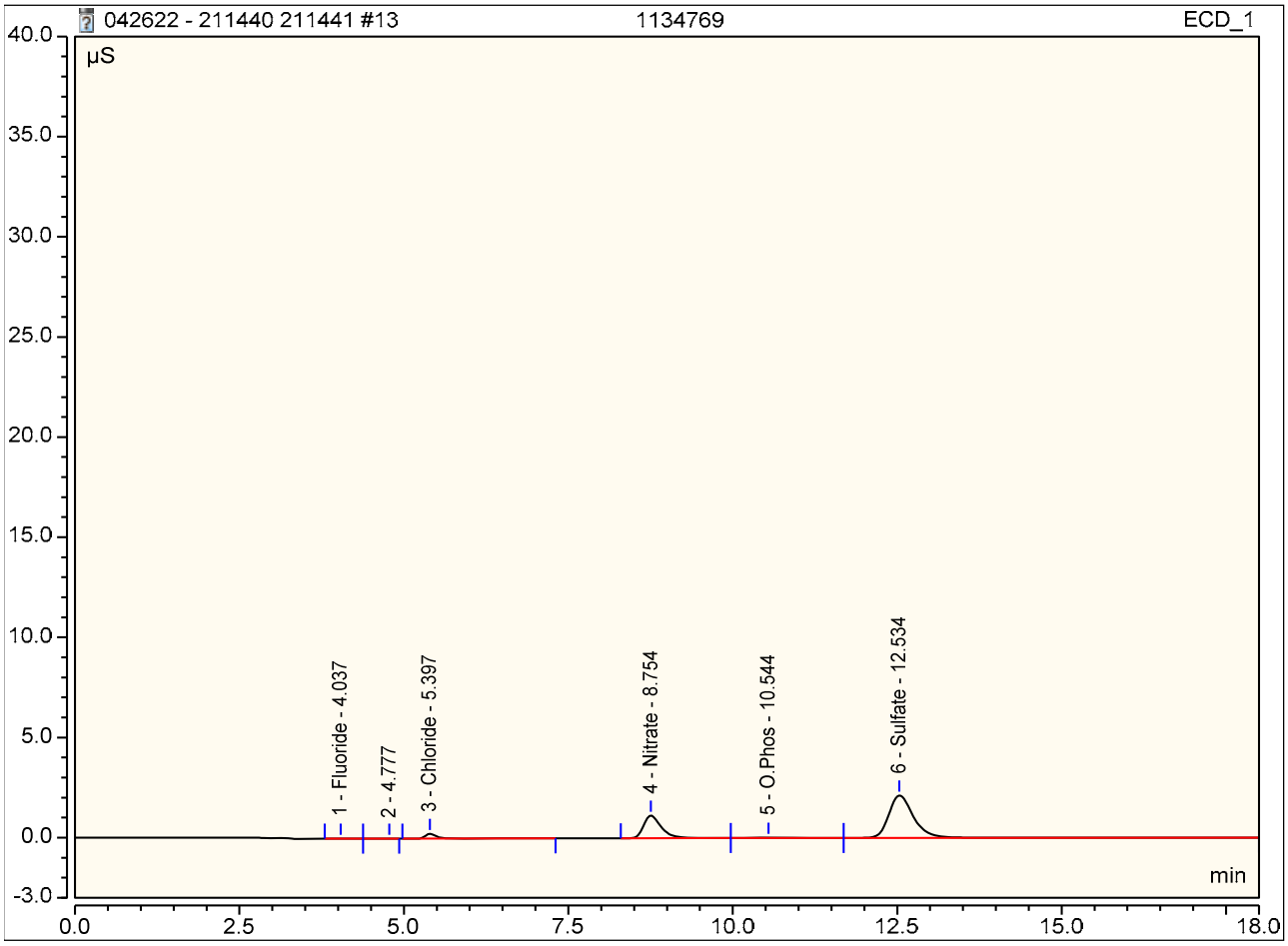
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.033	0.170	0.1353
3	5.40	Chloride	0.180	0.880	0.9655
4	7.67	Bromide	0.001	0.003	0.0152
5	8.78	Nitrate	0.080	0.256	0.2012
6	10.53	O.Phos	0.024	0.044	0.1336
7	12.52	Sulfate	2.806	6.587	14.4026



Peak Integration Report

Sample Name:	**1134769**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 15:30**	*Run Time:*	**18.00**

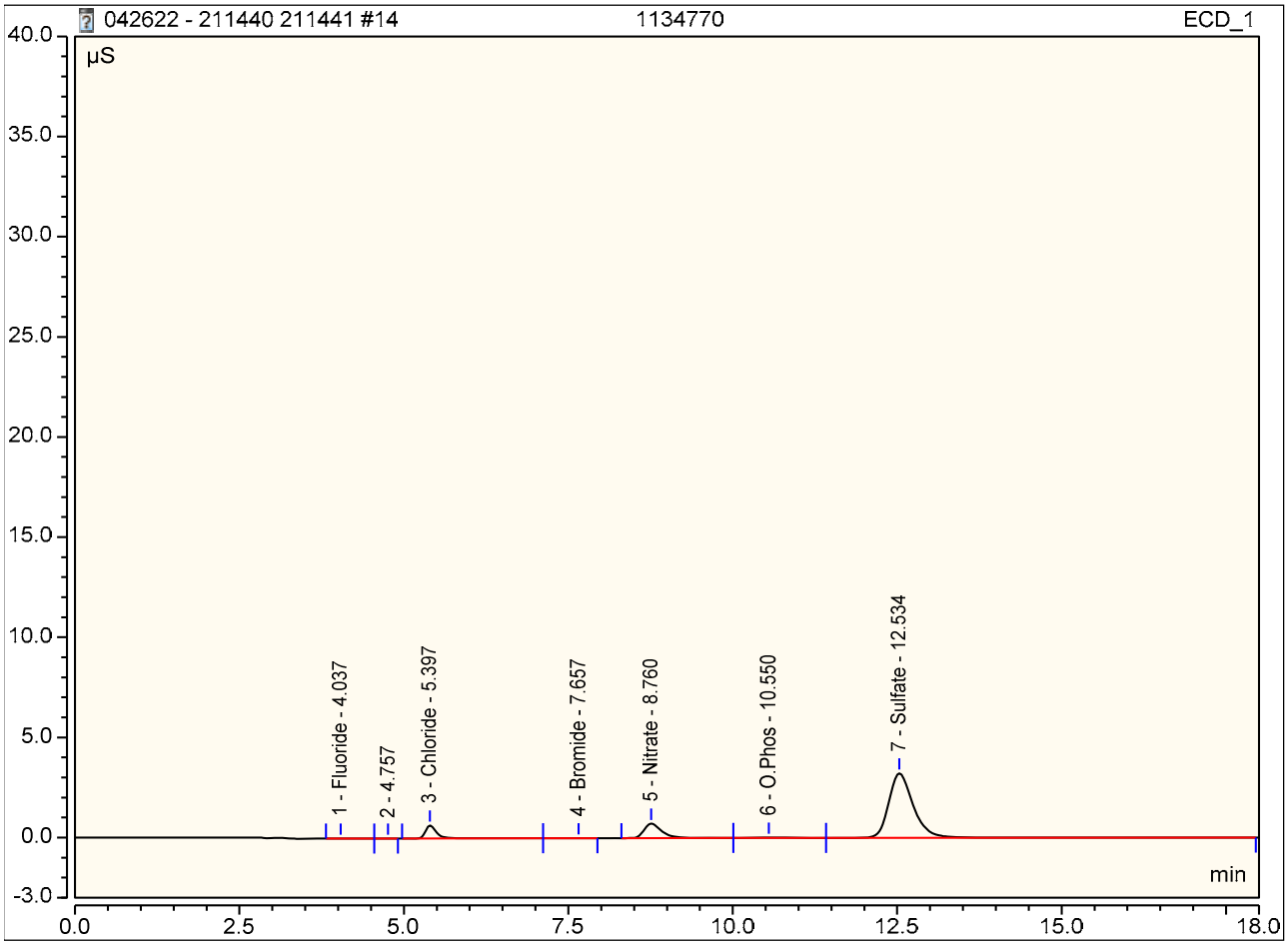
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	0.002	0.010	0.0533
3	5.40	Chloride	0.049	0.239	0.5360
4	8.75	Nitrate	0.350	1.129	0.6310
5	10.54	O.Phos	0.013	0.023	0.0803
6	12.53	Sulfate	0.934	2.125	5.1433



Peak Integration Report

Sample Name:	**1134770**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 15:48**	*Run Time:*	**18.00**

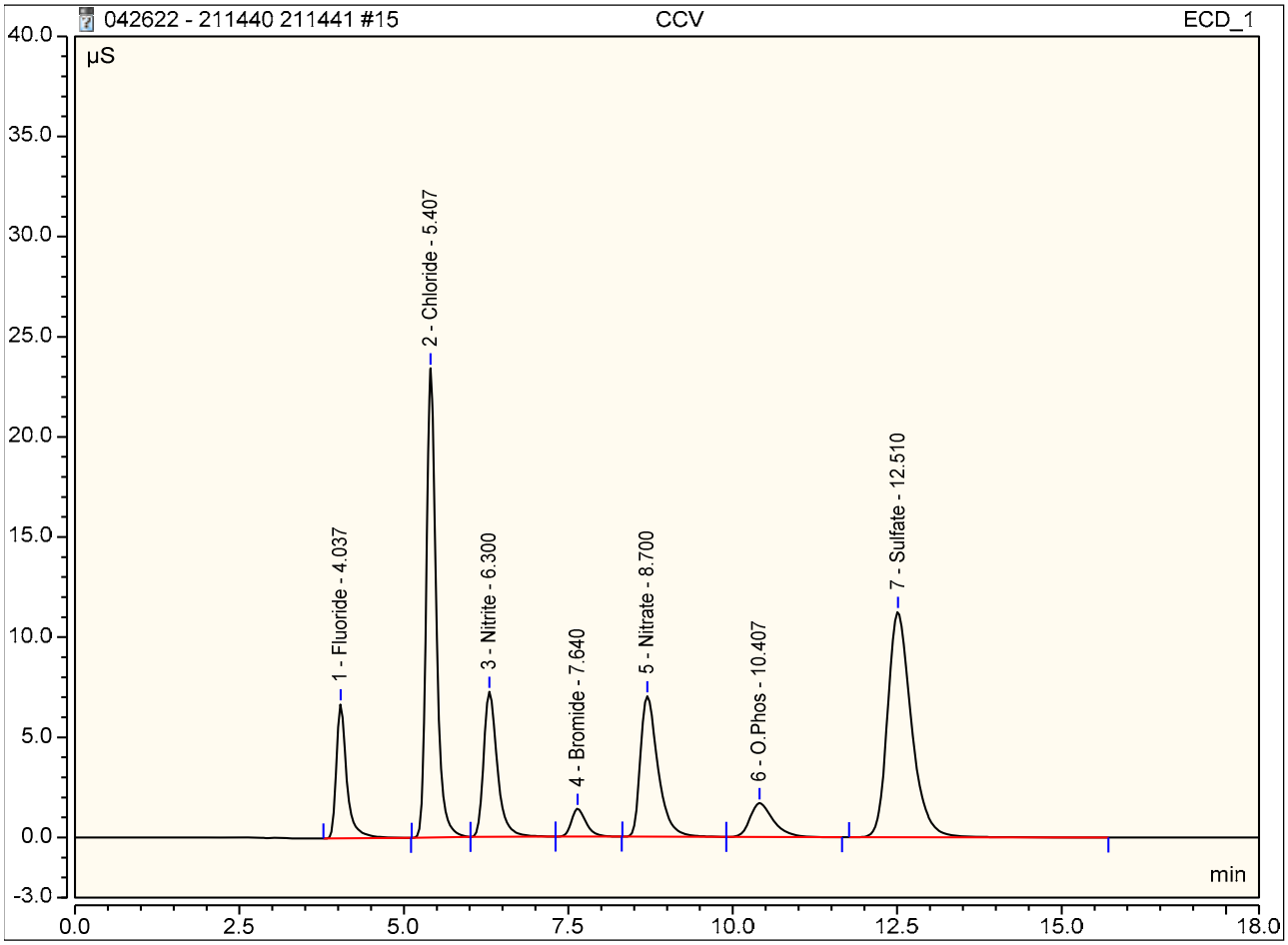
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	0.002	0.009	0.0534
3	5.40	Chloride	0.129	0.653	0.8000
4	7.66	Bromide	0.001	0.002	0.0108
5	8.76	Nitrate	0.223	0.721	0.4290
6	10.55	O.Phos	0.012	0.023	0.0781
7	12.53	Sulfate	1.406	3.225	7.4774



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 16:06**	*Run Time:*	**18.00**

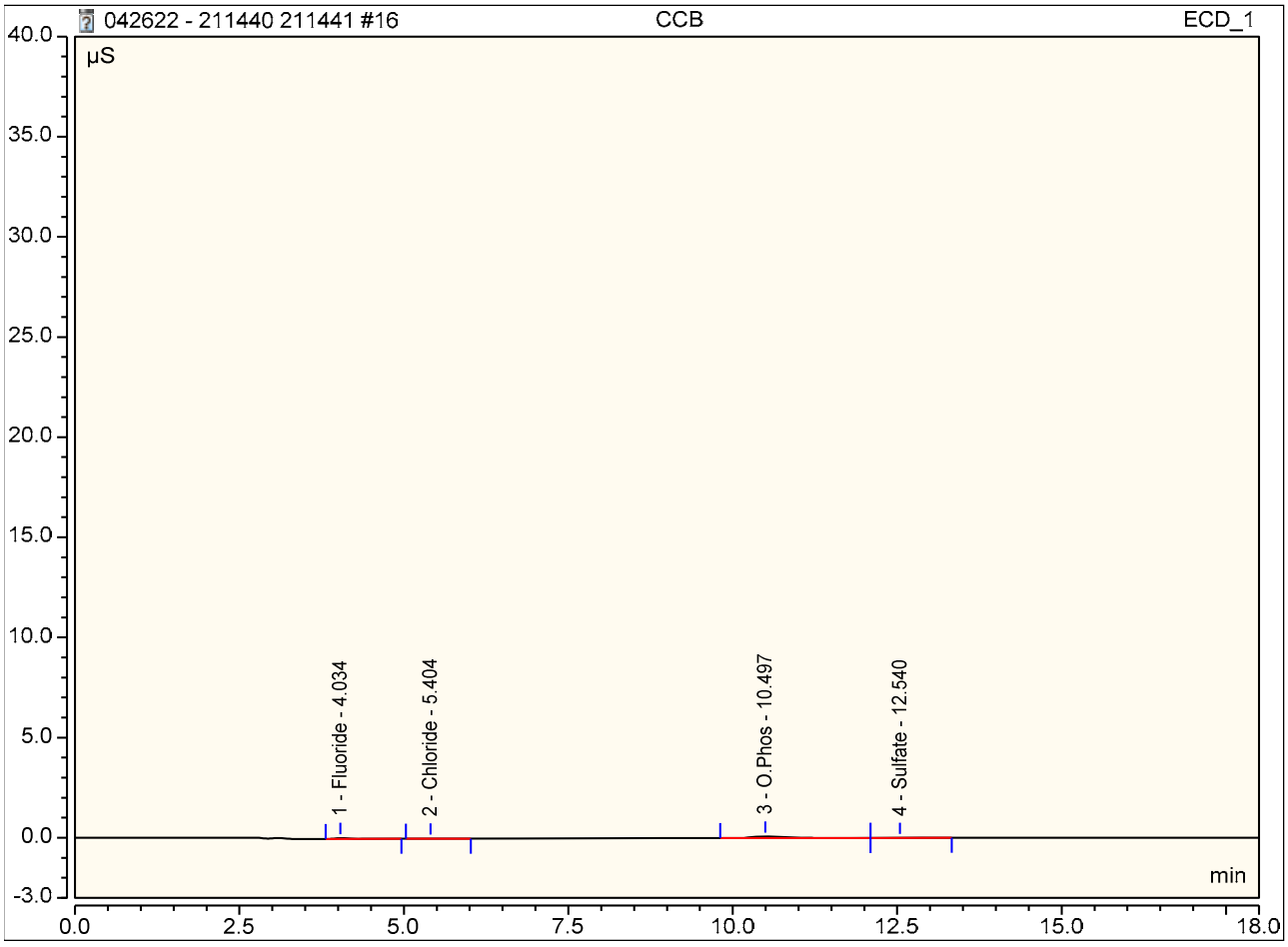
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.04	Fluoride	1.238	6.699	3.3027
2	5.41	Chloride	4.086	23.423	13.8321
3	6.30	Nitrite	1.742	7.247	3.5523
4	7.64	Bromide	0.360	1.393	3.5895
5	8.70	Nitrate	2.176	7.021	3.5361
6	10.41	O.Phos	0.694	1.690	3.4786
7	12.51	Sulfate	4.739	11.256	23.9679



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 16:25**	*Run Time:*	**18.00**

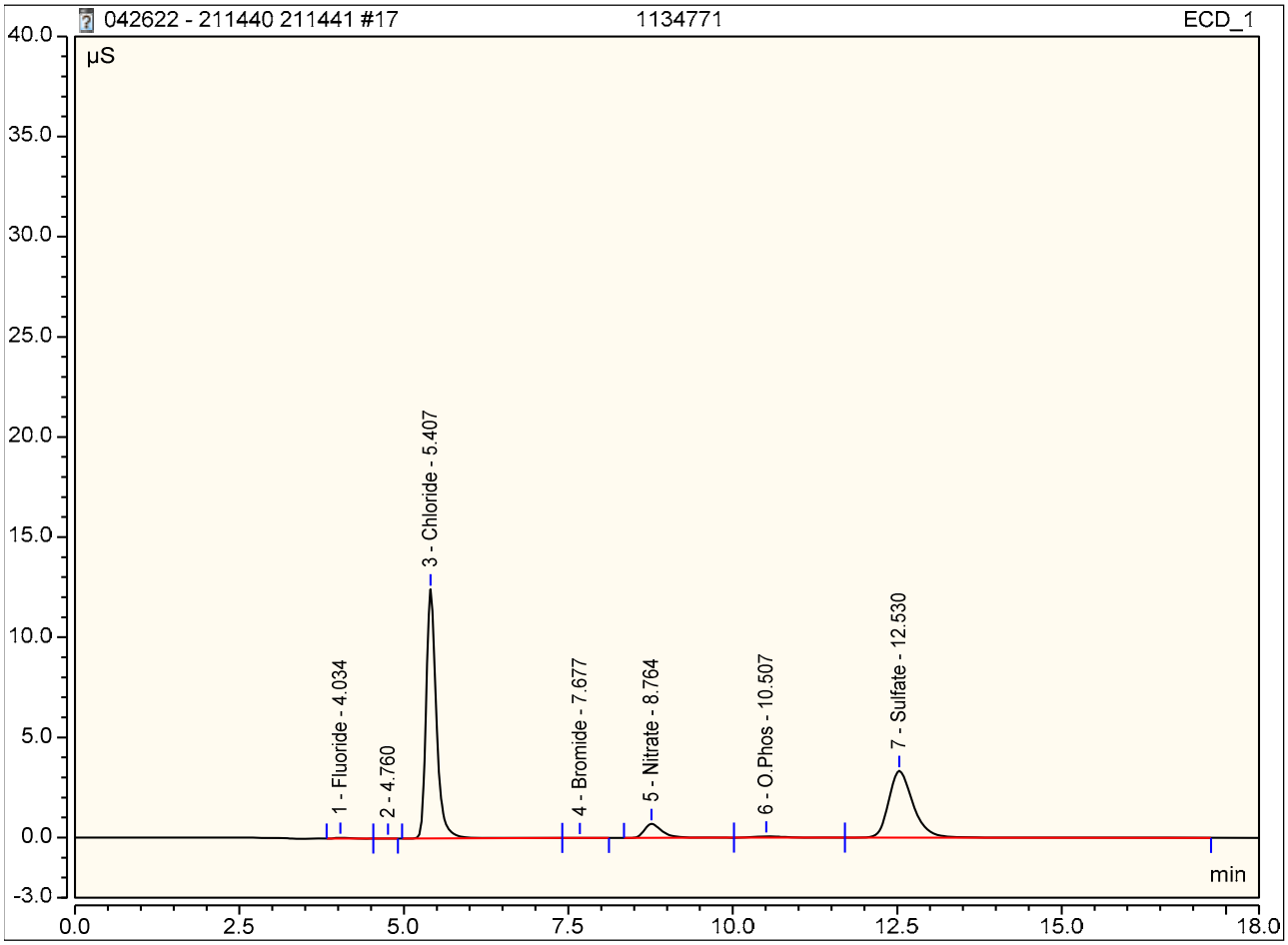
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.012	0.049	0.0800
2	5.40	Chloride	0.004	0.015	0.3858
3	10.50	O.Phos	0.047	0.086	0.2487
4	12.54	Sulfate	0.001	0.003	0.5290



Peak Integration Report

Sample Name:	**1134771**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 16:43**	*Run Time:*	**18.00**

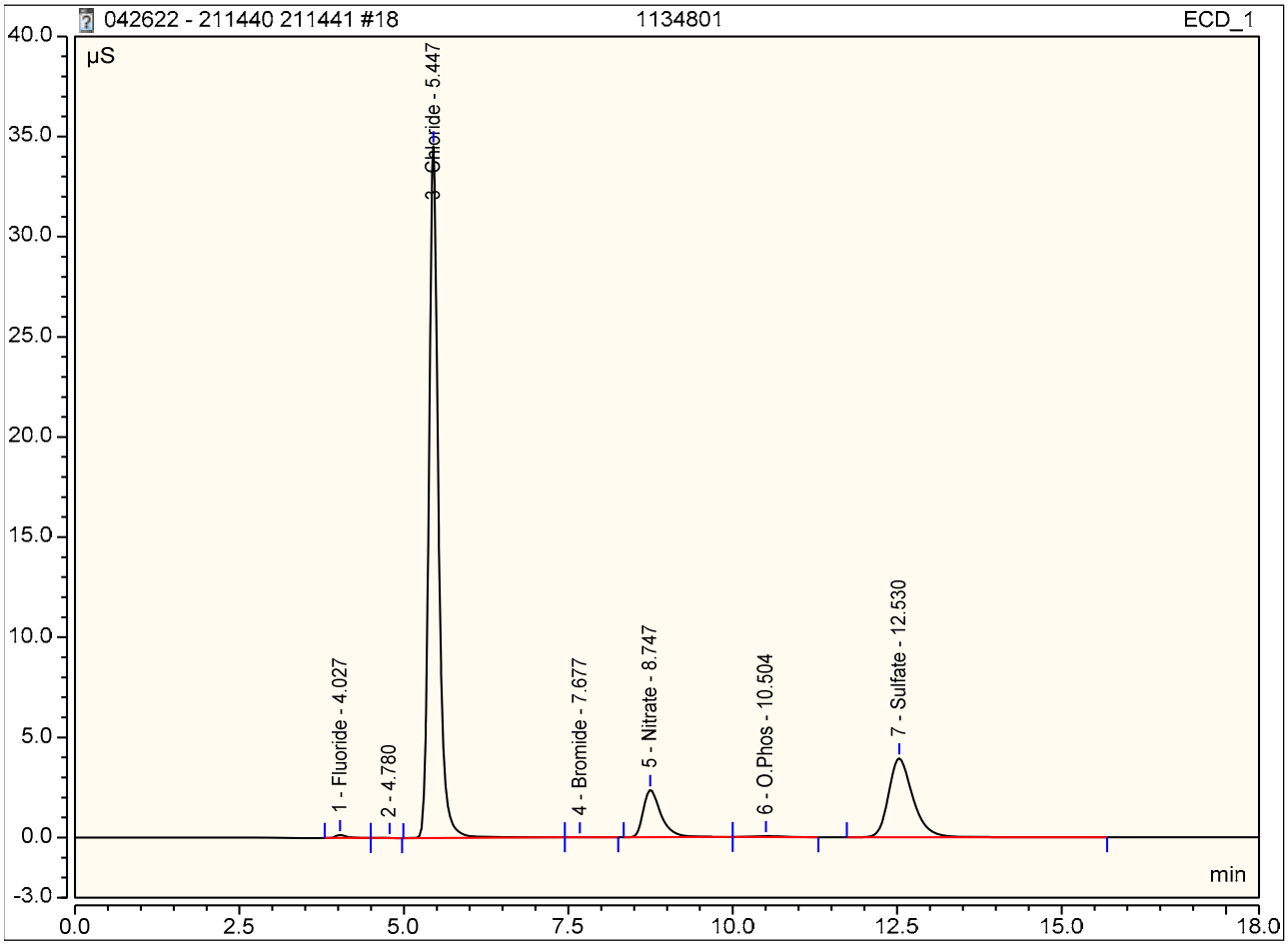
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.011	0.056	0.0768
3	5.41	Chloride	2.237	12.440	7.7414
4	7.68	Bromide	0.001	0.002	0.0112
5	8.76	Nitrate	0.222	0.695	0.4266
6	10.51	O.Phos	0.034	0.066	0.1864
7	12.53	Sulfate	1.448	3.335	7.6861



Peak Integration Report

Sample Name:	**1134801**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 17:01**	*Run Time:*	**18.00**

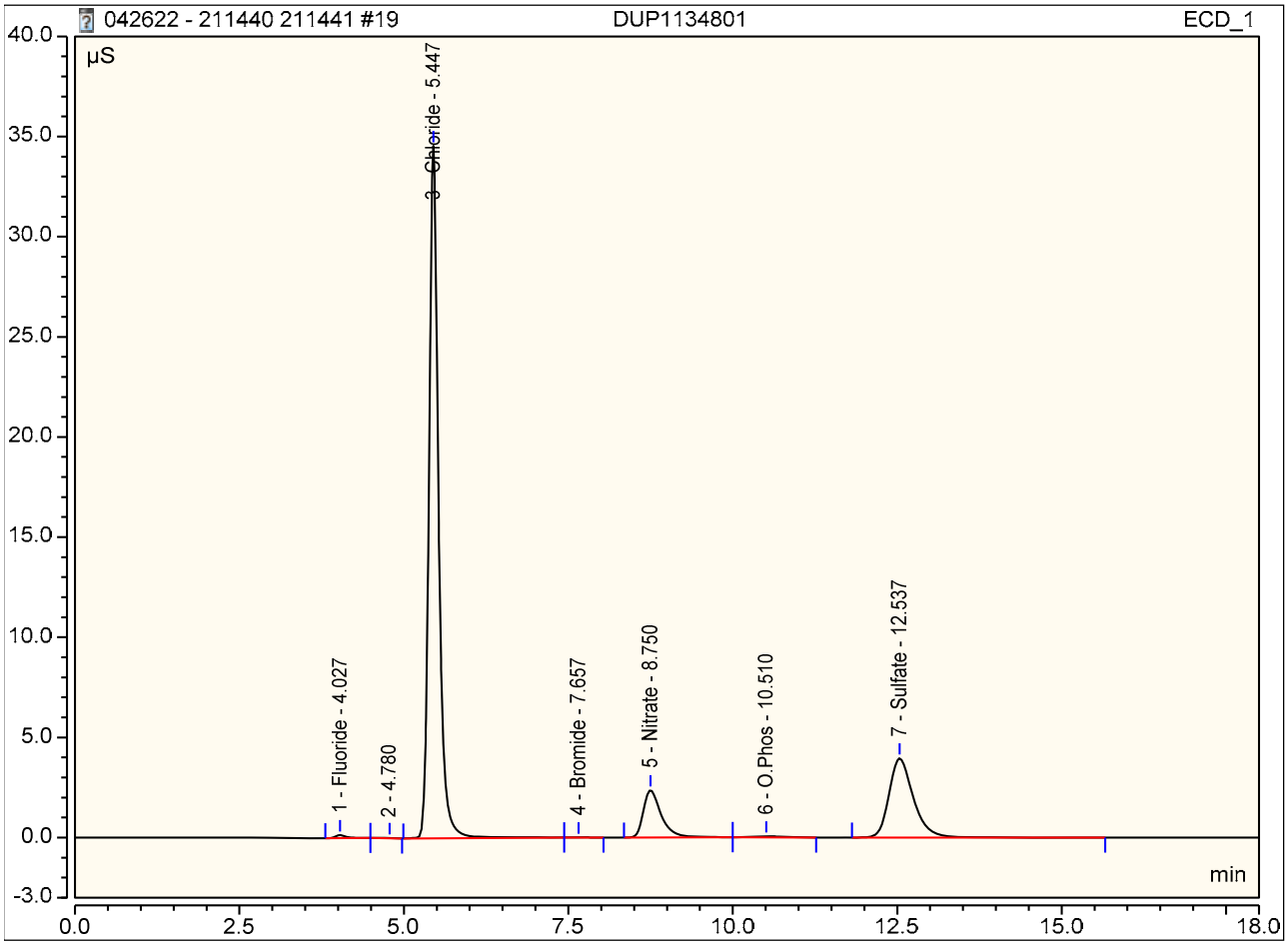
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.028	0.147	0.1223
3	5.45	Chloride	5.781	34.553	19.4180
4	7.68	Bromide	0.002	0.005	0.0252
5	8.75	Nitrate	0.740	2.353	1.2513
6	10.50	O.Phos	0.024	0.048	0.1348
7	12.53	Sulfate	1.700	3.949	8.9323



Peak Integration Report

Sample Name:	**DUP1134801**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 17:19**	*Run Time:*	**18.00**

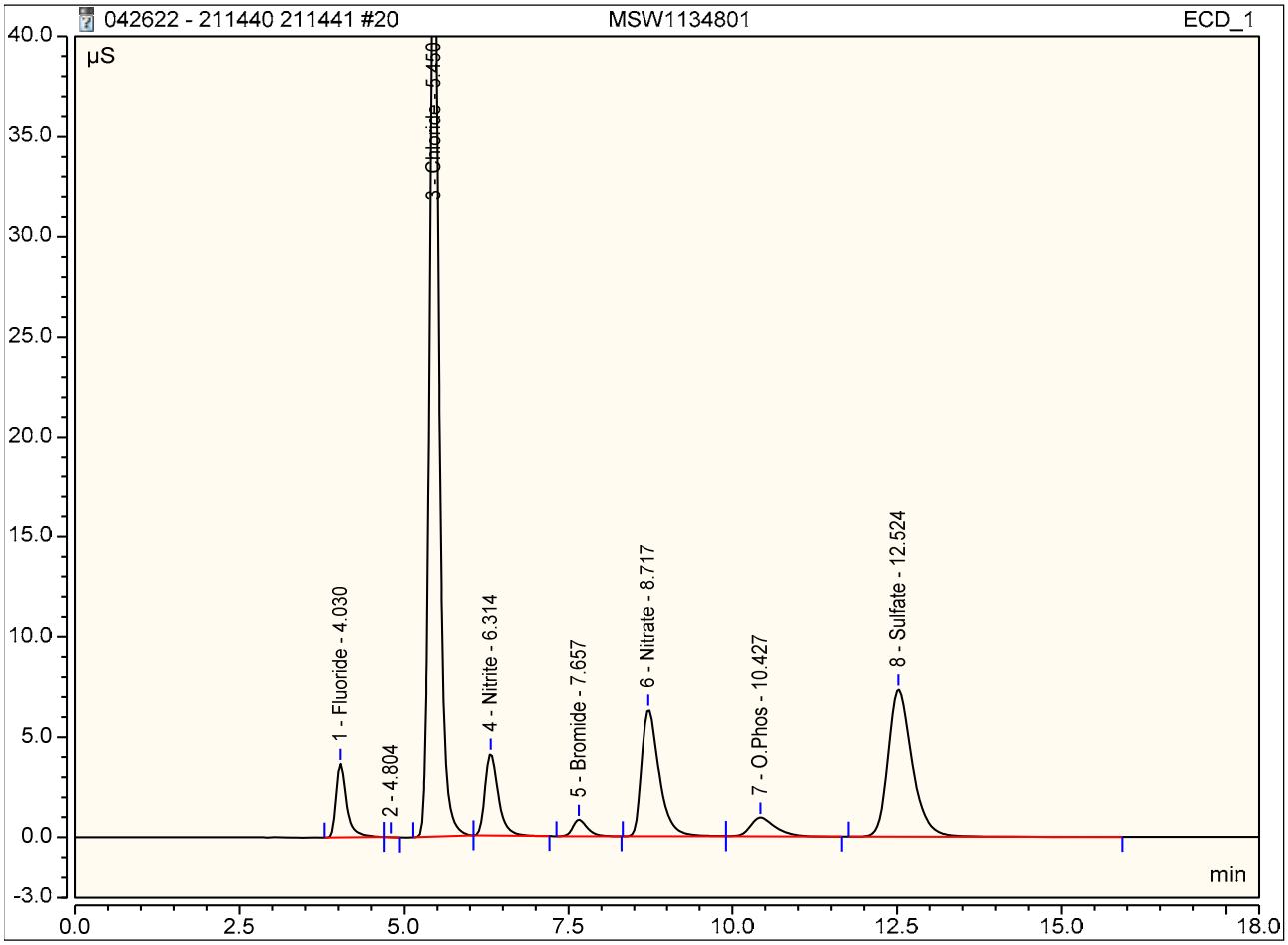
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.027	0.146	0.1208
3	5.45	Chloride	5.791	34.560	19.4507
4	7.66	Bromide	0.001	0.005	0.0175
5	8.75	Nitrate	0.739	2.356	1.2499
6	10.51	O.Phos	0.023	0.048	0.1329
7	12.54	Sulfate	1.701	3.955	8.9387



Peak Integration Report

Sample Name:	**MSW1134801**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 17:37**	*Run Time:*	**18.00**

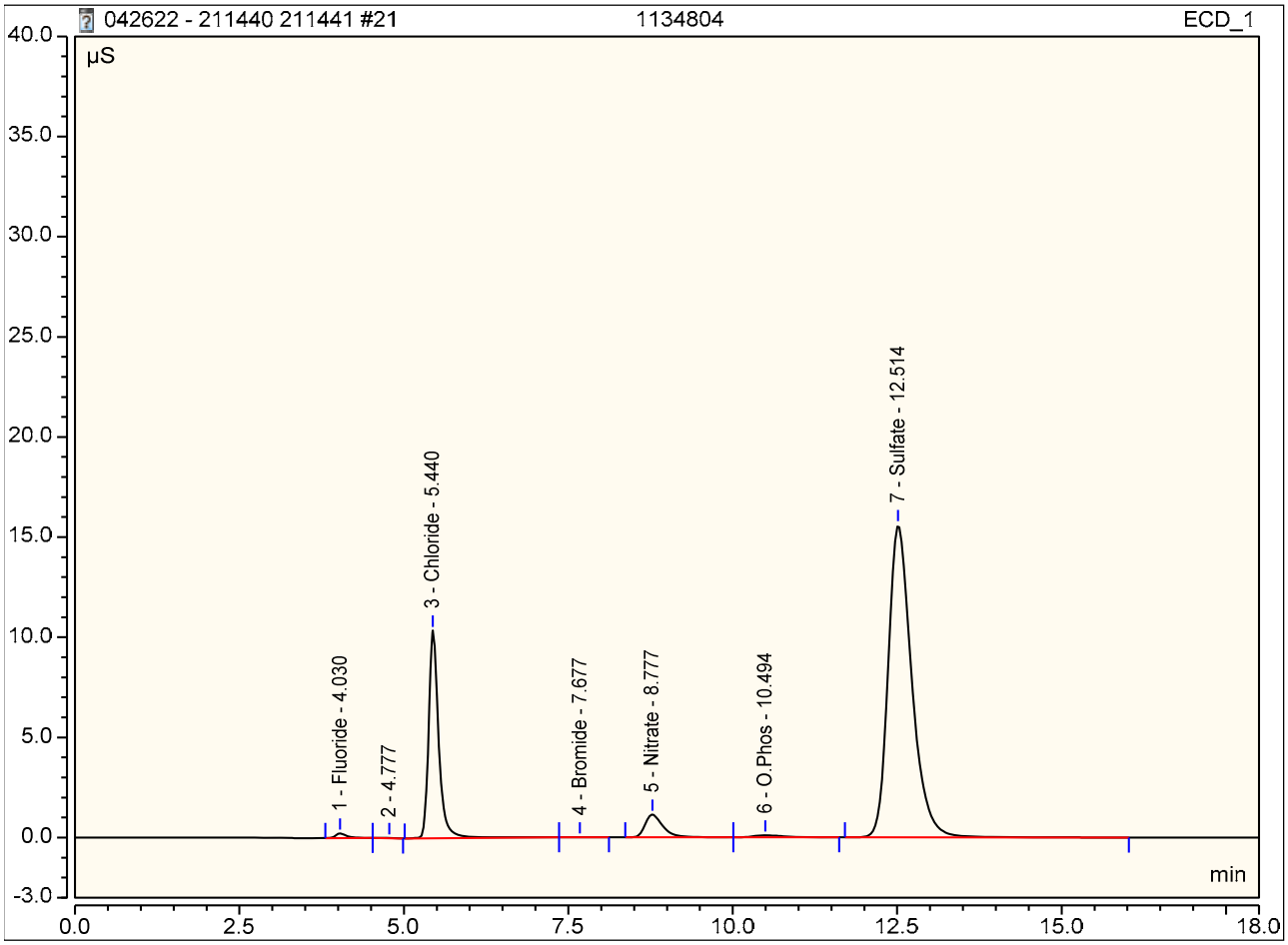
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.693	3.688	1.8688
3	5.45	Chloride	8.018	48.239	26.7868
4	6.31	Nitrite	0.965	4.094	1.9787
5	7.66	Bromide	0.215	0.826	2.1433
6	8.72	Nitrate	1.984	6.334	3.2300
7	10.43	O.Phos	0.412	0.936	2.0704
8	12.52	Sulfate	3.136	7.366	16.0343



Peak Integration Report

Sample Name:	**1134804**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 17:55**	*Run Time:*	**18.00**

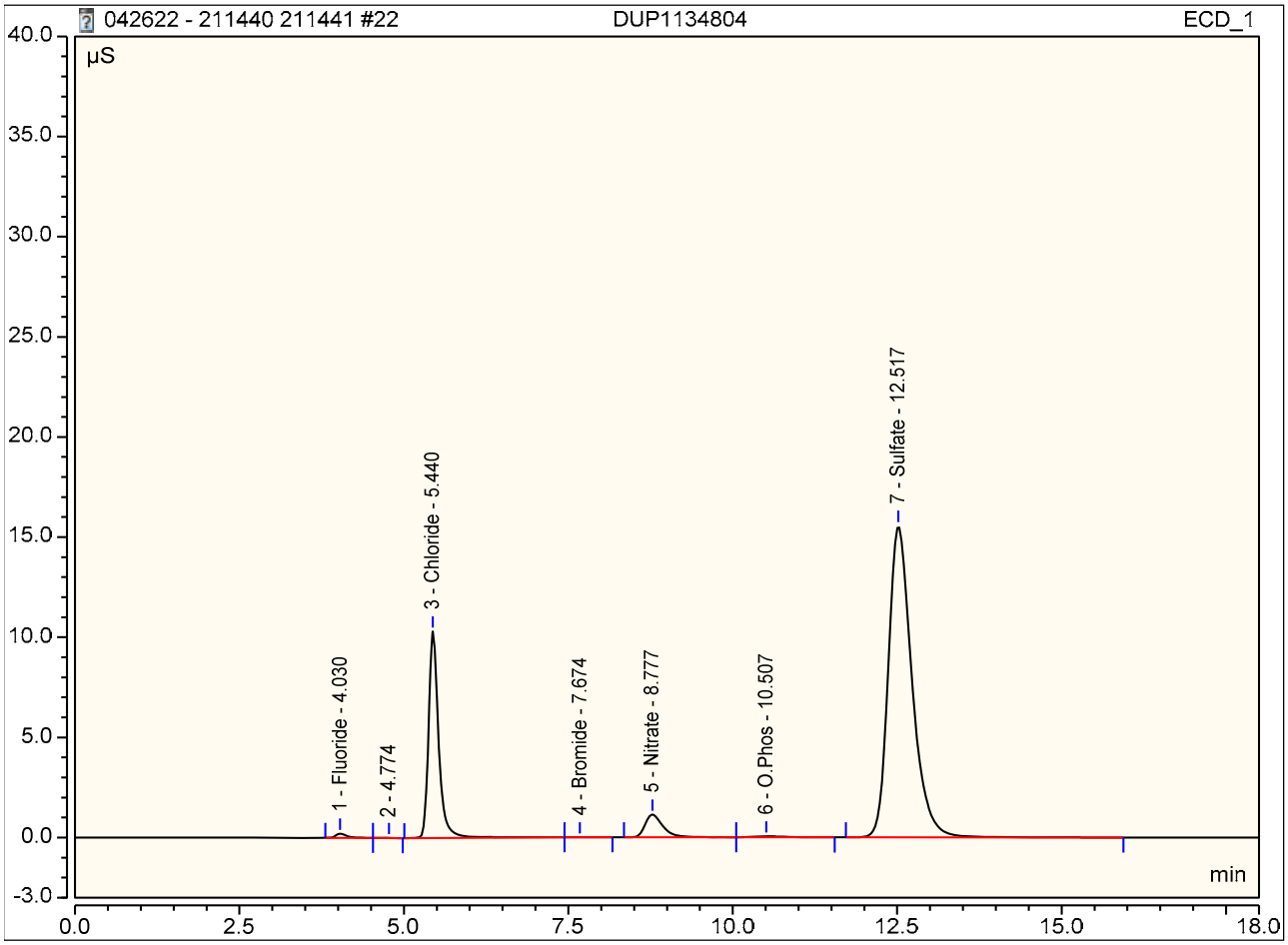
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.045	0.232	0.1656
3	5.44	Chloride	1.845	10.367	6.4525
4	7.68	Bromide	0.002	0.009	0.0271
5	8.78	Nitrate	0.359	1.139	0.6442
6	10.49	O.Phos	0.052	0.101	0.2741
7	12.51	Sulfate	6.494	15.597	32.6467



Peak Integration Report

Sample Name:	**DUP1134804**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 18:13**	*Run Time:*	**18.00**

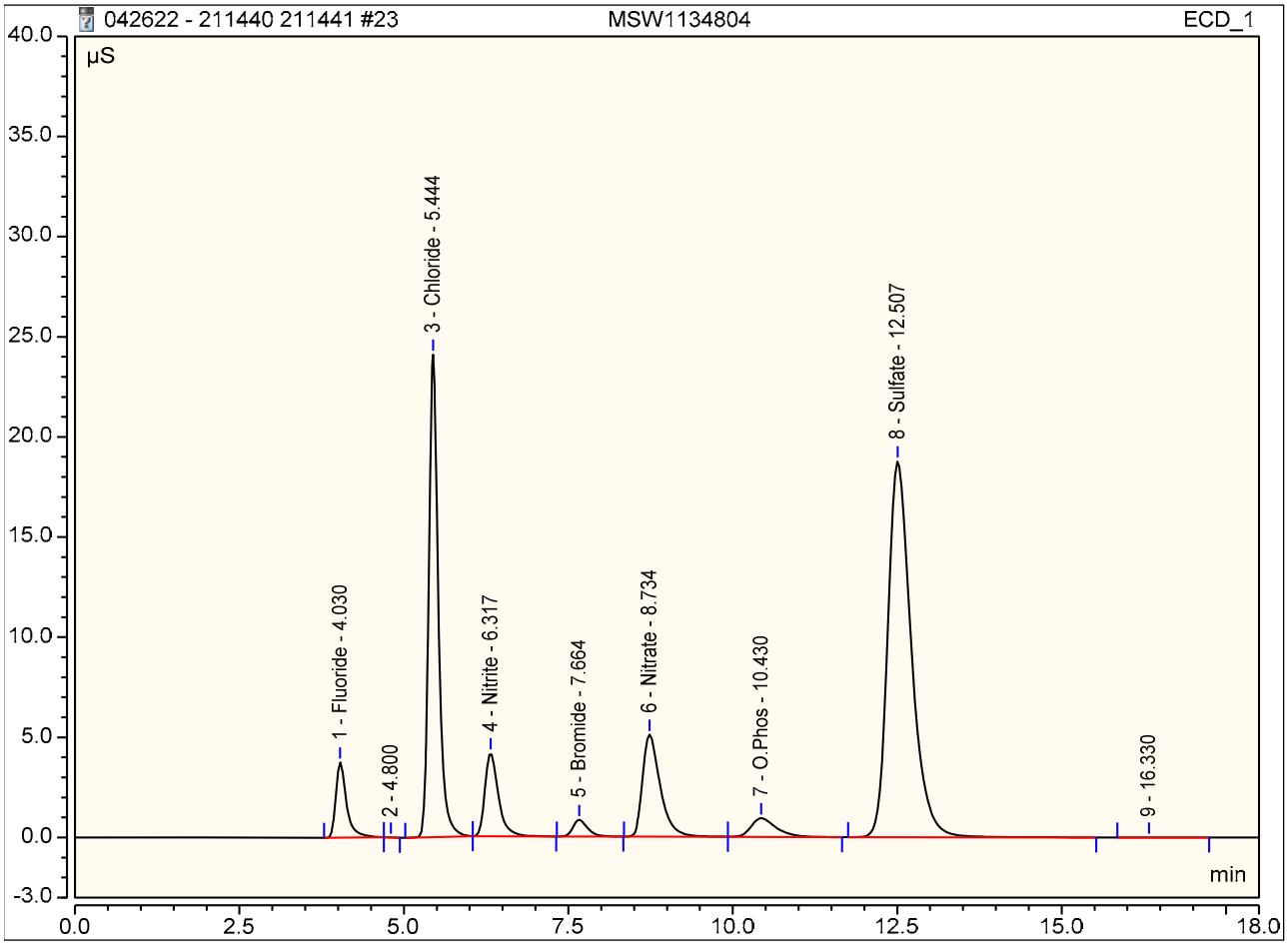
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.042	0.219	0.1591
3	5.44	Chloride	1.847	10.320	6.4589
4	7.67	Bromide	0.002	0.008	0.0262
5	8.78	Nitrate	0.358	1.137	0.6439
6	10.51	O.Phos	0.027	0.052	0.1512
7	12.52	Sulfate	6.497	15.563	32.6627



Peak Integration Report

Sample Name:	**MSW1134804**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 18:31**	*Run Time:*	**18.00**

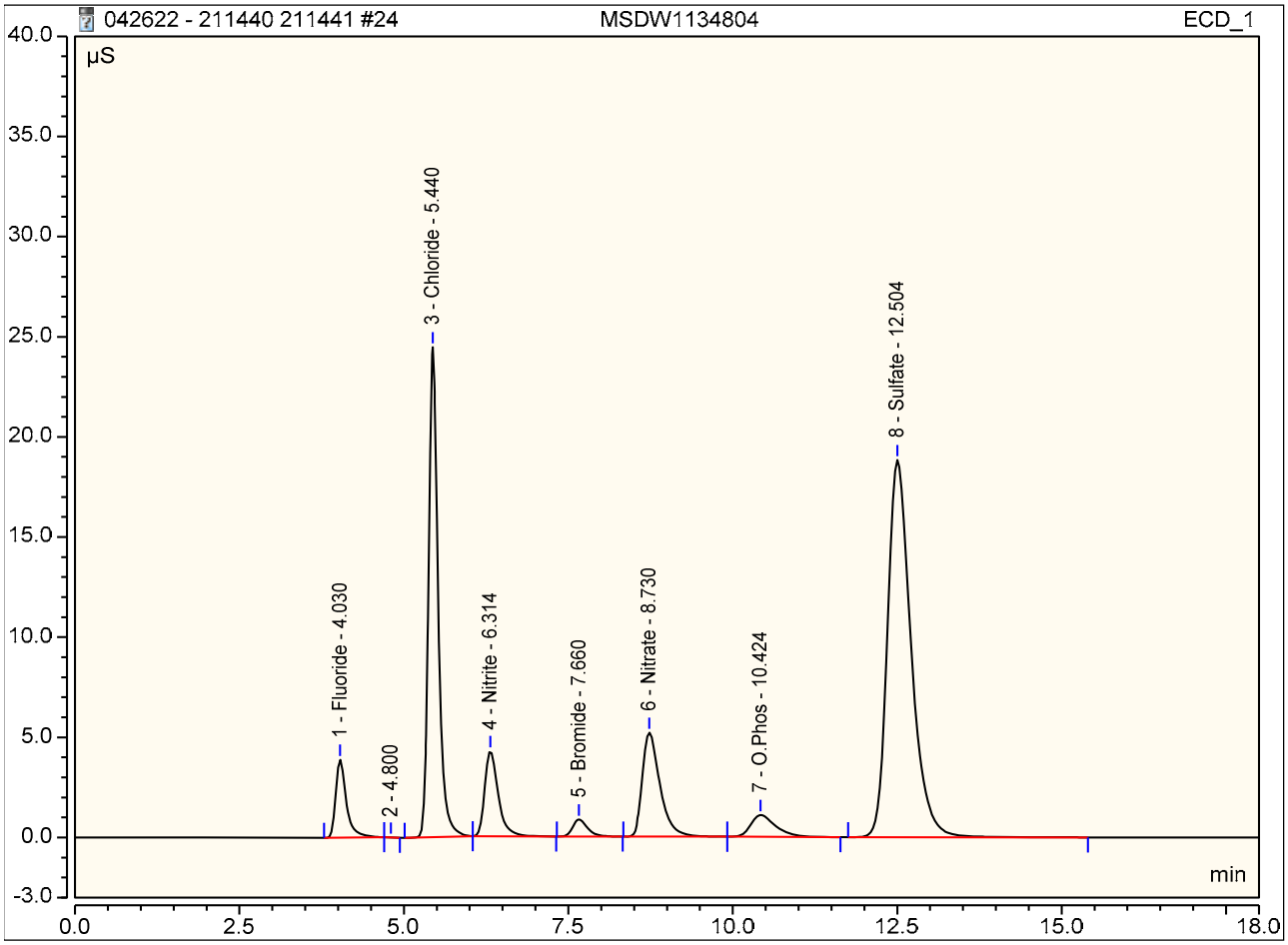
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.708	3.757	1.9079
3	5.44	Chloride	4.053	24.103	13.7261
4	6.32	Nitrite	0.987	4.150	2.0227
5	7.66	Bromide	0.216	0.831	2.1581
6	8.73	Nitrate	1.587	5.090	2.5981
7	10.43	O.Phos	0.411	0.934	2.0674
8	12.51	Sulfate	7.790	18.768	39.0617



Peak Integration Report

Sample Name:	**MSDW1134804**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 18:50**	*Run Time:*	**18.00**

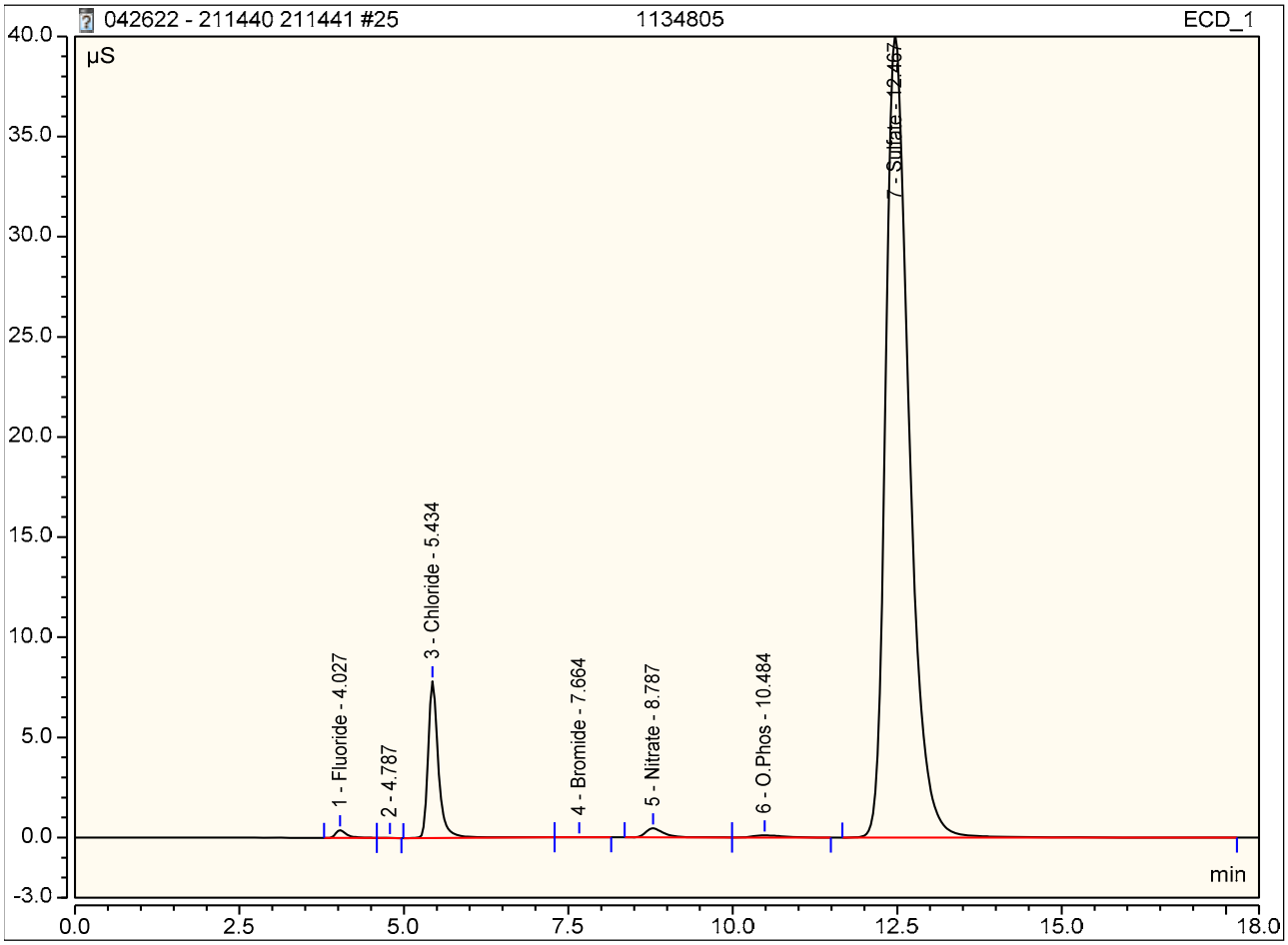
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.732	3.898	1.9730
3	5.44	Chloride	4.117	24.463	13.9345
4	6.31	Nitrite	1.013	4.252	2.0752
5	7.66	Bromide	0.223	0.853	2.2217
6	8.73	Nitrate	1.622	5.196	2.6547
7	10.42	O.Phos	0.478	1.092	2.4010
8	12.50	Sulfate	7.833	18.837	39.2710



Peak Integration Report

Sample Name:	**1134805**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 19:08**	*Run Time:*	**18.00**

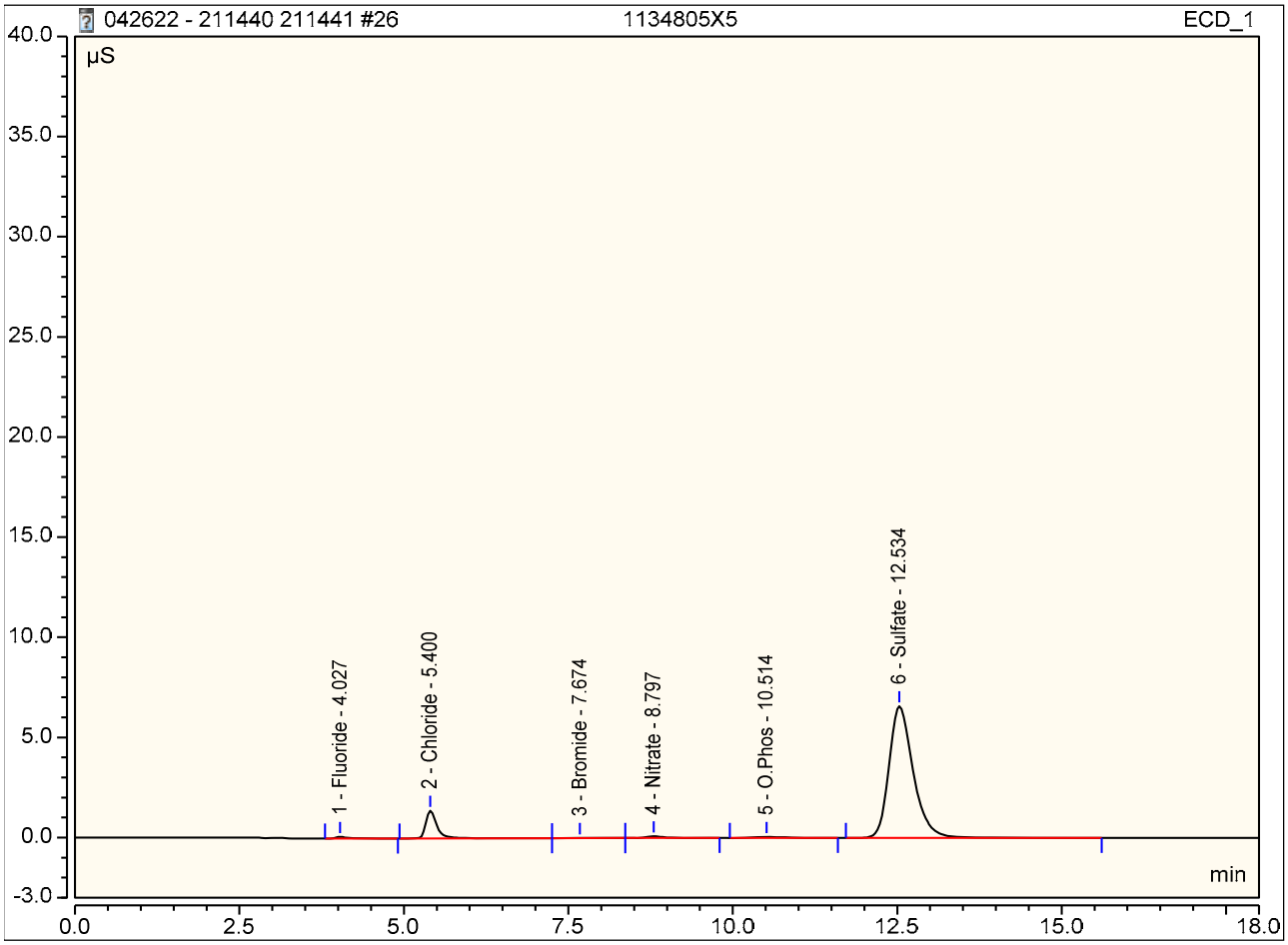
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.075	0.387	0.2449
3	5.43	Chloride	1.424	7.831	5.0641
4	7.66	Bromide	0.002	0.008	0.0290
5	8.79	Nitrate	0.144	0.454	0.3030
6	10.48	O.Phos	0.053	0.104	0.2811
7	12.47	Sulfate	16.700	40.102	83.1406



Peak Integration Report

Sample Name:	**1134805X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 19:26**	*Run Time:*	**18.00**

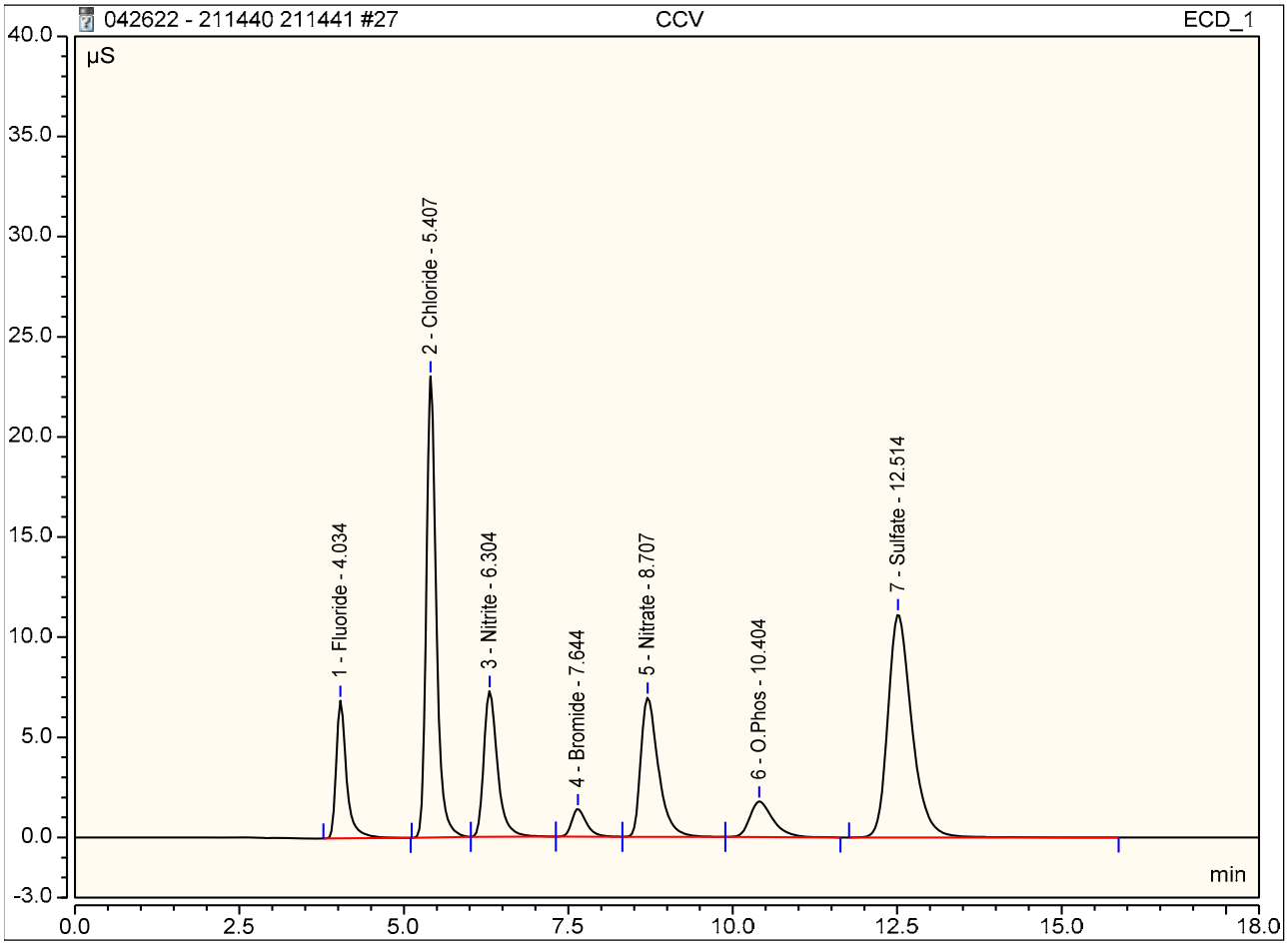
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.019	0.086	0.0991
2	5.40	Chloride	0.273	1.386	1.2747
3	7.67	Bromide	0.001	0.002	0.0126
4	8.80	Nitrate	0.028	0.089	0.1179
5	10.51	O.Phos	0.029	0.054	0.1602
6	12.53	Sulfate	2.807	6.581	14.4096



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 19:44**	*Run Time:*	**18.00**

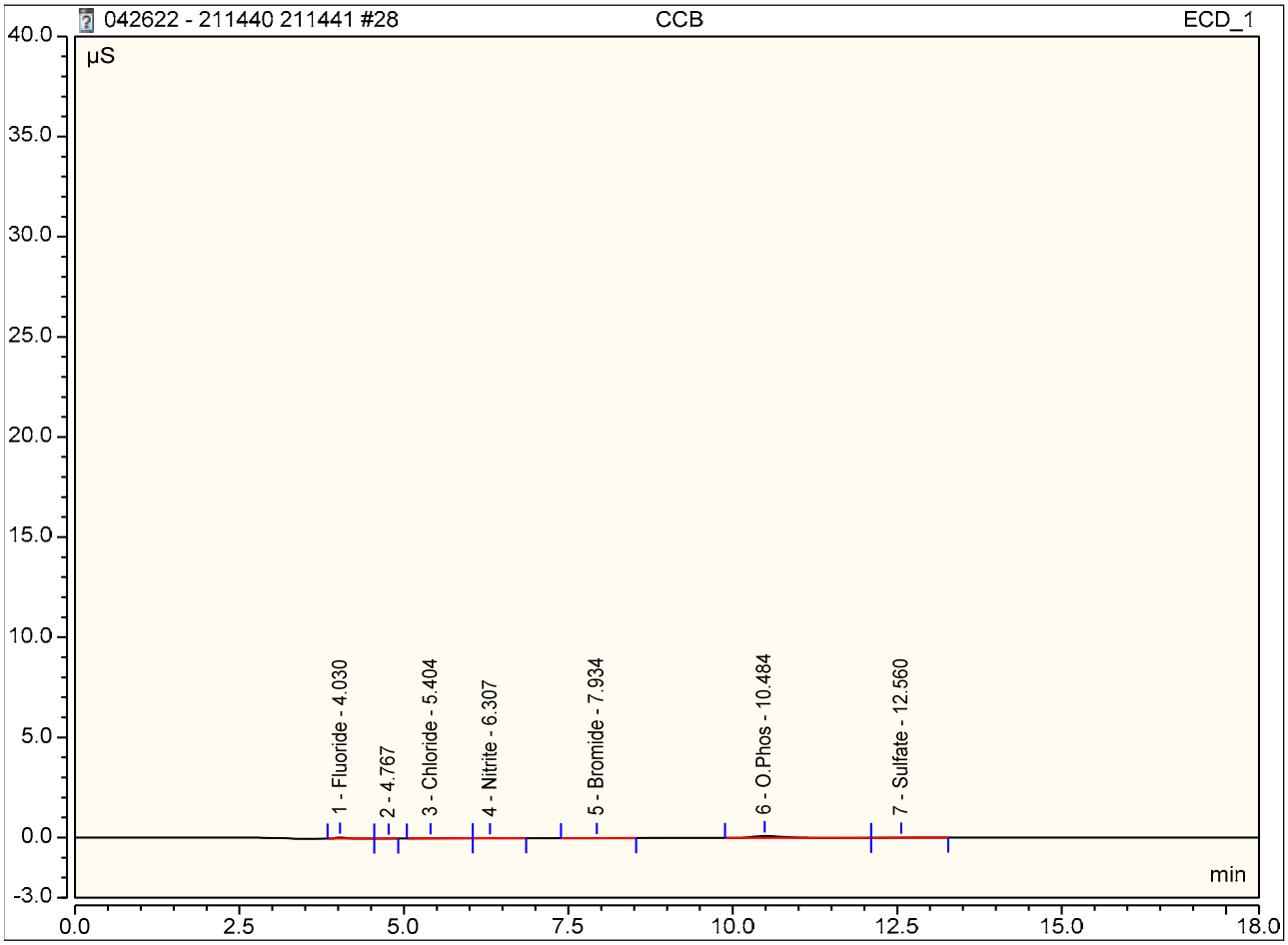
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	1.258	6.875	3.3551
2	5.41	Chloride	4.046	23.030	13.7017
3	6.30	Nitrite	1.758	7.282	3.5845
4	7.64	Bromide	0.358	1.379	3.5686
5	8.71	Nitrate	2.161	6.950	3.5108
6	10.40	O.Phos	0.725	1.779	3.6321
7	12.51	Sulfate	4.702	11.153	23.7830



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 20:02**	*Run Time:*	**18.00**

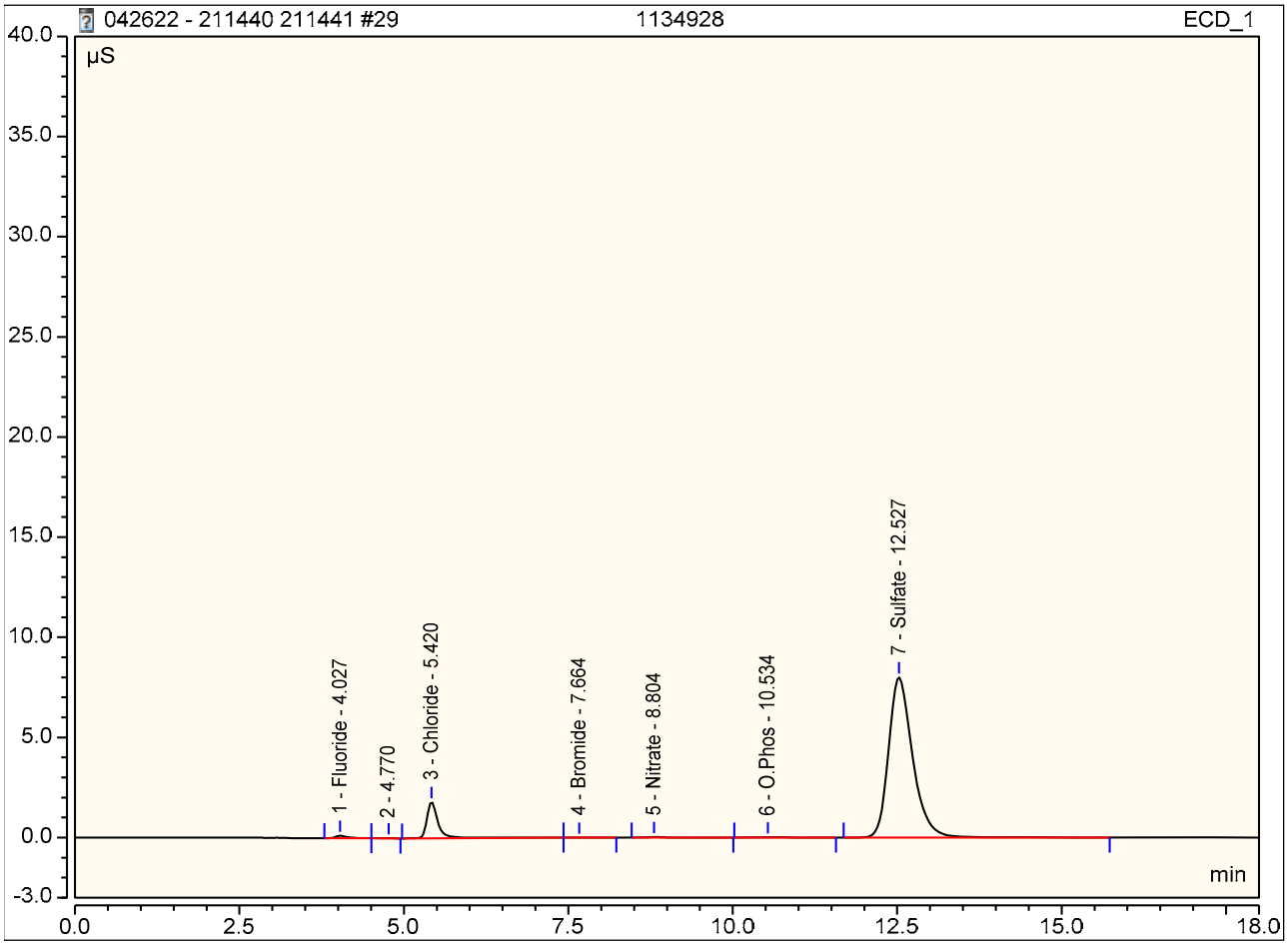
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.011	0.059	0.0785
3	5.40	Chloride	0.004	0.018	0.3881
4	6.31	Nitrite	0.001	0.003	0.0279
5	7.93	Bromide	0.004	0.011	0.0401
6	10.48	O.Phos	0.048	0.092	0.2573
7	12.56	Sulfate	0.003	0.006	0.5365



Peak Integration Report

Sample Name:	**1134928**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 20:20**	*Run Time:*	**18.00**

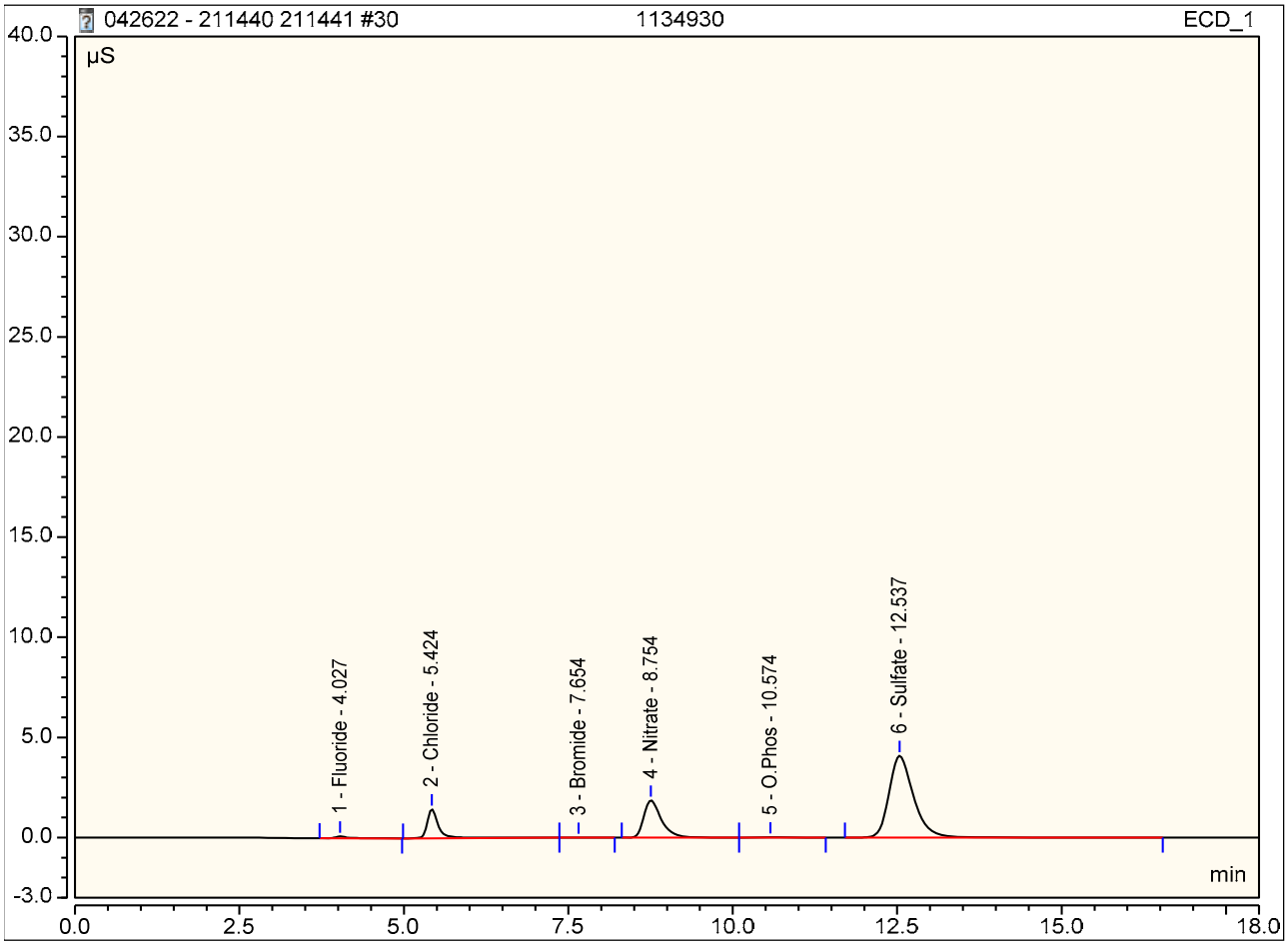
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.023	0.124	0.1095
3	5.42	Chloride	0.365	1.820	1.5774
4	7.66	Bromide	0.001	0.006	0.0199
5	8.80	Nitrate	0.012	0.036	0.0931
6	10.53	O.Phos	0.013	0.025	0.0824
7	12.53	Sulfate	3.397	8.007	17.3254



Peak Integration Report

Sample Name:	**1134930**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 20:38**	*Run Time:*	**18.00**

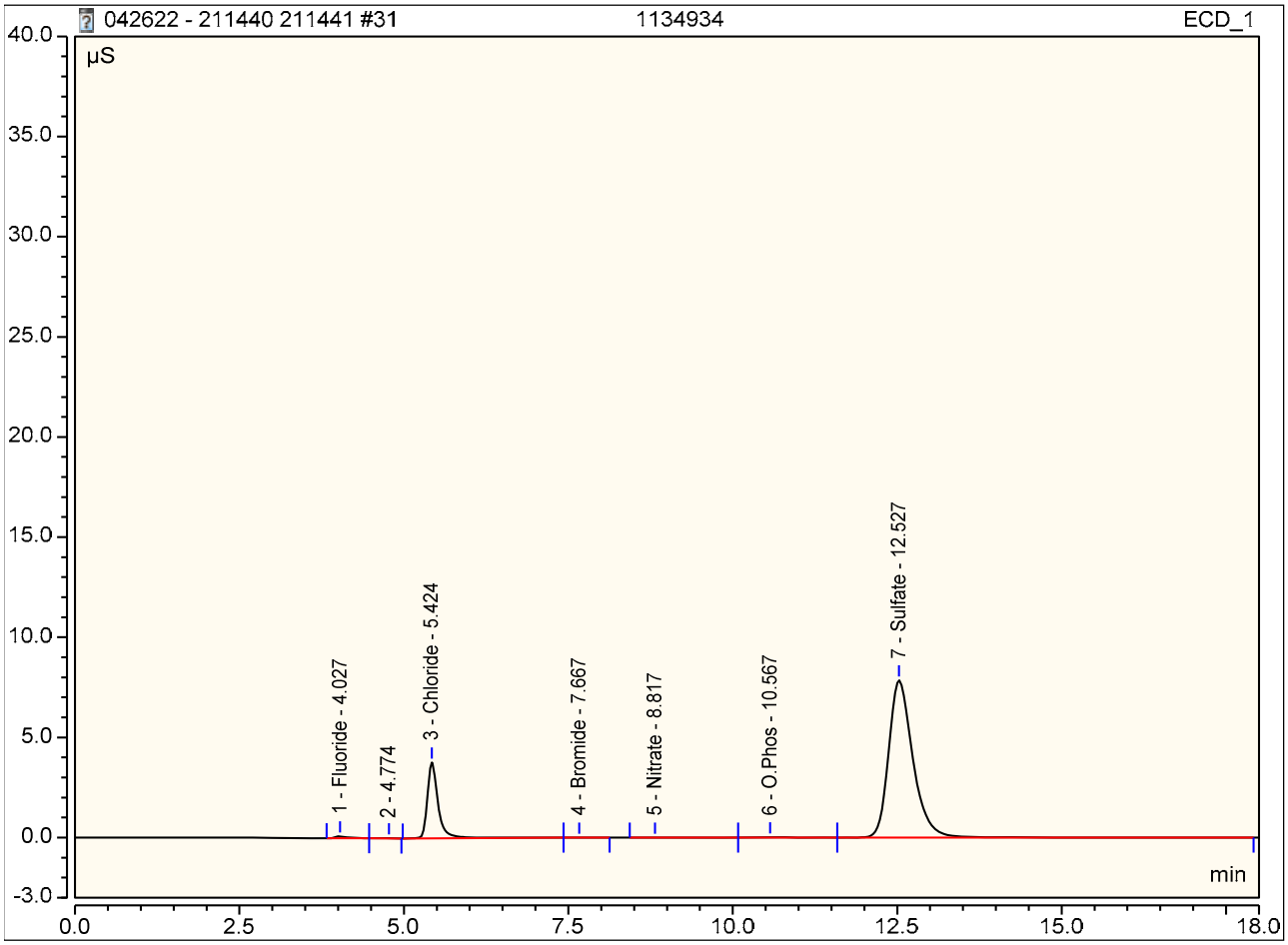
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.028	0.094	0.1211
2	5.42	Chloride	0.303	1.455	1.3710
3	7.65	Bromide	0.001	0.003	0.0151
4	8.75	Nitrate	0.582	1.862	0.9994
5	10.57	O.Phos	0.010	0.018	0.0648
6	12.54	Sulfate	1.770	4.082	9.2772



Peak Integration Report

Sample Name:	**1134934**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 20:56**	*Run Time:*	**18.00**

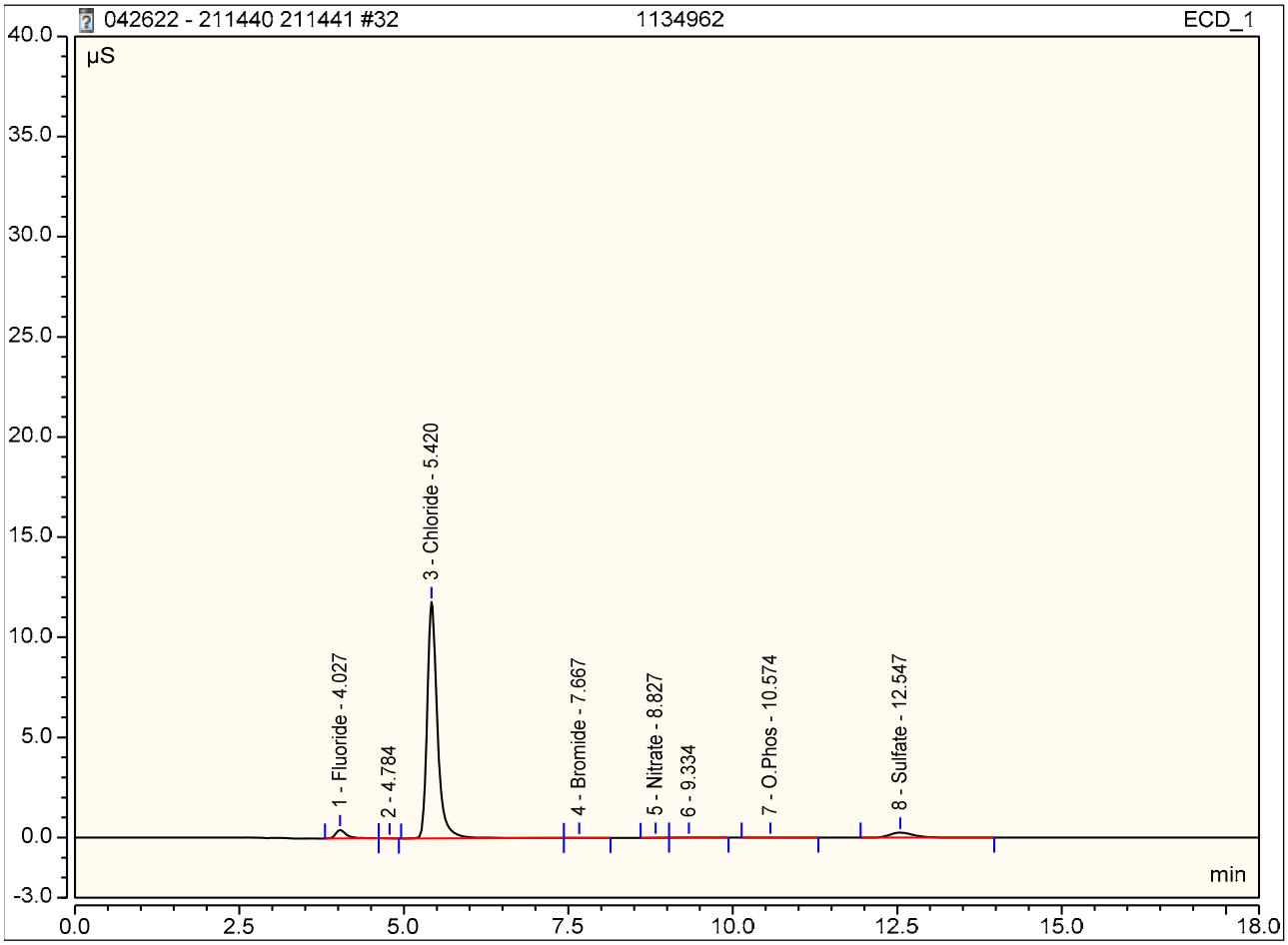
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.018	0.097	0.0958
3	5.42	Chloride	0.727	3.788	2.7695
4	7.67	Bromide	0.001	0.005	0.0188
5	8.82	Nitrate	0.005	0.009	0.0808
6	10.57	O.Phos	0.007	0.014	0.0532
7	12.53	Sulfate	3.370	7.852	17.1938



Peak Integration Report

Sample Name:	**1134962**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 21:14**	*Run Time:*	**18.00**

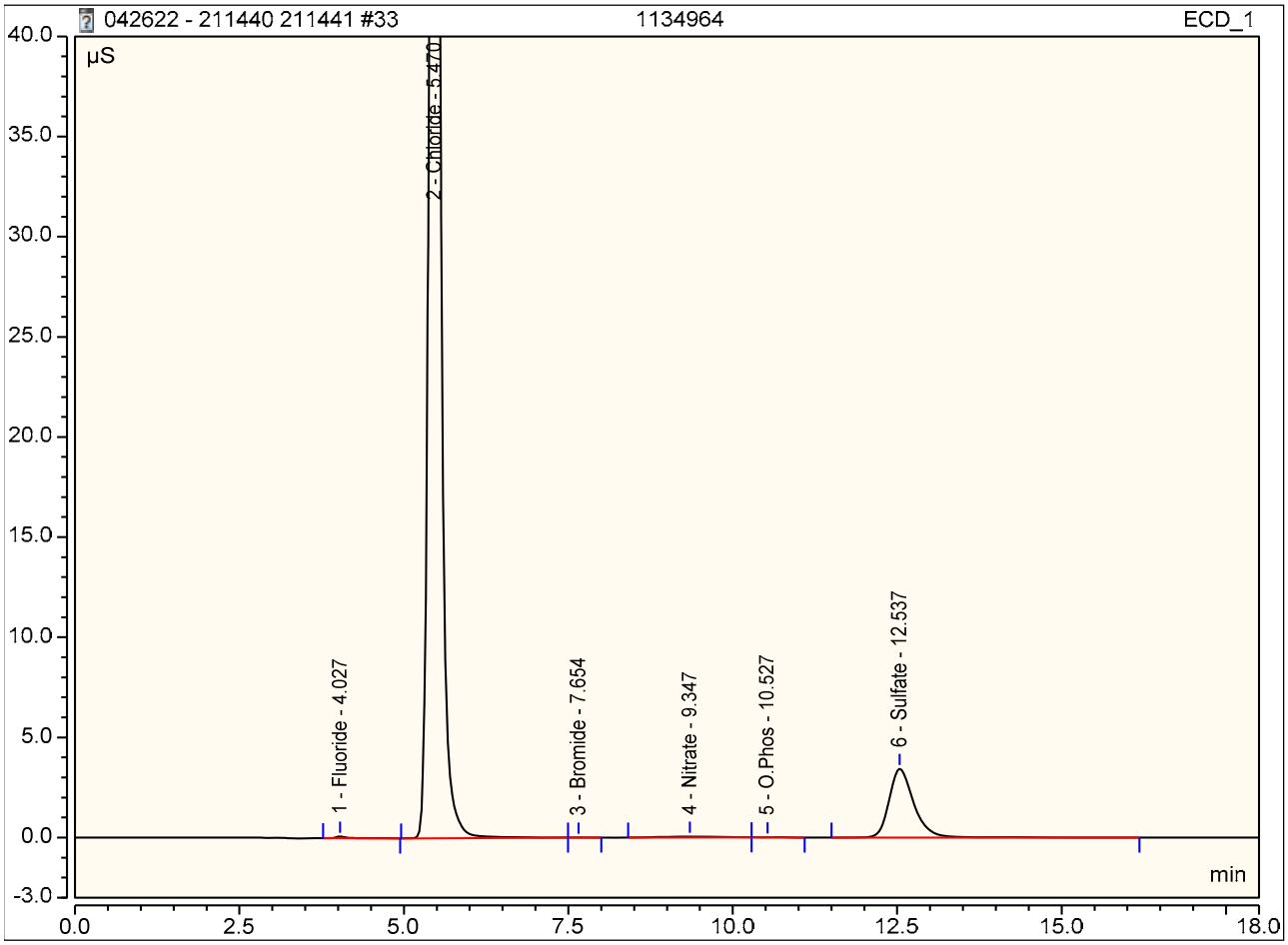
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.079	0.420	0.2570
3	5.42	Chloride	2.120	11.796	7.3588
4	7.67	Bromide	0.001	0.005	0.0194
5	8.83	Nitrate	0.001	0.002	0.0745
7	10.57	O.Phos	0.006	0.011	0.0444
8	12.55	Sulfate	0.111	0.254	1.0713



Peak Integration Report

Sample Name:	**1134964**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 21:32**	*Run Time:*	**18.00**

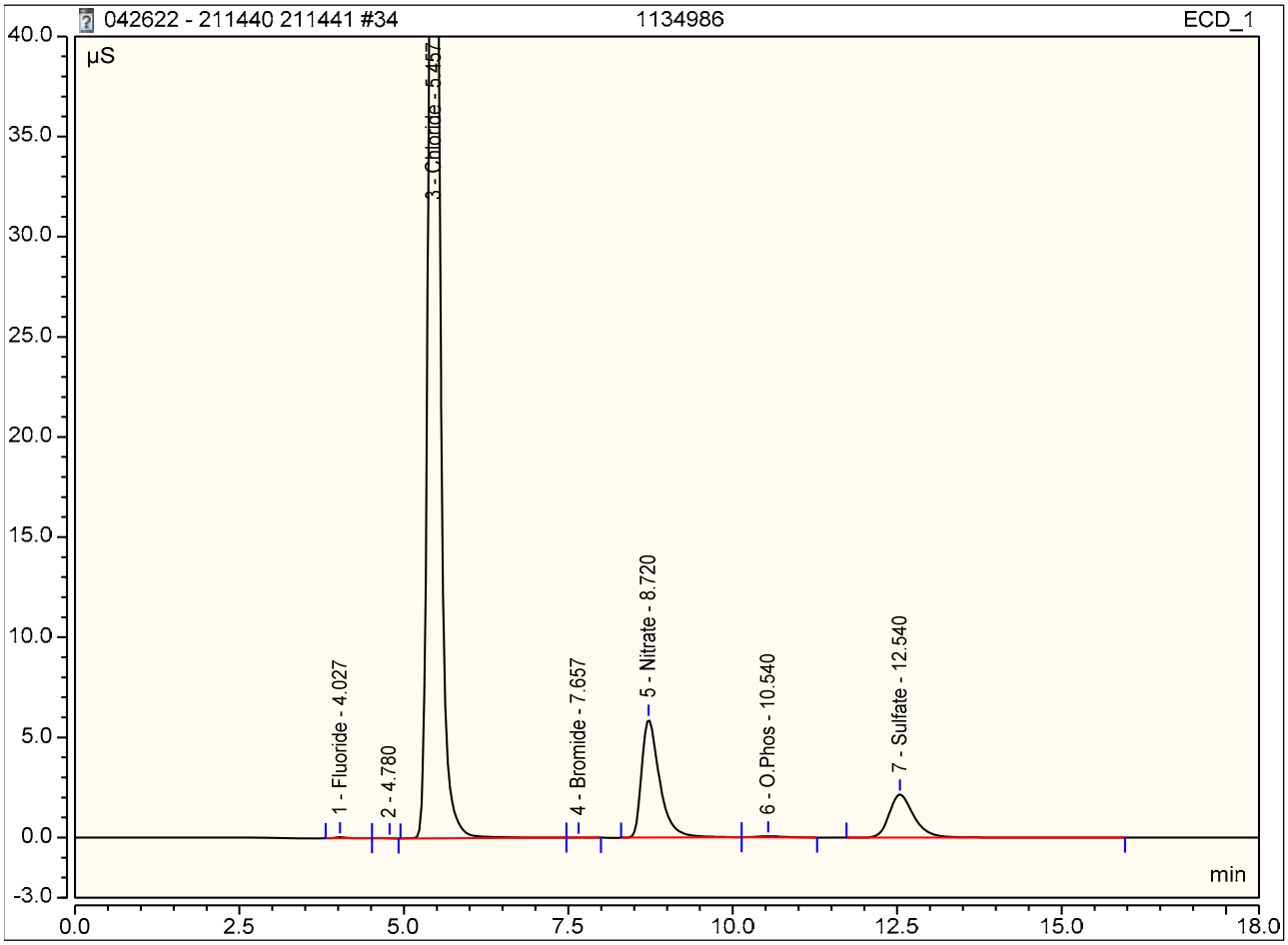
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.023	0.093	0.1100
2	5.47	Chloride	15.924	92.171	52.8296
3	7.65	Bromide	0.001	0.003	0.0107
4	9.35	Nitrate	0.044	0.047	0.1438
5	10.53	O.Phos	0.003	0.006	0.0289
6	12.54	Sulfate	1.498	3.432	7.9342



Peak Integration Report

Sample Name:	**1134986**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 21:50**	*Run Time:*	**18.00**

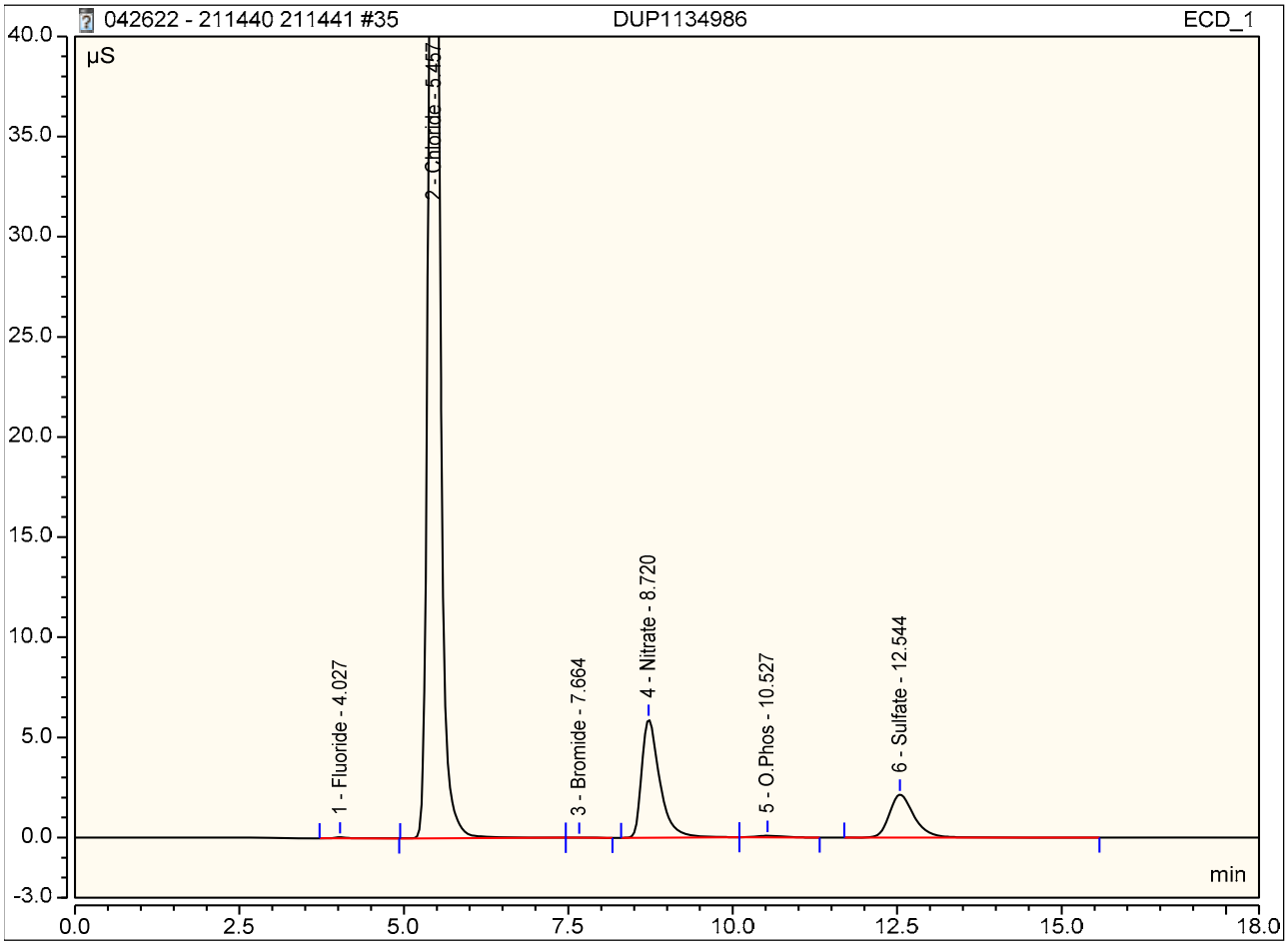
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.011	0.056	0.0765
3	5.46	Chloride	13.699	79.556	45.4978
4	7.66	Bromide	0.001	0.005	0.0174
5	8.72	Nitrate	1.879	5.887	3.0621
6	10.54	O.Phos	0.029	0.058	0.1594
7	12.54	Sulfate	0.949	2.155	5.2148



Peak Integration Report

Sample Name:	**DUP1134986**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 22:08**	*Run Time:*	**18.00**

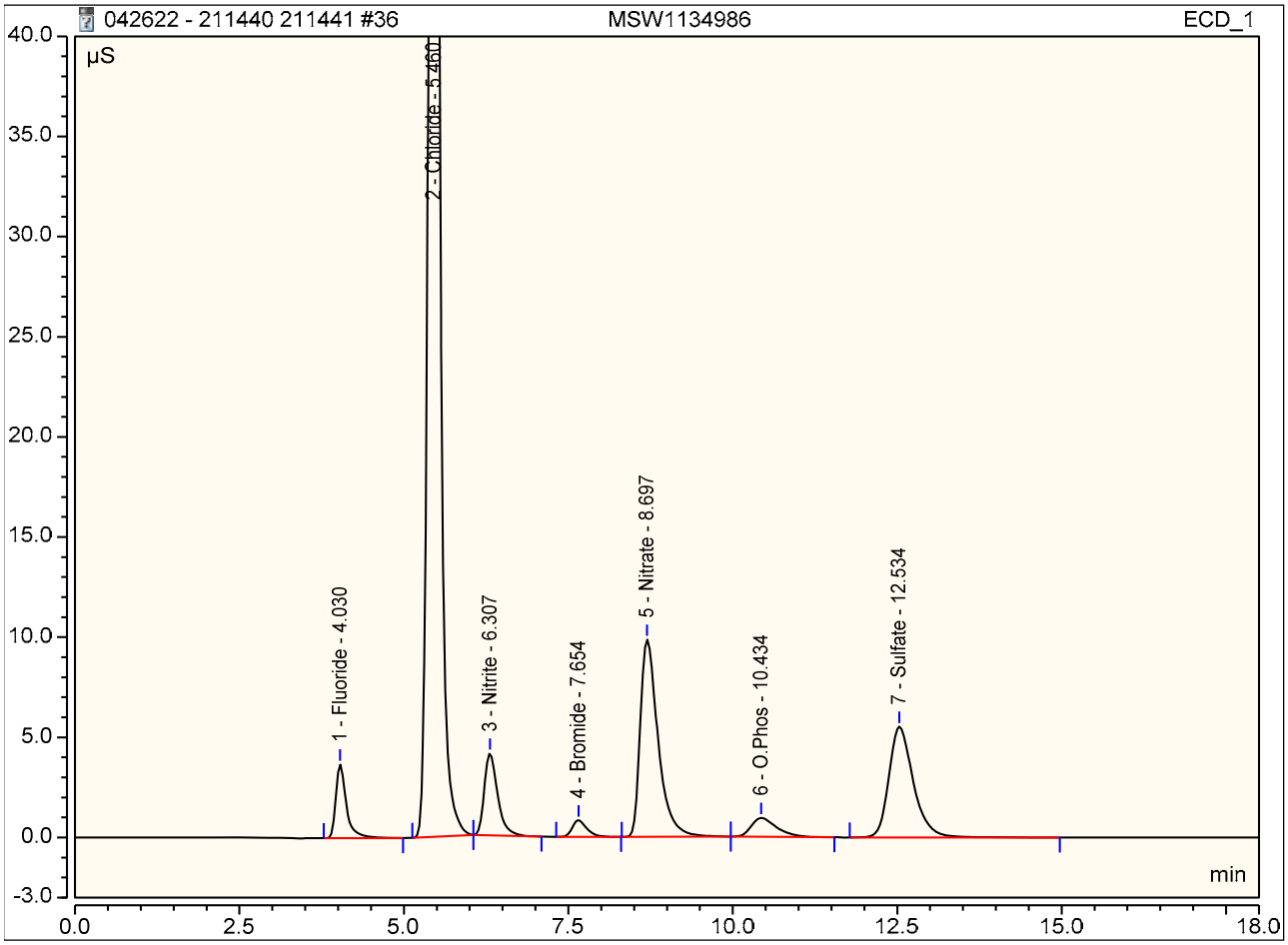
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.015	0.058	0.0884
2	5.46	Chloride	13.685	79.385	45.4532
3	7.66	Bromide	0.002	0.006	0.0207
4	8.72	Nitrate	1.879	5.897	3.0633
5	10.53	O.Phos	0.039	0.079	0.2124
6	12.54	Sulfate	0.947	2.152	5.2072



Peak Integration Report

Sample Name:	**MSW1134986**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 22:26**	*Run Time:*	**18.00**

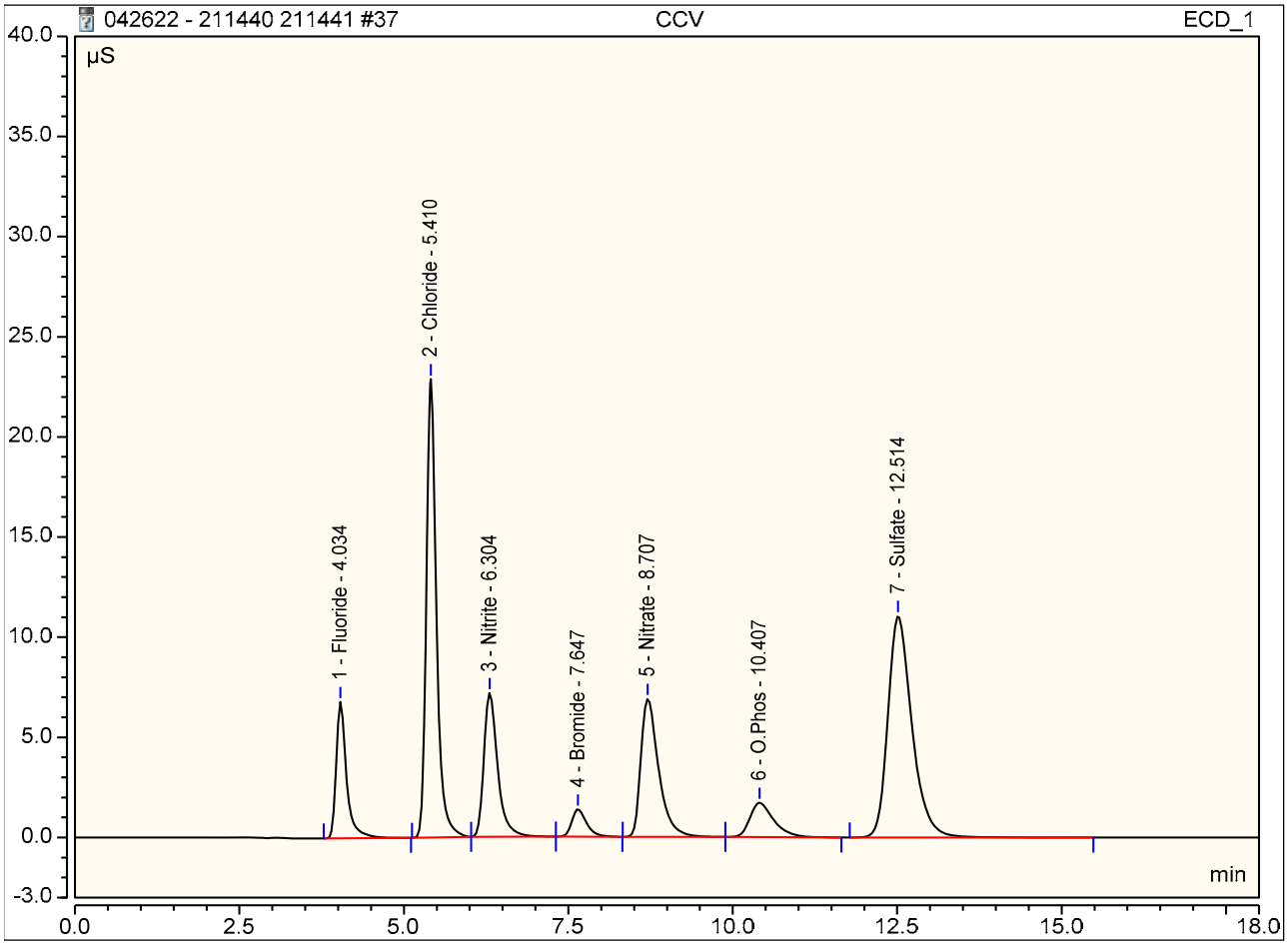
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.688	3.684	1.8556
2	5.46	Chloride	15.532	89.806	51.5360
3	6.31	Nitrite	0.963	4.086	1.9752
4	7.65	Bromide	0.214	0.824	2.1393
5	8.70	Nitrate	3.104	9.847	5.0119
6	10.43	O.Phos	0.423	0.946	2.1249
7	12.53	Sulfate	2.380	5.525	12.2980



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 22:44**	*Run Time:*	**18.00**

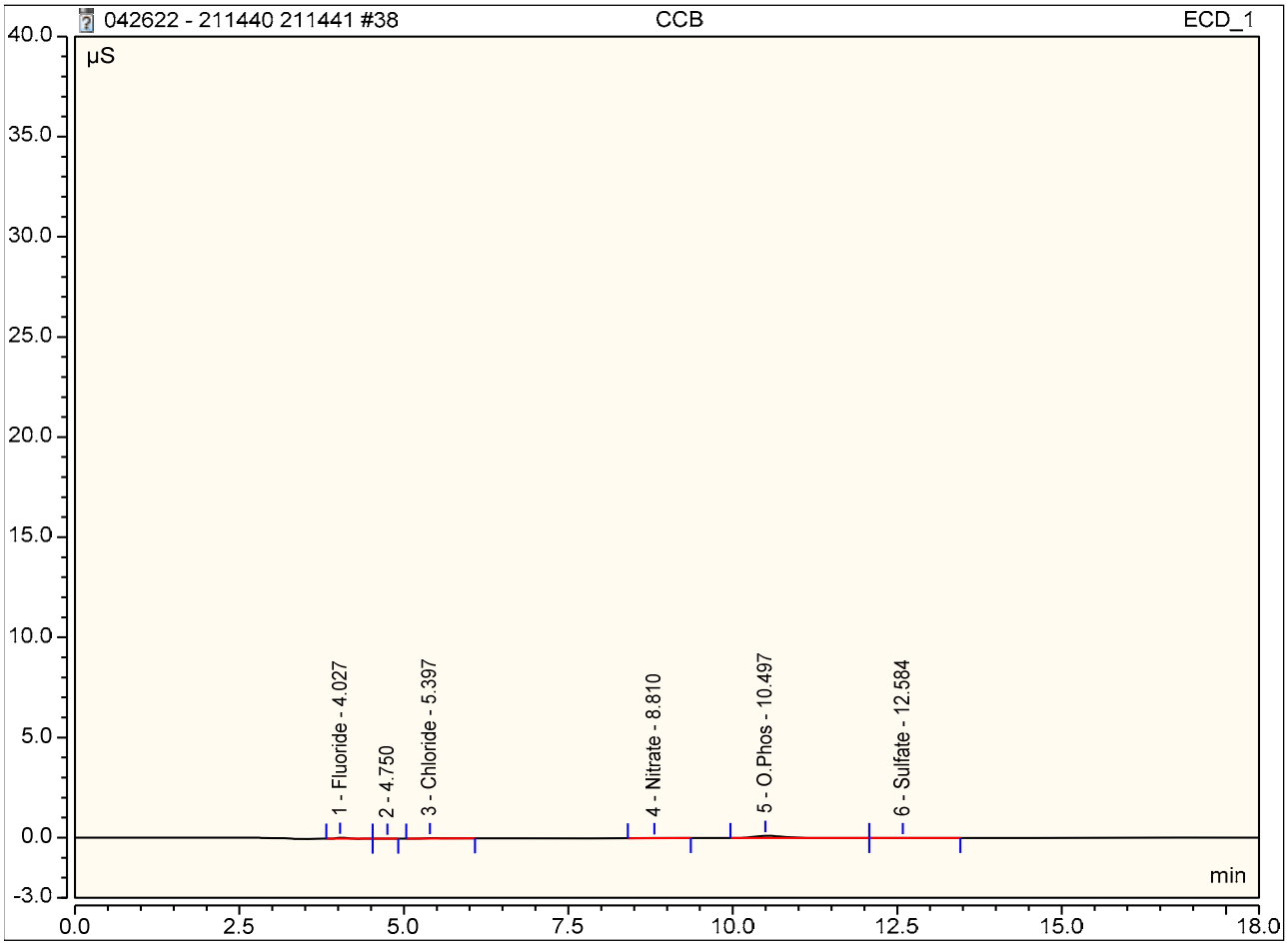
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	1.246	6.810	3.3220
2	5.41	Chloride	4.052	22.885	13.7206
3	6.30	Nitrite	1.746	7.178	3.5592
4	7.65	Bromide	0.357	1.367	3.5653
5	8.71	Nitrate	2.163	6.893	3.5140
6	10.41	O.Phos	0.724	1.719	3.6261
7	12.51	Sulfate	4.696	11.068	23.7549



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC4083A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2022 / 23:02**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.03	Fluoride	0.010	0.052	0.0746
3	5.40	Chloride	0.005	0.024	0.3918
4	8.81	Nitrate	0.001	0.002	0.0749
5	10.50	O.Phos	0.058	0.109	0.3075
6	12.58	Sulfate	0.002	0.004	0.5313



Schedule File: C:\INSTARCH\Sequences\System 2\042522 - ic4106.SCH

Line	Sample	Sample Type	Level	Method	Data File	Volume	Dilution
4	STD1	Calibration St	1	ic4106.met	std1_004.dxd	1	1
6	STD3	Calibration St	3	ic4106.met	std3_006.dxd	1	1
7	STD4	Calibration St	4	ic4106.met	std4_007.dxd	1	1
8	STD5	Calibration St	5	ic4106.met	std5_008.dxd	1	1
9	STD6	Calibration St	6	ic4106.met	std6_009.dxd	1	1
10	STD7	Calibration St	7	ic4106.met	std7_010.dxd	1	1
11	STD8	Calibration St	8	ic4106.met	std8_011.dxd	1	1
12	STD9	Calibration St	9	ic4106.met	std9_012.dxd	1	1
15	STD2	Calibration St	2	ic4106.met	std2_015.dxd	1	1
17	ICV	Sample		ic4106.met	icv_017.dxd	1	1
18	ICB	Sample		ic4106.met	icb_018.dxd	1	1

Calibration Concentrations

Instrument:	DX-120 (2)	Cal. File:	IC4106		ICV	IC4096 IC4107		Analyst/Date: TMG 04/25/2022		
Analyte	Cal Level 1 (mg/L)	Cal Level 2 (mg/L)	Cal Level 3 (mg/L)	Cal Level 4 (mg/L)	Cal Level 5 (mg/L)	Cal Level 6 (mg/L)	Cal Level 7 (mg/L)	Cal Level 8 (mg/L)	Cal Level 9 (mg/L)	ICV (mg/L)
Fluoride	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Chloride	0.0	0.5	0.75	1.0	5.0	10.0	20.0	30.0	40.0	15.0
Bromide	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrite	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrate	0.0	0.1	0.30	0.5	1.0	2.0	5.0	7.0		3.5
O-Phoshorous	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Sulfate	0.0	0.5	0.75	1.0	5.0	10.0	30.0	50.0	70.0	25.0

RJ 05/05/2022

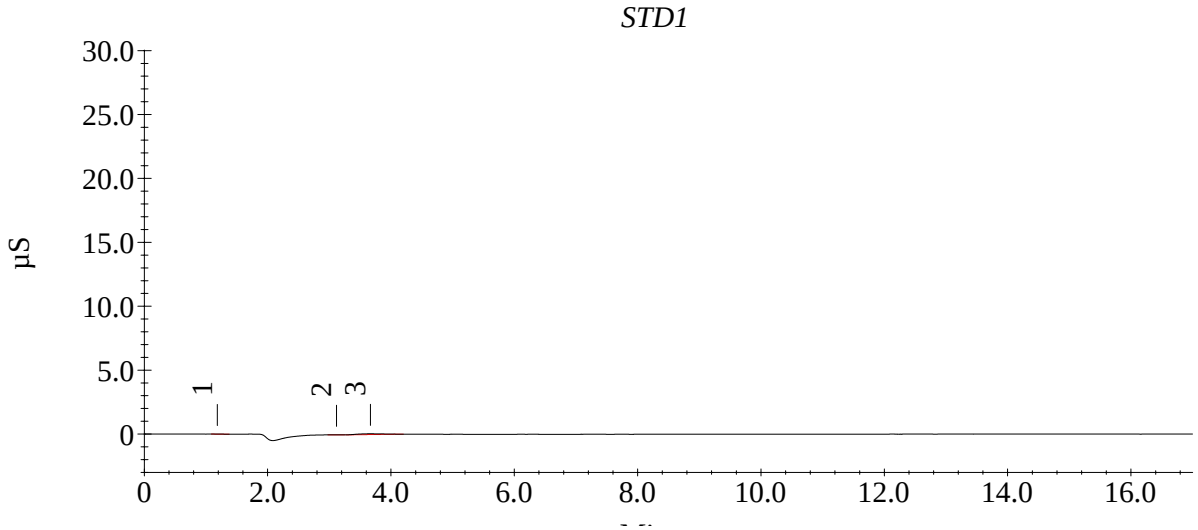
Calibration Update Report

Sample Name : STD1
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\STD1_004.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Schedule File Name : c:\instarch\sequences\system 2\042522 - ic4106.sch
Date Time Collected : 4/25/22 11:23
Calibration Date : 4/25/22 11:40
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
3	Chloride	3.67	0	18900	18900



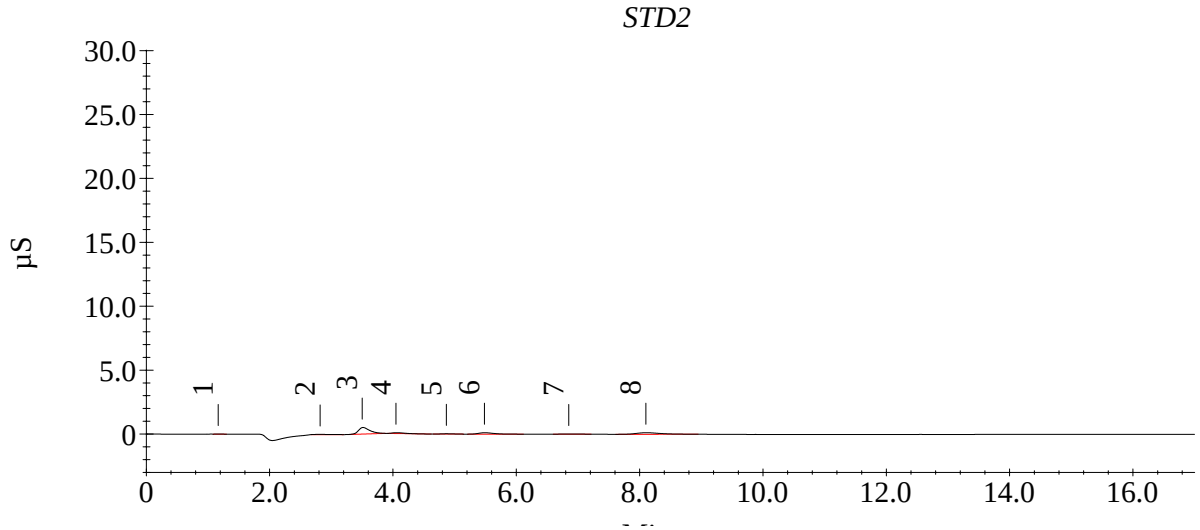
Calibration Update Report

Sample Name : STD2
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\STD2_015.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Schedule File Name : c:\instarch\sequences\system 2\042522 - ic4106.sch
Date Time Collected : 4/26/22 07:26
Calibration Date : 4/26/22 07:43
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	2.82	3393	3742	3742
3	Chloride	3.50	58532	66760	66760
4	Nitrite	4.05	10247	8762	8762
5	Bromide	4.87	2603	3133	3133
6	Nitrate	5.48	14170	19634	19634
7	O.Phos	6.85	0	3287	3287
8	Sulfate	8.10	36226	34896	34896



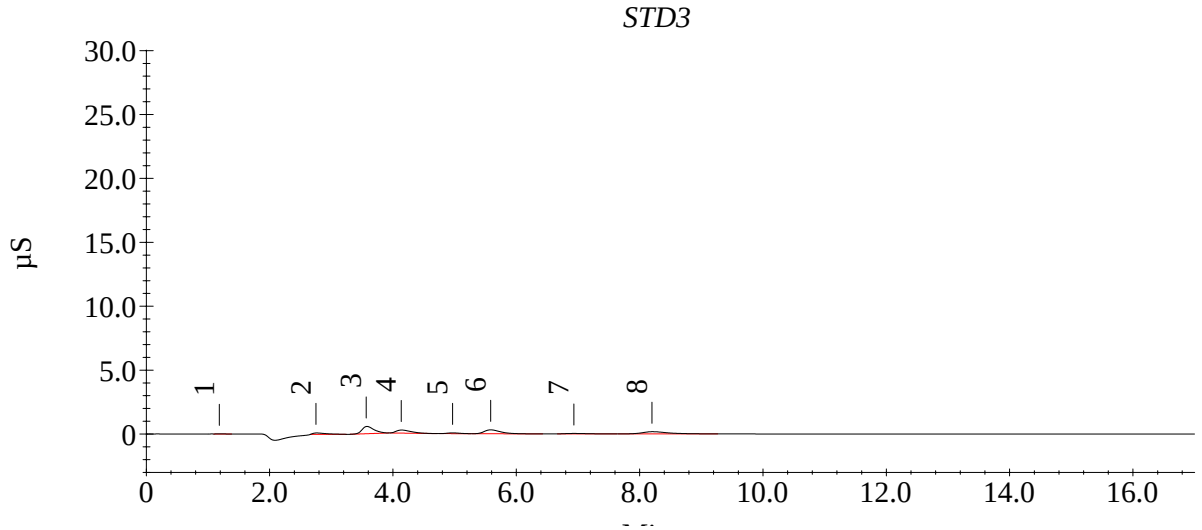
Calibration Update Report

Sample Name : STD3
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\STD3_006.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Schedule File Name : c:\instarch\sequences\system 2\042522 - ic4106.sch
Date Time Collected : 4/25/22 12:02
Calibration Date : 4/25/22 12:19
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	2.75	0	16550	16550
3	Chloride	3.57	0	77712	77712
4	Nitrite	4.13	0	40550	40550
5	Bromide	4.97	0	8290	8290
6	Nitrate	5.58	0	56688	56688
7	O.Phos	6.93	0	8534	8534
8	Sulfate	8.20	0	52945	52945



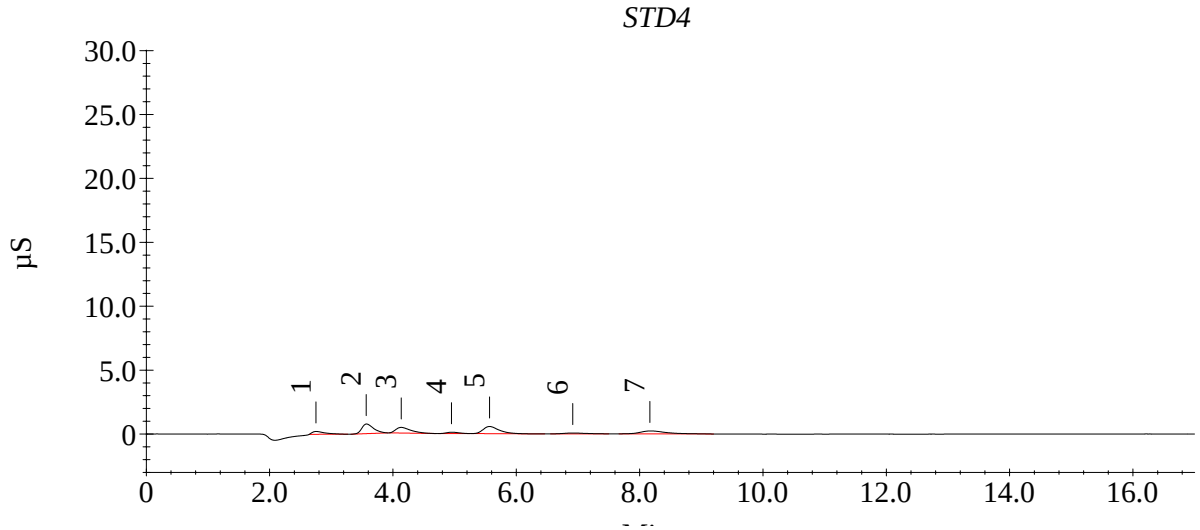
Calibration Update Report

Sample Name : STD4
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\STD4_007.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Schedule File Name : c:\instarch\sequences\system 2\042522 - ic4106.sch
Date Time Collected : 4/25/22 12:21
Calibration Date : 4/25/22 12:38
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	Fluoride	2.75	0	32713	32713
2	Chloride	3.57	0	100073	100073
3	Nitrite	4.13	0	75003	75003
4	Bromide	4.95	0	14703	14703
5	Nitrate	5.57	0	102565	102565
6	O.Phos	6.92	0	16500	16500
7	Sulfate	8.17	0	66370	66370



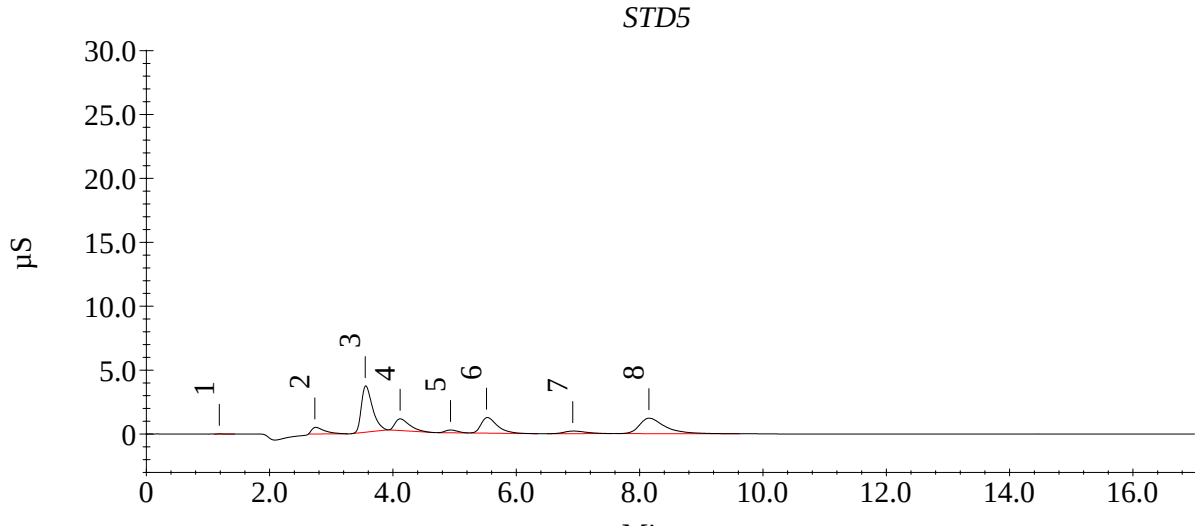
Calibration Update Report

Sample Name : STD5
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\STD5_008.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Schedule File Name : c:\instarch\sequences\system 2\042522 - ic4106.sch
Date Time Collected : 4/25/22 12:40
Calibration Date : 4/25/22 12:57
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	2.73	0	75670	75670
3	Chloride	3.55	0	453771	453771
4	Nitrite	4.12	0	149999	149999
5	Bromide	4.93	0	29660	29660
6	Nitrate	5.52	0	223393	223393
7	O.Phos	6.92	0	50889	50889
8	Sulfate	8.15	0	349509	349509



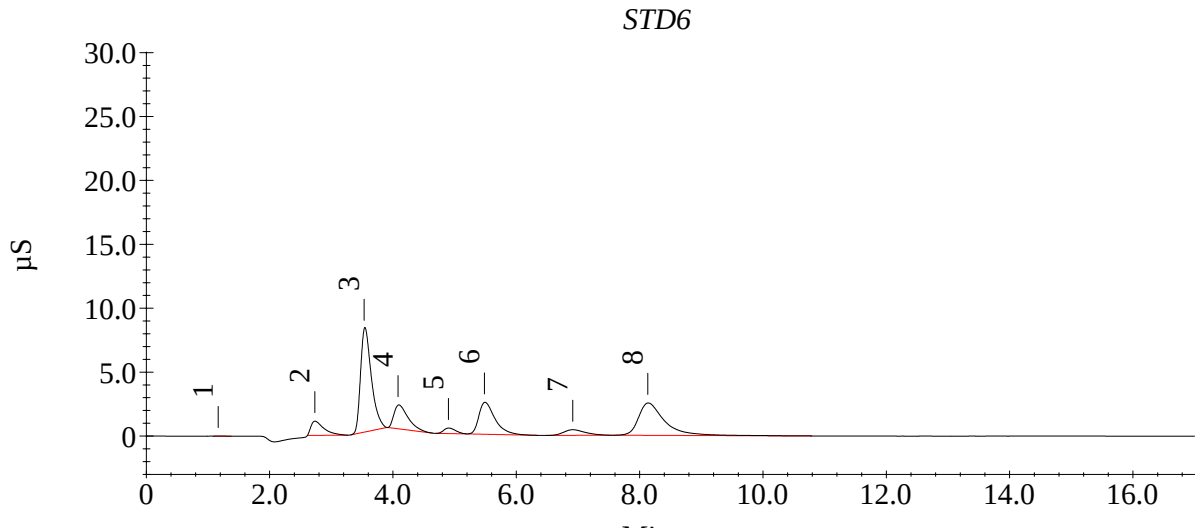
Calibration Update Report

Sample Name : STD6
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\STD6_009.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Schedule File Name : c:\instarch\sequences\system 2\042522 - ic4106.sch
Date Time Collected : 4/25/22 12:59
Calibration Date : 4/25/22 13:16
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	2.73	0	162835	162835
3	Chloride	3.53	0	992280	992280
4	Nitrite	4.08	0	299933	299933
5	Bromide	4.90	0	57987	57987
6	Nitrate	5.48	0	455799	455799
7	O.Phos	6.92	0	105704	105704
8	Sulfate	8.13	0	746183	746183



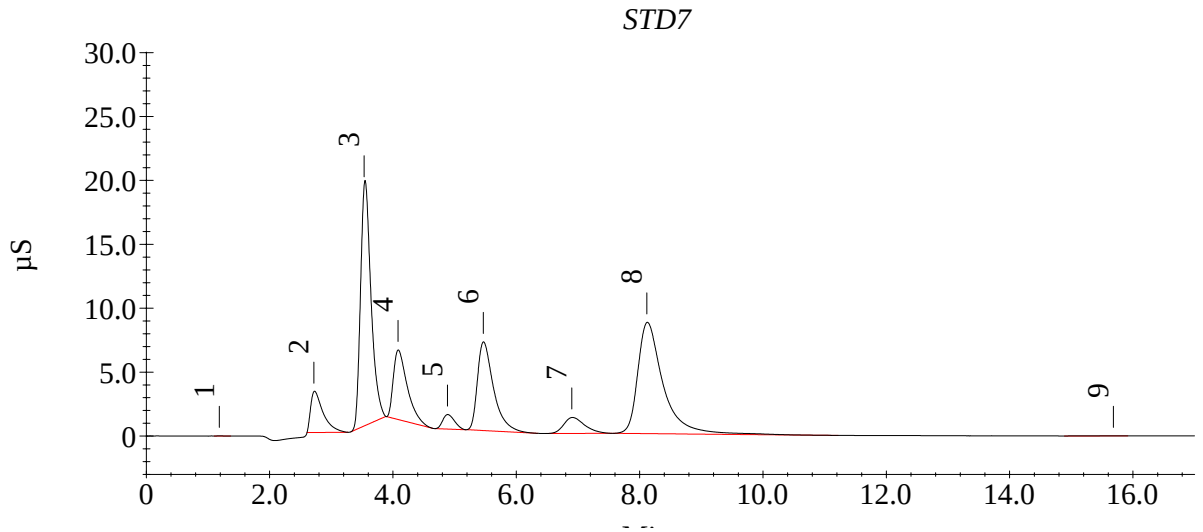
Calibration Update Report

Sample Name : STD7
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\STD7_010.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Schedule File Name : c:\instarch\sequences\system 2\042522 - ic4106.sch
Date Time Collected : 4/25/22 13:19
Calibration Date : 4/25/22 13:36
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	2.72	0	451065	451065
3	Chloride	3.53	0	2255652	2255652
4	Nitrite	4.08	0	856341	856341
5	Bromide	4.88	0	151609	151609
6	Nitrate	5.47	0	1257180	1257180
7	O.Phos	6.90	0	295059	295059
8	Sulfate	8.12	0	2491289	2491289



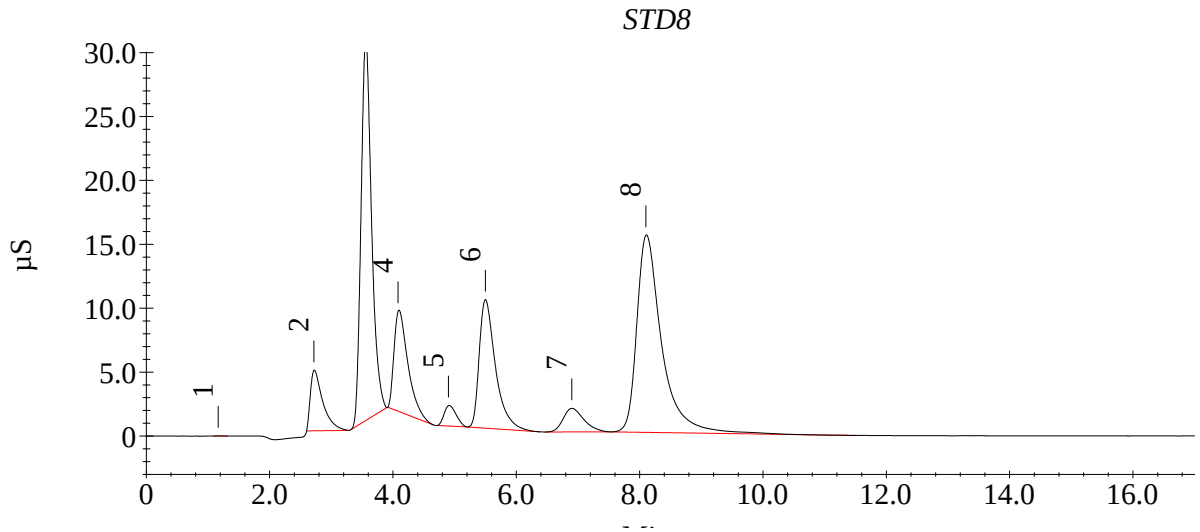
Calibration Update Report

Sample Name : STD8
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\STD8_011.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Schedule File Name : c:\instarch\sequences\system 2\042522 - ic4106.sch
Date Time Collected : 4/25/22 13:38
Calibration Date : 4/25/22 13:55
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	2.72		659356	
3	Chloride	3.55	0	3540151	3540151
4	Nitrite	4.08		1241640	
5	Bromide	4.90		216515	
6	Nitrate	5.50	0	1840060	1840060
7	O.Phos	6.90		430569	
8	Sulfate	8.10	0	4329587	4329587



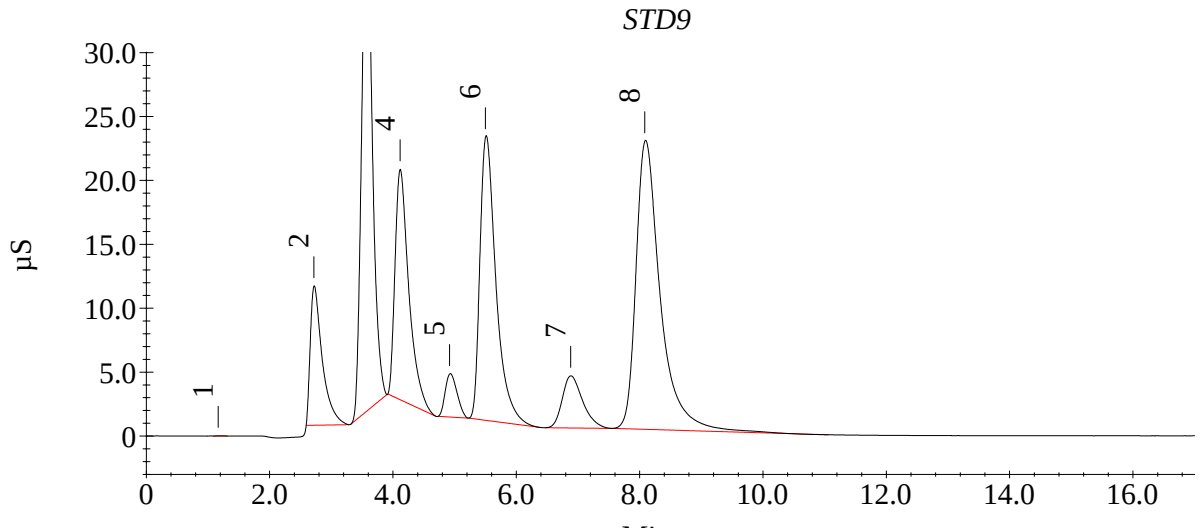
Calibration Update Report

Sample Name : STD9
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\STD9_012.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Schedule File Name : c:\instarch\sequences\system 2\042522 - ic4106.sch
Date Time Collected : 4/25/22 13:57
Calibration Date : 4/25/22 14:14
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	2.72		1469940	
3	Chloride	3.57	0	4824843	4824843
4	Nitrite	4.12		2806329	
5	Bromide	4.92		450026	
6	Nitrate	5.50		4018108	
7	O.Phos	6.88		934962	
8	Sulfate	8.08	0	6201093	6201093



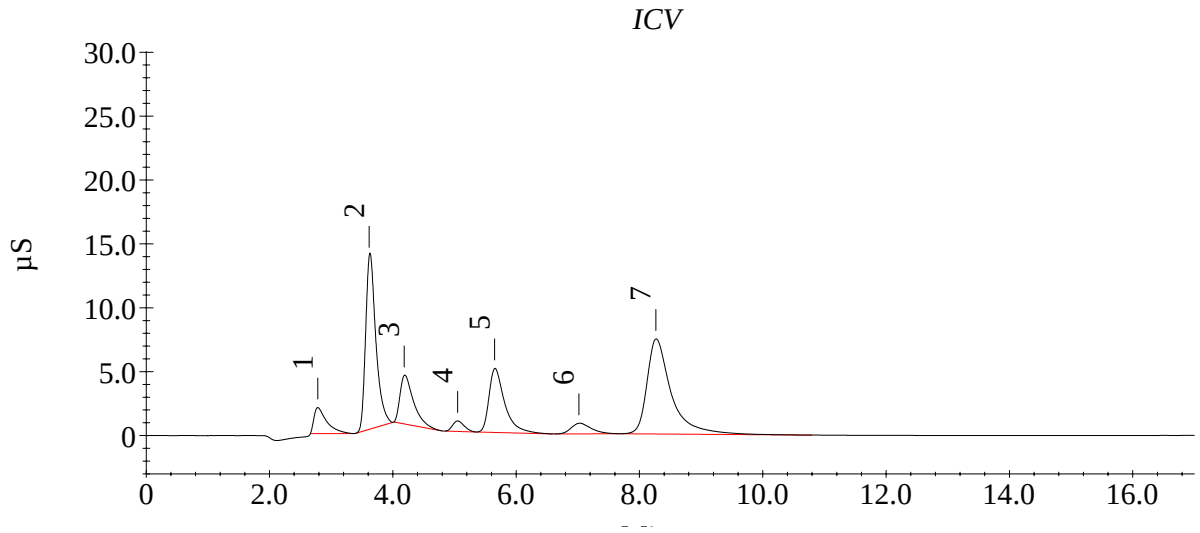
Sample Analysis Report

Sample Name : ICV
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\ICV_017.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/26/22 08:16
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.78	3.3039	291348	20311	
2	Chloride	3.62	13.7024	1584710	135614	
3	Nitrite	4.18	3.4882	585230	37872	
4	Bromide	5.05	3.5600	107246	8245	
5	Nitrate	5.65	3.4894	886258	49985	
6	O.Phos	7.02	3.2698	188180	8309	
7	Sulfate	8.27	23.7168	2032871	74250	



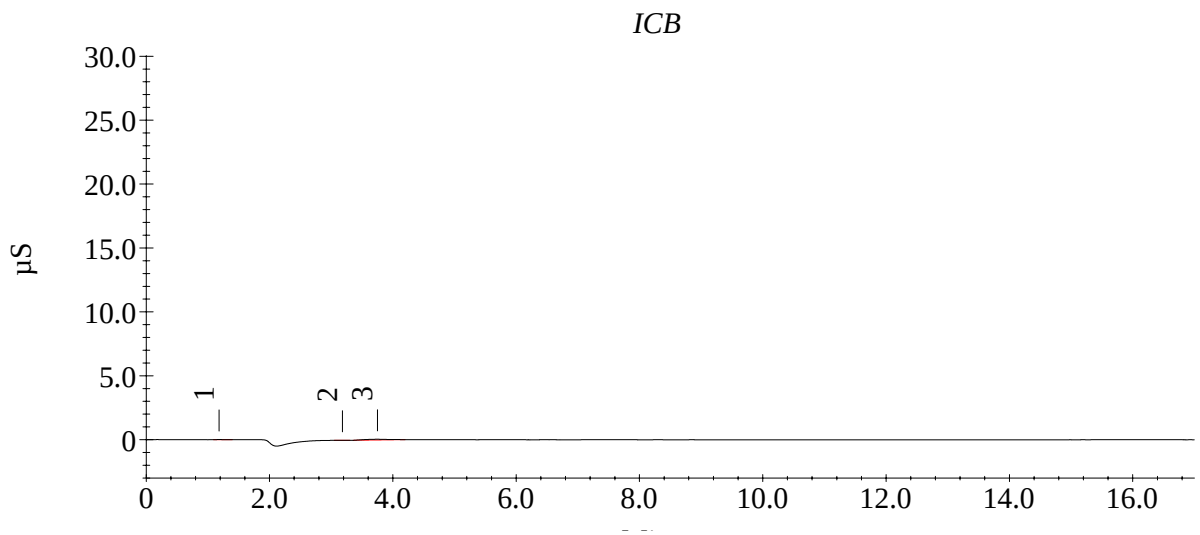
Sample Analysis Report

Sample Name : ICB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042522 -\ICB_018.DXD

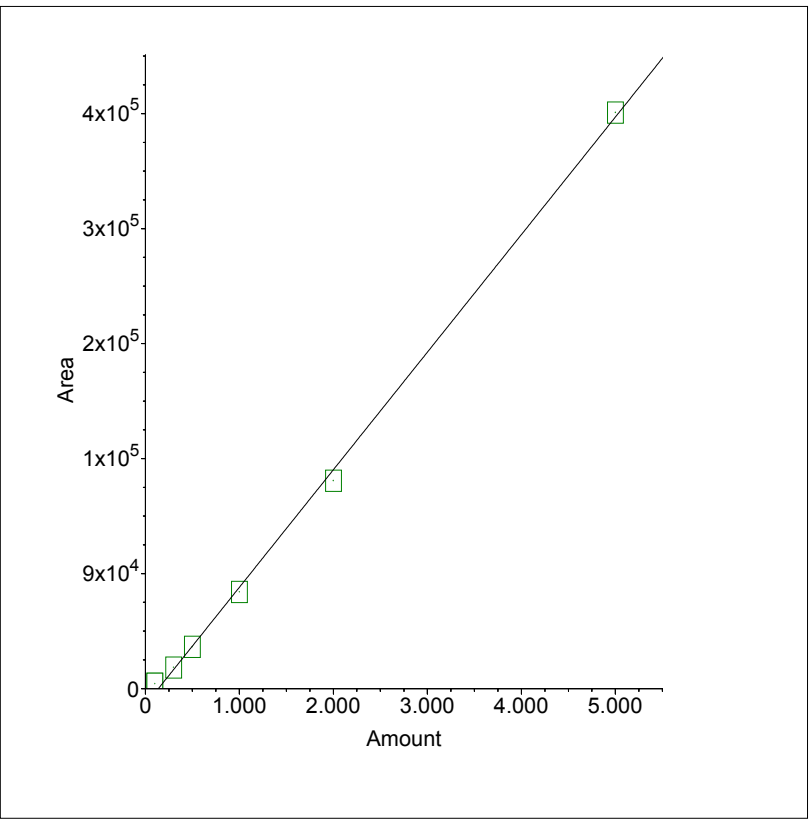
Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/26/22 08:35
System Operator : TMG

Peak Information : Found Components

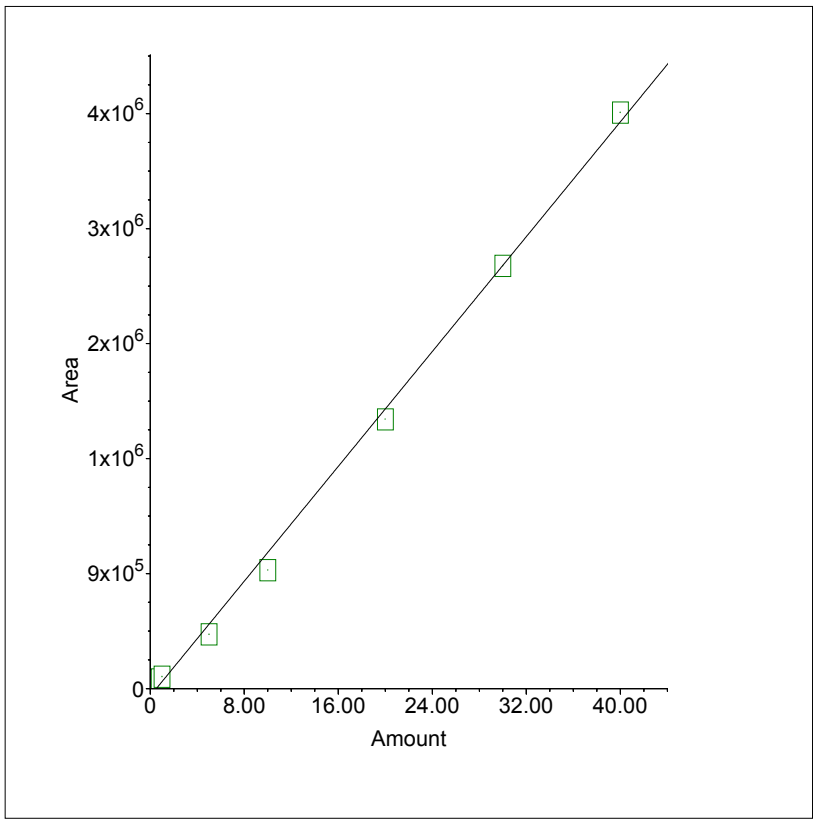
Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.75	0.6519	15693	555	



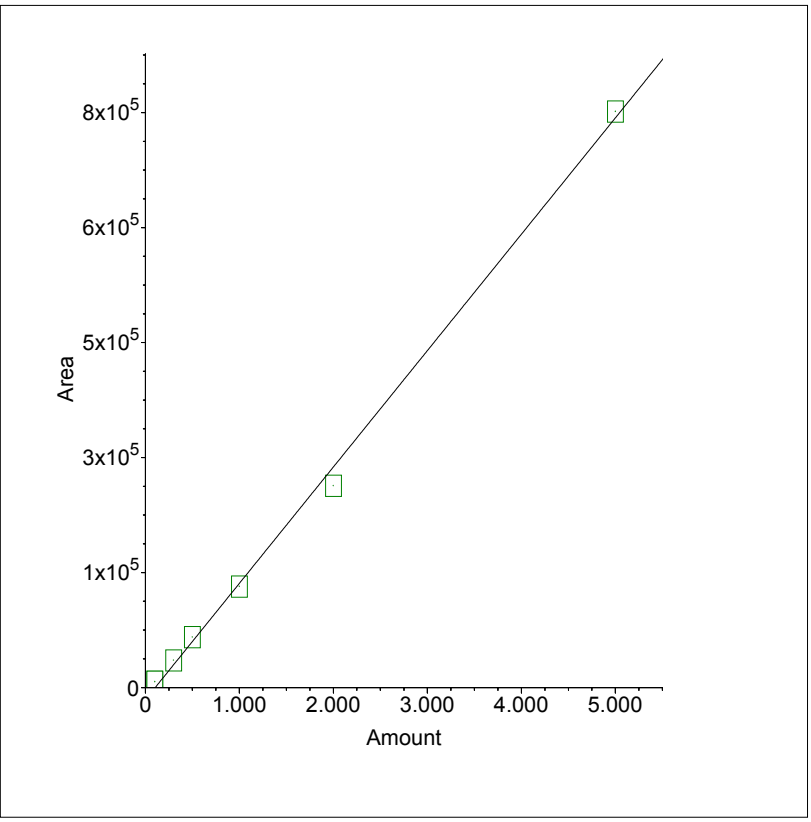
1. Component:Fluoride
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.998936
Amt=1.086e-005*Resp+0.1389



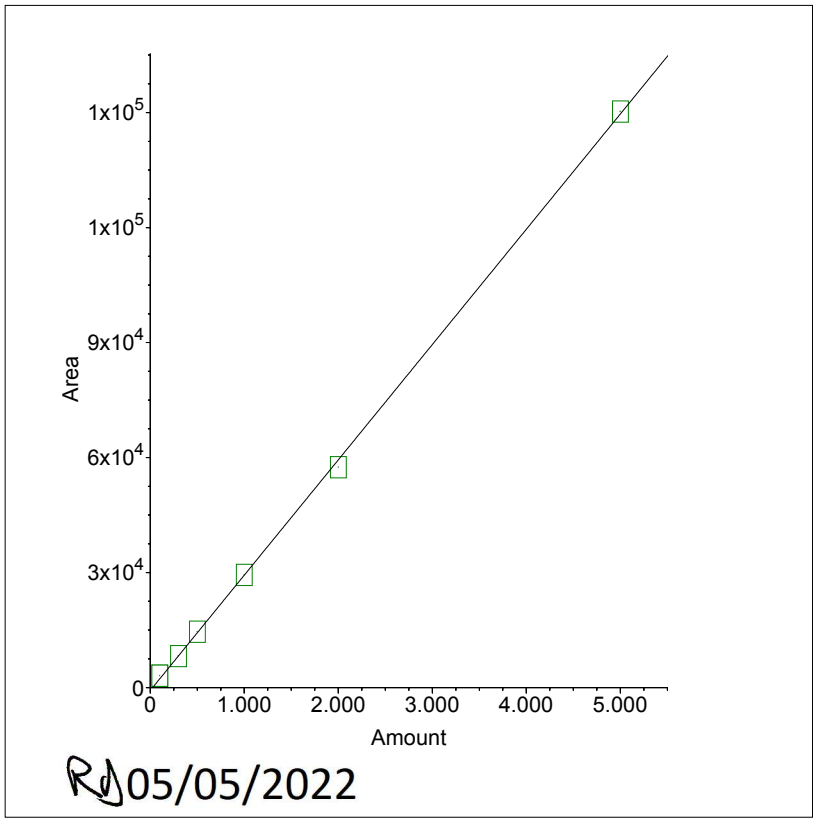
2. Component:Chloride
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.997695
Amt=8.318e-006*Resp+0.5213



3. Component:Nitrite
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.997904
Amt=5.781e-006*Resp+0.1049

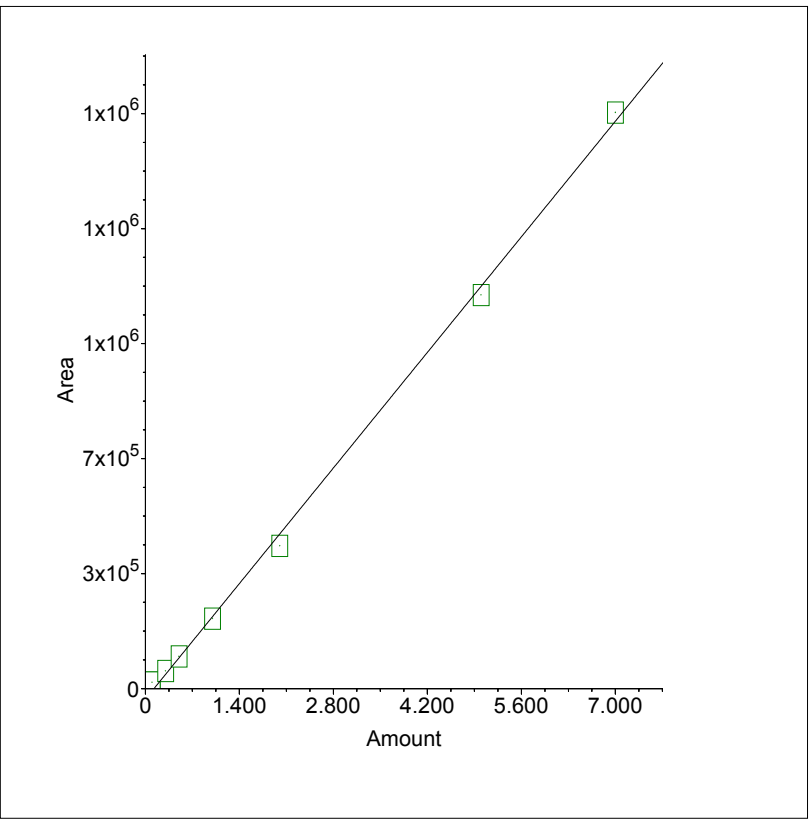


4. Component:Bromide
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999682
Amt=3.296e-005*Resp+0.02571

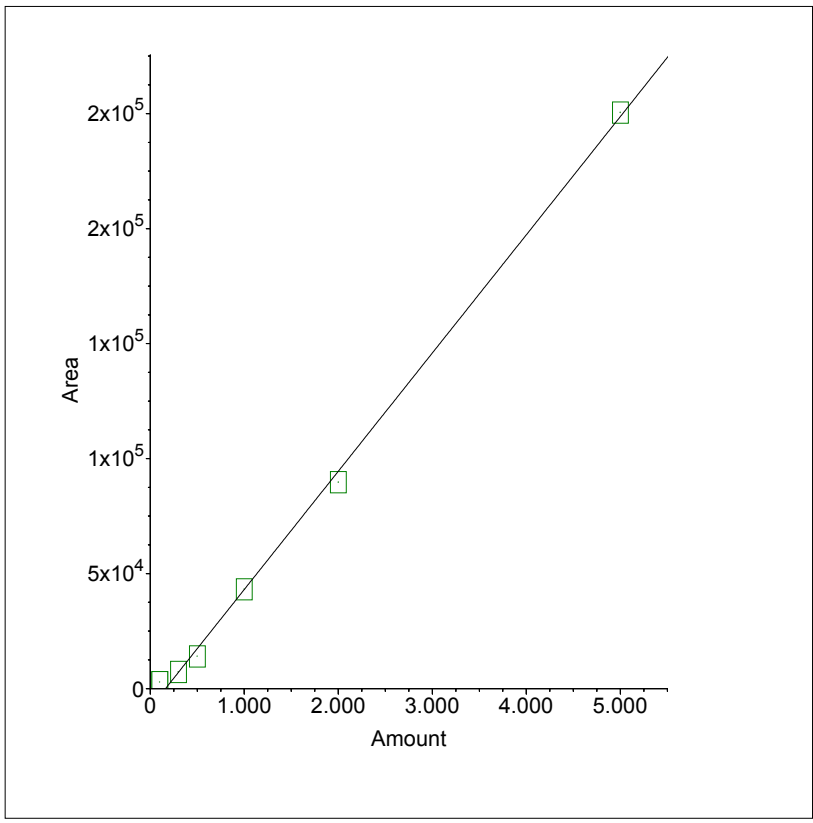


RJ 05/05/2022

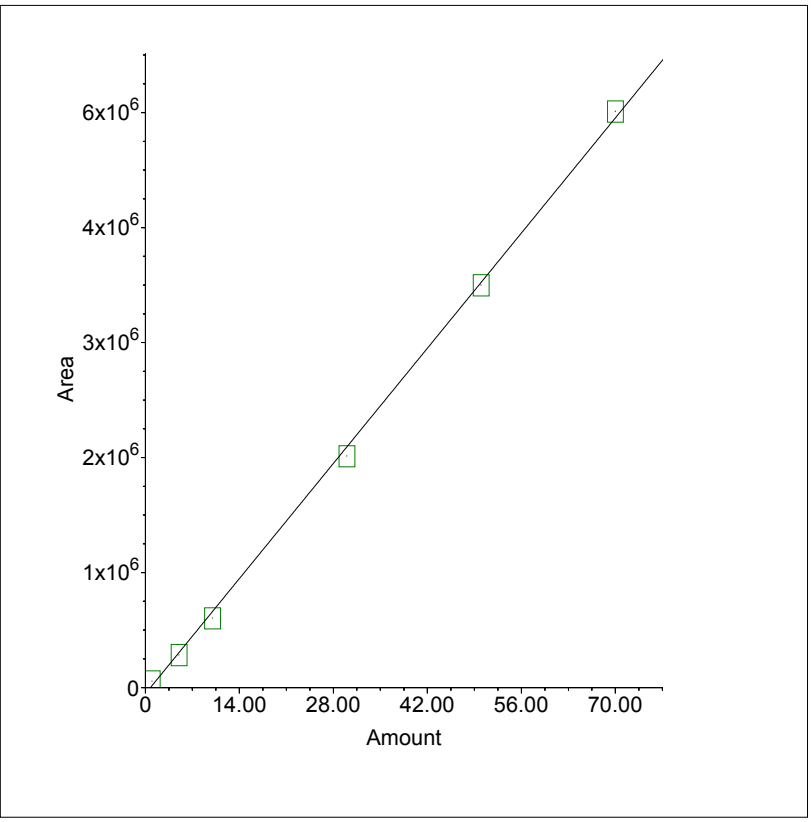
5. Component:Nitrate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.998705
Amt=3.792e-006*Resp+0.1289



6. Component:O.Phos
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.998393
Amt=1.651e-005*Resp+0.1623



7. Component:Sulfate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999235
Amt=1.129e-005*Resp+0.7604



RJ 05/05/2022

Schedule File: C:\INSTARCH\Sequences\System 2\042822 -.sch

Line	Sample	Sample Type	Level	Method	Data File
1	CCV	Sample		ic4106.met	ccv_001.dxd
2	CCB	Sample		ic4106.met	ccb_002.dxd
3	1136205	Sample		ic4106.met	1136205_003.dxd
4	1136206	Sample		ic4106.met	1136206_004.dxd
5	1136207	Sample		ic4106.met	1136207_005.dxd
6	1136208	Sample		ic4106.met	1136208_006.dxd
7	1136209	Sample		ic4106.met	1136209_007.dxd
8	1136210	Sample		ic4106.met	1136210_008.dxd
9	1136211	Sample		ic4106.met	1136211_009.dxd
10	1136213	Sample		ic4106.met	1136213_010.dxd
11	1136214	Sample		ic4106.met	1136214_011.dxd
12	1136215	Sample		ic4106.met	1136215_012.dxd
13	CCV	Sample		ic4106.met	ccv_013.dxd
14	LCSW	Sample		ic4106.met	lcsw_014.dxd
15	MBW-CCB	Sample		ic4106.met	mbw-ccb_015.dxd
16	1136216	Sample		ic4106.met	1136216_016.dxd
17	1136217	Sample		ic4106.met	1136217_017.dxd
18	1136203	Sample		ic4106.met	1136203_018.dxd
19	1136204	Sample		ic4106.met	1136204_019.dxd
20	DUP1136203	Sample		ic4106.met	dup1136203_020.dxd
21	MSW1136203	Sample		ic4106.met	msw1136203_021.dxd
22	MSDW1136203	Sample		ic4106.met	msdw1136203_022.dxd
23	1136205X5	Sample		ic4106.met	1136205x5_023.dxd
24	1136217X5	Sample		ic4106.met	1136217x5_024.dxd
26	CCV	Sample		ic4106.met	ccv_026.dxd
27	CCB	Sample		ic4106.met	ccb_027.dxd

63	CCV	Sample		ic4106.met	ccv_063.dxd

Schedule File: C:\INSTARCH\Sequences\System 2\042822 -.sch

Line	Sample	Sample Type	Level	Method	Data File
64	CCB	Sample		ic4106.met	ccb_064.dxd
65	1136207X5	Sample		ic4106.met	1136207x5_065.dxd
66	1136215X5	Sample		ic4106.met	1136215x5_066.dxd
67	1136412	Sample		ic4106.met	1136412_067.dxd
68	CCV	Sample		ic4106.met	ccv_068.dxd
69	CCB	Sample		ic4106.met	ccb_069.dxd
70	CCV	Sample		ic4106.met	ccv_070.dxd
71	CCB	Sample		ic4106.met	ccb_071.dxd
72	1136203X5	Sample		ic4106.met	1136203x5_072.dxd
73	DUP1136203X5	Sample		ic4106.met	dup1136203x5_073.dxd
74	MSW1136203X5	Sample		ic4106.met	msw1136203x5_074.dxd
75	MSDW1136203X5	Sample		ic4106.met	msdw1136203x5_075.dxd
82	CCV	Sample		ic4106.met	ccv_082.dxd
83	CCB	Sample		ic4106.met	ccb_083.dxd
93	CCV	Sample		ic4106.met	ccv
94	LCSW	Sample		ic4106.met	lcsw
95	MBW-CCB	Sample		ic4106.met	mbw-ccb
96	1136588	Sample		ic4106.met	1136588
97	1136588X5	Sample		ic4106.met	1136588x5
98	1136671	Sample		ic4106.met	1136671
99	1136671X5	Sample		ic4106.met	1136671x5
100	1136672	Sample		ic4106.met	1136672
101	1136672X5	Sample		ic4106.met	1136672x5
102	1136673	Sample		ic4106.met	1136673
103	1136673X5	Sample		ic4106.met	1136673x5
104	1136674	Sample		ic4106.met	1136674
105	1136674X5	Sample		ic4106.met	1136674x5
106	CCV	Sample		ic4106.met	ccv
107	CCB	Sample		ic4106.met	ccb
108	DUP1136674	Sample		ic4106.met	dup1136674
109	MSW1136674	Sample		ic4106.met	msw1136674
110	MSDW1136674	Sample		ic4106.met	msdw1136674
117	CCV	Sample		ic4106.met	ccv
118	CCB	Sample		ic4106.met	ccb

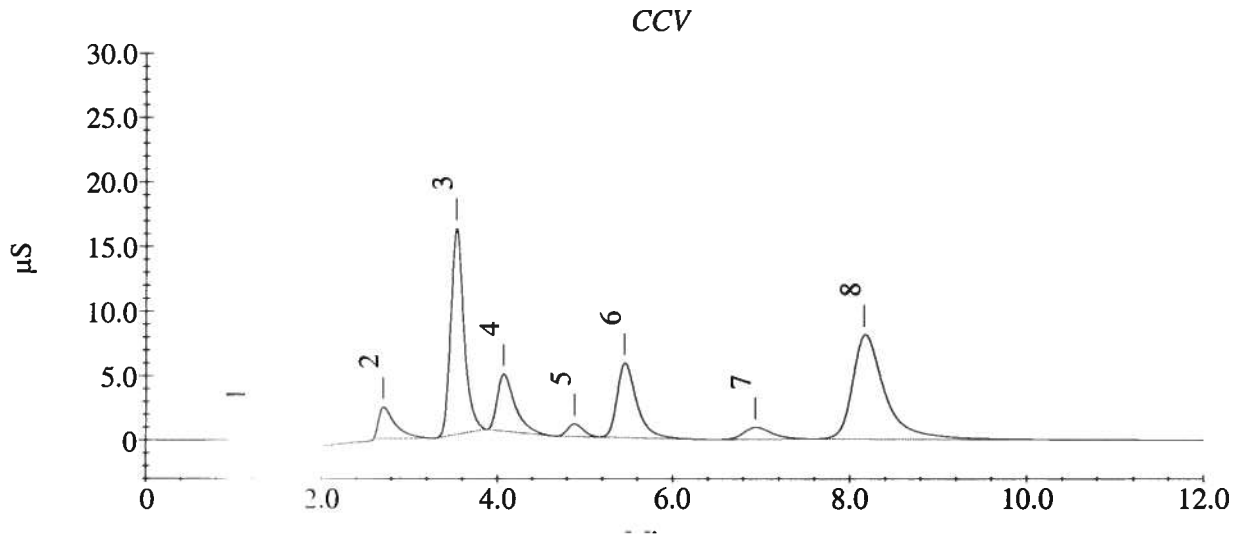
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\042822 -\CCV_001.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 10:23
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.70	3.5637	315266	24141	
3	Chloride	3.53	14.4085	1669595	159256	
4	Nitrite	4.07	3.7227	625789	43966	
5	Bromide	4.88	3.9293	118450	9742	
6	Nitrate	5.45	3.5648	906148	57456	
7	O.Phos	6.93	3.5321	204059	9293	
8	Sulfate	8.17	24.1662	2072663	80563	



Page 1665

Sample Analysis Report

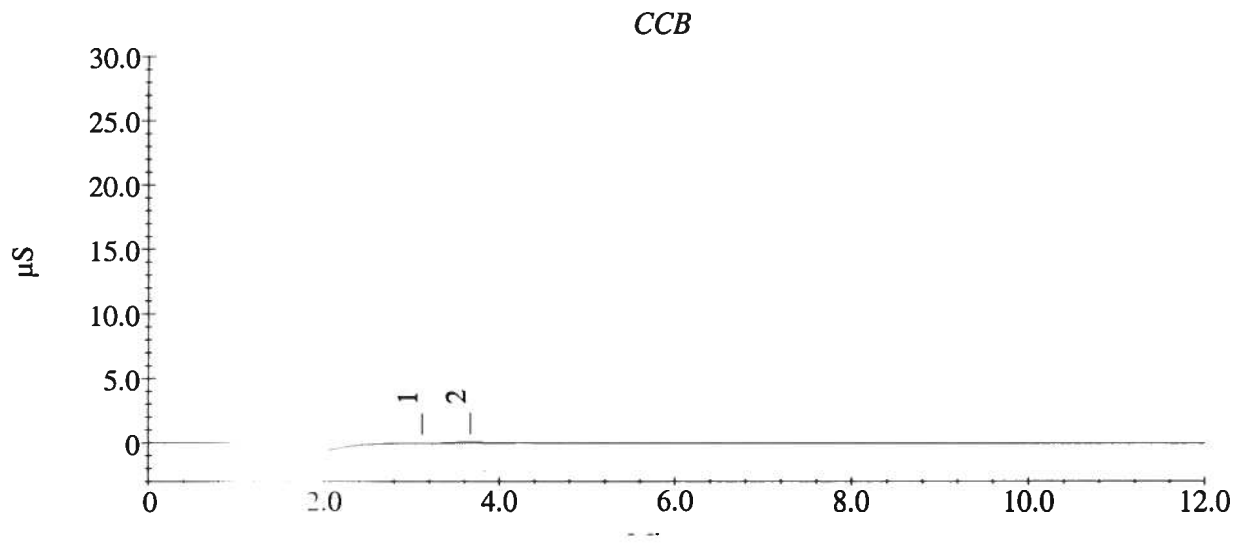
Sample Name : CCB
Data File Name : c:\instarch\data\system 2\042822 -\CCB_002.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 10:38
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Chloride	3.67	0.6607	16755	563	

Page 1666



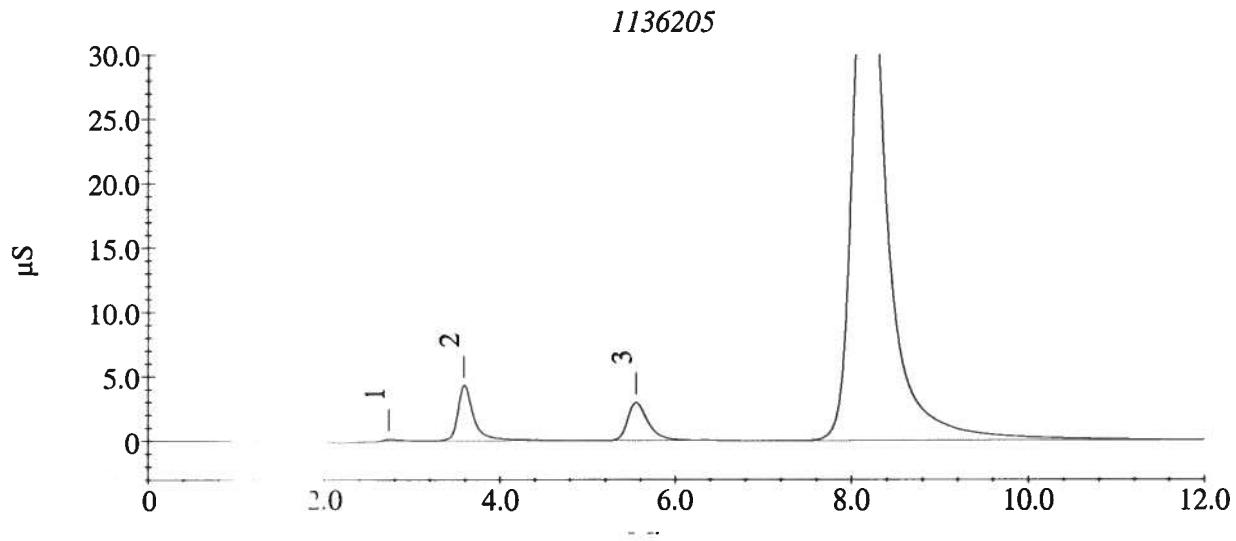
Sample Analysis Report

Sample Name : 1136205
Data File Name : c:\instarch\data\system 2\042822 -\1136205_003.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 10:52
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.73	0.2907	13974	1142	
2	Chloride	3.58	5.1385	555104	42725	
3	Nitrate	5.55	1.9401	477660	29399	
4	Sulfate	8.15	132.0624	11627247	458935	+



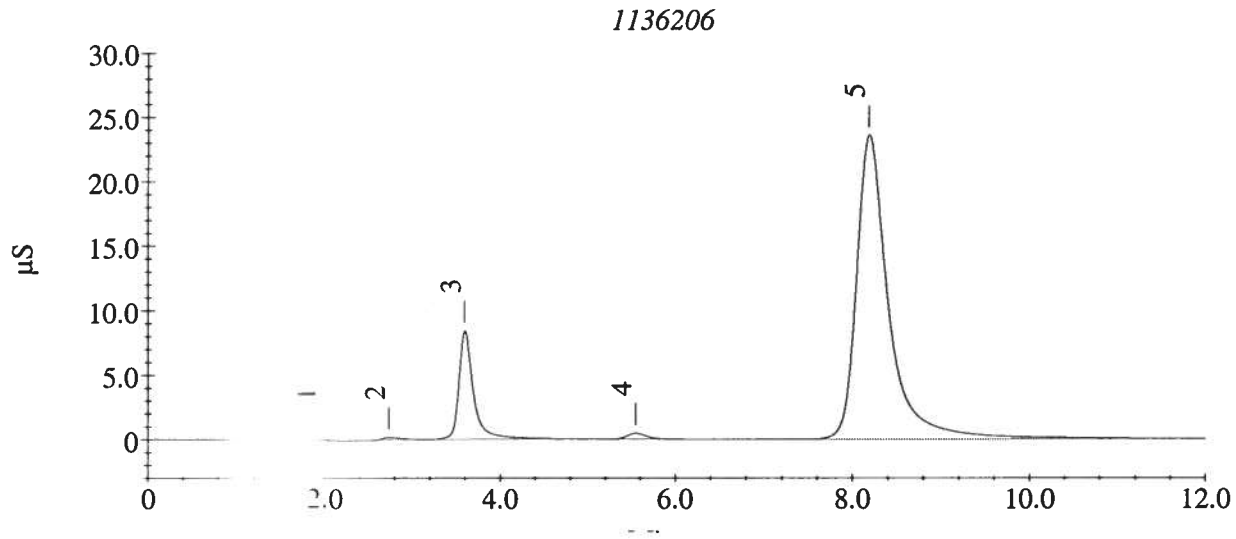
Sample Analysis Report

Sample Name : 1136206
Data File Name : c:\instarch\data\system 2\042822 -\1136206_004.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 11:06
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.73	0.3717	21435	1615	
3	Chloride	3.60	8.6578	978211	84041	
4	Nitrate	5.55	0.3954	70293	4619	
5	Sulfate	8.18	68.6102	6008329	235380	



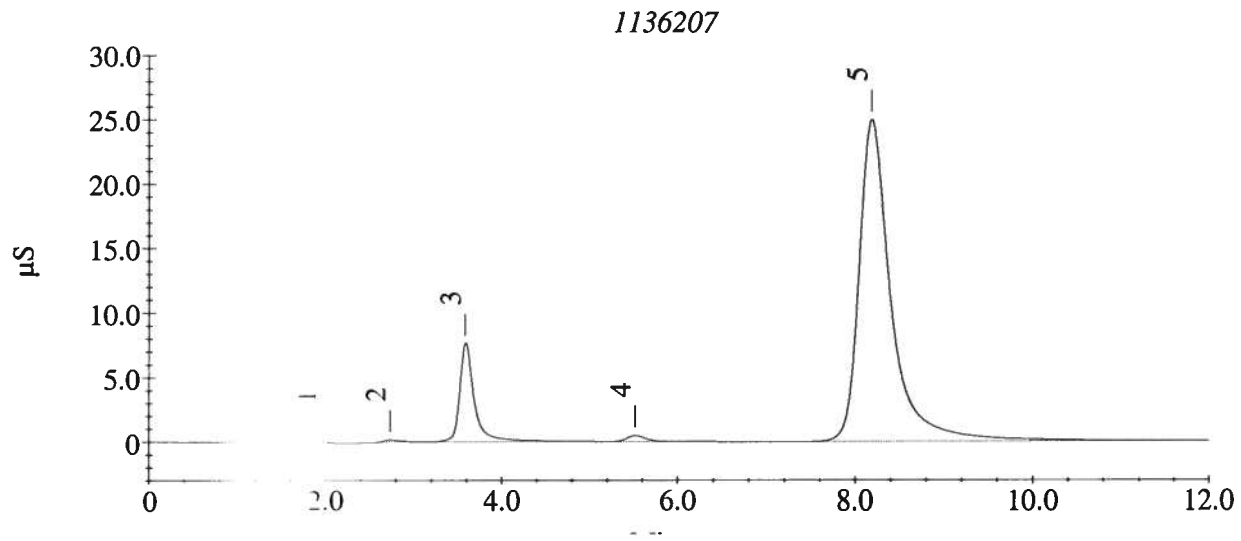
Sample Analysis Report

Sample Name : 1136207
Data File Name : c:\instarch\data\system 2\042822 -\1136207_005.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 11:20
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.73	0.3592	20280	1550	
3	Chloride	3.58	7.9825	897026	75780	
4	Nitrate	5.52	0.3893	68685	4647	
5	Sulfate	8.18	71.7667	6287855	249144	+



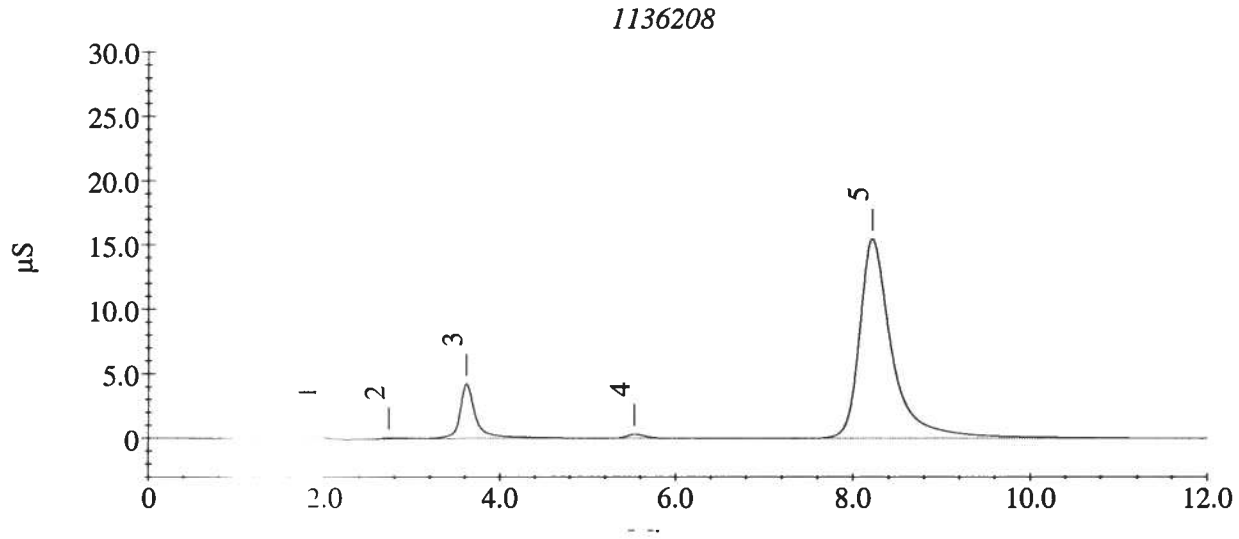
Sample Analysis Report

Sample Name : 1136208
Data File Name : c:\instarch\data\system 2\042822 -\1136208_006.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 11:35
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.73	0.3118	15916	930	
3	Chloride	3.62	4.9125	527935	41974	
4	Nitrate	5.53	0.2987	44779	3168	
5	Sulfate	8.22	45.3294	3946736	154713	



Sample Analysis Report

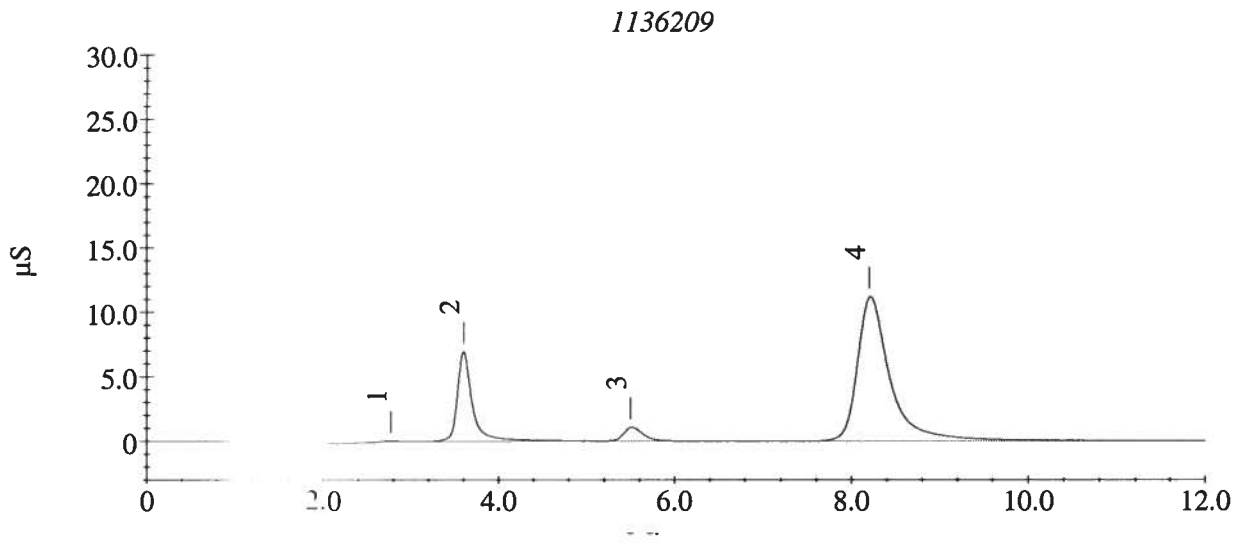
Sample Name : 1136209
Data File Name : c:\instarch\data\system 2\042822 -\1136209_007.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 11:49
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.77	0.1828	4046	319	
2	Chloride	3.60	7.5298	842602	69334	
3	Nitrate	5.50	0.7327	159240	10447	
4	Sulfate	8.20	33.2460	2876709	111592	

Page 1671



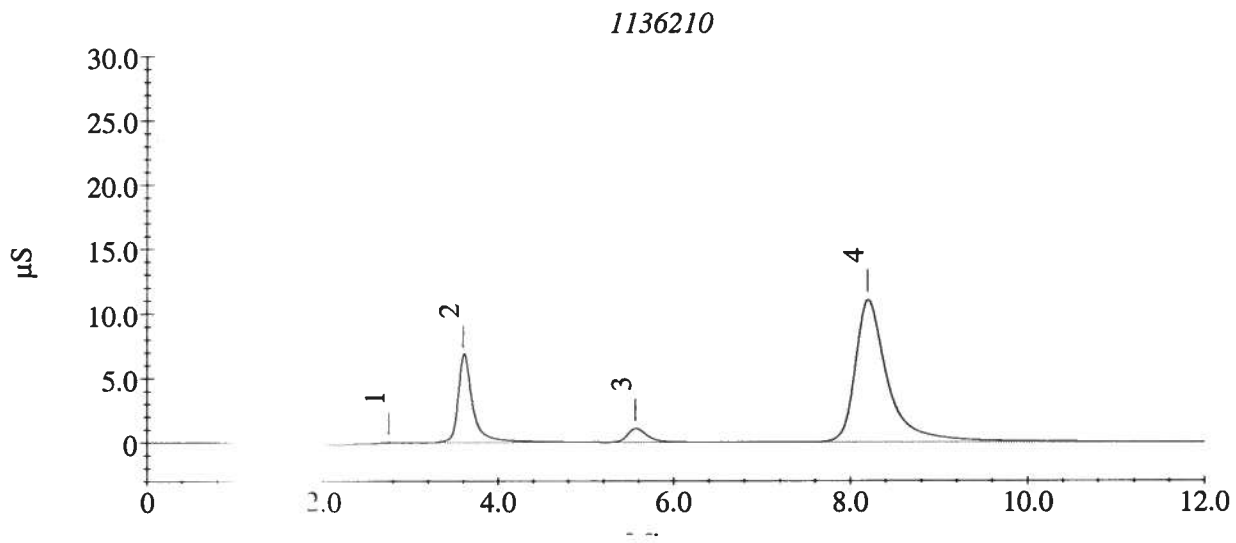
Sample Analysis Report

Sample Name : 1136210
Data File Name : c:\instarch\data\system 2\042822 -\1136210_008.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 12:03
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.75	0.1810	3875	288	
2	Chloride	3.60	7.3480	820746	67323	
3	Nitrate	5.57	0.7497	163727	10668	
4	Sulfate	8.20	32.6091	2820315	110164	



Sample Analysis Report

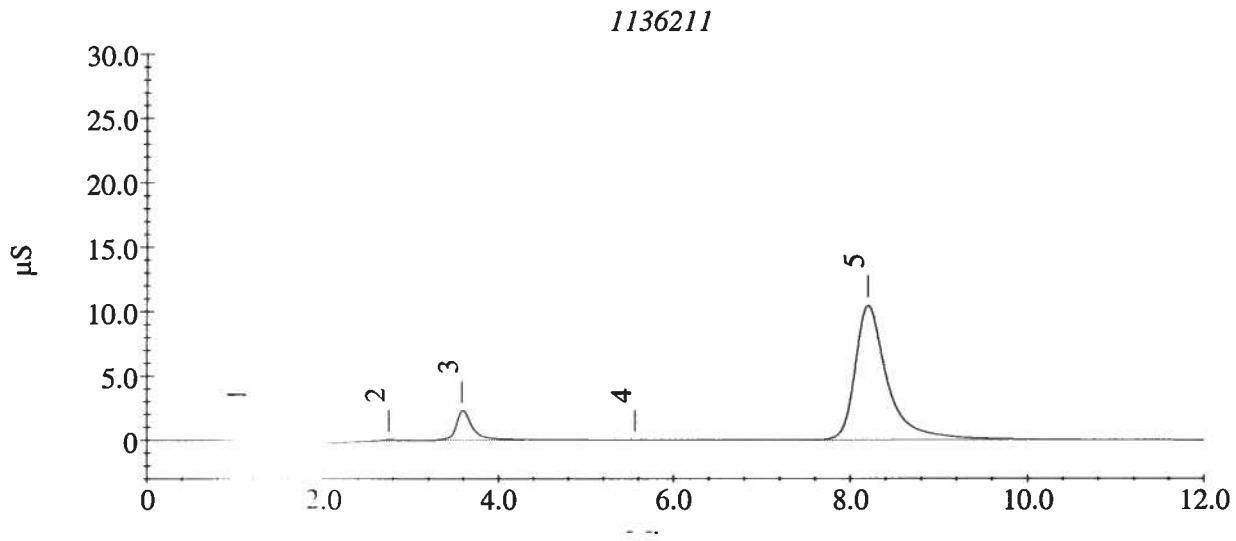
Sample Name : 1136211
Data File Name : c:\instarch\data\system 2\042822 -\1136211_009.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 12:17
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.75	0.1865	4390	374	
3	Chloride	3.58	3.0662	305957	22725	
4	Nitrate	5.57	0.1340	1345	108	
5	Sulfate	8.20	30.9313	2671734	104336	

Page 1673



Sample Analysis Report

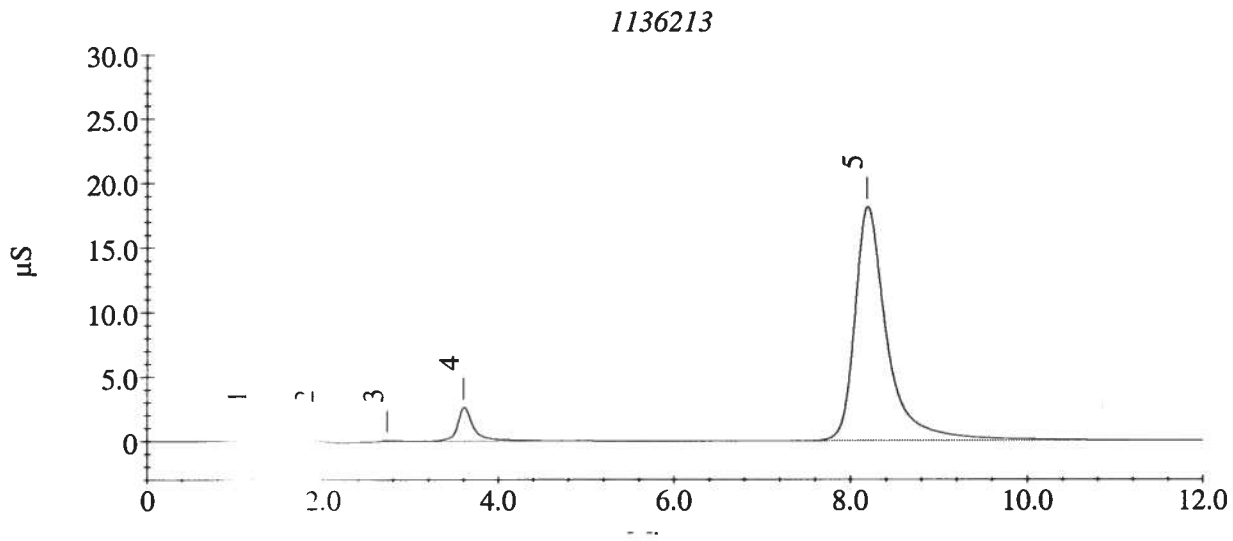
Sample Name : 1136213
Data File Name : c:\instarch\data\system 2\042822 -\1136213_010.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 12:31
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	2.73	0.2121	6742	569	
4	Chloride	3.60	3.4165	348081	26006	
5	Sulfate	8.18	52.9757	4623842	180866	

Page 1674



Sample Analysis Report

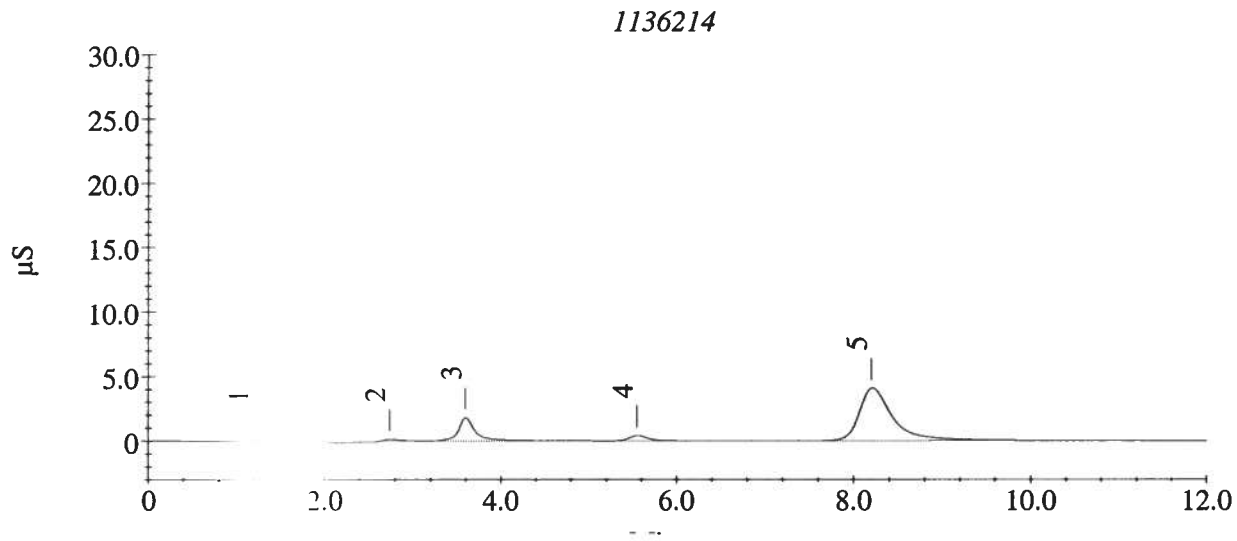
Sample Name : 1136214
Data File Name : c:\instarch\data\system 2\042822 -\1136214_011.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 12:46
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.73	0.3056	15353	1186	
3	Chloride	3.60	2.5853	248146	17980	
4	Nitrate	5.55	0.3521	58866	3971	
5	Sulfate	8.20	12.8662	1072013	40714	

Page 1675



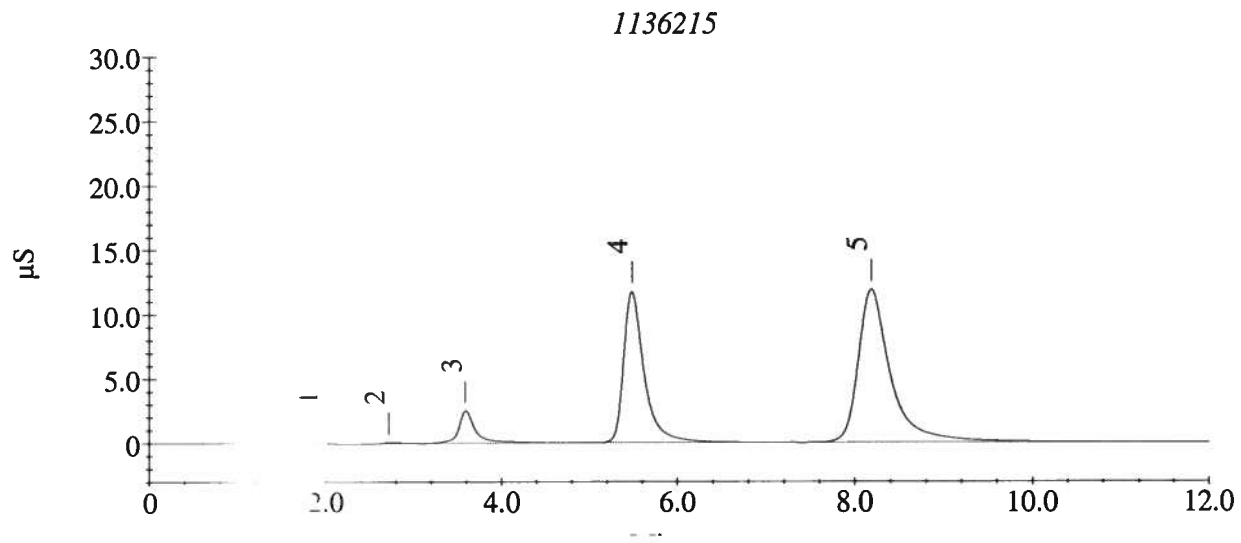
Sample Analysis Report

Sample Name : 1136215
Data File Name : c:\instarch\data\system 2\042822 -\1136215_012.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 13:00
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.72	0.2115	6690	543	
3	Chloride	3.58	3.3339	338150	24803	
4	Nitrate	5.48	7.3228	1897225	117168	+
5	Sulfate	8.18	35.1194	3042606	118818	



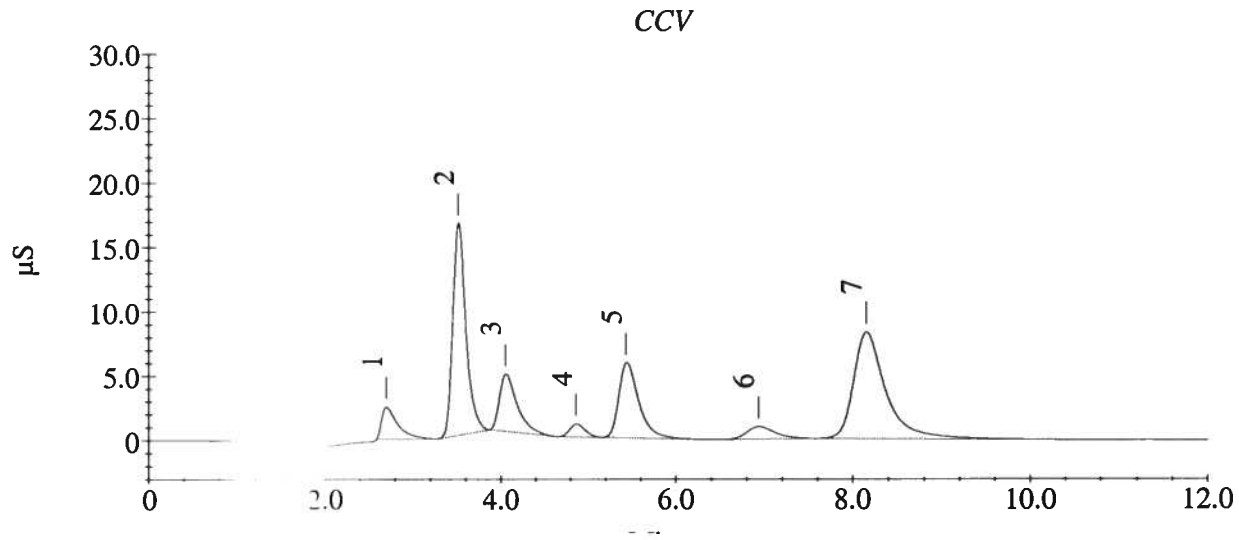
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\042822 -\CCV_013.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 13:14
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.70	3.6067	319227	24903	
2	Chloride	3.52	14.7016	1704841	164370	
3	Nitrite	4.05	3.7144	624355	44091	
4	Bromide	4.87	3.9891	120265	9859	
5	Nitrate	5.43	3.6113	918416	58024	
6	O.Phos	6.93	3.7213	215518	9695	
7	Sulfate	8.15	24.3426	2088281	82777	



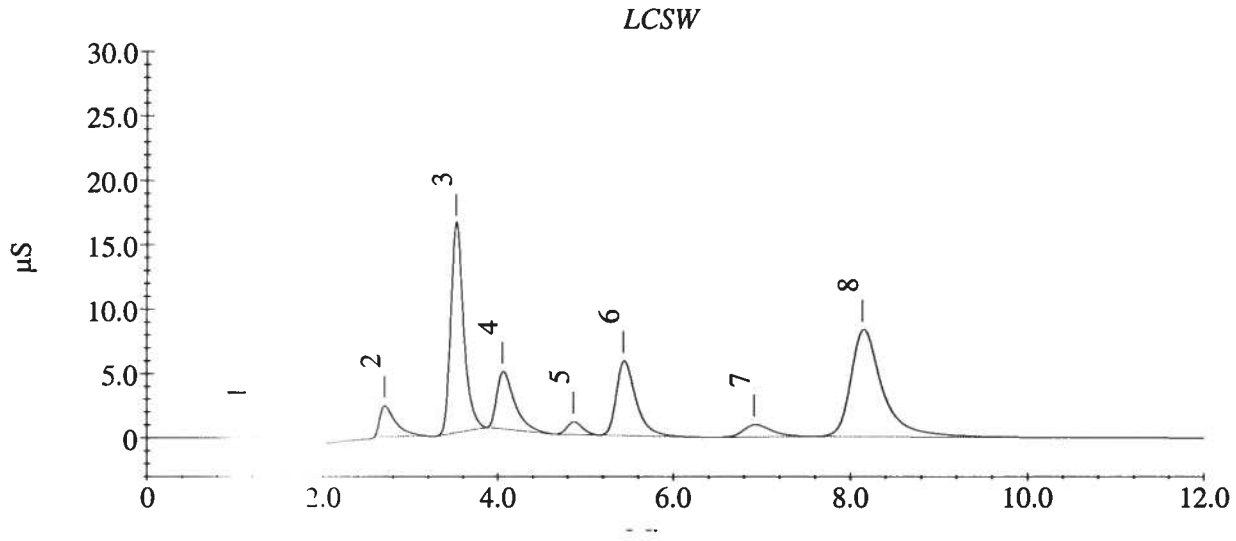
Sample Analysis Report

Sample Name : LCSW
Data File Name : c:\instarch\data\system 2\042822 -\LCSW_014.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 13:28
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.70	3.4468	304501	23830	
3	Chloride	3.52	14.5795	1690158	162039	
4	Nitrite	4.05	3.7274	626611	44079	
5	Bromide	4.87	3.9740	119807	9858	
6	Nitrate	5.43	3.5527	902959	57781	
7	O.Phos	6.92	3.6889	213555	9647	
8	Sulfate	8.13	24.4559	2098320	82968	



Sample Analysis Report

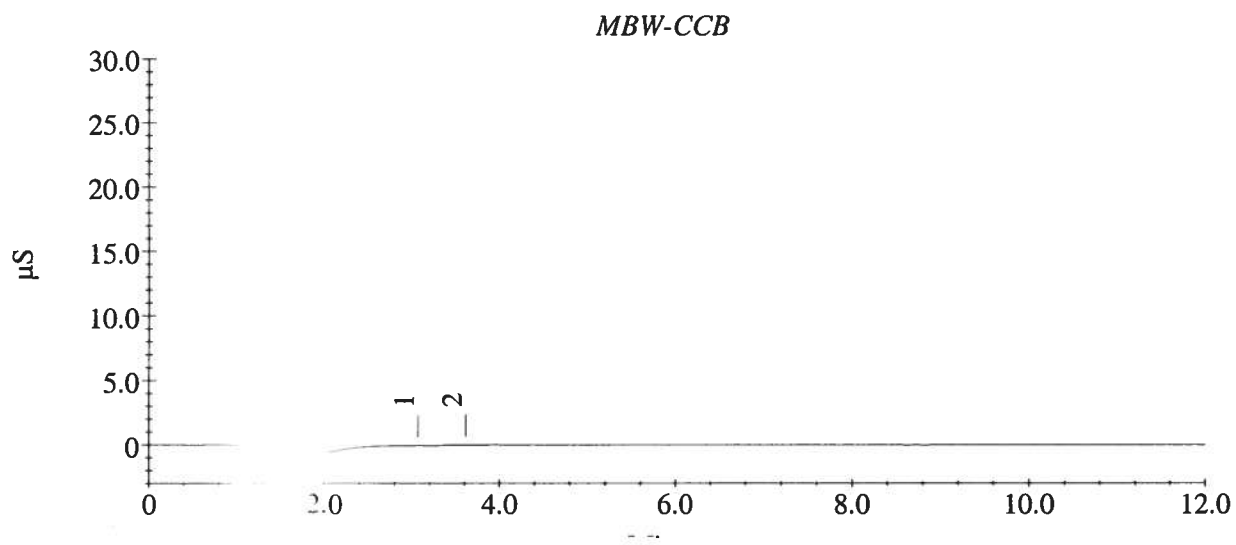
Sample Name : MBW-CCB
Data File Name : c:\instarch\data\system 2\042822 -\MBW-CCB_015.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 13:43
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Chloride	3.62	0.6847	19638	627	

Page 1679



Sample Analysis Report

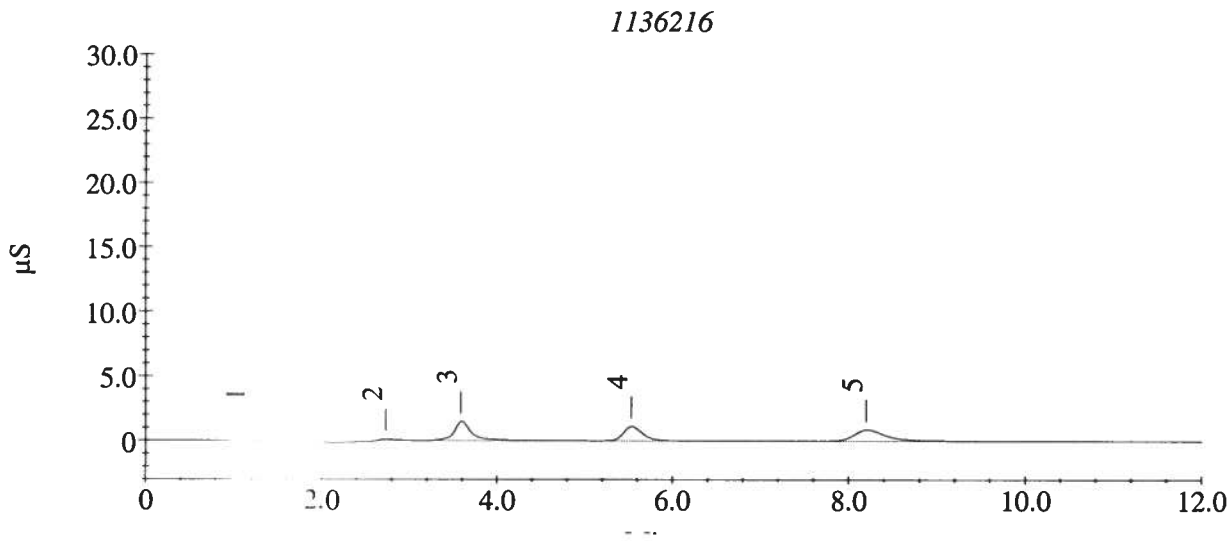
Sample Name : 1136216
Data File Name : c:\instarch\data\system 2\042822 -\1136216_016.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 13:57
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.73	0.3045	15249	1240	
3	Chloride	3.58	2.3108	215142	14664	
4	Nitrate	5.53	0.7808	171920	11090	
5	Sulfate	8.20	3.4016	233888	8785	

Page 1680



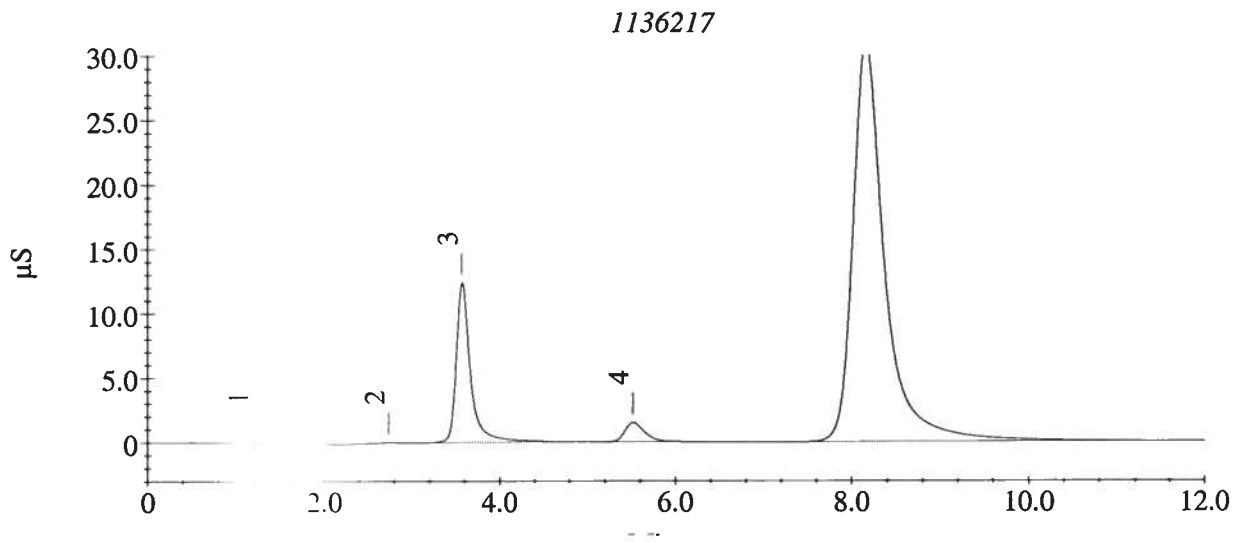
Sample Analysis Report

Sample Name : 1136217
Data File Name : c:\instarch\data\system 2\042822 -\1136217_017.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 14:11
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.73	0.1567	1645	205	
3	Chloride	3.57	12.3747	1425085	123592	
4	Nitrate	5.52	1.0328	238383	15000	
5	Sulfate	8.15	88.7961	7795860	310716	+



Sample Analysis Report

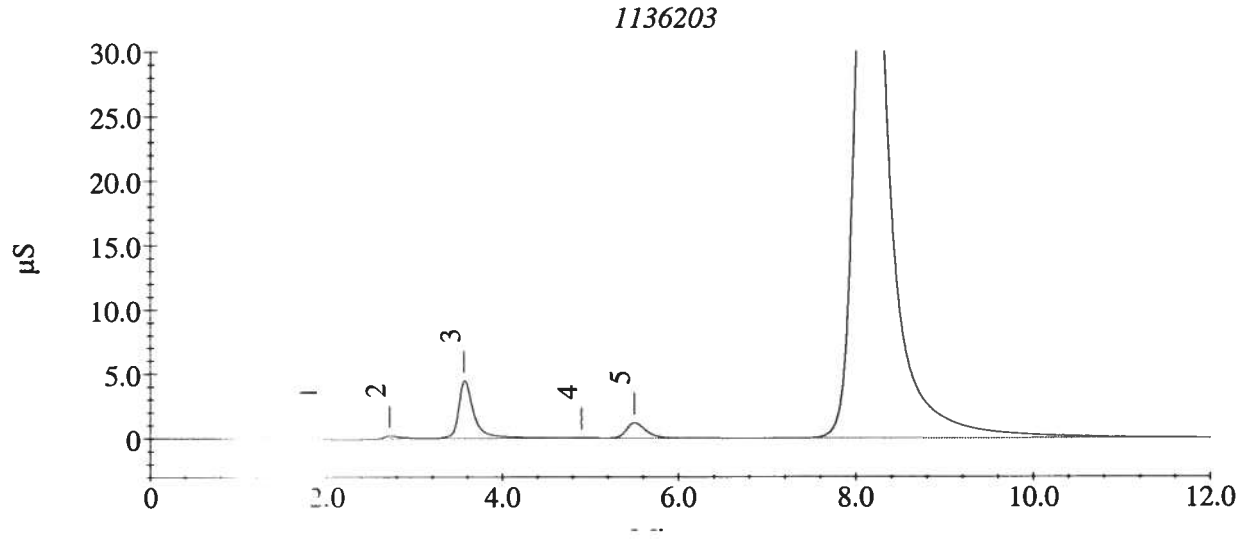
Sample Name : 1136203
Data File Name : c:\instarch\data\system 2\042822 -\1136203_018.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 14:25
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.72	0.4045	24457	1941	
3	Chloride	3.57	5.0282	541844	44345	
4	Bromide	4.90	0.1903	4994	376	
5	Nitrate	5.50	0.8210	182538	11851	
6	Sulfate	8.13	155.8337	13732273	545306	+

Page 1682



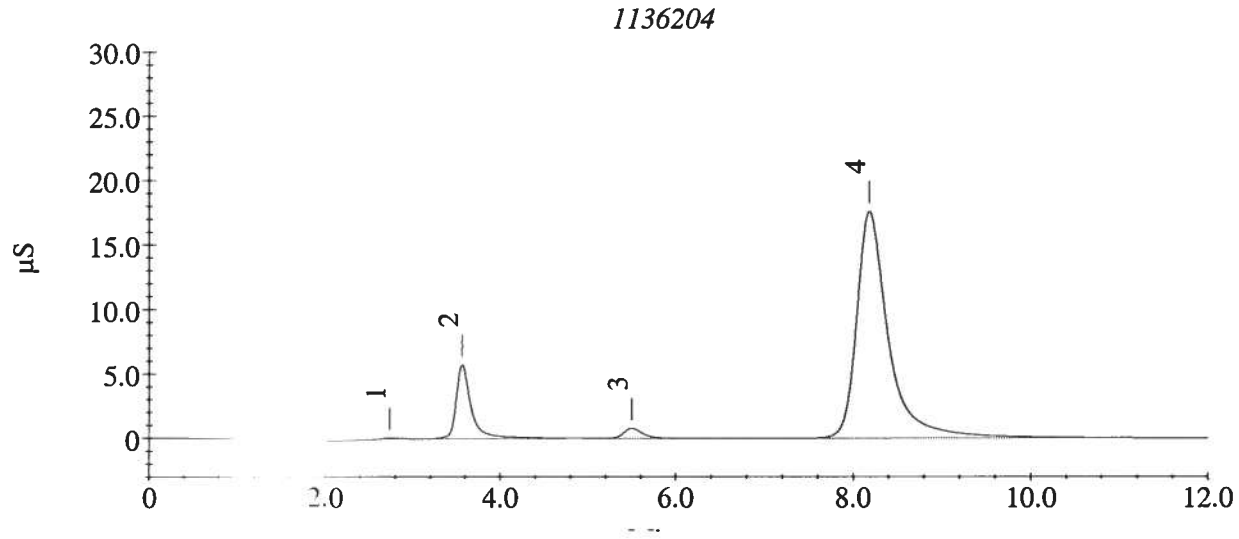
Sample Analysis Report

Sample Name : 1136204
Data File Name : c:\instarch\data\system 2\042822 -\1136204_019.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 14:39
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.73	0.2120	6733	598	
2	Chloride	3.57	6.2285	686145	57219	
3	Nitrate	5.50	0.5734	117236	7790	
4	Sulfate	8.18	50.6230	4415502	175623	



Sample Analysis Report

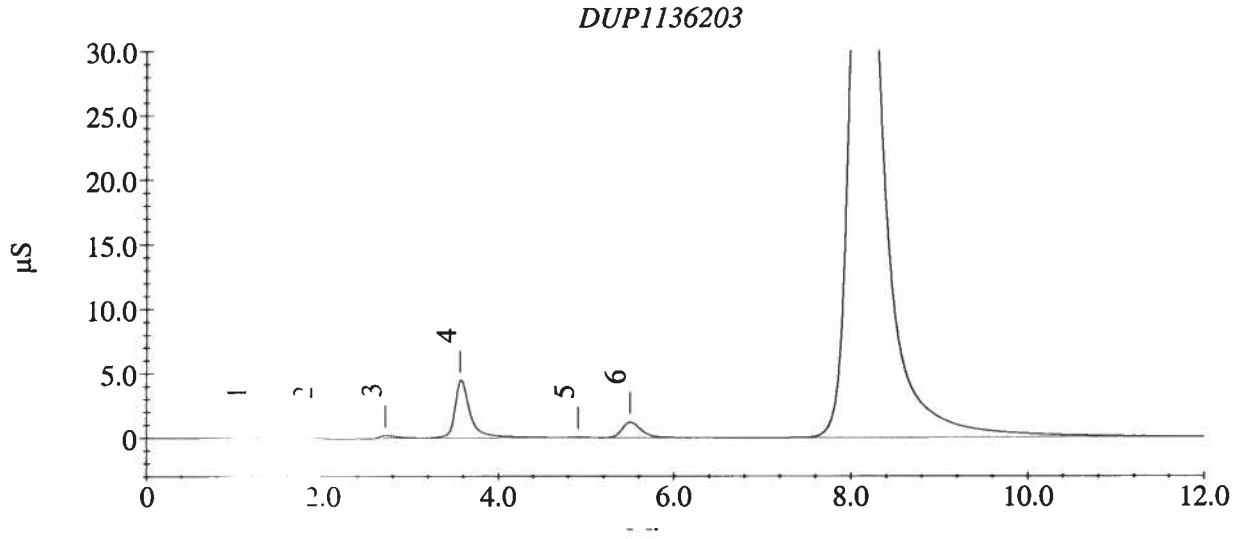
Sample Name : DUP1136203
Data File Name : c:\instarch\data\system 2\042822 -\DUP1136203_020.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 14:54
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	2.72	0.3969	23757	1914	
4	Chloride	3.57	5.0344	542588	44252	
5	Bromide	4.92	0.1985	5244	416	
6	Nitrate	5.50	0.8224	182894	12028	
7	Sulfate	8.13	155.7298	13723073	547304	+

Page 1684



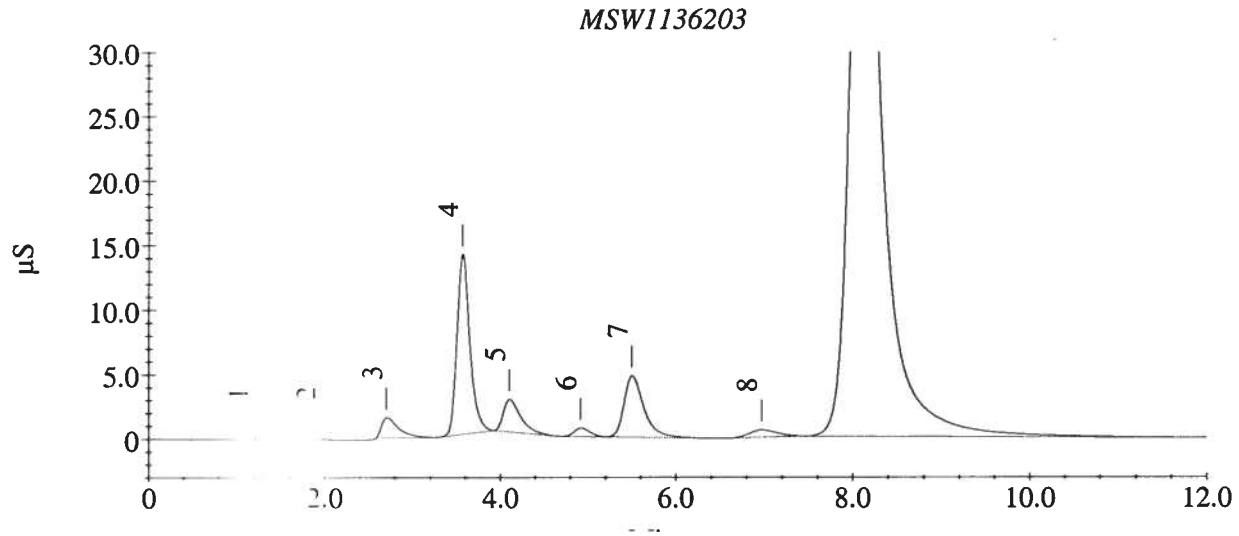
Sample Analysis Report

Sample Name : MSW1136203
Data File Name : c:\instarch\data\system 2\042822 -\MSW1136203_021.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 15:08
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	2.70	2.3760	205931	15368	
4	Chloride	3.57	12.3541	1422611	139116	
5	Nitrite	4.10	2.1255	349515	25090	
6	Bromide	4.92	2.7039	81268	6581	
7	Nitrate	5.50	2.9457	742877	47495	
8	O.Phos	6.97	2.1605	121002	5602	
9	Sulfate	8.10	152.8689	13469731	543166	+



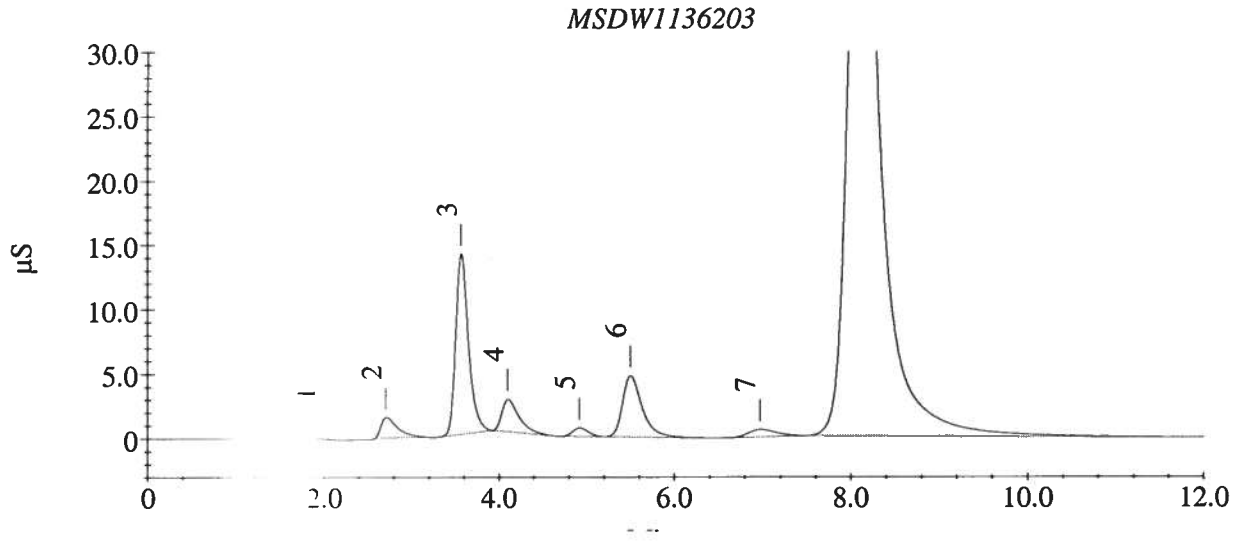
Sample Analysis Report

Sample Name : MSDW1136203
Data File Name : c:\instarch\data\system 2\042822 -\MSDW1136203_022.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 15:22
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.70	2.3975	207917	15431	
3	Chloride	3.57	12.3357	1420396	139261	
4	Nitrite	4.10	2.1030	345628	24966	
5	Bromide	4.92	2.6879	80781	6602	
6	Nitrate	5.50	2.9325	739382	47349	
7	O.Phos	6.97	2.2400	125818	5718	
8	Sulfate	8.10	153.0277	13483796	543738	+



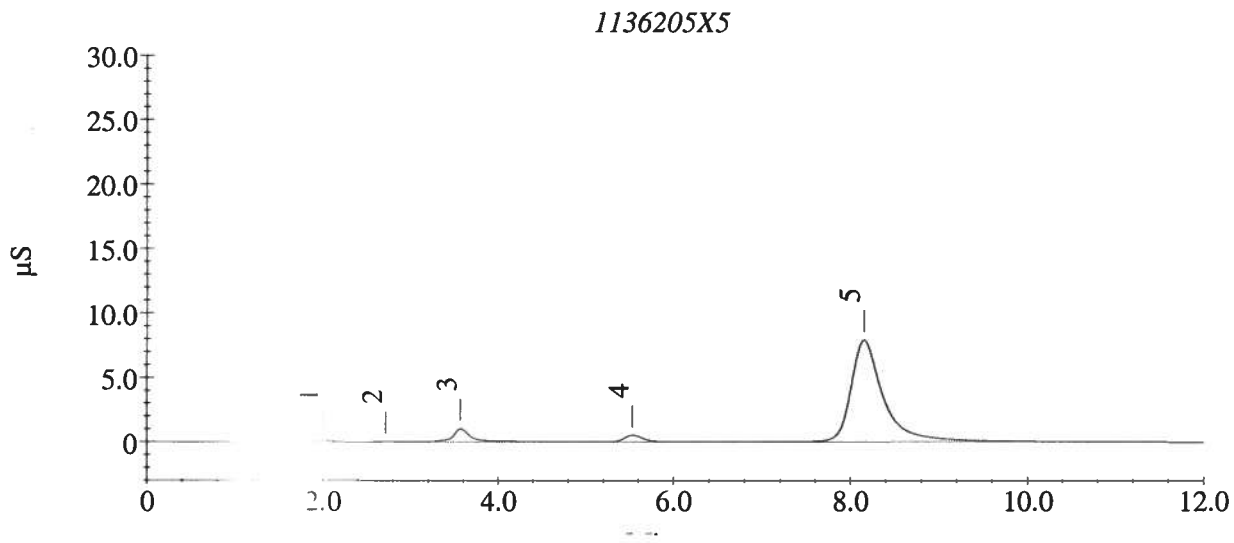
Sample Analysis Report

Sample Name : 1136205X5
Data File Name : c:\instarch\data\system 2\042822 -\1136205X5_023.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 15:36
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.72	0.1845	4205	324	
3	Chloride	3.57	1.7711	150261	10143	
4	Nitrate	5.53	0.4274	78716	5177	
5	Sulfate	8.15	23.7197	2033125	78683	



Sample Analysis Report

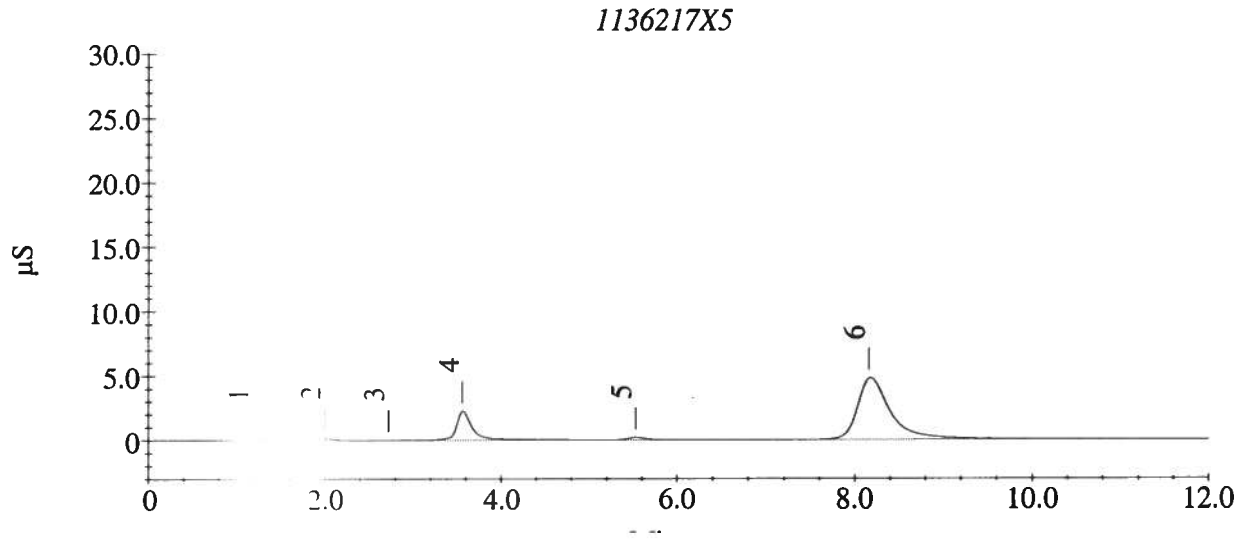
Sample Name : 1136217X5
Data File Name : c:\instarch\data\system 2\042822 -\1136217X5_024.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 15:51
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Chloride	3.57	2.9547	292558	22443	
5	Nitrate	5.53	0.2345	27852	1978	
6	Sulfate	8.17	14.8728	1249700	47611	

Page 1688



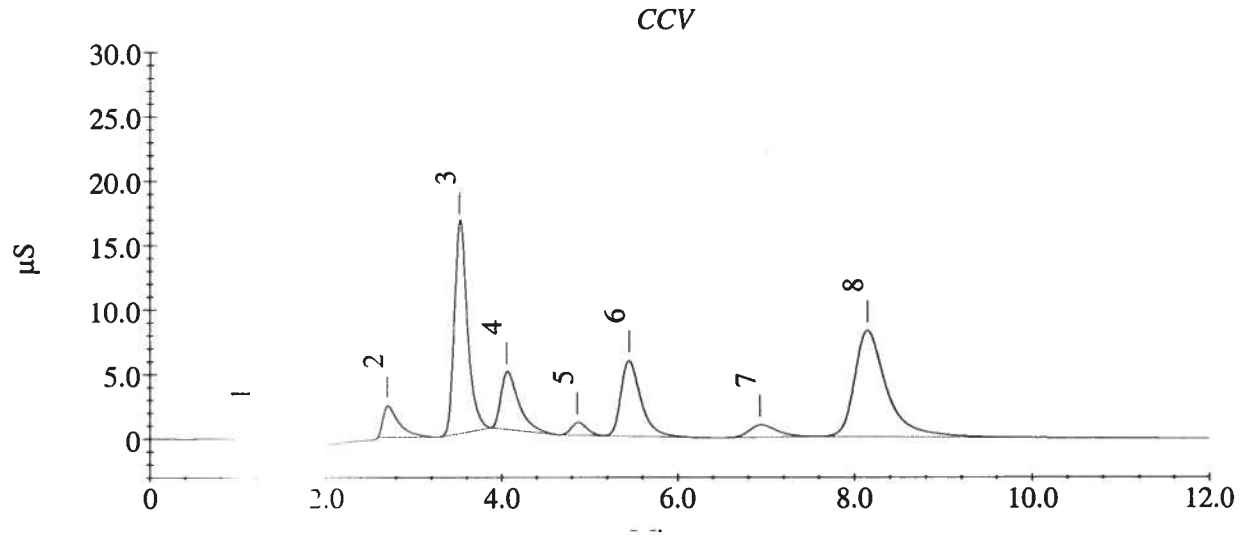
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\042822 -\CCV_026.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 16:19
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.70	3.4958	309014	24141	
3	Chloride	3.52	14.6987	1704483	163560	
4	Nitrite	4.05	3.7632	632797	44063	
5	Bromide	4.87	3.9950	120445	9827	
6	Nitrate	5.45	3.5914	913146	58493	
7	O.Phos	6.93	3.6864	213404	9579	
8	Sulfate	8.15	24.1174	2068338	82542	



Sample Analysis Report

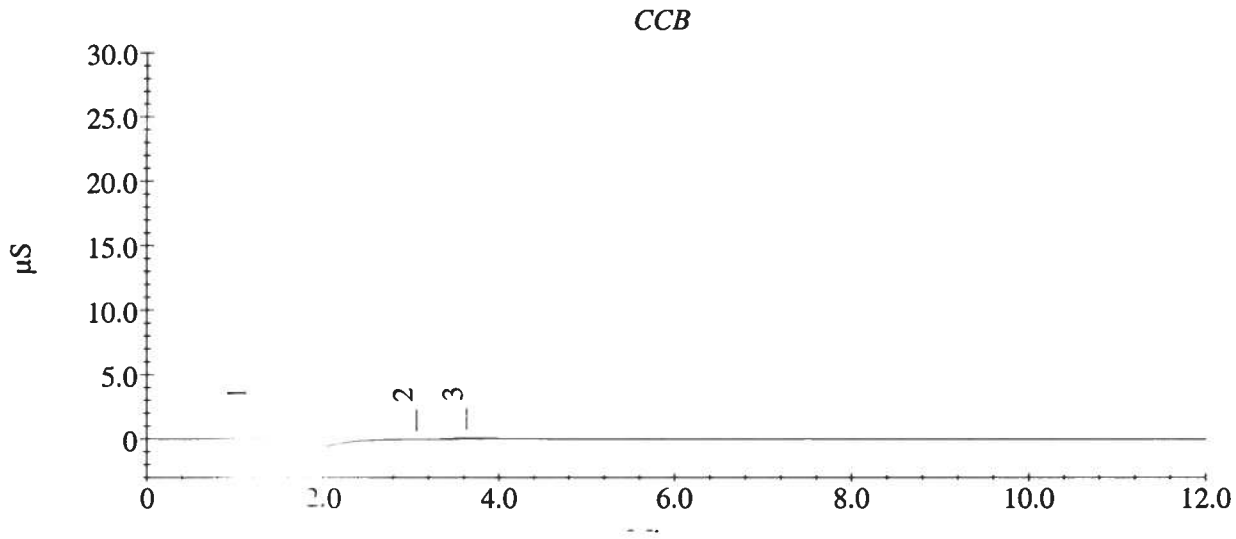
Sample Name : CCB
Data File Name : c:\instarch\data\system 2\042822 -\CCB_027.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/28/22 16:33
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.63	0.6731	18245	686	

Page 1690



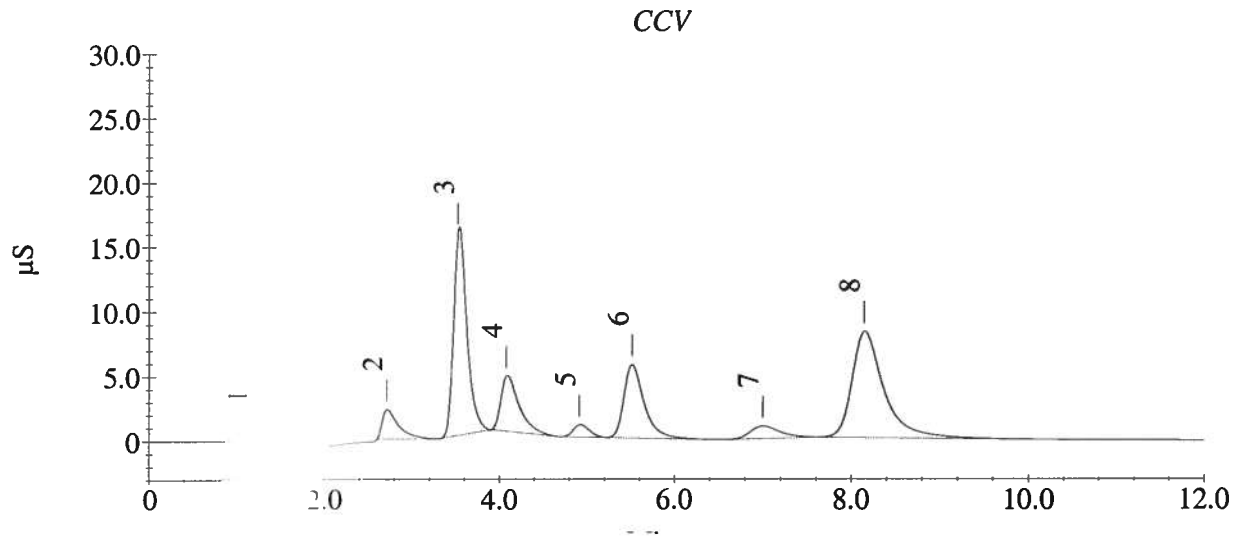
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\042822 -\CCV_063.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 01:05
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.72	3.3789	298253	22805	
3	Chloride	3.53	14.6396	1697379	157012	
4	Nitrite	4.08	3.7534	631105	42519	
5	Bromide	4.92	4.0068	120803	9455	
6	Nitrate	5.52	3.6311	923627	56861	
7	O.Phos	7.00	3.8949	226033	9791	
8	Sulfate	8.15	24.1644	2072507	82212	



Sample Analysis Report

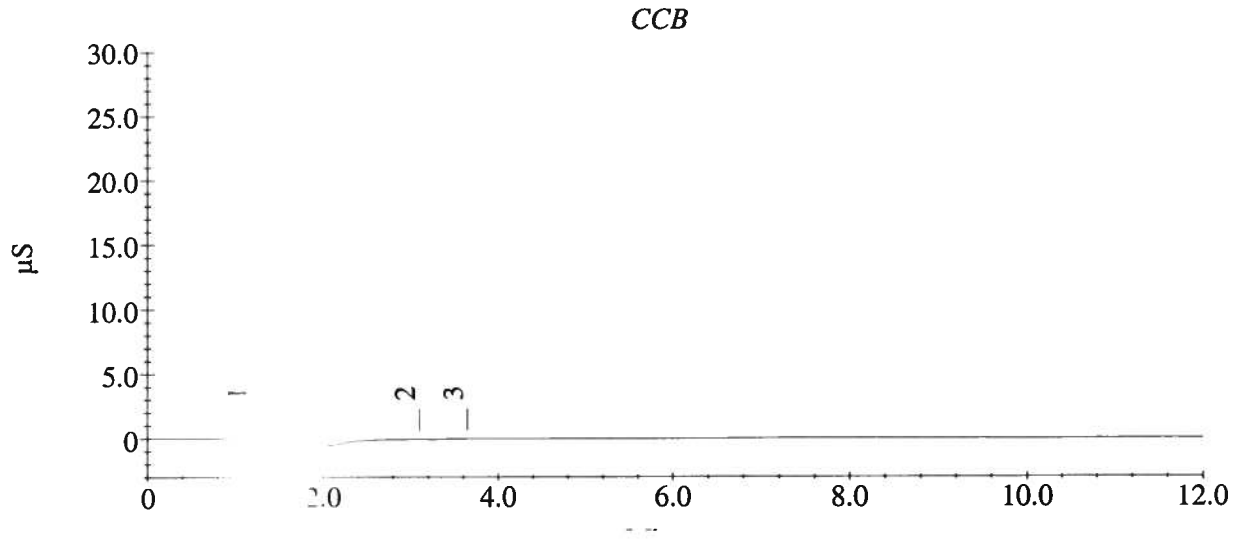
Sample Name : CCB
Data File Name : c:\instarch\data\system 2\042822 -\CCB_064.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 01:19
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.65	0.5609	4763	207	

Page 1692



Sample Analysis Report

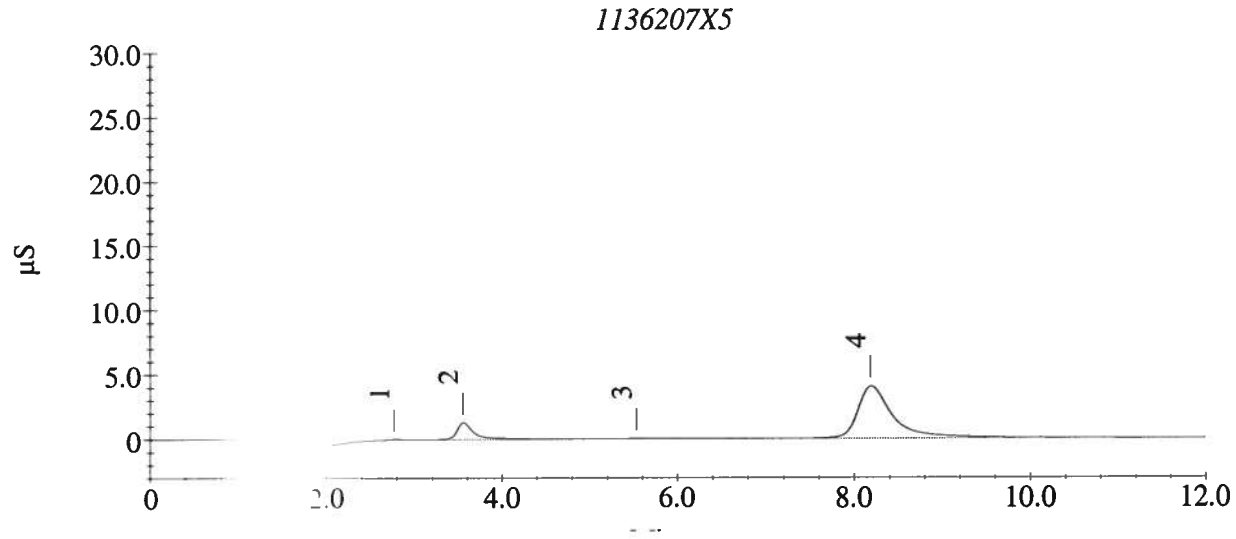
Sample Name : 1136207X5
Data File Name : c:\instarch\data\system 2\042822 -\1136207X5_065.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 01:34
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Chloride	3.55	2.0065	178561	12885	
3	Nitrate	5.53	0.1421	3477	289	
4	Sulfate	8.18	13.4094	1120111	40133	

Page 1693



Sample Analysis Report

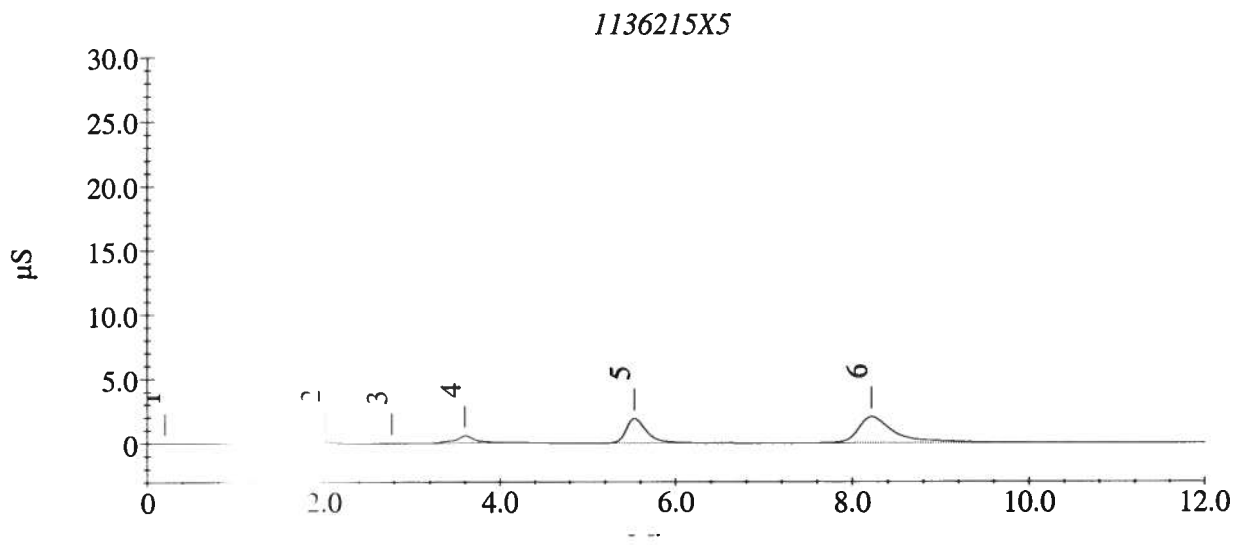
Sample Name : 1136215X5
Data File Name : c:\instarch\data\system 2\042822 -\1136215X5_066.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 01:48
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	2.77	0.1637	2290	168	
4	Chloride	3.60	1.2389	86274	5575	
5	Nitrate	5.53	1.3064	310548	19013	
6	Sulfate	8.22	7.3110	580074	20256	

Page 1694



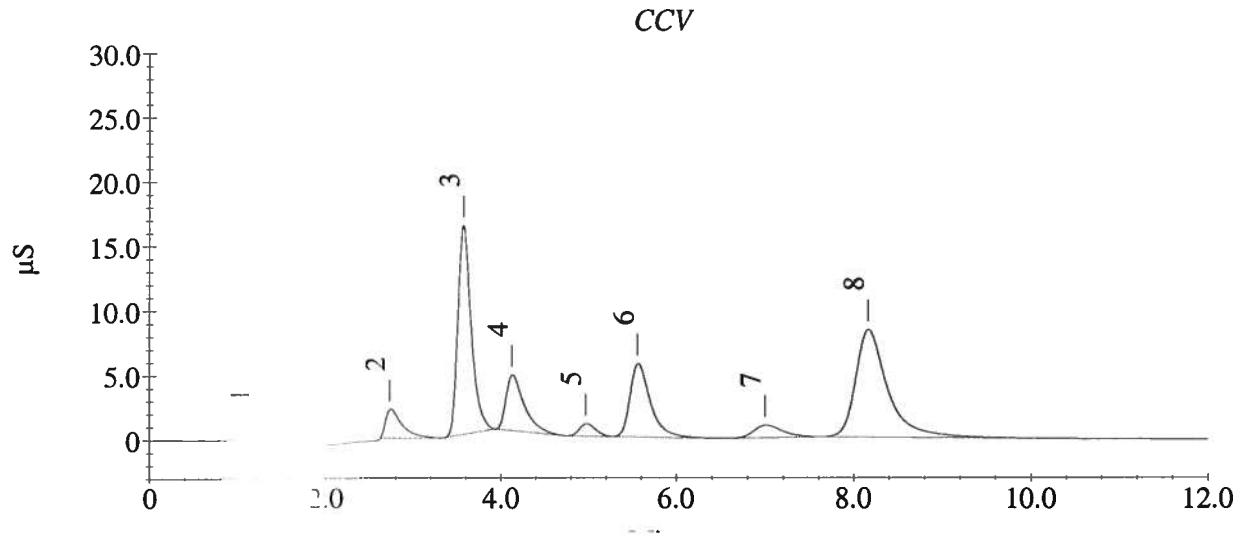
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\042822 -\CCV_068.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 02:16
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.73	3.3483	295440	22093	
3	Chloride	3.58	14.7541	1711144	161613	
4	Nitrite	4.13	3.7783	635410	43144	
5	Bromide	4.97	4.0347	121649	9457	
6	Nitrate	5.57	3.6311	923617	56898	
7	O.Phos	7.00	3.7781	218958	9738	
8	Sulfate	8.17	24.7306	2122645	83412	



Sample Analysis Report

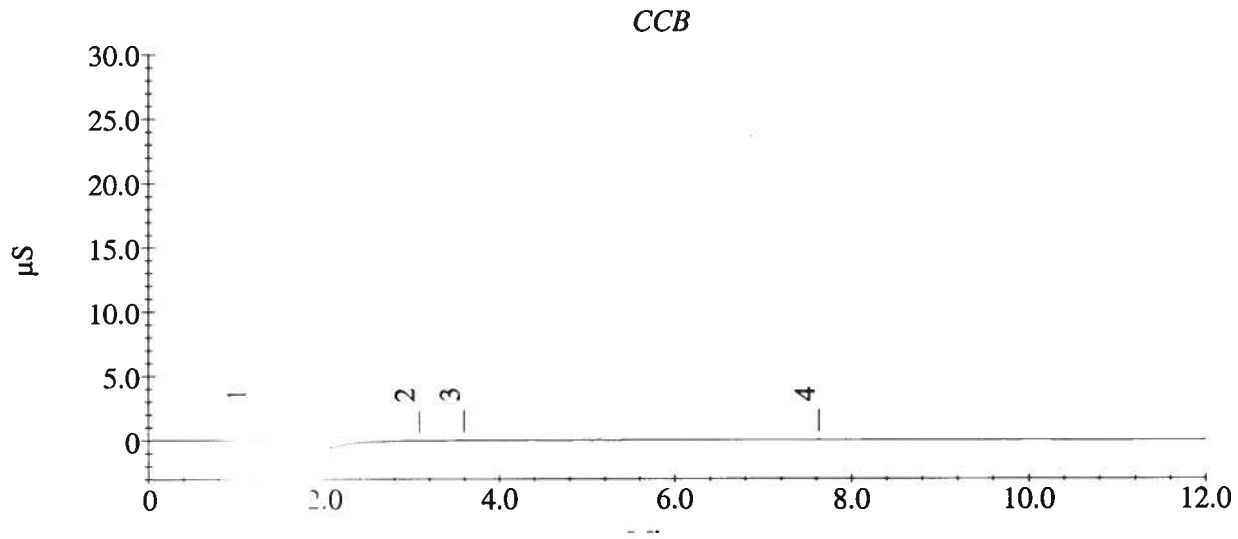
Sample Name : CCB
Data File Name : c:\instarch\data\system 2\042822 -\CCB_069.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 02:30
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.60	0.5798	7036	327	
4	Sulfate	7.63	0.7962	3171	71	

Page 1696



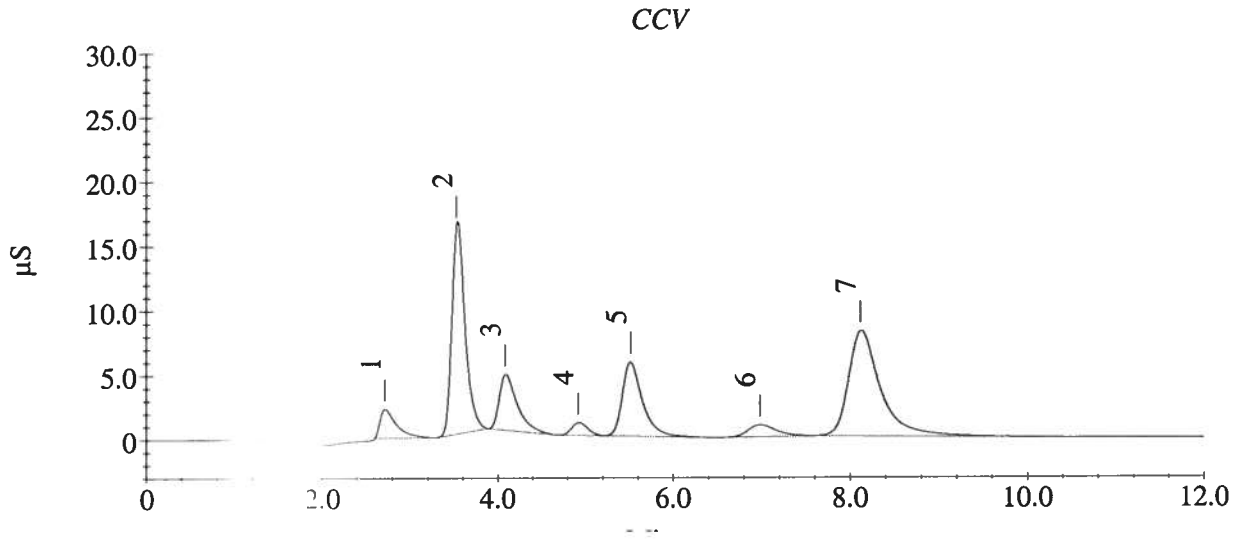
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\042822 -\CCV_070.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 08:10
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.72	3.3216	292984	22495	
2	Chloride	3.53	14.7803	1714304	161114	
3	Nitrite	4.08	3.7500	630509	43080	
4	Bromide	4.92	4.0684	122671	9766	
5	Nitrate	5.52	3.6268	922488	57424	
6	O.Phos	6.98	3.5127	202887	9164	
7	Sulfate	8.12	23.9917	2057207	81368	



Page 1697

Sample Analysis Report

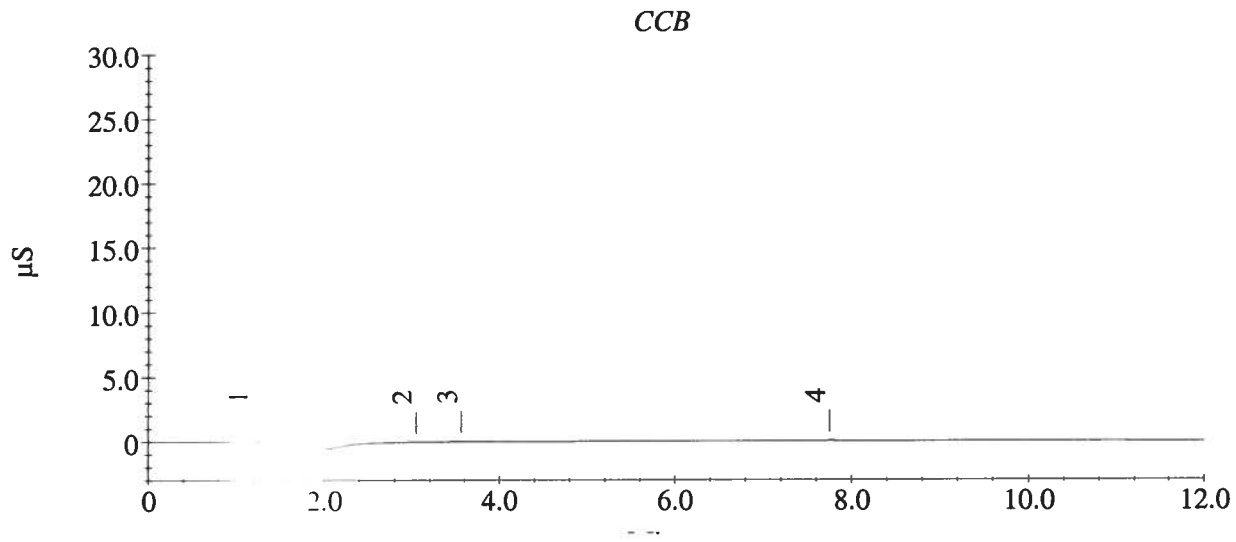
Sample Name : CCB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042822 -\CCB_071.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 08:24
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.57	0.6056	10134	453	
4	Sulfate	7.75	0.7956	3117	307	

Page 1698



Sample Analysis Report

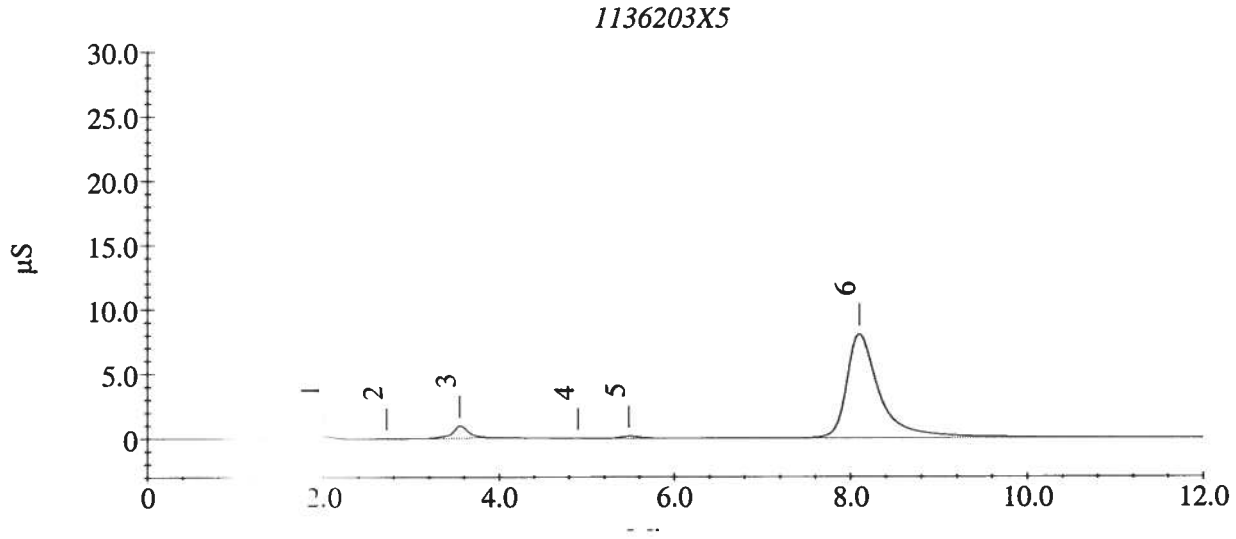
Sample Name : 1136203X5
Data File Name : c:\instarch\data\system 2\042822 -\1136203X5_072.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 08:39
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.72	0.1878	4504	352	
3	Chloride	3.55	1.5645	125421	9345	
4	Bromide	4.90	0.0697	1334	107	
5	Nitrate	5.48	0.2235	24946	1705	
6	Sulfate	8.10	24.5298	2104865	80292	

Page 1699



Sample Analysis Report

Sample Name : DUP1136203X5
Data File Name : c:\instarch\data\system 2\042822 -\DUP1136203X5_073.DXD

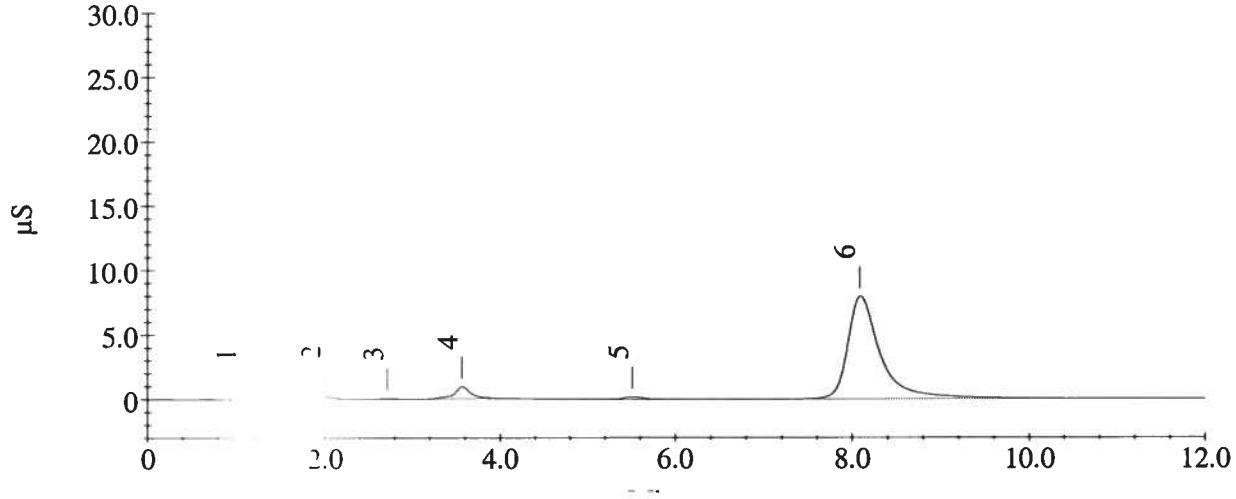
Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 08:53
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	2.72	0.1931	4991	381	
4	Chloride	3.57	1.5747	126643	9371	
5	Nitrate	5.52	0.2190	23775	1694	
6	Sulfate	8.08	24.0460	2062019	79389	

Page 1700

DUP1136203X5



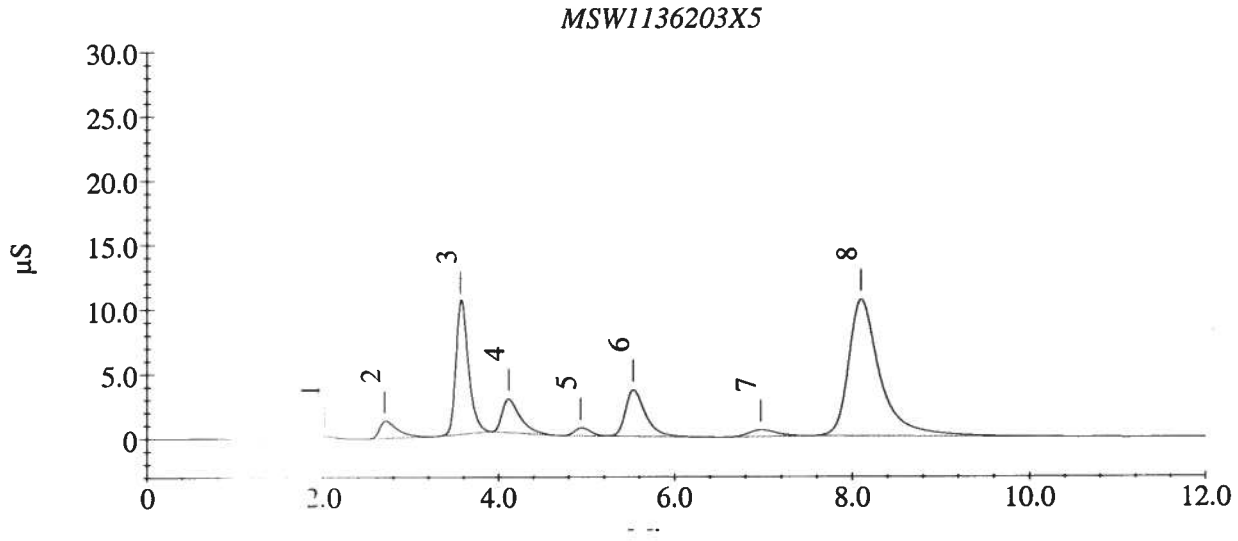
Sample Analysis Report

Sample Name : MSW1136203X5
Data File Name : c:\instarch\data\system 2\042822 -\MSW1136203X5_074.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 09:07
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.70	2.1731	187261	13075	
3	Chloride	3.57	9.1067	1032180	102339	
4	Nitrite	4.12	2.2410	369497	26067	
5	Bromide	4.93	2.5069	75291	6036	
6	Nitrate	5.53	2.2812	567622	35897	
7	O.Phos	6.97	2.0576	114769	5222	
8	Sulfate	8.10	30.5595	2638809	105733	



Sample Analysis Report

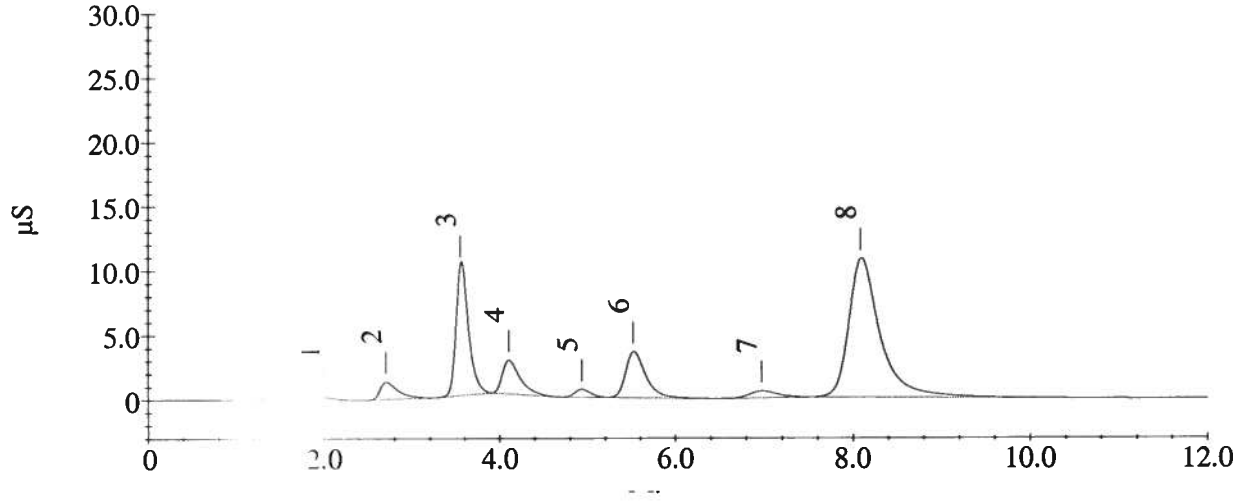
Sample Name : MSDW1136203X5
Data File Name : c:\instarch\data\system 2\042822 -\MSDW1136203X5_075.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 09:21
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.70	2.1920	188994	13354	
3	Chloride	3.55	9.1116	1032774	100660	
4	Nitrite	4.10	2.2522	371428	26114	
5	Bromide	4.93	2.5173	75604	6107	
6	Nitrate	5.52	2.2963	571614	35593	
7	O.Phos	6.97	2.1037	117560	5360	
8	Sulfate	8.08	31.1073	2687325	107620	

MSDW1136203X5



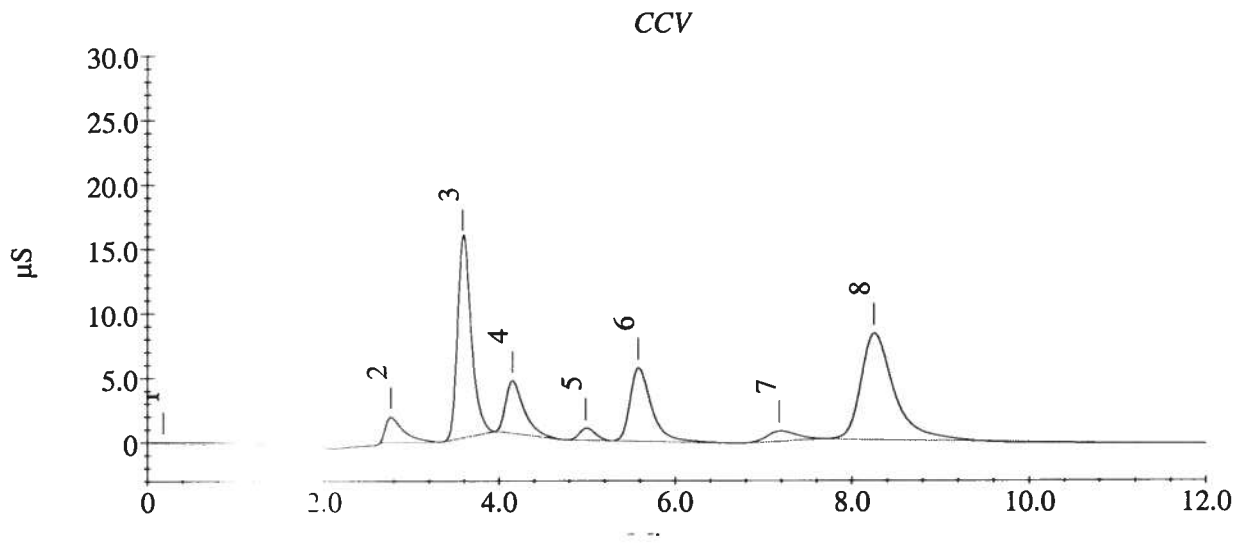
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\042822 -\CCV_093.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 14:03
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.77	3.1595	278054	19593	
3	Chloride	3.58	14.7476	1710367	154047	
4	Nitrite	4.15	3.5175	590303	40563	
5	Bromide	4.98	3.9996	120584	9364	
6	Nitrate	5.58	3.7820	963433	56881	
7	O.Phos	7.18	3.1274	179556	7794	
8	Sulfate	8.25	24.4745	2099967	82258	



Page 1703

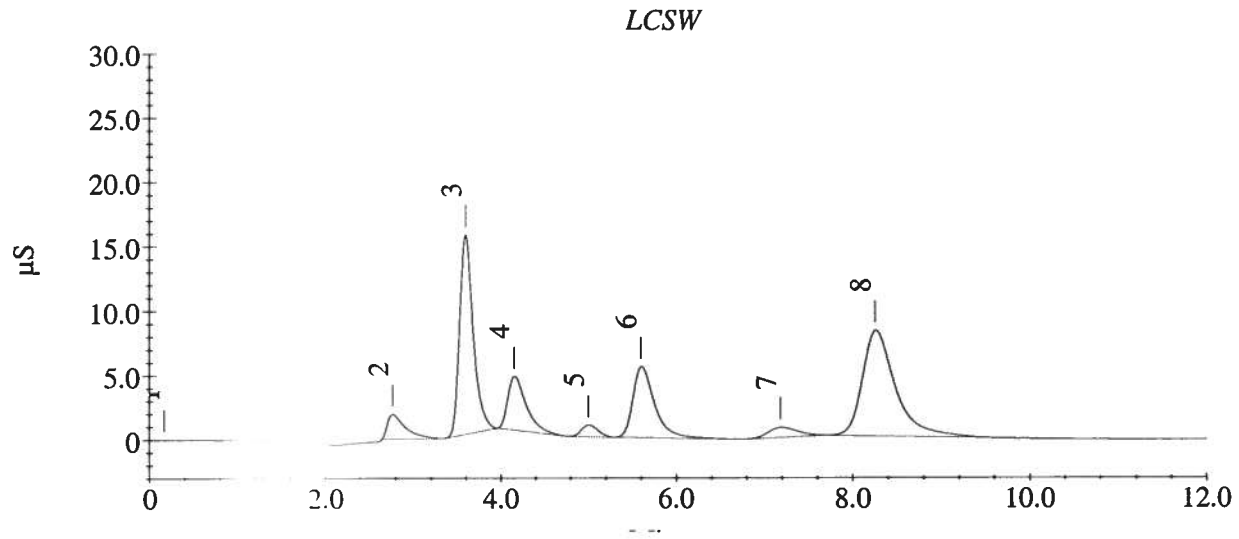
Sample Analysis Report

Sample Name : LCSW
Data File Name : c:\instarch\data\system 2\042822 -\LCSW_094.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 14:17
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.77	3.0634	269212	19035	
3	Chloride	3.60	14.4910	1679514	154214	
4	Nitrite	4.15	3.6682	616373	41499	
5	Bromide	5.00	3.9160	118046	9122	
6	Nitrate	5.60	3.7206	947234	55138	
7	O.Phos	7.18	3.1117	178601	7714	
8	Sulfate	8.25	24.6274	2113503	81847	



Sample Analysis Report

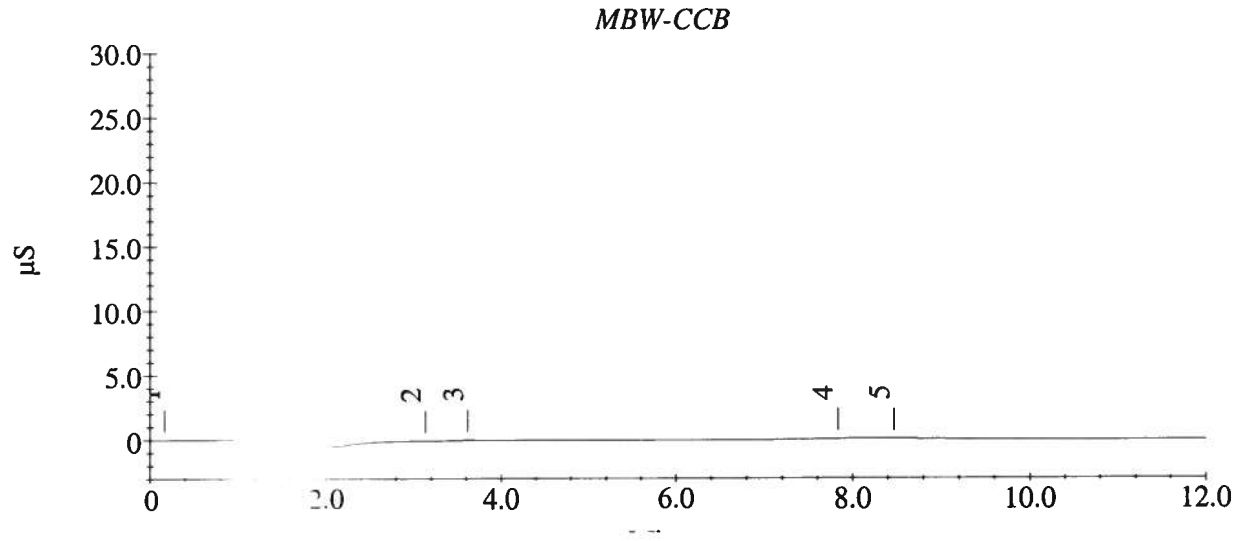
Sample Name : MBW-CCB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042822 -\MBW-CCB_095.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 14:31
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.62	0.5769	6678	403	
4	Sulfate	7.83	0.7930	2883	173	

Page 1705



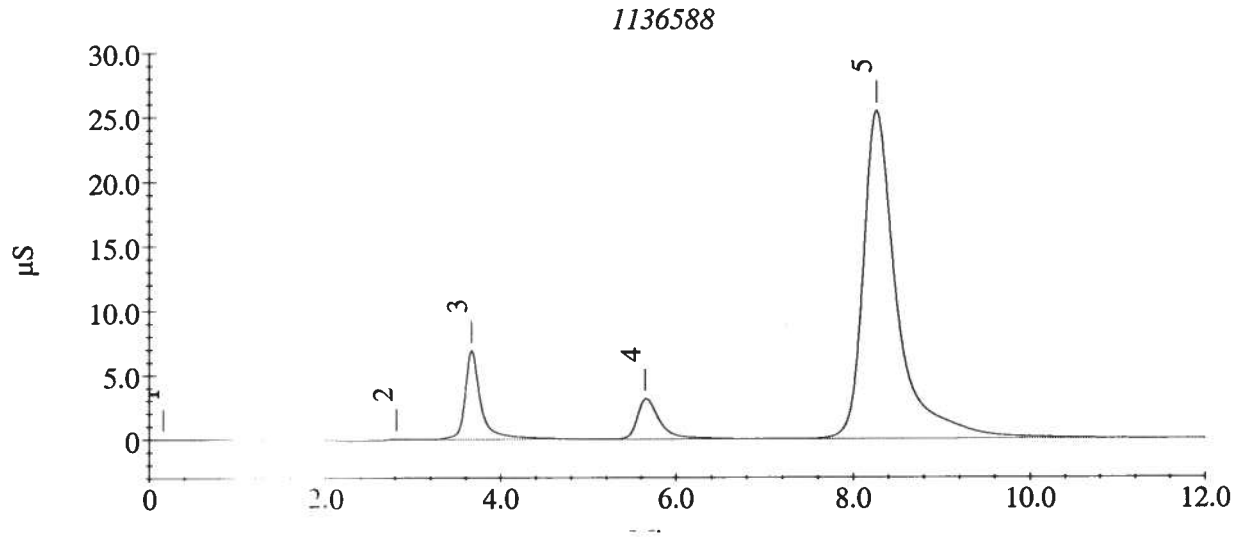
Sample Analysis Report

Sample Name : 1136588
Data File Name : c:\instarch\data\system 2\042822 -\1136588_096.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 14:46
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.82	0.1929	4976	388	
3	Chloride	3.67	7.7730	871844	68721	
4	Nitrate	5.65	2.2472	558654	31048	
5	Sulfate	8.27	77.4732	6793186	254013	+



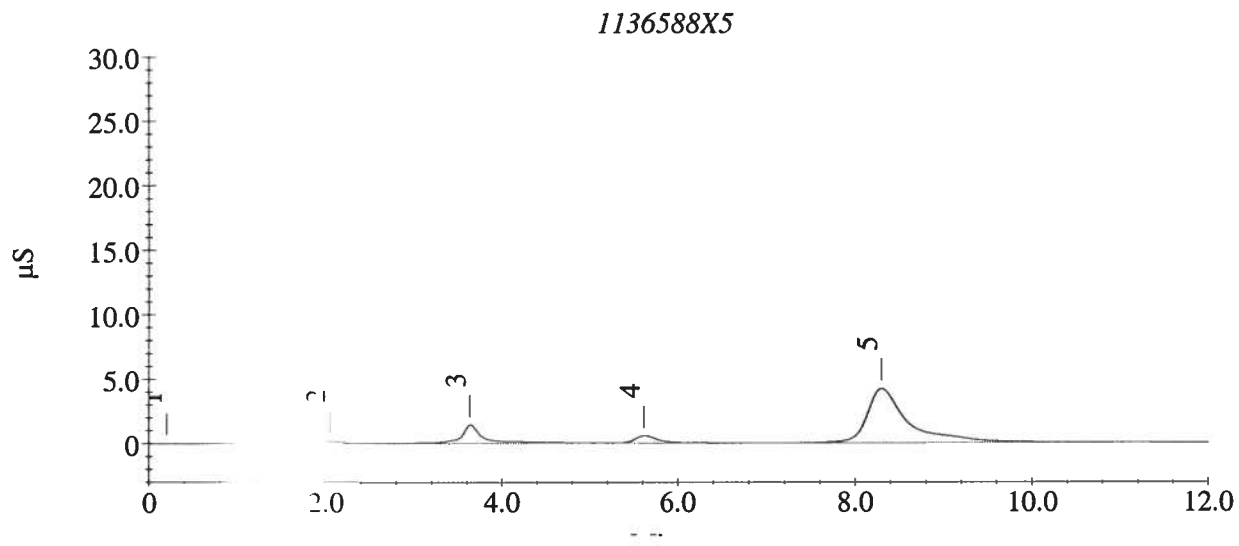
Sample Analysis Report

Sample Name : 1136588X5
Data File Name : c:\instarch\data\system 2\042822 -\1136588X5_097.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 15:00
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.63	2.5704	246350	14115	
4	Nitrate	5.62	0.4943	96376	5606	
5	Sulfate	8.30	15.9633	1346269	41815	



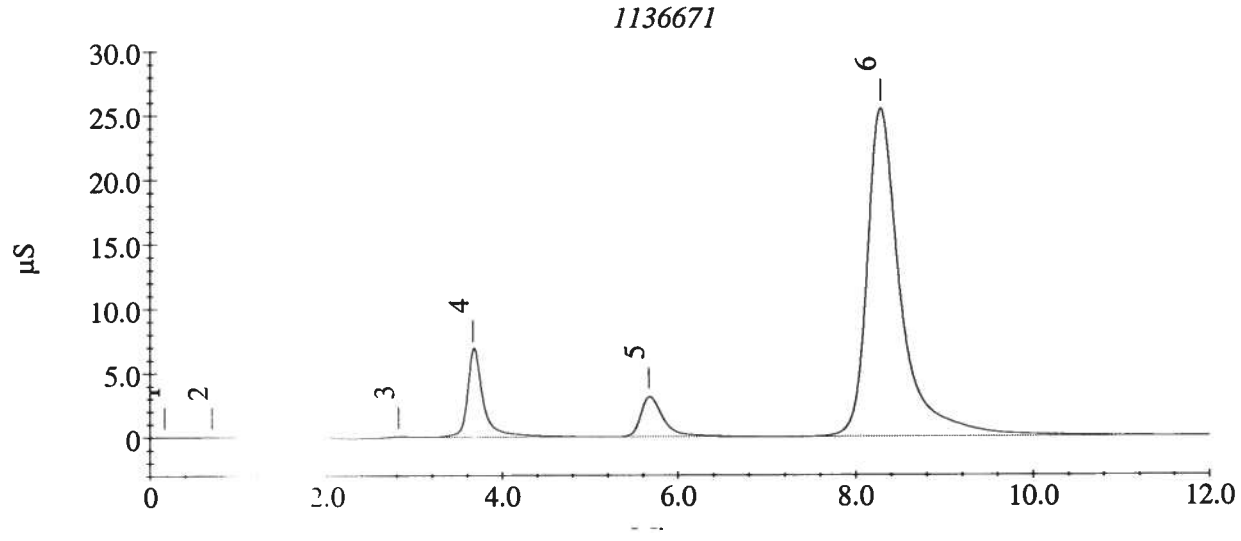
Sample Analysis Report

Sample Name : 1136671
Data File Name : c:\instarch\data\system 2\042822 -\1136671_098.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 15:14
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	2.82	0.1926	4944	425	
4	Chloride	3.67	7.8012	875230	67569	
5	Nitrate	5.67	2.2354	555532	31052	
6	Sulfate	8.28	76.7102	6725614	254367	+



Sample Analysis Report

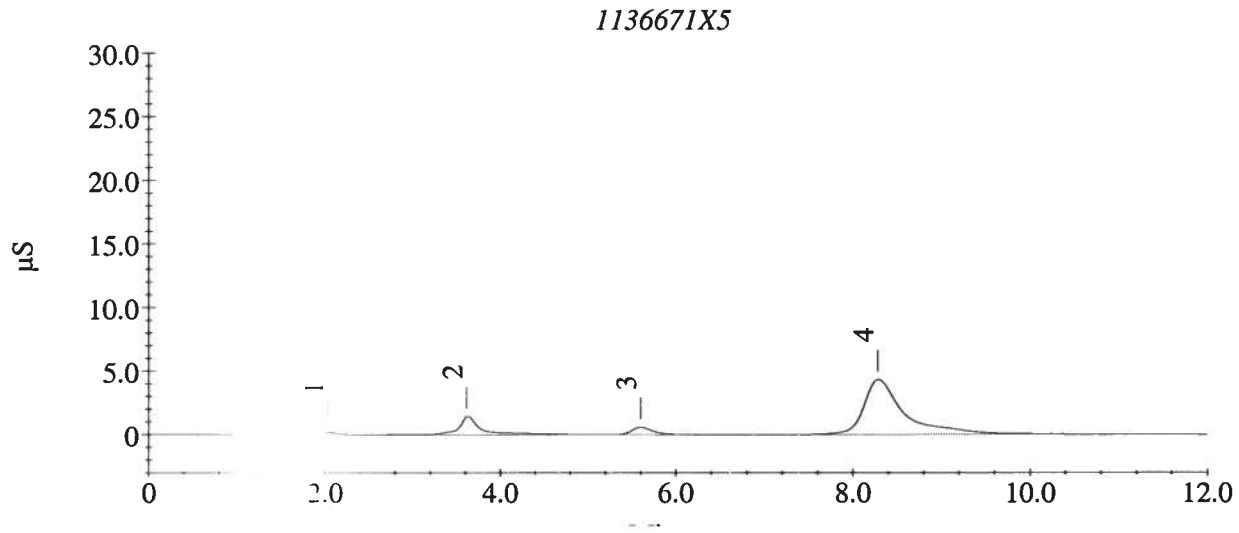
Sample Name : 1136671X5
Data File Name : c:\instarch\data\system 2\042822 -\1136671X5_099.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 15:28
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Chloride	3.62	2.6912	260870	14217	
3	Nitrate	5.60	0.4888	94921	5736	
4	Sulfate	8.28	16.3574	1381165	43123	

Page 1709



Sample Analysis Report

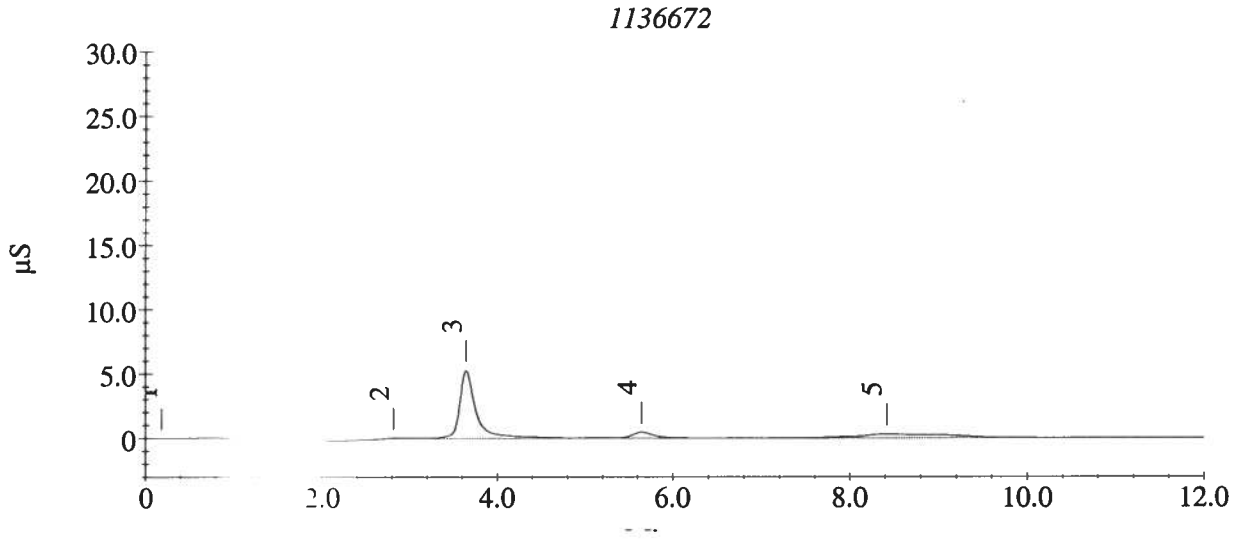
Sample Name : 1136672
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042822 -\1136672_100.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 15:43
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.82	0.1672	2608	242	
3	Chloride	3.65	6.2646	690496	52410	
4	Nitrate	5.65	0.4114	74499	4522	
5	Sulfate	8.42	3.0083	199063	2968	

Page 1710



Sample Analysis Report

Not used

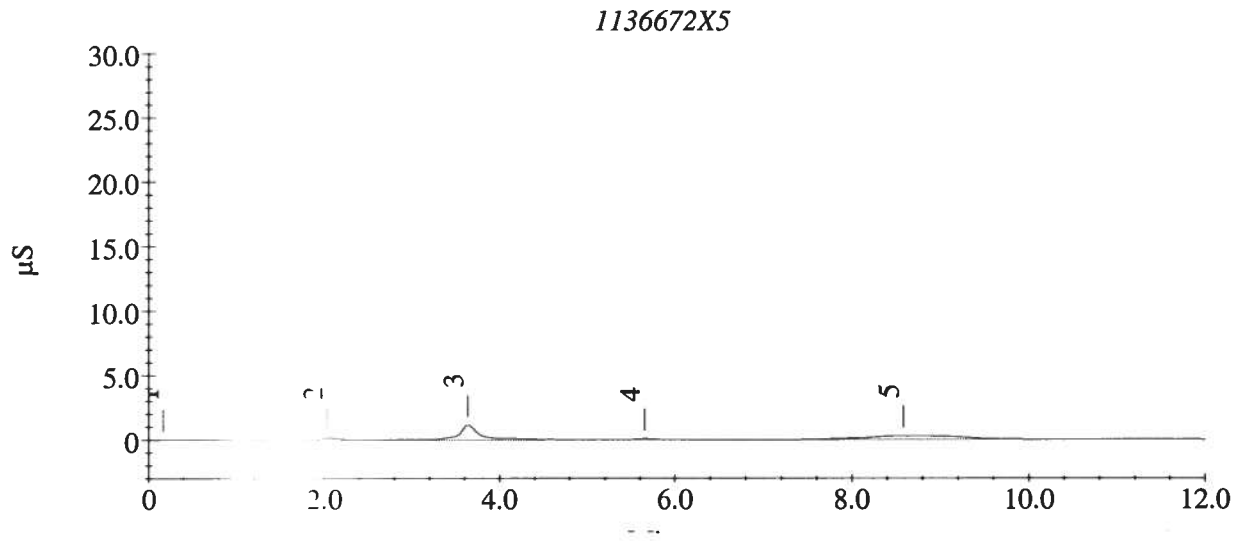
Sample Name : 1136672X5
Data File Name : c:\instarch\data\system 2\042822 -\1136672X5_101.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 15:57
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.63	2.2761	210968	11441	
4	Nitrate	5.65	0.1700	10832	715	
5	Sulfate	8.58	3.1731	213652	2895	

Page 1711



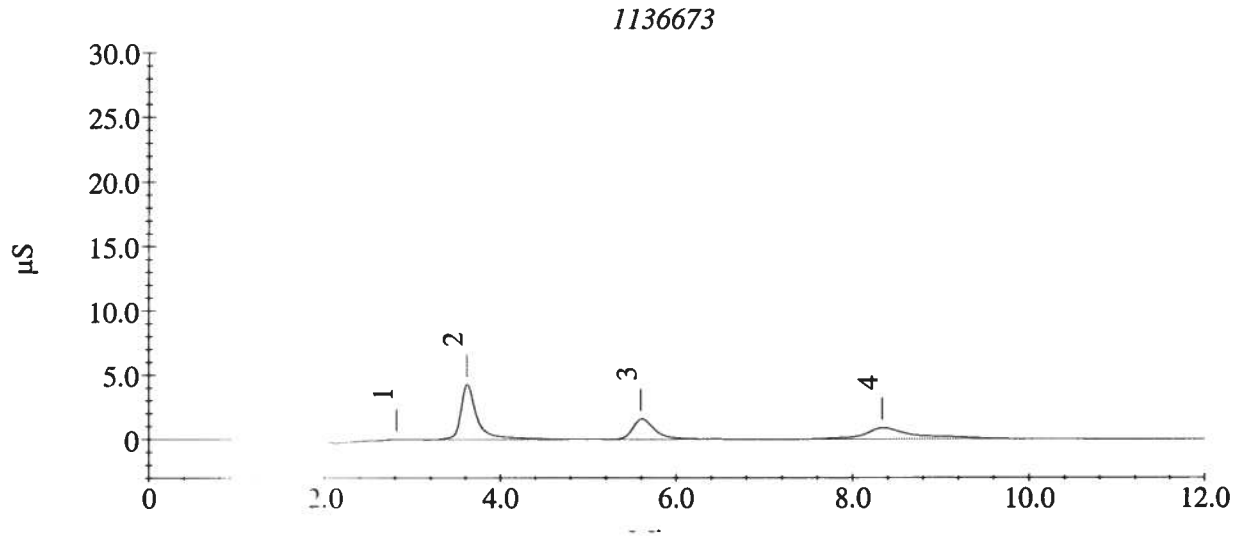
Sample Analysis Report

Sample Name : 1136673
Data File Name : c:\instarch\data\system 2\042822 -\1136673_102.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 16:11
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.82	0.1755	3374	264	
2	Chloride	3.62	5.2193	564818	42602	
3	Nitrate	5.60	1.1828	277950	15669	
4	Sulfate	8.33	4.6397	343528	8741	



Sample Analysis Report

Not used

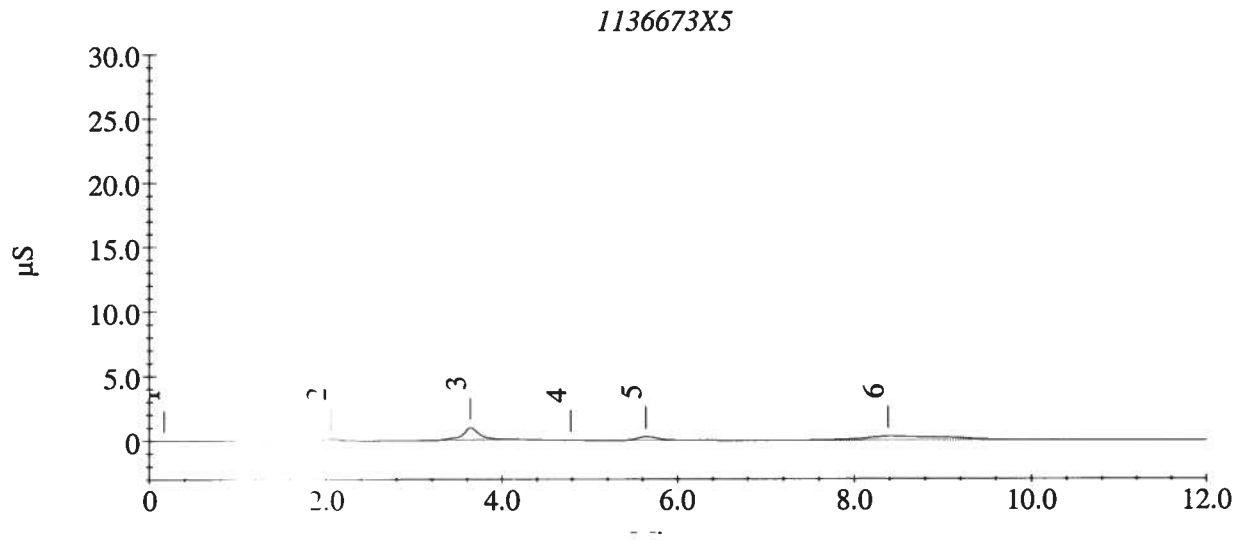
Sample Name : 1136673X5
Data File Name : c:\instarch\data\system 2\042822 -\1136673X5_103.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 16:25
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.63	1.5431	122847	9143	
4	Bromide	4.78	0.0872	1866	114	
5	Nitrate	5.63	0.3049	46418	2781	
6	Sulfate	8.38	3.0110	199300	3045	

Page 1713



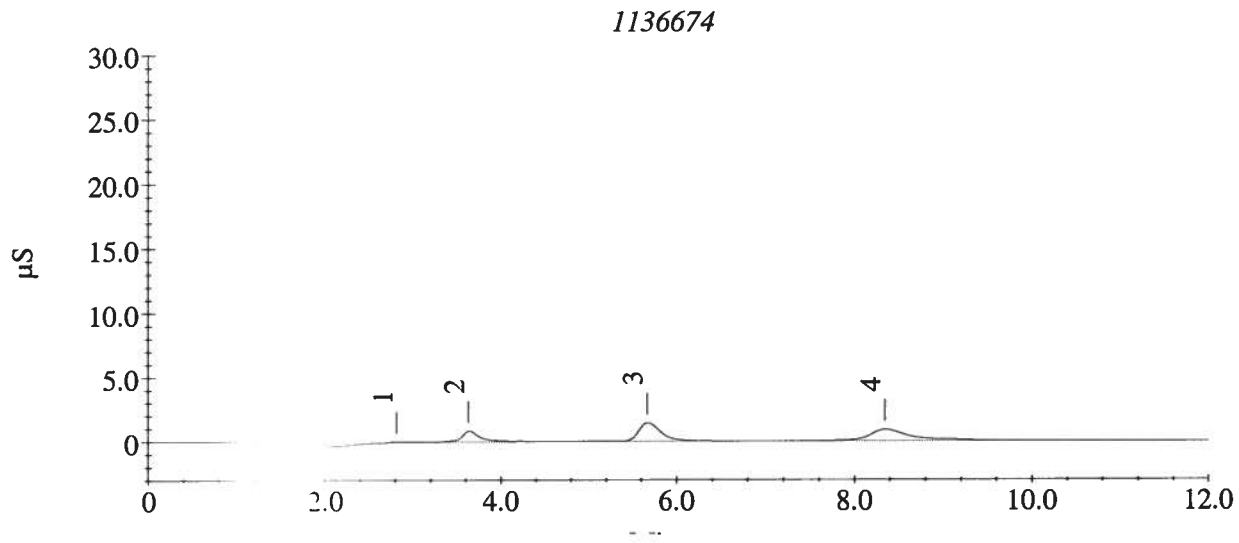
Sample Analysis Report

Sample Name : 1136674
Data File Name : c:\instarch\data\system 2\042822 -\1136674_104.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 16:39
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.82	0.1670	2590	224	
2	Chloride	3.63	1.5891	128374	8443	
3	Nitrate	5.67	1.1003	256196	14353	
4	Sulfate	8.35	4.0756	293573	8912	



Sample Analysis Report

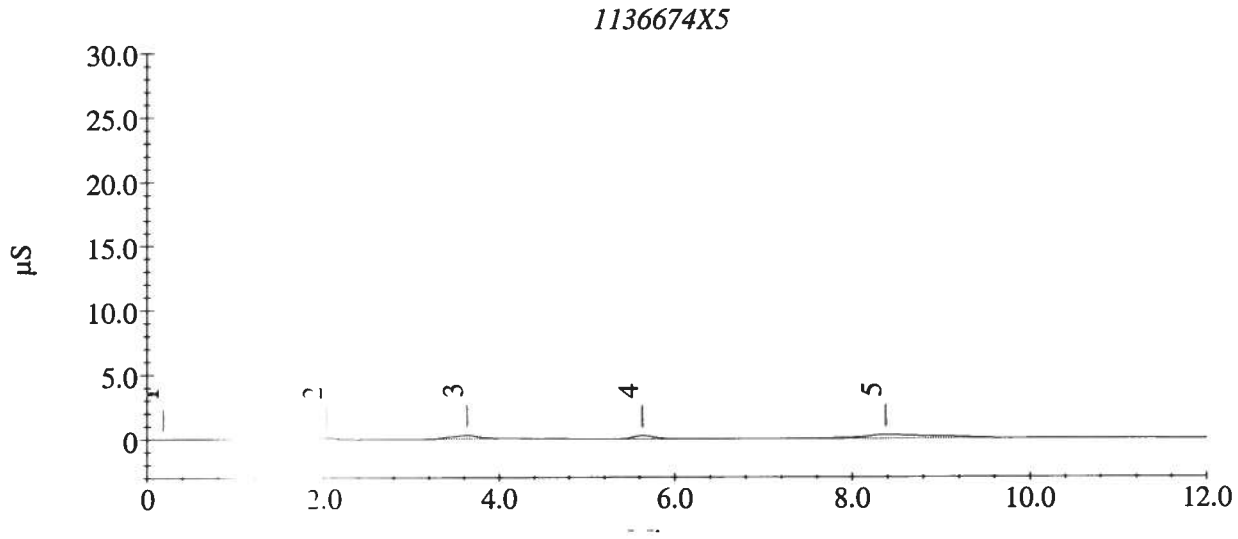
Not used

Sample Name : 1136674X5
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042822 -\1136674X5_105.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 16:54
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.63	1.0073	58425	2857	
4	Nitrate	5.63	0.2880	41957	2602	
5	Sulfate	8.38	2.5854	161613	2908	



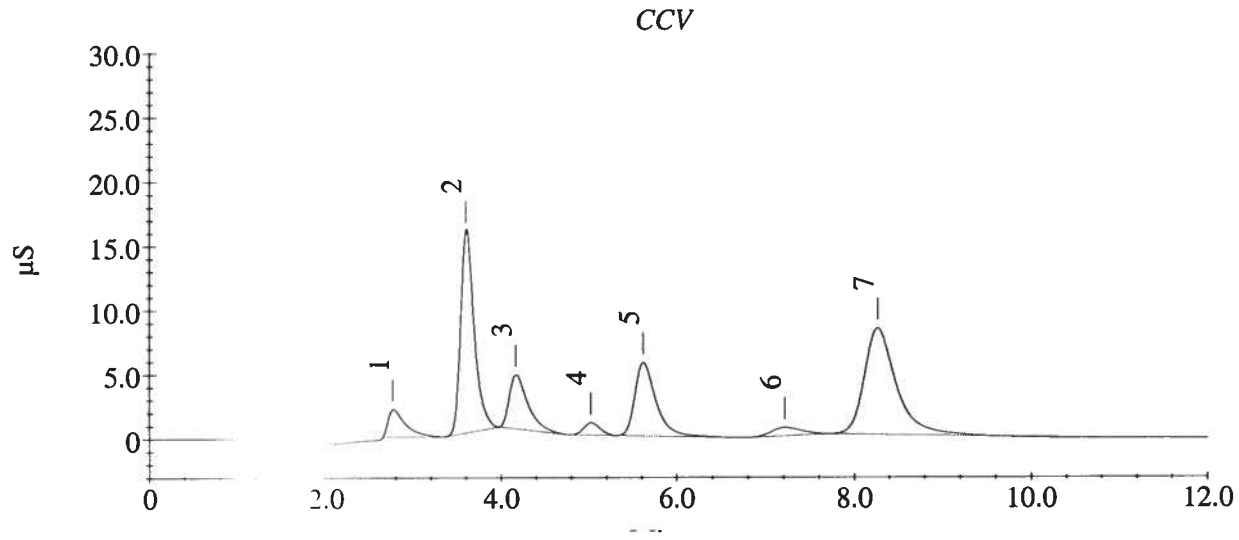
Sample Analysis Report

Sample Name : CCV
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042822 -\CCV_106.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 17:08
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.77	3.3028	291253	21167	
2	Chloride	3.60	14.8435	1721893	156746	
3	Nitrite	4.17	3.6597	614904	41860	
4	Bromide	5.02	4.0268	121409	9433	
5	Nitrate	5.62	3.7605	957750	56890	
6	O.Phos	7.22	2.6913	153147	6441	
7	Sulfate	8.27	24.3228	2086532	82713	



Sample Analysis Report

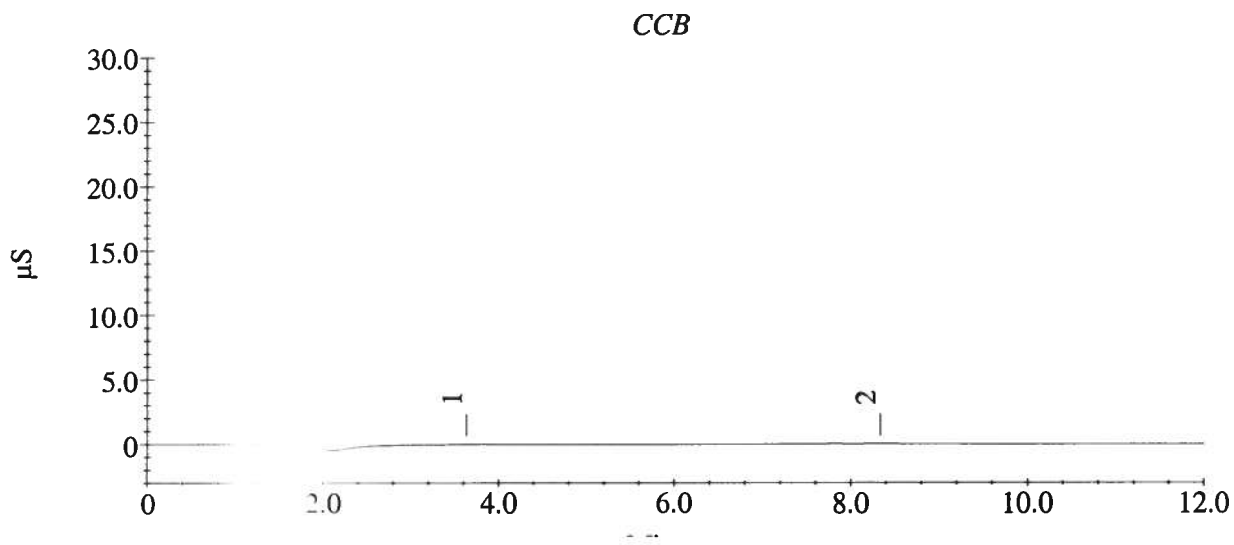
Sample Name : CCB
Data File Name : c:\instarch\data\system 2\042822 -\CCB_107.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 17:22
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Sulfate	8.33	0.8078	4196	172	

Page 1717



Sample Analysis Report

Sample Name : DUP1136674
Data File Name : c:\instarch\data\system 2\042822 -\DUP1136674_108.DXD

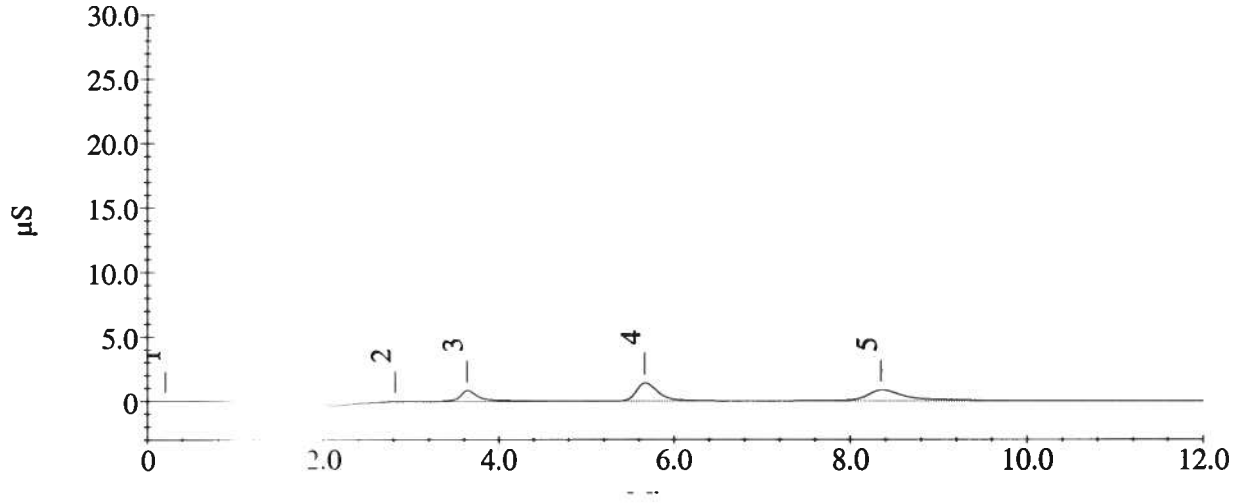
Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 17:36
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.82	0.1713	2988	237	
3	Chloride	3.63	1.6527	136025	8519	
4	Nitrate	5.67	1.0888	253154	14164	
5	Sulfate	8.35	3.9025	278247	8527	

Page 1718

DUP1136674



Sample Analysis Report

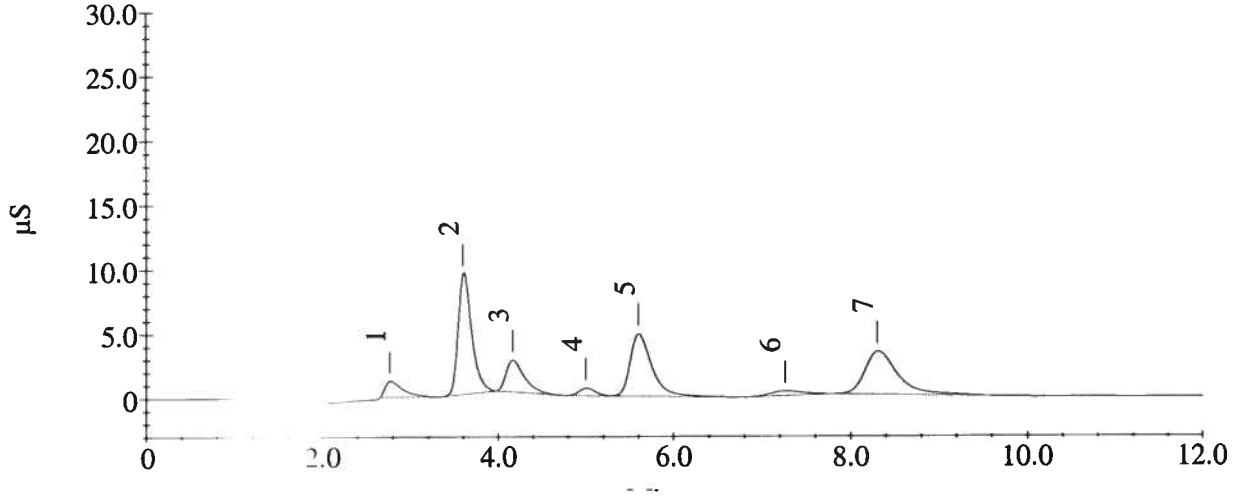
Sample Name : MSW1136674
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042822 -\MSW1136674_109.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 17:50
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.77	2.0013	171447	12316	
2	Chloride	3.60	9.0876	1029892	93080	
3	Nitrite	4.17	2.1856	359917	24599	
4	Bromide	5.00	2.4470	73472	5745	
5	Nitrate	5.60	3.2440	821551	48404	
6	O.Phos	7.27	1.6564	90475	3671	
7	Sulfate	8.30	10.5669	868397	33328	

MSW1136674



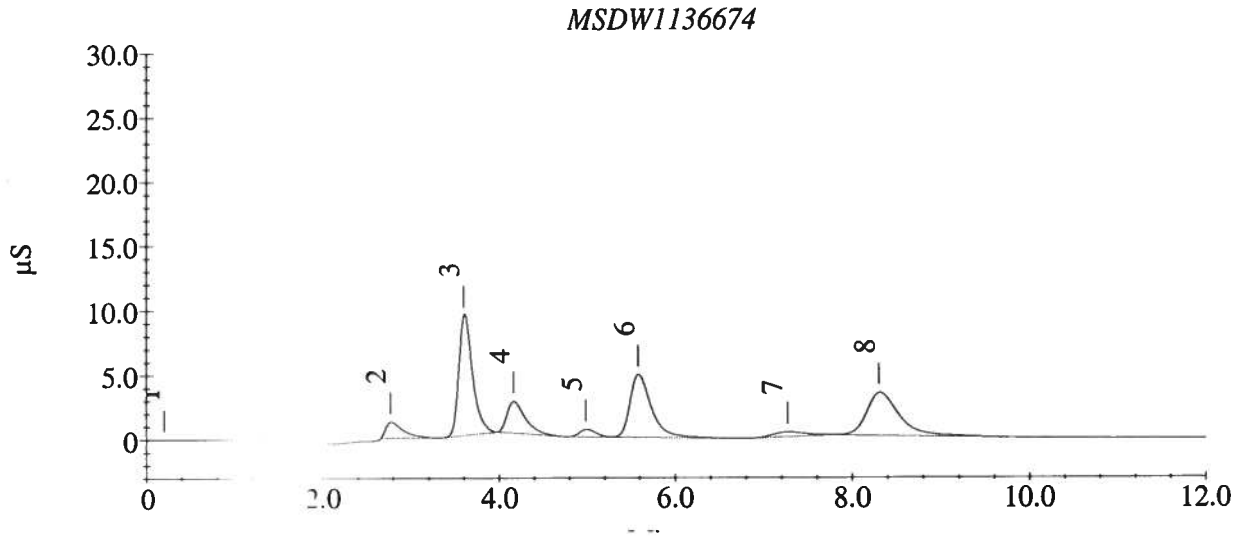
Sample Analysis Report

Sample Name : MSDW1136674
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042822 -\MSDW1136674_110.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 18:05
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.77	2.0090	172153	12396	
3	Chloride	3.60	9.0216	1021959	92520	
4	Nitrite	4.17	2.1651	356361	24493	
5	Bromide	4.98	2.4286	72913	5725	
6	Nitrate	5.58	3.2355	819309	48644	
7	O.Phos	7.27	1.6559	90443	3686	
8	Sulfate	8.30	10.3723	851170	33114	



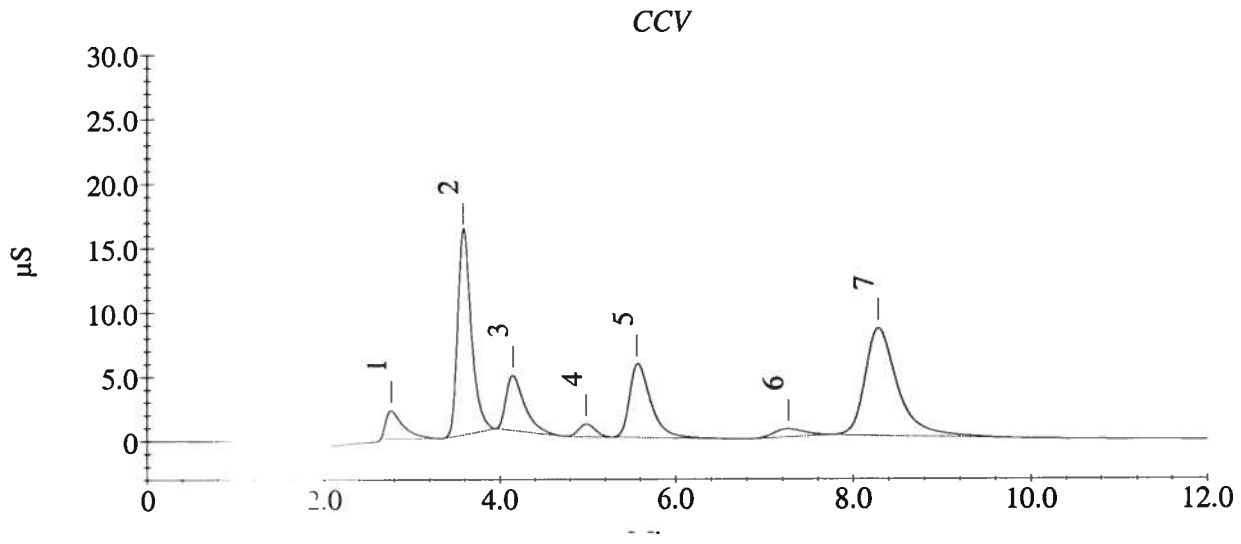
Sample Analysis Report

Sample Name : CCV
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042822 -\CCV_117.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 19:44
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.77	3.4110	301205	21896	
2	Chloride	3.58	14.9868	1739120	156845	
3	Nitrite	4.15	3.7133	624160	42615	
4	Bromide	4.98	4.1089	123901	9636	
5	Nitrate	5.57	3.7829	963665	56859	
6	O.Phos	7.27	2.5853	146728	6157	
7	Sulfate	8.28	24.7050	2120374	83385	



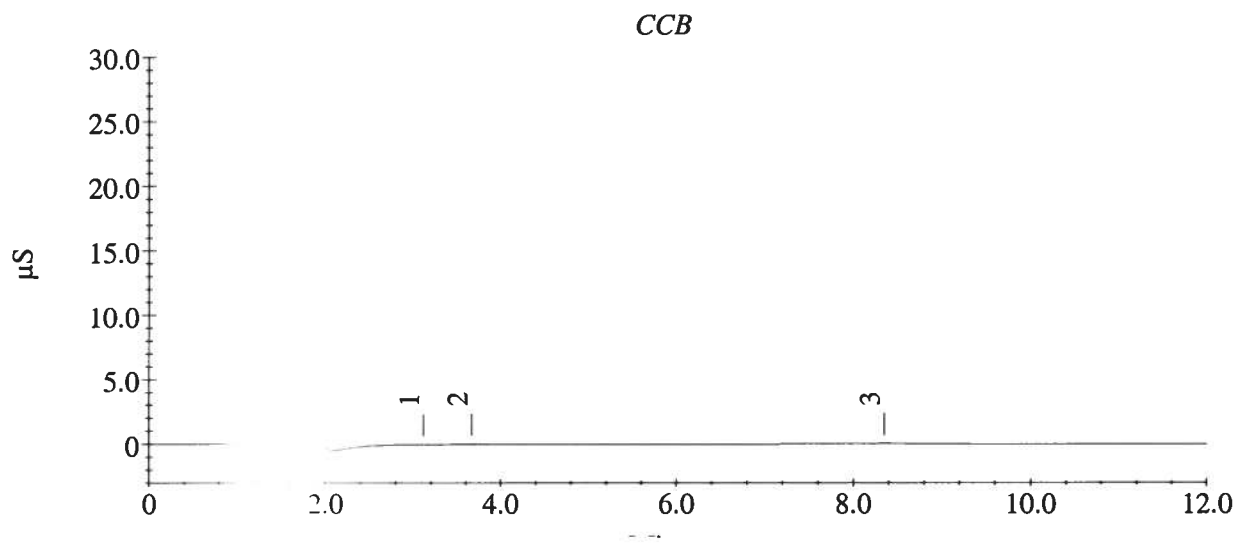
Sample Analysis Report

Sample Name : CCB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\042822 -\CCB_118.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 4/29/22 19:58
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Chloride	3.67	0.6049	10044	404	
3	Sulfate	8.35	0.7889	2527	141	



Schedule File: C:\INSTARCH\Sequences\System 2\043022 -.sch

Line	Sample	Sample Type	Level	Method	Data File
1	CCV	Sample		ic4106.met	ccv_001.dxd
2	LCSW	Sample		ic4106.met	lcsw_002.dxd
3	MBW	Sample		ic4106.met	mbw_003.dxd
4	1137438	Sample		ic4106.met	1137438_004.dxd
5	1137438X5	Sample		ic4106.met	1137438x5_005.dxd
6	DUP1137438	Sample		ic4106.met	dup1137438_006.dxd
7	MSW1137438	Sample		ic4106.met	msw1137438_007.dxd
8	MSDW1137438	Sample		ic4106.met	msdw1137438_008.dxd
9	CCV	Sample		ic4106.met	ccv_009.dxd
10	CCB	Sample		ic4106.met	ccb_010.dxd
11	CCV	Sample		ic4106.met	ccv_011.dxd
12	CCB	Sample		ic4106.met	ccb_012.dxd
13	DUP1137438X5	Sample		ic4106.met	dup1137438x5_013.dxd
14	MSW1137438X5	Sample		ic4106.met	msw1137438x5_014.dxd
15	MSDW1137438X5	Sample		ic4106.met	msdw1137438x5_015.dxd
16	CCV	Sample		ic4106.met	ccv_016.dxd
17	CCB	Sample		ic4106.met	ccb_017.dxd
18	1137438X5	Sample		ic4106.met	1137438x5_018.dxd
19	CCV	Sample		ic4106.met	ccv_019.dxd
20	CCB	Sample		ic4106.met	ccb_020.dxd

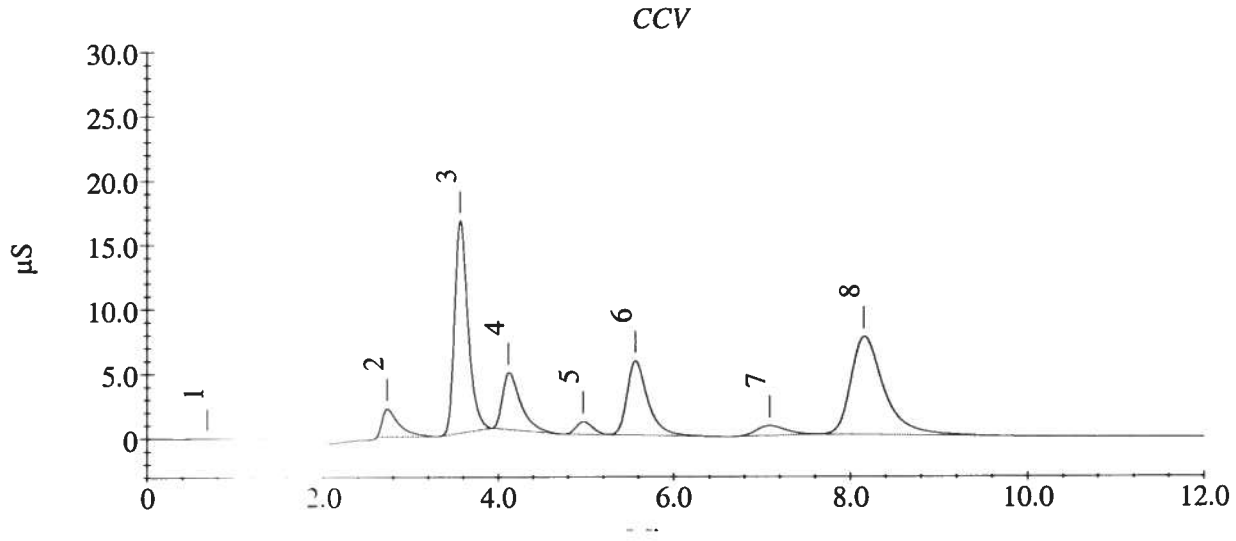
Sample Analysis Report

Sample Name : CCV
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\CCV_001.dxd

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 12:02
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.73	3.2555	286891	21592	
3	Chloride	3.57	14.9762	1737850	164308	
4	Nitrite	4.12	3.8162	641959	43657	
5	Bromide	4.97	4.1390	124813	9711	
6	Nitrate	5.57	3.7054	943226	57212	
7	O.Phos	7.08	3.0690	176016	7554	
8	Sulfate	8.15	22.9922	1968705	75717	



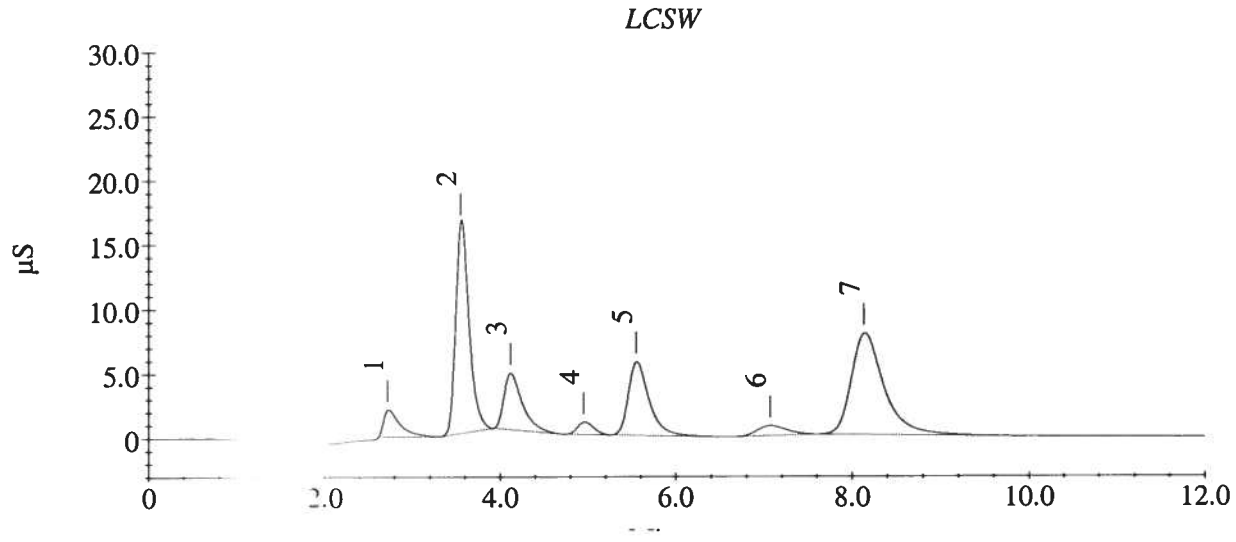
Sample Analysis Report

Sample Name : LCSW
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\LCSW_002.dxd

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 12:16
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.72	3.1656	278621	20666	
2	Chloride	3.55	15.0107	1741999	162484	
3	Nitrite	4.12	3.7937	638079	43669	
4	Bromide	4.95	4.0662	122604	9461	
5	Nitrate	5.55	3.7036	942762	56821	
6	O.Phos	7.07	3.1028	178066	7734	
7	Sulfate	8.13	23.4613	2010245	78403	



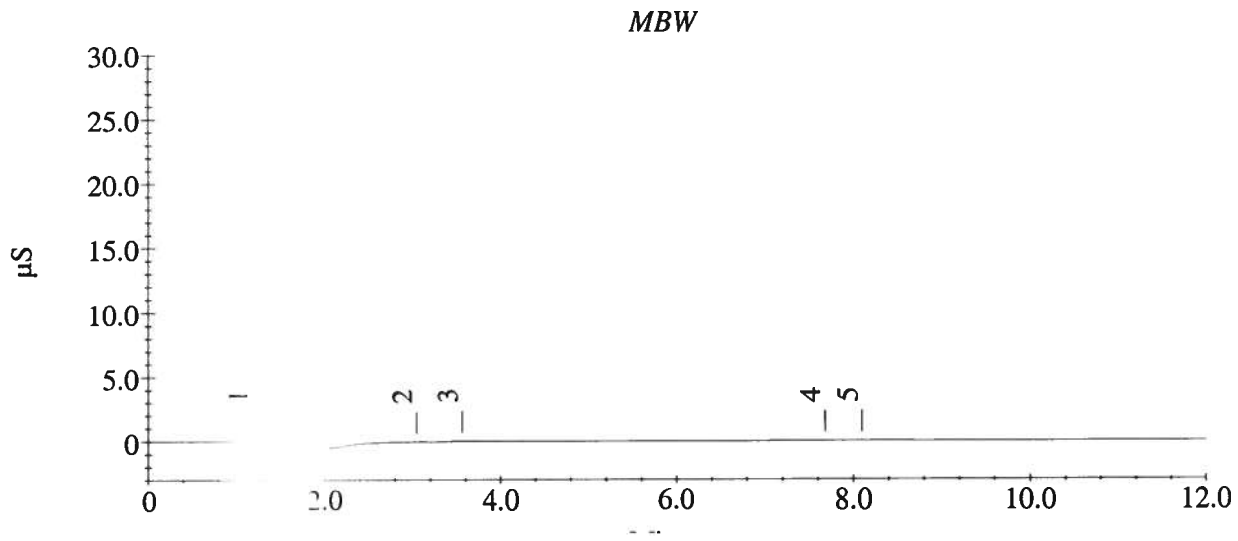
Sample Analysis Report

Sample Name : MBW
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\MBW_003.dxd

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 12:31
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.57	0.6361	13800	533	
5	Sulfate	8.10	0.7902	2640	91	



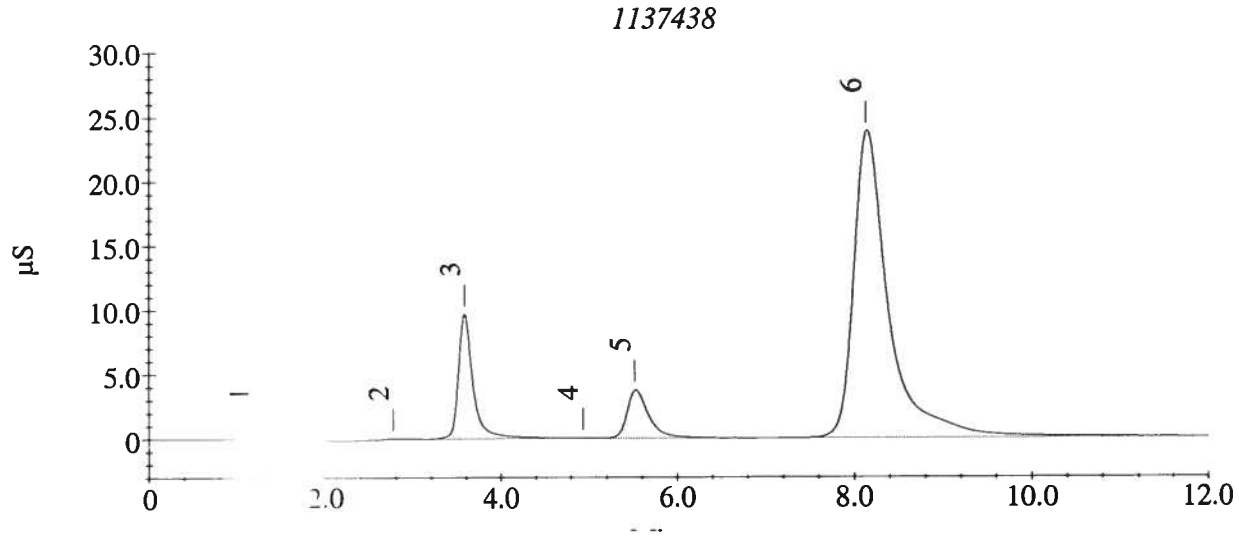
Sample Analysis Report

Sample Name : 1137438
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\1137438_004.dxd

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 12:45
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.77	0.1597	1918	214	
3	Chloride	3.58	9.8753	1124594	96368	
4	Bromide	4.93	0.0658	1215	118	
5	Nitrate	5.52	2.5362	634867	37035	
6	Sulfate	8.13	74.6384	6542150	237733	+



Sample Analysis Report

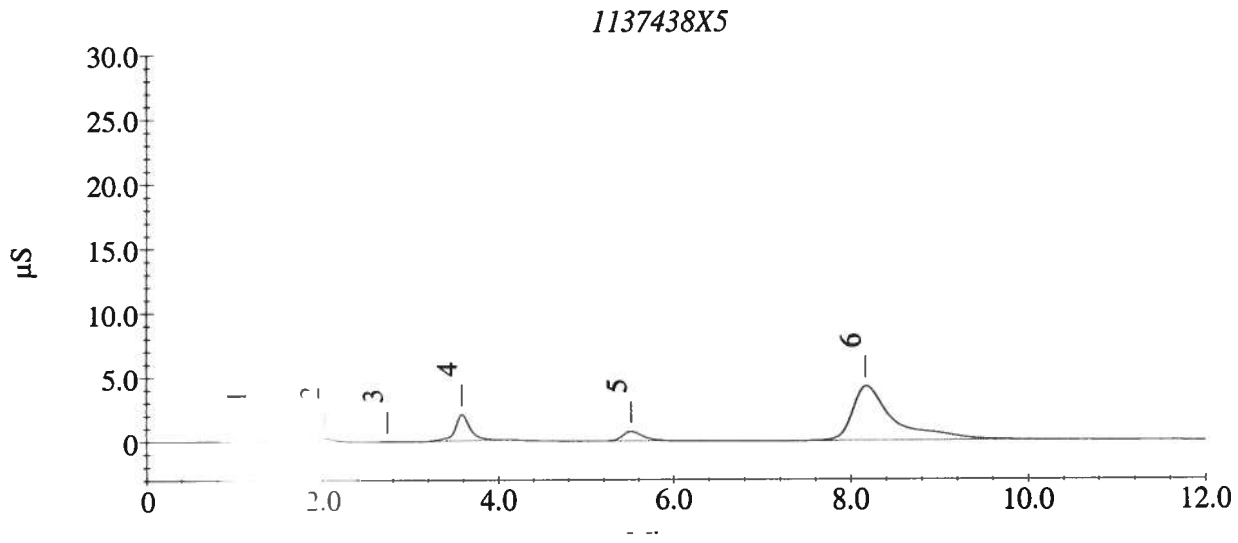
Not used

Sample Name : 1137438X5
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\1137438X5_005.dxd

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 12:59
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	2.73	0.1498	1009	93	
4	Chloride	3.58	2.5393	242613	20268	
5	Nitrate	5.52	0.5847	120210	7365	
6	Sulfate	8.17	16.2197	1368977	42248	



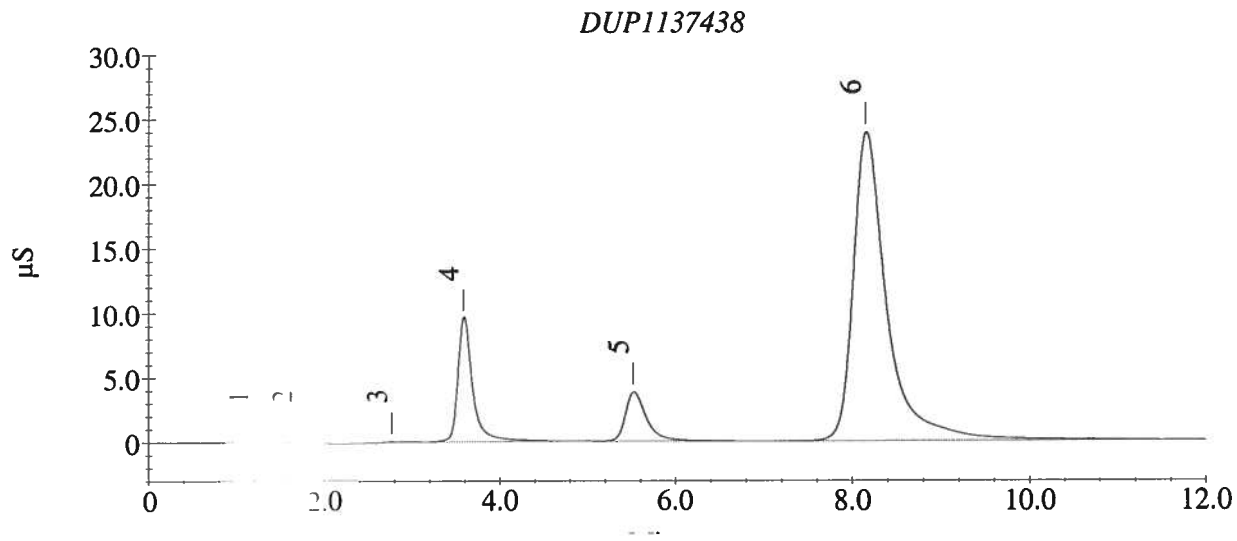
Sample Analysis Report

Sample Name : DUP1137438
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\DUP1137438_006.dxd

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 13:13
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	2.77	0.1641	2324	277	
4	Chloride	3.58	9.8627	1123076	95136	
5	Nitrate	5.52	2.5479	637957	37841	
6	Sulfate	8.15	72.6434	6365483	239050	+



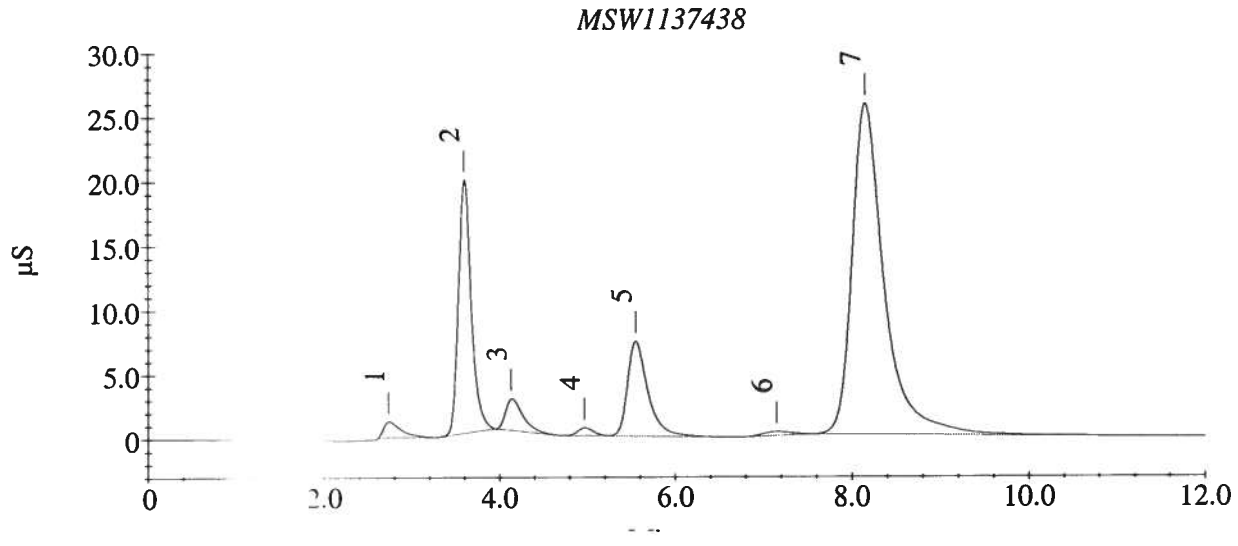
Sample Analysis Report

Sample Name : MSW1137438
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\MSW1137438_007.dxd

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 13:27
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.73	2.0110	172332	12393	
2	Chloride	3.60	17.1585	2000222	196073	
3	Nitrite	4.13	2.0677	339513	24467	
4	Bromide	4.97	2.4843	74603	6138	
5	Nitrate	5.55	4.6286	1186690	73595	
6	O.Phos	7.15	1.2946	68565	3097	
7	Sulfate	8.15	74.3380	6515553	256675	+



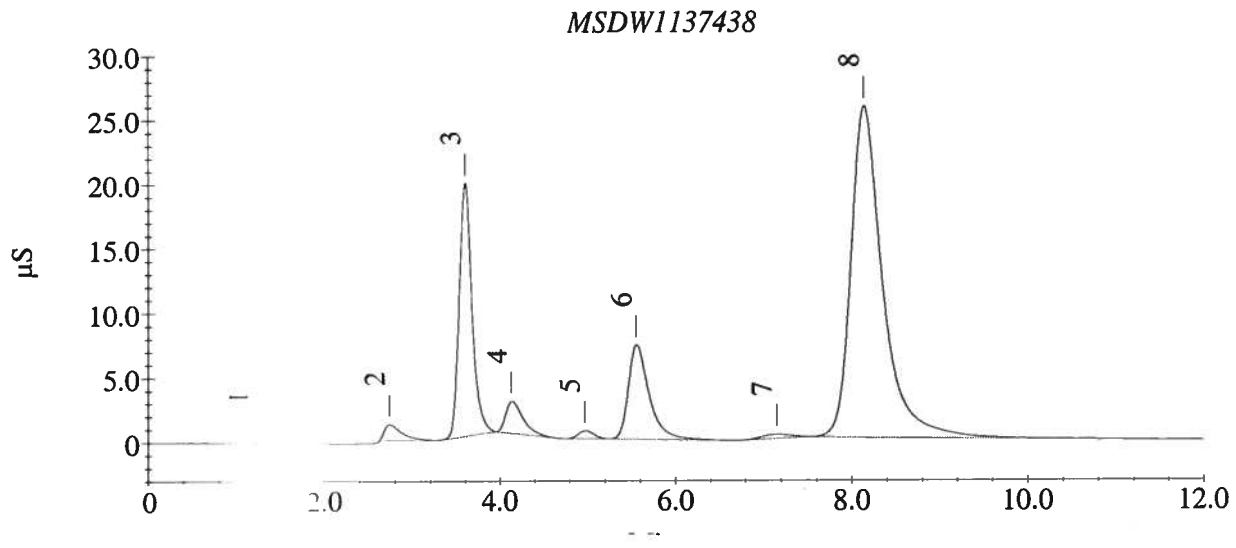
Sample Analysis Report

Sample Name : MSDW1137438
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\MSDW1137438_008.dxd

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 13:42
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.73	1.9872	170143	12382	
3	Chloride	3.60	17.2275	2008515	195779	
4	Nitrite	4.13	2.0772	341152	24494	
5	Bromide	4.97	2.4953	74938	6042	
6	Nitrate	5.55	4.6493	1192153	72269	
7	O.Phos	7.15	1.3336	70931	3238	
8	Sulfate	8.13	73.4938	6440795	256784	+



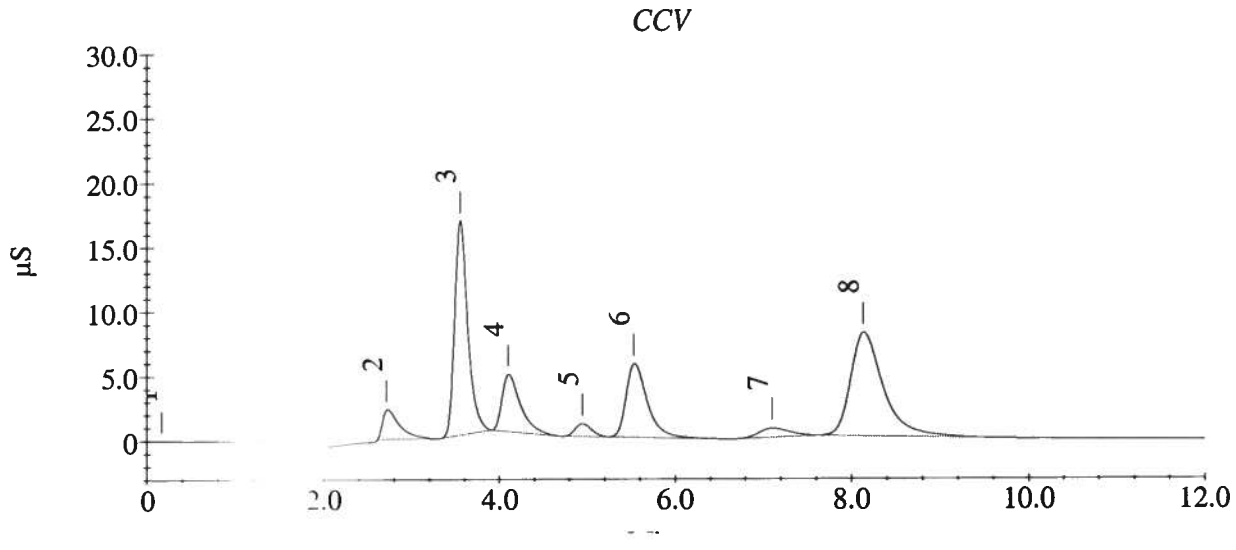
Sample Analysis Report

Sample Name : CCV
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\CCV_009.dxd

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 13:56
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.72	3.4591	305635	22666	
3	Chloride	3.55	15.0624	1748219	165593	
4	Nitrite	4.10	3.8526	648260	44062	
5	Bromide	4.95	4.1552	125305	9802	
6	Nitrate	5.53	3.7351	951069	56880	
7	O.Phos	7.10	2.8828	164739	6943	
8	Sulfate	8.13	23.8718	2046596	80234	



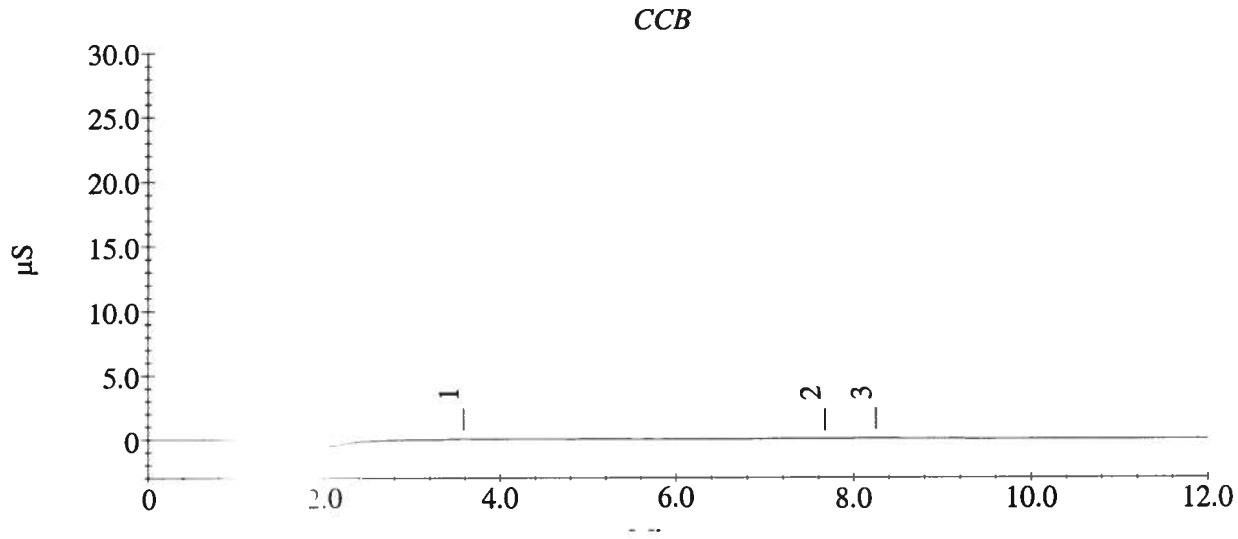
Sample Analysis Report

Sample Name : CCB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\CCB_010.DXD

Method File Name : C:\INSTARCH\METHODS\SYSTEM 2\IC4106.met
Date Time Collected : 4/30/22 14:10
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Chloride	3.58	0.5497	3417	205	
3	Sulfate	8.25	0.8302	6180	263	



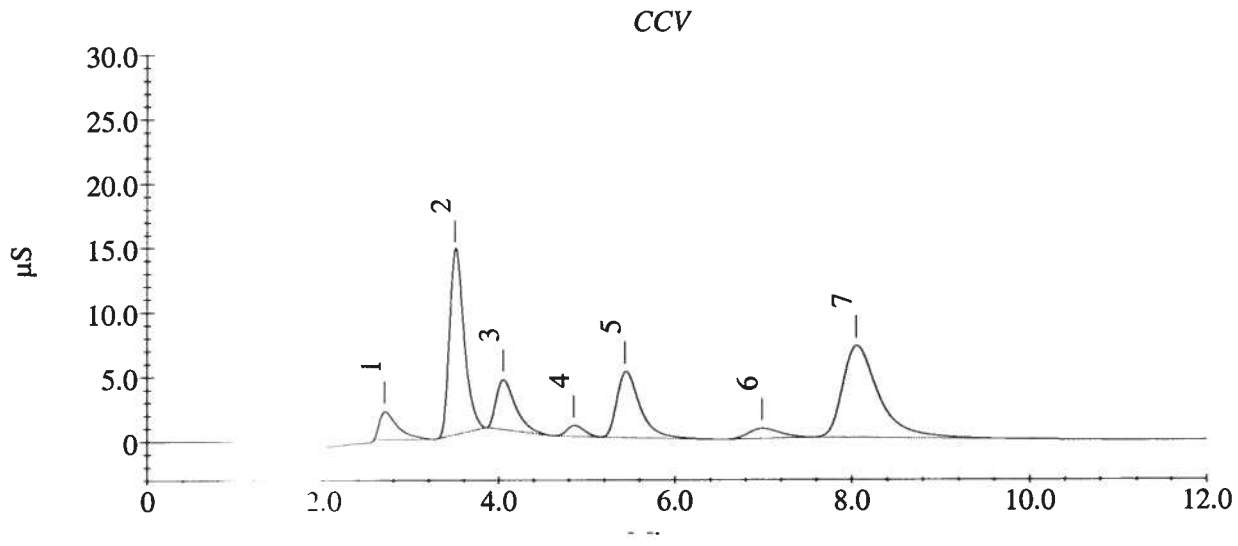
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\043022 -\CCV_011.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 08:57
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.70	3.5004	309442	21525	
2	Chloride	3.50	14.2531	1650917	142356	
3	Nitrite	4.05	3.5249	591574	38428	
4	Bromide	4.85	3.8098	114824	8307	
5	Nitrate	5.43	3.6586	930873	50726	
6	O.Phos	6.98	3.3323	191965	7735	
7	Sulfate	8.05	23.4315	2007604	71030	



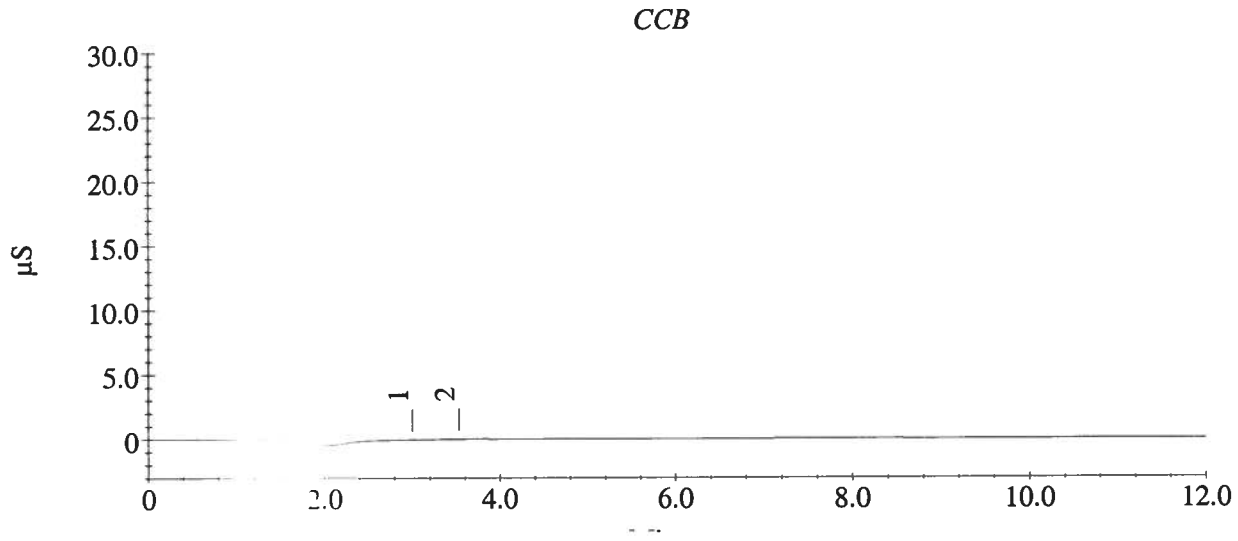
Sample Analysis Report

Sample Name : CCB
Data File Name : c:\instarch\data\system 2\043022 -\CCB_012.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 09:11
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Chloride	3.53	0.6230	12228	516	



Sample Analysis Report

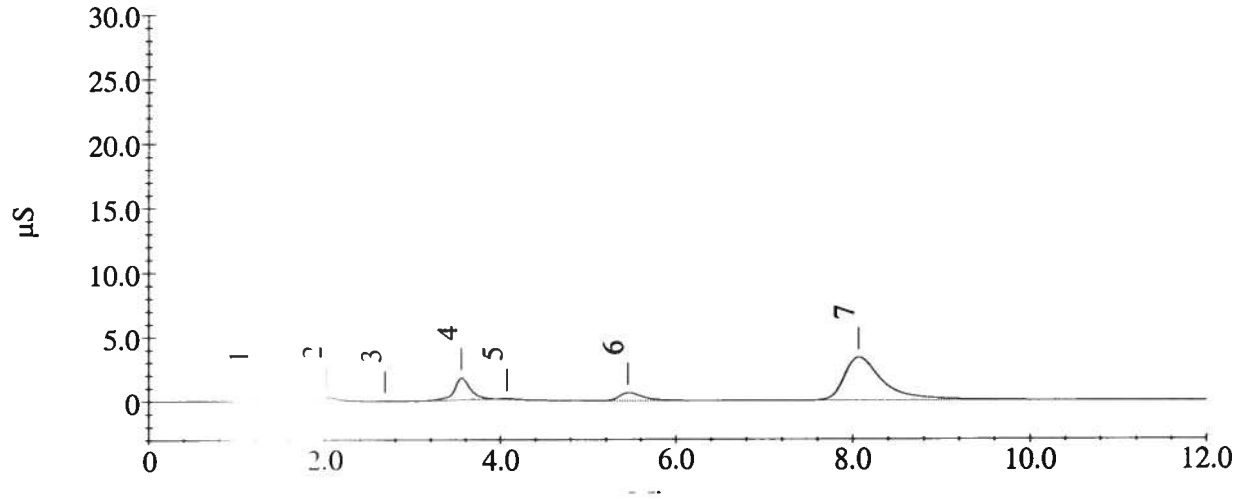
Sample Name : DUP1137438X5
Data File Name : c:\instarch\data\system 2\043022 -\DUP1137438X5_013.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 09:25
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Chloride	3.55	2.3653	221697	16898	
5	Nitrite	4.07	0.1465	7183	571	
6	Nitrate	5.45	0.5713	116670	6112	
7	Sulfate	8.07	12.2022	1013210	33547	

DUP1137438X5



Sample Analysis Report

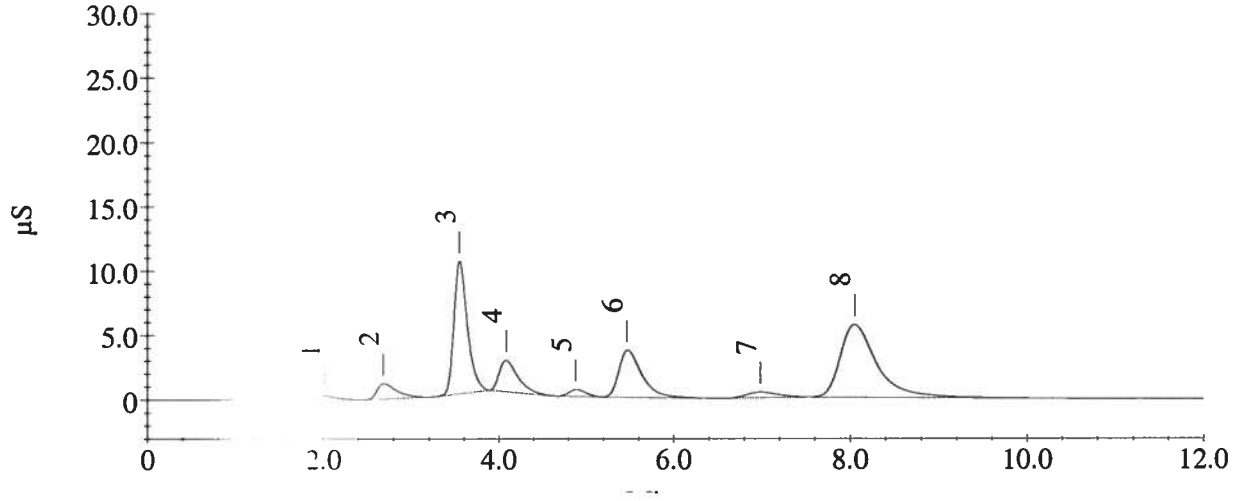
Sample Name : MSW1137438X5
Data File Name : c:\instarch\data\system 2\043022 -\MSW1137438X5_014.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 09:40
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.68	2.1079	181257	11602	
3	Chloride	3.55	9.6690	1099785	102615	
4	Nitrite	4.08	2.2022	362781	24120	
5	Bromide	4.88	2.3259	69796	5167	
6	Nitrate	5.47	2.6383	661796	36151	
7	O.Phos	6.98	1.9461	108021	4354	
8	Sulfate	8.05	18.9659	1612155	56378	

MSW1137438X5



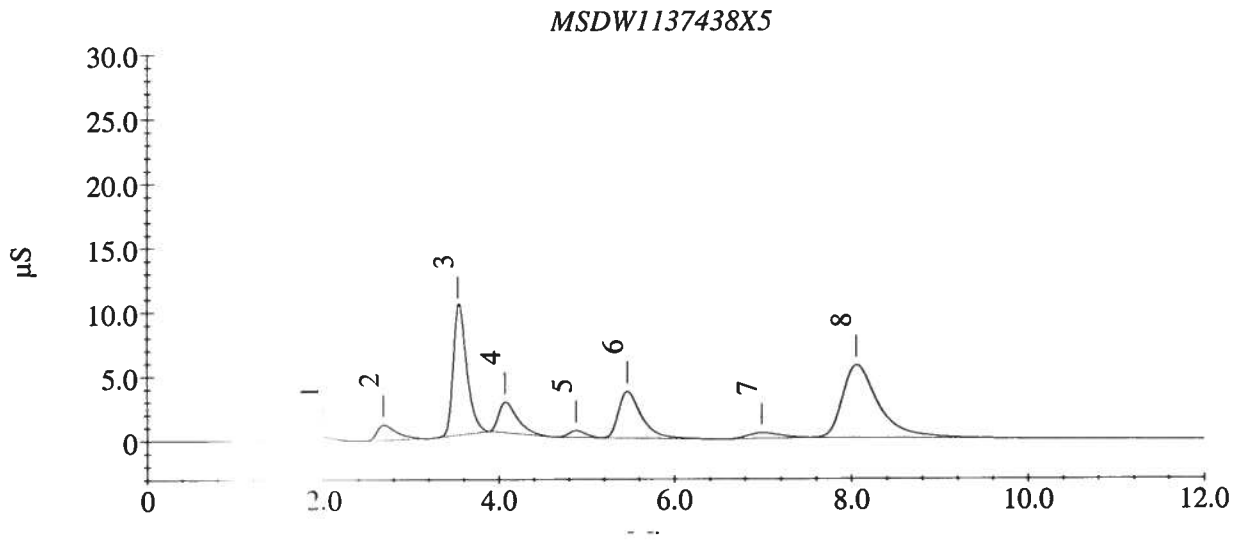
Sample Analysis Report

Sample Name : MSDW1137438X5
Data File Name : c:\instarch\data\system 2\043022 -\MSDW1137438X5_015.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 09:54
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	2.68	2.1200	182372	11721	
3	Chloride	3.53	9.6341	1095598	99891	
4	Nitrite	4.07	2.1601	355498	23618	
5	Bromide	4.88	2.2939	68825	5164	
6	Nitrate	5.47	2.6223	657570	36213	
7	O.Phos	6.98	1.9723	109607	4352	
8	Sulfate	8.05	18.8750	1604109	56301	



Page 1738

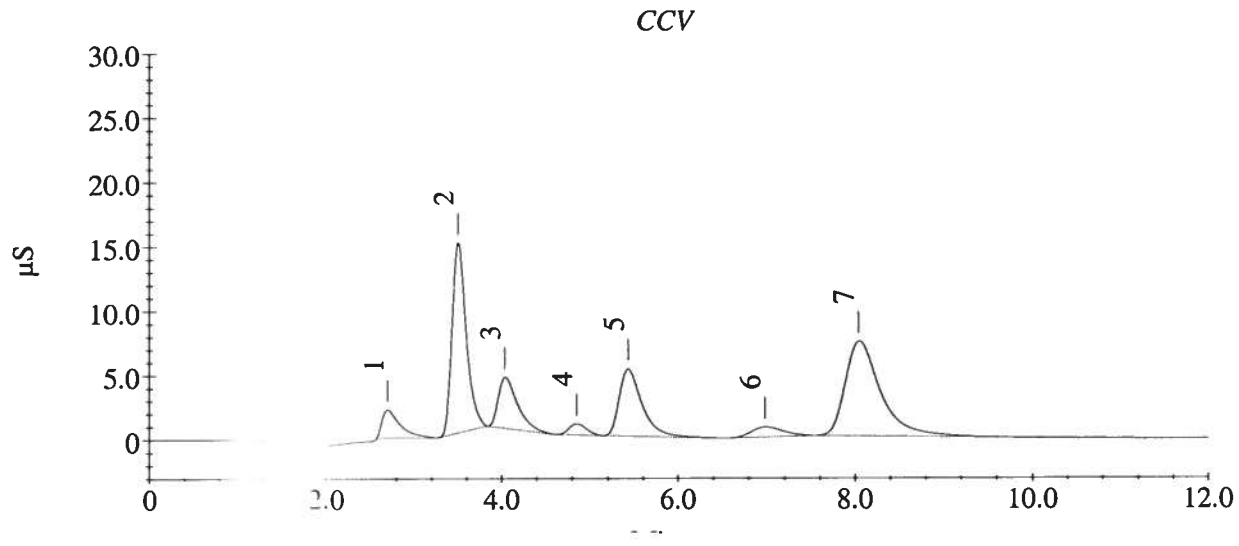
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\043022 -\CCV_016.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 10:08
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.70	3.4694	306585	21640	
2	Chloride	3.50	14.4040	1669057	147314	
3	Nitrite	4.03	3.6113	606518	39442	
4	Bromide	4.85	3.8359	115617	8566	
5	Nitrate	5.43	3.6820	937048	52103	
6	O.Phos	6.98	3.3018	190118	7695	
7	Sulfate	8.03	23.6835	2029920	73340	



Sample Analysis Report

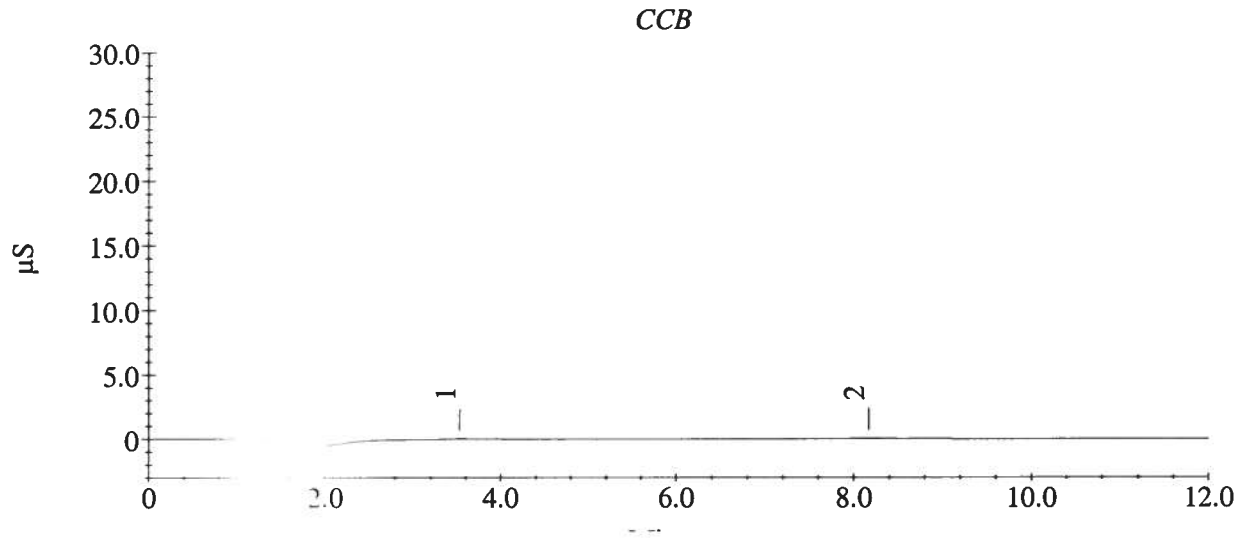
Sample Name : CCB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\CCB_017.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 10:22
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Chloride	3.53	0.5884	8067	326	
2	Sulfate	8.17	0.8811	10686	412	

Page 1740



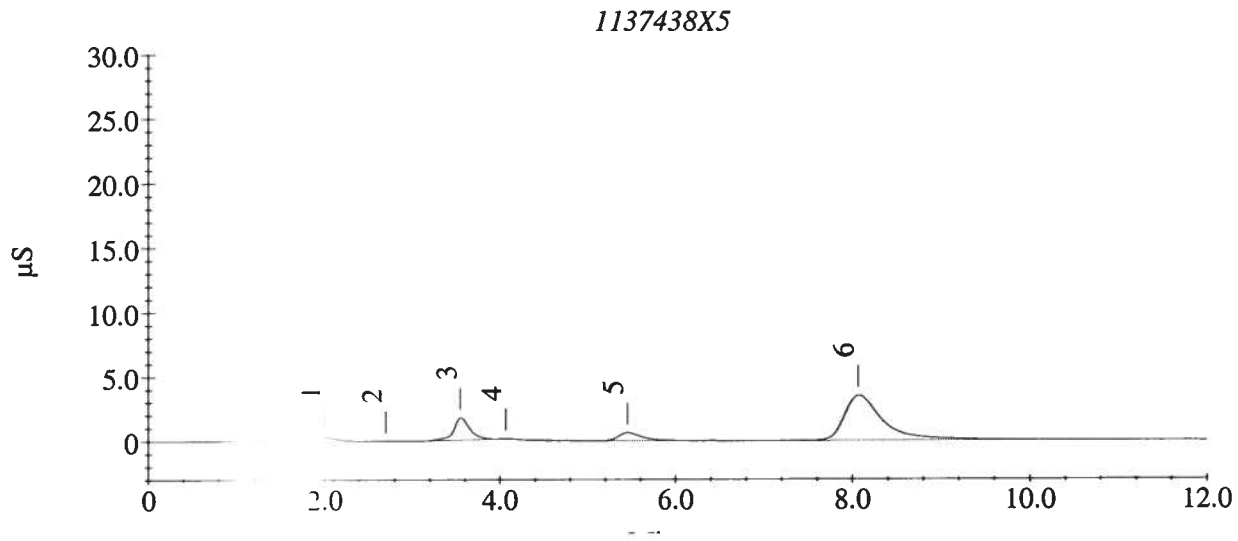
Sample Analysis Report

Sample Name : 1137438X5
Data File Name : c:\instarch\data\system 2\043022 -\1137438X5_018.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 10:55
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	3.55	2.4021	226117	17250	
4	Nitrite	4.07	0.1338	4994	517	
5	Nitrate	5.45	0.5747	117581	6201	
6	Sulfate	8.07	12.6739	1054983	34908	



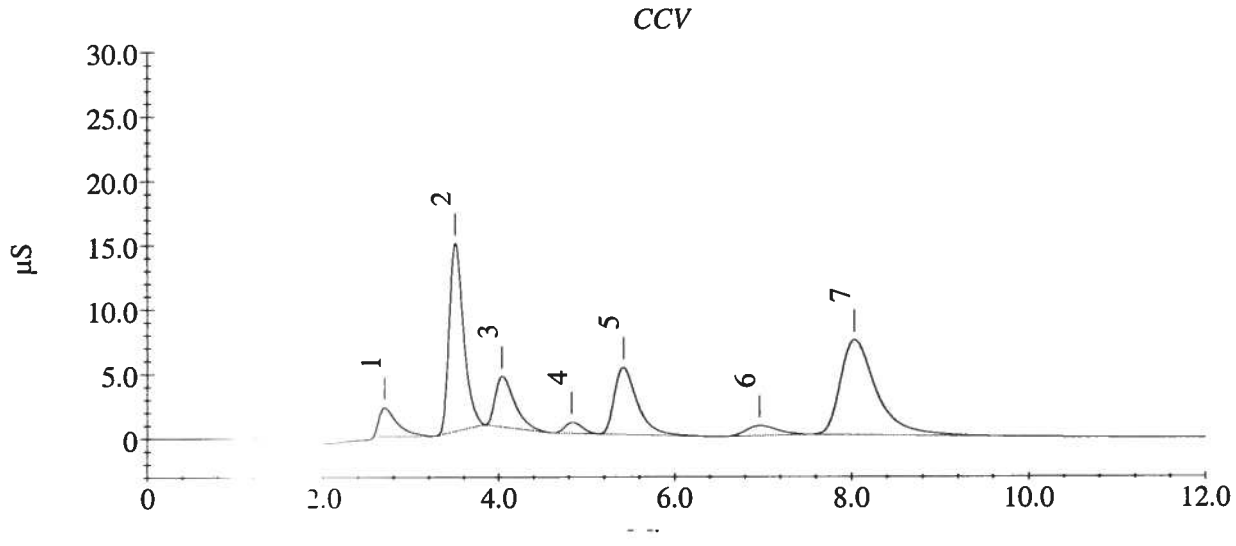
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\043022 -\CCV_019.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 11:09
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	2.70	3.5771	316504	22187	
2	Chloride	3.50	14.3706	1665043	145662	
3	Nitrite	4.03	3.5799	601094	38873	
4	Bromide	4.83	3.8197	115126	8451	
5	Nitrate	5.42	3.6807	936718	51830	
6	O.Phos	6.97	3.3125	190766	7687	
7	Sulfate	8.03	23.9081	2049810	73441	



Sample Analysis Report

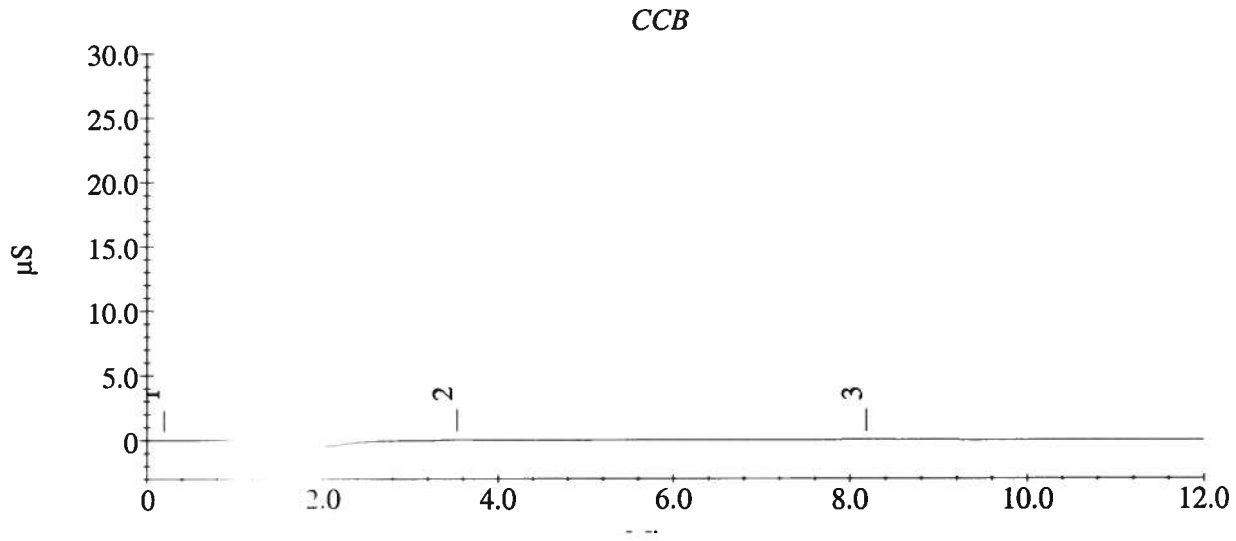
Sample Name : CCB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\043022 -\CCB_020.DXD

Method File Name : c:\instarch\methods\system 2\ic4106.met
Date Time Collected : 5/2/22 11:23
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Chloride	3.53	0.5588	4501	283	
3	Sulfate	8.18	0.8190	5185	261	

Page 1743



pH - Mettler Toledo Seven Easy

Date:	04/28/2022	Analyst:	HLB	Lims #:	211555	Slope (%)	98%

GRP	Sample ID#	Matrix	DF	Corrected Temp (°C)*	Result	
1	BUFFER 7	QC	1			
2			1			
3			1			
4			1			
5			1			
6			1			
7			1			
8			1			
9			1			
10			1			
11	1136212	GW	1	8.1	7.37	
dup 11	1136212	GW	1	8.2	7.37	
12	BUFFER 7	QC	1			
13			1			
14			1			
15			1			
16			1			
17			1			
18			1			
19			1			
20			1			
21			1			
23			1			
dup 23			1			
24	BUFFER 7		1			
25			1			
dup 25			1			
26			1			
dup 26			1			

To datacapture: Save CSV file under the TSS datacapture folder.

*Temperature of samples should be room temperature around 25°C

Buffer Standard IDs:

pH 4: WC205 pH 7: WC398 pH 10: WC275

pH - Mettler Toledo Seven Easy

Date:	05/02/2022	Analyst:	RLB	Lims #:	211639	Slope (%)	98%

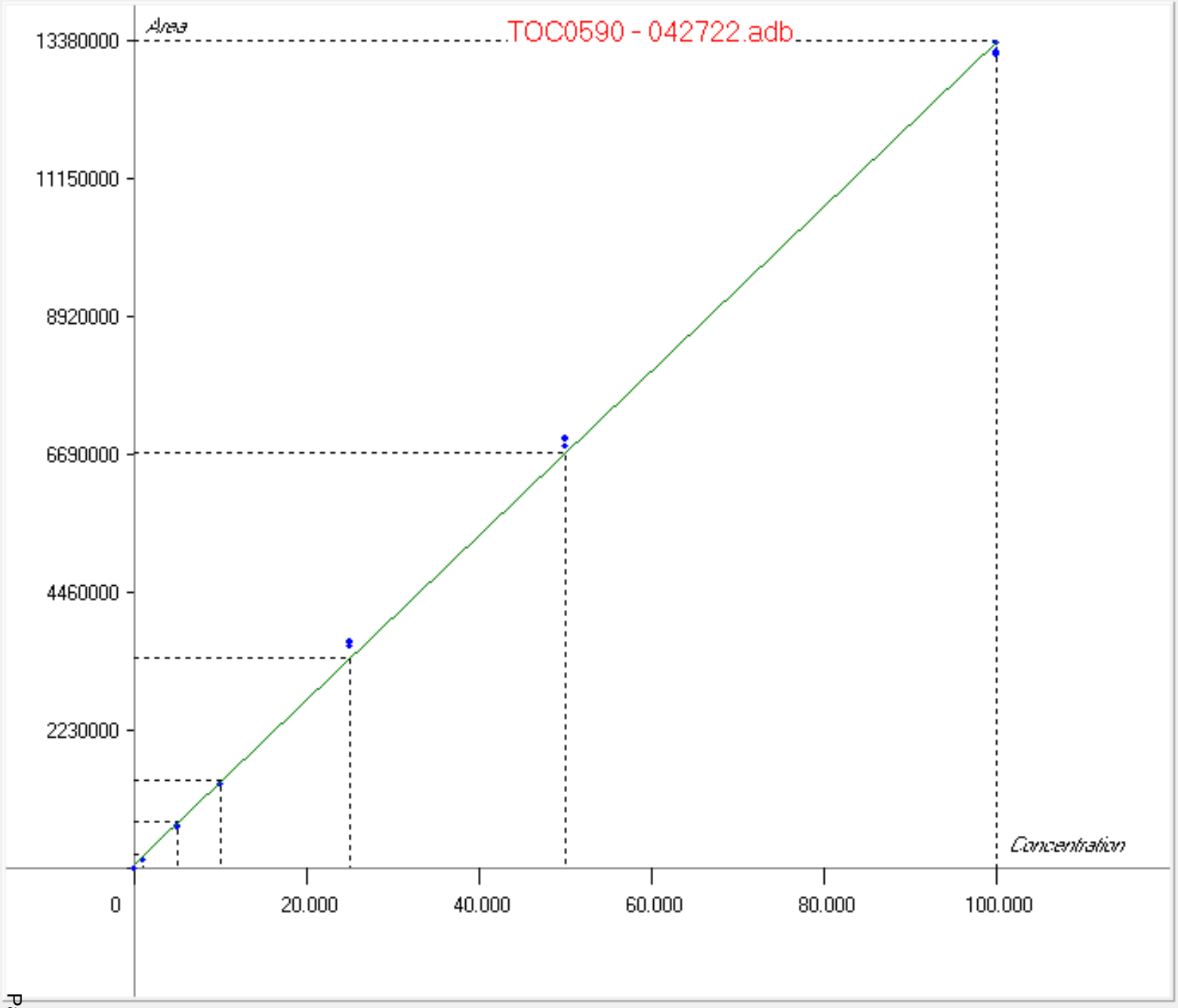
GRP	Sample ID#	Matrix	DF	Corrected Temp (°C)*	Result	
1	BUFFER 7	QC	1	23.9	7.02	
2			1			
3			1			
4			1			
5			1			
6			1			
7			1			
8			1			
9			1			
10			1			
11	1137439	GW	1	12.4	7.61	
dup 11	1137439	GW	1	12.5	7.62	
12	BUFFER 7	QC	1	22.0	7.09	
13			1			
14			1			
15			1			
16			1			
17			1			
18			1			
19			1			
20			1			
21			1			
23	1137501	WW	1	14.6	7.32	
dup 23	1137501	WW	1	14.7	7.35	
24	BUFFER 7	QC	1	21.1	7.08	
25			1			
dup 25			1			
26			1			
dup 26			1			

To datacapture: Save CSV file under the TSS datacapture folder.

*Temperature of samples should be room temperature around 25°C

Buffer Standard IDs:

pH 4: WC205 pH 7: WC398 pH 10: WC275



Cursor Position

Concentration	Area
117.200 mg/l	-1059250

A2	0
A1	132871
A0	95820
Correlation	0.99952
Order	1
Volume	100 µl
Conc.	100.00
Area	13373923

☐ Confidence Intervals 95%

☐ Detection/Determination 95%

Conc.	Area	Sel.
0	0	☑
0	0	☑
0	0	☑
0	0	☑
1	165320	☑
1	148018	☑
1	166376	☑
1	149662	☑

• Used Value
• Ignored Value

CurveNo:1 CurveType:TC

<-- --> Print... Exit

RJ 05/05/2022

Analysis Name TOC0590 - 042722.adb

Template Name CURVE TEMP.tdb
Method Name N / A
Operator TMG

Date Wednesday, April 27, 2022
Time 9:08

Start Oven Temp. 752 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL: TOC0590 INSTRUMENT:TOCW

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %

SampleTime 240 s

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	This Analysis	Apr 27 2022, 9:08	13373923	100	1	0.99952	100 µl	Yes
	A2: 0		*A1: 132870.760830549*		*A0: 95820.1687664372*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/27/2022 9:19:28	ZERO !	86217	1	756	2	-	-
2	4/27/2022 9:22:21	0.00	0	0	755	2	-	Yes
3	4/27/2022 9:26:23	0.00	0	0	757	2	-	Yes
4	4/27/2022 9:30:24	0.00	0	0	758	2	-	Yes
5	4/27/2022 9:34:26	0.00	0	0	758	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Standard	TC Std 0.00 mg/l	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/27/2022 9:39:18	0.00	0	1	760	2	-	Yes
2	4/27/2022 9:43:56	0.00	0	1	759	2	-	Yes
3	4/27/2022 9:47:58	0.00	0	1	759	2	-	Yes
4	4/27/2022 9:52:00	0.00	0	1	759	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S2	Standard	TC Std 1.00 mg/l	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.46**	**157344**	**6.26**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/27/2022 9:56:53	0.52	165320	1	758	2	-	Yes
2	4/27/2022 9:59:54	0.39	148018	1	758	2	-	Yes
3	4/27/2022 10:02:12	0.53	166376	1	757	2	-	Yes
4	4/27/2022 10:04:34	0.41	149662	1	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	S3	Standard	TC Std. 5.00 mg/l	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**4.56**	**700856**	**0.90**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/27/2022 10:08:04	4.62	709067	1	757	2	-	Yes
2	4/27/2022 10:11:22	4.51	695235	1	756	2	-	Yes
3	4/27/2022 10:13:57	4.57	702460	1	757	2	-	Yes
4	4/27/2022 10:16:36	4.52	696665	1	756	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	S4	Standard	TC Std. 10.00 mg/l	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**9.67**	**1380399**	**0.64**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.

1		4/27/2022 10:20:05	9.63	1375951	1	757	2	-	Yes
2		4/27/2022 10:23:28	9.59	1370364	1	757	2	-	Yes
3		4/27/2022 10:26:11	9.71	1385504	1	756	2	-	Yes
4		4/27/2022 10:28:58	9.74	1389779	1	756	2	-	Yes

---

6 S5 Standard TC Std. 25.00 mg/l 1 x

	TC	**26.66**	**3638253**	**0.96**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/27/2022 10:32:38	26.77	3653032	1	757	2	-	Yes
2	4/27/2022 10:36:19	26.47	3612880	1	757	2	-	Yes
3	4/27/2022 10:39:12	26.42	3606492	1	757	2	-	Yes
4	4/27/2022 10:42:08	26.98	3680609	1	756	2	-	Yes

---

7 S6 Standard TC Std. 50.00 mg/l 1 x

	TC	**51.46**	**6933403**	**0.82**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/27/2022 10:45:53	50.86	6853888	1	756	2	-	Yes
2	4/27/2022 10:49:34	51.52	6941430	1	756	2	-	Yes
3	4/27/2022 10:52:51	51.88	6989245	1	755	2	-	Yes
4	4/27/2022 10:55:58	51.58	6949049	1	756	2	-	Yes

---

8 S7 Standard TC Std. 100.00 mg/l 1 x

	TC	**98.91**	**13238800**	**0.71**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/27/2022 10:59:59	98.31	13158295	1	755	2	-	Yes
2	4/27/2022 11:03:59	99.93	13373923	1	755	2	-	Yes
3	4/27/2022 11:07:16	98.77	13219156	1	755	2	-	Yes
4	4/27/2022 11:10:35	98.65	13203826	1	754	2	-	Yes

---

9 S8 Unknown ICV - 50.00 mg/L 1 x

	TC	**49.82**	**6715782**	**0.53**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/27/2022 11:14:34	49.90	6726441	1	754	2	-	Yes
2	4/27/2022 11:18:15	49.63	6689710	1	754	2	-	Yes
3	4/27/2022 11:21:15	50.16	6761041	1	754	2	-	Yes
4	4/27/2022 11:24:16	49.60	6685936	1	754	2	-	Yes

---

10 2 Unknown ICB 1 x

	TC	**0.00**	**0**	**0.00**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/27/2022 11:28:12	0	0	0	754	2	-	Yes
2	4/27/2022 11:32:49	0	0	0	754	2	-	Yes
3	4/27/2022 11:36:50	0	0	0	754	2	-	Yes
4	4/27/2022 11:40:52	0	0	0	753	2	-	Yes

Analysis Name 042822 - 211530.adb

Template Name 042822 - 211530.tdb
Method Name N / A
Operator TMG

Date Thursday, April 28, 2022
Time 9:07

Start Oven Temp. 758 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL0590 INSTRUMENT:TOCW
CCV0588 LCS0589 SPIKE0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0590 - 042722	Apr 27 2022, 9:08	13373923	100	1	0.99952	100 µl	Yes
	A2: 0		*A1: 132870.760830549*		*A0: 95820.1687664372*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/28/2022 9:08:05	0.62	177591	1	757	2	-	-
2	4/28/2022 9:11:12	0	0	0	757	2	-	Yes
3	4/28/2022 9:15:13	0	0	0	757	2	-	Yes
4	4/28/2022 9:19:14	0	0	0	757	2	-	Yes
5	4/28/2022 9:23:15	0	0	0	758	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**49.79**	**6711776**	**0.50**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/28/2022 9:28:06	50.17	6761745	1	759	2	-	Yes
2	4/28/2022 9:31:51	49.65	6693210	1	758	2	-	Yes
3	4/28/2022 9:34:51	49.65	6692668	1	758	2	-	Yes
4	4/28/2022 9:37:50	49.70	6699483	1	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**49.87**	**6722497**	**0.56**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/28/2022 9:41:40	49.98	6737172	1	757	2	-	Yes
2	4/28/2022 9:45:24	49.50	6673212	1	757	2	-	Yes
3	4/28/2022 9:48:16	50.18	6763077	1	756	2	-	Yes
4	4/28/2022 9:51:13	49.83	6716529	1	756	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/28/2022 9:55:12	0	0	0	756	2	-	Yes
2	4/28/2022 9:59:50	0	0	0	756	2	-	Yes
3	4/28/2022 10:03:52	0	0	0	756	2	-	Yes
4	4/28/2022 10:07:53	0	0	0	755	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	3	Unknown	1134804	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**83.44**	**11182032**	**0.93**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/28/2022 10:12:45	84.33	11300990	1	755	2	-	Yes
2	4/28/2022 10:16:34	83.78	11227151	1	756	2	-	Yes
3	4/28/2022 10:19:25	82.53	11061544	1	755	2	-	Yes
4	4/28/2022 10:22:23	83.11	11138446	1	755	2	-	Yes

---

6 4 Unknown 1134805 1 x

	TC	**77.99**	**10458599**	**0.24**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/28/2022 10:26:25	77.99	10458237	1	756	2	-	Yes
2	4/28/2022 10:29:52	77.75	10426111	1	756	2	-	Yes
3	4/28/2022 10:32:45	78.02	10462149	1	755	2	-	Yes
4	4/28/2022 10:35:46	78.21	10487900	1	755	2	-	Yes

---

7 S1 Unknown CCV 1 x

	TC	**50.06**	**6747477**	**1.41**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/28/2022 10:39:34	50.98	6869076	1	755	2	-	Yes
2	4/28/2022 10:43:15	49.82	6715815	1	755	2	-	Yes
3	4/28/2022 10:46:12	50.18	6762981	1	754	2	-	Yes
4	4/28/2022 10:49:10	49.27	6642039	1	754	2	-	Yes

---

8 5 Unknown CCB 1 x

	TC	**0.00**	**0**	**0.00**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4/28/2022 10:53:09	0	0	0	755	2	-	Yes
2	4/28/2022 10:57:46	ZERO !	58557	1	754	2	-	-
3	4/28/2022 10:59:59	0	0	0	753	2	-	Yes
4	4/28/2022 11:04:00	0	0	0	754	2	-	Yes
5	4/28/2022 11:08:02	0	0	0	754	2	-	Yes

Analysis Name 050222 - 211613.adb

Template Name 050222 - 211613.tdb
Method Name N / A
Operator TMG

Date Monday, May 2, 2022
Time 9:21

Start Oven Temp. 758 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL0590 INSTRUMENT:TOCW
CCV0588 LCS0589 SPIKE 0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0590 - 042722	Apr 27 2022, 9:08	13373923	100	1	0.99952	100 µl	Yes
	A2: 0		*A1: 132870.760830549*		*A0: 95820.1687664372*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 2 2022 9:21:32	ZERO !	74819	1	758	2	-	-
2	5 2 2022 9:24:21	0	0	0	757	2	-	Yes
3	5 2 2022 9:28:23	0	0	0	758	2	-	Yes
4	5 2 2022 9:32:25	0	0	0	758	2	-	Yes
5	5 2 2022 9:36:25	0	0	0	758	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**48.66**	**6561892**	**0.52**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 2 2022 9:41:18	48.97	6602820	1	759	2	-	Yes
2	5 2 2022 9:45:02	48.70	6567133	1	759	2	-	Yes
3	5 2 2022 9:48:00	48.35	6520193	1	758	2	-	Yes
4	5 2 2022 9:50:56	48.63	6557424	1	758	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**48.64**	**6558063**	**1.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 2 2022 9:54:48	47.93	6464807	1	759	2	-	Yes
2	5 2 2022 9:58:35	48.88	6590110	1	758	2	-	Yes
3	5 2 2022 10:01:34	48.68	6563621	1	758	2	-	Yes
4	5 2 2022 10:04:43	49.05	6613714	1	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 2 2022 10:08:33	0	0	0	758	2	-	Yes
2	5 2 2022 10:13:10	0	0	0	758	2	-	Yes
3	5 2 2022 10:17:12	0	0	0	758	2	-	Yes
4	5 2 2022 10:21:14	0	0	0	758	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	3	Unknown	1136209	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**82.05**	**10997649**	**0.64**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 2 2022 10:26:08	82.73	11087565	1	758	2	-	Yes
2	5 2 2022 10:29:52	82.22	11020884	1	758	2	-	Yes
3	5 2 2022 10:33:04	81.62	10940951	1	757	2	-	Yes
4	5 2 2022 10:36:05	81.62	10941198	1	756	2	-	Yes

---

6 4 Unknown 1136210 1 x

TC **83.00** **11124933** **1.74** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 2 2022 10:40:03	84.60	11336559	1	756	2	-	Yes
2	5 2 2022 10:43:44	83.60	11204116	1	756	2	-	Yes
3	5 2 2022 10:46:49	82.65	11077746	1	756	2	-	Yes
4	5 2 2022 10:49:43	81.17	10881311	1	755	2	-	Yes

---

7 5 Unknown 1136211 1 x

TC **60.18** **8092121** **0.36** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 2 2022 10:53:33	59.87	8050888	1	755	2	-	Yes
2	5 2 2022 10:57:02	60.38	8118211	1	755	2	-	Yes
3	5 2 2022 10:59:53	60.28	8105217	1	755	2	-	Yes
4	5 2 2022 11:02:51	60.20	8094169	1	755	2	-	Yes

---

8 S1 Unknown CCV 1 x

TC **49.89** **6725032** **0.44** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 2 2022 11:06:42	49.61	6687338	1	755	2	-	Yes
2	5 2 2022 11:10:21	50.04	6744593	1	754	2	-	Yes
3	5 2 2022 11:13:30	50.09	6751891	1	754	2	-	Yes
4	5 2 2022 11:16:33	49.83	6716306	1	754	2	-	Yes

---

9 6 Unknown CCB 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 2 2022 11:20:24	0	0	0	754	2	-	Yes
2	5 2 2022 11:25:02	0	0	0	753	2	-	Yes
3	5 2 2022 11:29:03	0	0	0	753	2	-	Yes
4	5 2 2022 11:33:04	0	0	0	754	2	-	Yes

Analysis Name 050422 - 211696 211697.adb

Template Name 050422 - 211696 211697.tdb
Method Name N / A
Operator TMG

Date Wednesday, May 4, 2022
Time 11:07

Start Oven Temp. 758 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL0590 INSTRUMENT:TOCW
CCV0588 LCS0589 SPIKE0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0590 - 042722	Apr 27 2022, 9:08	13373923	100	1	0.99952	100 µl	Yes
	A2: 0		*A1: 132870.760830549*		*A0: 95820.1687664372*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 11:18:15	ZERO !	78016	1	760	2	-	-
2	5 4 2022 11:21:05	0	0	0	758	2	-	Yes
3	5 4 2022 11:25:07	0	0	0	758	2	-	Yes
4	5 4 2022 11:29:08	0	0	0	757	2	-	Yes
5	5 4 2022 11:33:10	0	0	0	756	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**48.53**	**6544127**	**0.81**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 11:38:02	48.51	6541861	1	756	2	-	Yes
2	5 4 2022 11:41:39	48.53	6544376	1	756	2	-	Yes
3	5 4 2022 11:44:39	48.05	6480492	1	756	2	-	Yes
4	5 4 2022 11:47:39	49.02	6609779	1	756	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**48.33**	**6517280**	**0.80**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 11:51:30	47.97	6469799	1	756	2	-	Yes
2	5 4 2022 11:55:10	48.11	6487862	1	756	2	-	Yes
3	5 4 2022 11:58:10	48.38	6524065	1	756	2	-	Yes
4	5 4 2022 12:01:03	48.86	6587397	1	755	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 12:04:56	0	0	0	755	2	-	Yes
2	5 4 2022 12:09:33	0	0	0	755	2	-	Yes
3	5 4 2022 12:13:35	0	0	0	754	2	-	Yes
4	5 4 2022 12:17:37	0	0	0	754	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	3	Unknown	1134804	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**ZERO !**	**84802**	**10.82**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 12:22:31	ZERO !	91816	1	754	2	-	Yes
2	5 4 2022 12:25:21	ZERO !	79578	1	753	2	-	Yes
3	5 4 2022 12:27:31	ZERO !	93246	1	752	2	-	Yes
4	5 4 2022 12:29:42	ZERO !	74569	1	752	2	-	Yes
5	5 4 2022 12:31:49	0	0	0	752	2	-	-

---

6 4 Unknown DUP1134804 1 x

	TC	**ZERO !**	**31810**	**115.93**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 12:36:42	0	0	0	753	2	-	Yes
2	5 4 2022 12:41:20	ZERO !	59619	1	753	2	-	Yes
3	5 4 2022 12:43:29	ZERO !	67621	1	753	2	-	Yes
4	5 4 2022 12:45:39	0	0	0	752	2	-	Yes
5	5 4 2022 12:49:41	0	0	0	752	2	-	-

---

7 5 Unknown MSW1134804 1 x

	TC	**48.91**	**6594684**	**0.80**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 12:54:34	49.50	6672317	1	753	2	-	Yes
2	5 4 2022 12:58:04	48.83	6584087	1	752	2	-	Yes
3	5 4 2022 13:01:08	48.70	6566422	1	752	2	-	Yes
4	5 4 2022 13:03:55	48.62	6555910	1	752	2	-	Yes

---

8 6 Unknown MDSW1134804 1 x

	TC	**48.40**	**6526963**	**0.42**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 13:07:42	48.57	6548780	1	752	2	-	Yes
2	5 4 2022 13:11:19	48.25	6506747	1	752	2	-	Yes
3	5 4 2022 13:14:16	48.20	6500188	1	752	2	-	Yes
4	5 4 2022 13:17:03	48.59	6552138	1	752	2	-	Yes

---

9 7 Unknown 1134805 1 x

	TC	**ZERO !**	**100467**	**9.22**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 13:20:46	0.12	111259	1	752	2	-	Yes
2	5 4 2022 13:23:45	ZERO !	95699	1	752	2	-	Yes
3	5 4 2022 13:25:57	ZERO !	90388	1	751	2	-	Yes
4	5 4 2022 13:28:04	0.07	104524	1	750	2	-	Yes

---

10 8 Unknown 1136203 1 x

	TC	**0.00**	**0**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 13:31:55	0	0	0	751	2	-	Yes
2	5 4 2022 13:36:33	0	0	0	752	2	-	Yes
3	5 4 2022 13:40:35	0	0	0	753	2	-	Yes
4	5 4 2022 13:44:36	0	0	0	753	2	-	Yes

---

11 9 Unknown DUP1136203 1 x

	TC	**0.00**	**0**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 13:49:30	0	0	0	753	2	-	Yes
2	5 4 2022 13:54:08	0	0	0	753	2	-	Yes
3	5 4 2022 13:58:10	0	0	0	752	2	-	Yes
4	5 4 2022 14:02:11	0	0	0	753	2	-	Yes

---

12 10 Unknown MSW1136203 1 x

	TC	**47.12**	**6356114**	**1.13**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 14:07:05	46.33	6251997	1	753	2	-	Yes
2	5 4 2022 14:10:30	47.19	6366500	1	752	2	-	Yes
3	5 4 2022 14:13:13	47.48	6404473	1	752	2	-	Yes
4	5 4 2022 14:15:55	47.46	6401486	1	752	2	-	Yes

---

13 11 Unknown MSDW1136203 1 x

		TC	**47.22**	**6370169**		**0.88**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 14:19:32	47.09	6352326	1	753	2	-	Yes
	2	5 4 2022 14:22:53	47.63	6424318	1	752	2	-	Yes
	3	5 4 2022 14:25:39	47.48	6404748	1	752	2	-	Yes
	4	5 4 2022 14:28:20	46.69	6299286	1	752	2	-	Yes
14	12	Unknown	1136204				1 x		
		TC	**0.00**	**0**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 14:31:54	0	0	0	752	2	-	Yes
	2	5 4 2022 14:36:32	0	0	0	752	2	-	Yes
	3	5 4 2022 14:40:34	0	0	0	752	2	-	Yes
	4	5 4 2022 14:44:35	0	0	0	752	2	-	Yes
15	S1	Unknown	CCV				1 x		
		TC	**47.13**	**6358800**		**0.62**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 14:49:29	47.18	6365190	1	752	2	-	Yes
	2	5 4 2022 14:53:14	46.94	6332968	1	752	2	-	Yes
	3	5 4 2022 14:56:12	46.89	6325490	1	752	2	-	Yes
	4	5 4 2022 14:59:13	47.53	6411552	1	752	2	-	Yes
16	S5	Unknown	LCSW				1 x		
		TC	**47.48**	**6404663**		**0.52**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 15:03:05	47.34	6386158	1	752	2	-	Yes
	2	5 4 2022 15:06:56	47.60	6419952	1	752	2	-	Yes
	3	5 4 2022 15:09:59	47.22	6369388	1	752	2	-	Yes
	4	5 4 2022 15:12:53	47.77	6443157	1	752	2	-	Yes
17	13	Unknown	MBW-CCB				1 x		
		TC	**0.00**	**0**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 15:16:51	0	0	0	752	2	-	Yes
	2	5 4 2022 15:21:28	0	0	0	752	2	-	Yes
	3	5 4 2022 15:25:29	0	0	0	752	2	-	Yes
	4	5 4 2022 15:29:31	0	0	0	752	2	-	Yes
18	14	Unknown	1136205				1 x		
		TC	**ZERO !**	**52991**		**14.57**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 15:34:25	ZERO !	59634	1	752	2	-	Yes
	2	5 4 2022 15:37:10	ZERO !	52292	1	751	2	-	Yes
	3	5 4 2022 15:39:16	ZERO !	57654	1	751	2	-	Yes
	4	5 4 2022 15:41:22	ZERO !	42385	1	751	2	-	Yes
	5	5 4 2022 15:43:33	0	0	0	751	2	-	-
19	15	Unknown	1136206				1 x		
		TC	**ZERO !**	**106680**		**12.05**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 15:48:27	0.08	107017	1	752	2	-	Yes
	2	5 4 2022 15:51:22	0.07	105074	1	752	2	-	Yes
	3	5 4 2022 15:53:28	0.20	122997	1	752	2	-	Yes
	4	5 4 2022 15:55:36	ZERO !	91633	1	752	2	-	Yes
	5	5 4 2022 15:57:39	0	0	0	751	2	-	-
20	16	Unknown	1136207				1 x		
		TC	**ZERO !**	**68018**		**67.15**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 16:02:33	ZERO !	84964	1	752	2	-	Yes
	2	5 4 2022 16:05:18	ZERO !	89026	1	751	2	-	Yes
	3	5 4 2022 16:07:20	0.02	98082	1	751	2	-	Yes
	4	5 4 2022 16:09:24	ZERO !	-28443	1	751	2	-	-

5	5 4 2022 16:12:57	0	0	0	752	2	-	Yes

21	17	Unknown	1136208				1 x	
	TC	**ZERO !**	**-41353**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 16:17:50	ZERO !	-71283	1	753	2	-	Yes
2	5 4 2022 16:21:42	0	0	0	752	2	-	-
3	5 4 2022 16:25:43	ZERO !	-59063	1	752	2	-	Yes
4	5 4 2022 16:29:07	ZERO !	-35067	1	752	2	-	Yes
5	5 4 2022 16:32:12	0	0	0	751	2	-	Yes

22	18	Unknown	1136209				1 x	
	TC	**ZERO !**	**60246**	**66.83**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 16:37:06	ZERO !	80193	1	753	2	-	Yes
2	5 4 2022 16:39:49	ZERO !	76922	1	752	2	-	Yes
3	5 4 2022 16:41:51	ZERO !	83870	1	751	2	-	Yes
4	5 4 2022 16:43:51	ZERO !	-17875	1	751	2	-	-
5	5 4 2022 16:47:26	0	0	0	752	2	-	Yes

23	19	Unknown	1136210				1 x	
	TC	**ZERO !**	**55863**	**68.12**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 16:52:21	ZERO !	63526	1	753	2	-	Yes
2	5 4 2022 16:55:06	ZERO !	-48726	1	752	2	-	-
3	5 4 2022 16:58:48	ZERO !	81352	1	752	2	-	Yes
4	5 4 2022 17:00:50	ZERO !	78576	1	751	2	-	Yes
5	5 4 2022 17:02:52	0	0	0	751	2	-	Yes

24	20	Unknown	1136211				1 x	
	TC	**0.00**	**0**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 17:07:46	0	0	0	752	2	-	Yes
2	5 4 2022 17:12:23	0	0	0	752	2	-	Yes
3	5 4 2022 17:16:24	0	0	0	752	2	-	Yes
4	5 4 2022 17:20:26	0	0	0	752	2	-	Yes

25	21	Unknown	1136213				1 x	
	TC	**0.00**	**0**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 17:25:20	0	0	0	752	2	-	Yes
2	5 4 2022 17:29:57	0	0	0	751	2	-	Yes
3	5 4 2022 17:33:58	0	0	0	752	2	-	Yes
4	5 4 2022 17:37:59	0	0	0	752	2	-	Yes

26	22	Unknown	1136214				1 x	
	TC	**0.00**	**0**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 17:42:53	0	0	0	752	2	-	Yes
2	5 4 2022 17:47:31	0	0	0	752	2	-	Yes
3	5 4 2022 17:51:33	0	0	0	752	2	-	Yes
4	5 4 2022 17:55:33	0	0	0	752	2	-	Yes

27	23	Unknown	1136215				1 x	
	TC	**0.00**	**0**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 18:00:29	0	0	0	752	2	-	Yes
2	5 4 2022 18:05:07	0	0	0	752	2	-	Yes
3	5 4 2022 18:09:08	0	0	0	752	2	-	Yes
4	5 4 2022 18:13:10	0	0	0	751	2	-	Yes

28	S1	Unknown	CCV				1 x	
	TC	**47.18**	**6364262**	**0.44**		**100 µl**		

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 18:18:06	47.48	6404529	1	752	2	-	Yes
2	5 4 2022 18:22:01	47.00	6341249	1	751	2	-	Yes
3	5 4 2022 18:25:02	47.11	6355332	1	751	2	-	Yes
4	5 4 2022 18:27:58	47.11	6355941	1	751	2	-	Yes

29 24 Unknown CCB 1 x

TC 0.00 0 0.00 100 µl

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 18:31:49	0	0	0	751	2	-	Yes
2	5 4 2022 18:36:27	0	0	0	752	2	-	Yes
3	5 4 2022 18:40:28	0	0	0	752	2	-	Yes
4	5 4 2022 18:44:29	0	0	0	752	2	-	Yes

30 25 Unknown 1136216 1 x

TC ZERO ! 94428 6.61 100 µl

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 18:49:25	0.04	101655	1	752	2	-	Yes
2	5 4 2022 18:52:18	ZERO !	95535	1	752	2	-	Yes
3	5 4 2022 18:54:22	ZERO !	94053	1	751	2	-	Yes
4	5 4 2022 18:56:31	ZERO !	86469	1	751	2	-	Yes

31 26 Unknown 1136217 1 x

TC 0.50 161714 9.58 100 µl

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 19:00:35	0.65	182357	1	752	2	-	Yes
2	5 4 2022 19:03:30	0.49	160582	1	751	2	-	Yes
3	5 4 2022 19:05:37	0.37	144805	1	751	2	-	Yes
4	5 4 2022 19:07:40	0.48	159112	1	751	2	-	Yes

32 27 Unknown 1136588 1 x

TC ZERO ! -47756 0.00 100 µl

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 19:11:44	0	0	0	752	2	-	-
2	5 4 2022 19:16:21	ZERO !	-84756	1	752	2	-	Yes
3	5 4 2022 19:19:58	0	0	0	751	2	-	Yes
4	5 4 2022 19:23:59	ZERO !	-106270	1	752	2	-	Yes
5	5 4 2022 19:27:32	0	0	0	752	2	-	Yes

33 28 Unknown DUP1136588 1 x

TC ZERO ! -42597 0.00 100 µl

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 19:32:29	0	0	0	752	2	-	Yes
2	5 4 2022 19:37:07	ZERO !	-86364	1	752	2	-	Yes
3	5 4 2022 19:40:45	ZERO !	63074	1	752	2	-	-
4	5 4 2022 19:42:48	ZERO !	-84025	1	751	2	-	Yes
5	5 4 2022 19:46:36	0	0	0	752	2	-	Yes

34 29 Unknown MSW1136588 1 x

TC 47.40 6393095 0.76 100 µl

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 19:51:28	47.05	6347193	1	752	2	-	Yes
2	5 4 2022 19:54:50	47.36	6388177	1	752	2	-	Yes
3	5 4 2022 19:57:34	47.27	6376031	1	751	2	-	Yes
4	5 4 2022 20:00:13	47.90	6460980	1	752	2	-	Yes

35 30 Unknown MSDW1136588 1 x

TC 48.24 6505586 1.50 100 µl

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 20:03:49	49.17	6628951	1	752	2	-	Yes
2	5 4 2022 20:07:18	48.37	6522656	1	752	2	-	Yes
3	5 4 2022 20:09:59	47.41	6394917	1	752	2	-	Yes
4	5 4 2022 20:12:40	48.02	6475823	1	751	2	-	Yes

36	31	Unknown	1136671				1 x		
		TC	**ZERO !**	**92057**		**6.50**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 20:16:19	ZERO !	87877	1	751	2	-	Yes
	2	5 4 2022 20:19:00	0.04	100673	1	751	2	-	Yes
	3	5 4 2022 20:21:01	ZERO !	88122	1	751	2	-	Yes
	4	5 4 2022 20:23:02	ZERO !	91558	1	751	2	-	Yes

37	32	Unknown	1136672				1 x		
		TC	**0.00**	**0**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 20:27:28	0	0	0	752	2	-	Yes
	2	5 4 2022 20:32:05	0	0	0	752	2	-	Yes
	3	5 4 2022 20:36:06	0	0	0	752	2	-	Yes
	4	5 4 2022 20:40:08	0	0	0	752	2	-	Yes

38	33	Unknown	1136673				1 x		
		TC	**0.00**	**0**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 20:45:04	0	0	0	752	2	-	Yes
	2	5 4 2022 20:49:41	0	0	0	752	2	-	Yes
	3	5 4 2022 20:53:43	0	0	0	752	2	-	Yes
	4	5 4 2022 20:57:44	0	0	0	752	2	-	Yes

39	34	Unknown	1136674				1 x		
		TC	**0.00**	**0**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 21:02:39	0	0	0	752	2	-	Yes
	2	5 4 2022 21:07:16	0	0	0	752	2	-	Yes
	3	5 4 2022 21:11:18	0	0	0	752	2	-	Yes
	4	5 4 2022 21:15:20	0	0	0	752	2	-	Yes

40	S2	Unknown	CCV				1 x		
		TC	**48.21**	**6501471**		**0.26**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 21:20:18	48.24	6505854	1	752	2	-	Yes
	2	5 4 2022 21:24:09	48.03	6477604	1	751	2	-	Yes
	3	5 4 2022 21:27:14	48.24	6506089	1	752	2	-	Yes
	4	5 4 2022 21:30:18	48.32	6516338	1	752	2	-	Yes

41	35	Unknown	CCB				1 x		
		TC	**0.00**	**0**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 4 2022 21:34:12	0	0	0	752	2	-	Yes
	2	5 4 2022 21:38:49	0	0	0	752	2	-	Yes
	3	5 4 2022 21:42:50	0	0	0	752	2	-	Yes
	4	5 4 2022 21:46:51	0	0	0	752	2	-	Yes

42	36	Unknown	1137438				1 x			NOT USED
		TC	**ZERO !**	**42261**		**66.97**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.	
	1	5 4 2022 21:51:47	ZERO !	58667	1	752	2	-	Yes	
	2	5 4 2022 21:54:46	ZERO !	52568	1	751	2	-	Yes	
	3	5 4 2022 21:56:54	0	0	0	751	2	-	Yes	
	4	5 4 2022 22:00:56	ZERO !	57809	1	752	2	-	Yes	
	5	5 4 2022 22:03:03	0	0	0	752	2	-	-	

43	S2	Unknown	CCV				1 x			NOT USED
		TC	**43.22**	**5837452**		**7.87**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.	
	1	5 4 2022 22:07:59	47.34	6385576	1	753	2	-	Yes	

2	5 4 2022 22:11:45	44.45	6001858	1	752	2	-	Yes
3	5 4 2022 22:14:51	41.75	5642571	1	752	2	-	Yes
4	5 4 2022 22:18:01	39.32	5319803	1	752	2	-	Yes

---

44 37 Unknown CCB 1 x NOT USED

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 4 2022 22:22:23	0	0	0	752	2	-	Yes
2	5 4 2022 22:27:01	0	0	0	752	2	-	Yes
3	5 4 2022 22:31:01	0	0	0	752	2	-	Yes
4	5 4 2022 22:35:03	0	0	0	752	2	-	Yes

Analysis Name 050522 - 211697RR 211734.adb

Template Name 050522 - 211697RR 211734.tdb
Method Name N / A
Operator TMG

Date Thursday, May 5, 2022
Time 10:01

Start Oven Temp. 756 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL0590 INSTRUMENT:TOCW
CCV0588 LCS0589 SPIKE0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0590 - 042722	Apr 27 2022, 9:08	13373923	100	1	0.99952	100 µl	Yes
	A2: 0		*A1: 132870.760830549*		*A0: 95820.1687664372*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 5 2022 10:11:47	ZERO !	79327	1	755	2	-	-
2	5 5 2022 10:14:35	0	0	0	754	2	-	Yes
3	5 5 2022 10:18:37	0	0	0	754	2	-	Yes
4	5 5 2022 10:22:39	0	0	0	755	2	-	Yes
5	5 5 2022 10:26:40	0	0	0	754	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**49.66**	**6694171**	**1.24**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 5 2022 10:31:32	48.75	6573606	1	754	2	-	Yes
2	5 5 2022 10:35:07	49.98	6736984	1	754	2	-	Yes
3	5 5 2022 10:38:11	50.14	6758198	1	753	2	-	Yes
4	5 5 2022 10:41:13	49.76	6707898	1	753	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 5 2022 10:58:55	0	0	0	753	2	-	Yes
2	5 5 2022 11:03:32	0	0	0	753	2	-	Yes
3	5 5 2022 11:07:34	0	0	0	753	2	-	Yes
4	5 5 2022 11:11:36	0	0	0	752	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	3	Unknown	1137438	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**45686**	**69.84**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	5 5 2022 11:16:29	ZERO !	66716	1	753	2	-	Yes
2	5 5 2022 11:19:16	ZERO !	47503	1	752	2	-	Yes
3	5 5 2022 11:21:27	ZERO !	68527	1	752	2	-	Yes
4	5 5 2022 11:23:33	0	0	0	752	2	-	Yes
5	5 5 2022 11:27:34	0	0	0	752	2	-	-

15	S1	Unknown	CCV				1 x		
		TC	**46.41**	**6262697**	**2.60**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 5 2022 13:51:44	44.65	6028116	1	752	2	-	Yes
	2	5 5 2022 13:55:17	46.53	6278466	1	752	2	-	Yes
	3	5 5 2022 13:58:14	47.14	6359210	1	752	2	-	Yes
	4	5 5 2022 14:01:13	47.33	6384997	1	752	2	-	Yes

16	13	Unknown	CCB				1 x		
		TC	**0.00**	**0**	**0.00**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	5 5 2022 14:05:07	0	0	0	752	2	-	Yes
	2	5 5 2022 14:09:45	0	0	0	752	2	-	Yes
	3	5 5 2022 14:13:47	0	0	0	752	2	-	Yes
	4	5 5 2022 14:17:48	0	0	0	752	2	-	Yes

INORGANICS
LOGBOOK
DOCUMENTS

WCOD QSM Analytical Run
211565 on 5/2/2022

D1 12

Date Analyzed:

Date Reviewed:

Date Entered:

Date Validated:

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169156	1136212		4/26/2022 17:44			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	COD QSM		GW	4	
		54IDW							95239			
	1136533							COD QSM				
				MBW					95239			
	1136534							COD QSM				
				LCSW					95239			
	1136535		4/26/2022 17:44					COD QSM				
		54IDW		DUP	1136212				95239			
	1136536		4/26/2022 17:44					COD QSM				
		54IDW		MSW	1136212				95239			
	1136537		4/26/2022 17:44					COD QSM				
		54IDW		MSDW	1136536				95239			
	1137654							WCOD QSM				
				ICV								
	1137655							WCOD QSM				
				ICB								
	1137656							WCOD QSM				
				CCV								
	1137657							WCOD QSM				
				CCB								
	1137658							WCOD QSM				
				CCV								
	1137659							WCOD QSM				
				CCB								

12 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpADB.tmp

PrepWrkSht2
on 5/17/2022

Prep Batch: **95239**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1136533	MBW		COD QSM			LIQUID			
	1136534	LCSW		COD QSM			LIQUID			
169156	1136212			COD QSM	WESTON SOLUTIONS, INC.	54IDW	GROUND WATER	4/26/22 17:44	5/10/22	4
	1136535	DUP	1136212	COD QSM		54IDW	GROUND WATER	4/26/22 17:44		
	1136536	MSW	1136212	COD QSM		54IDW	GROUND WATER	4/26/22 17:44		
	1136537	MSDW	1136536	COD QSM		54IDW	GROUND WATER	4/26/22 17:44		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp93FA.tmp

COD Data Validation Checklist

		Method: Chemical Oxygen Demand EPA 410.4			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
211565	04/29/2022	RLB	etk	05/02/2022	yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Does a digestion sheet accompany the data package?	---	Yes		Yes		
2. Does the digestion sheet include all reagent and standard prep log numbers?	---	Yes		Yes		
3. Was a passing calibration test applied to sample analysis?	≥0.995	Yes		Yes		
4. Was a passing ICV analyzed immediately after the calibration?	90-110%	Yes		Yes		
5. Was a passing ICB analyzed immediately after the ICV?	< |LOD|or client/project specific	Yes		Yes		
6. Were CCVs and CCB analyzed at the required frequency?	1 per 10 samples	Yes		Yes		
7. Did analyzed CCVs meet the required acceptance criteria?	90-110%	Yes		Yes		
8. Did analyzed CCBs meet the acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
9. Was a Method Blank prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
10. Was the method blank within acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
11. Was an LCS prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
12. Did the LCS meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		
13. Was an MS and MSD prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
14. Did the MS/ MSD's meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		

15. Did the MS/MSD's meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
16. Was a Duplicate prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
17. Did the Duplicate meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
18. Were the samples digested within hold time?	28 days	Yes		Yes		
19. Was the max temperature(s) for reactor(s) documented?	---	Yes		Yes		
20. Was the method specifed temperature reached?		Yes		Yes		
21. Were reagents/standards used before expiration date?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		

CHEMICAL OXYGEN DEMAND REAGENT LOG

Prep Batch(es): 95239
Date/Time/Analyst: 04/29/2022 11:00:00 RLB
Run(s): 211565
Date/Time/Analyst: 04/29/2022 16:52 RLB

Reagents:	W #	Exp Date
ICAL Preparation	W52634	07/12/2022
CCV Preparation	W52637	07/12/2022
LCS/ICV Preparation	W52635	07/12/2022
Silver Sulfate Acid	W52533	03/22/2023
Potassium Dichromate Dig Solution	W51903	11/15/2022

Spiked Samples:	W #	Exp Date
Spiking Solution	W52637	07/12/2022

Concentration 2000 mg/L
Volume of Spike Used 0.2 mL
Final Sample Volume 2.5 mL
Final Spike Concentration 148.2 mg/L

Date: 04/29/2022
Time: 14:30

COD DIGESTION BLOCK TEMPS

	A	B
Temperature (Max) 150°C ± 2°C:		

	E	D
Temperature (Max) 150°C ± 2°C:	150.3	

WCOD QSM Analytical Run
211650 on 5/3/2022

Date Analyzed: Date Reviewed:

Date Entered: Date Validated:

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169227	1137439		4/29/2022 09:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	COD QSM		GW	4	
		49IDW							95270			
	1138063							COD QSM				
				MBW					95270			
	1138064							COD QSM				
				LCSW					95270			
	1138065		4/29/2022 09:45					COD QSM				
		49IDW		DUP	1137439				95270			
	1138066		4/29/2022 09:45					COD QSM				
		49IDW		MSW	1137439				95270			
	1138067		4/29/2022 09:45					COD QSM				
		49IDW		MSDW	1138066				95270			
	1138178							WCOD QSM				
				ICV								
	1138179							WCOD QSM				
				ICB								
	1138180							WCOD QSM				
				CCV								
	1138181							WCOD QSM				
				CCB								
	1138182							WCOD QSM				
				CCV								
	1138183							WCOD QSM				
				CCB								

12 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

PrepWrkSht2
on 5/17/2022

Prep Batch: **95270**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	1138063	MBW		COD QSM			LIQUID				
	1138064	LCSW		COD QSM			LIQUID				
169227	1137439			COD QSM	WESTON SOLUTIONS, INC.	49IDW	GROUND WATER	4/29/22	09:45	5/12/22	4
	1138065	DUP	1137439	COD QSM		49IDW	GROUND WATER	4/29/22	09:45		
	1138066	MSW	1137439	COD QSM		49IDW	GROUND WATER	4/29/22	09:45		
	1138067	MSDW	1138066	COD QSM		49IDW	GROUND WATER	4/29/22	09:45		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp7651.tmp

COD Data Validation Checklist

		Method: Chemical Oxygen Demand EPA 410.4			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
211650	05/03/2022	RLB	etk	05/03/2022	yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Does a digestion sheet accompany the data package?	---	Yes		Yes		
2. Does the digestion sheet include all reagent and standard prep log numbers?	---	Yes		Yes		
3. Was a passing calibration test applied to sample analysis?	≥0.995	Yes		Yes		
4. Was a passing ICV analyzed immediately after the calibration?	90-110%	Yes		Yes		
5. Was a passing ICB analyzed immediately after the ICV?	< |LOD|or client/project specific	Yes		Yes		
6. Were CCVs and CCB analyzed at the required frequency?	1 per 10 samples	Yes		Yes		
7. Did analyzed CCVs meet the required acceptance criteria?	90-110%	Yes		Yes		
8. Did analyzed CCBs meet the acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
9. Was a Method Blank prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
10. Was the method blank within acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
11. Was an LCS prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
12. Did the LCS meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		
13. Was an MS and MSD prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
14. Did the MS/ MSD's meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		

15. Did the MS/MSD's meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
16. Was a Duplicate prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
17. Did the Duplicate meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
18. Were the samples digested within hold time?	28 days	Yes		Yes		
19. Was the max temperature(s) for reactor(s) documented?	---	Yes		Yes		
20. Was the method specifed temperature reached?		Yes		Yes		
21. Were reagents/standards used before expiration date?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		

CHEMICAL OXYGEN DEMAND REAGENT LOG

Prep Batch(es): 95270
Date/Time/Analyst: 05/03/2022 9:00:00 RLB
Run(s): 211650
Date/Time/Analyst: 05/03/2022 13:32 RLB

Reagents:	W #	Exp Date
ICAL Preparation	W52634	07/12/2022
CCV Preparation	W52637	07/12/2022
LCS/ICV Preparation	W52635	07/12/2022
Silver Sulfate Acid	W52533	03/22/2023
Potassium Dichromate Dig Solution	W51903	11/15/2022

Spiked Samples:	W #	Exp Date
Spiking Solution	W52637	07/12/2022

Concentration 2000 mg/L
Volume of Spike Used 0.2 mL
Final Sample Volume 2.5 mL
Final Spike Concentration 148.2 mg/L

Date: 05/03/2022
Time: 10:00

COD DIGESTION BLOCK TEMPS

	A	B
Temperature (Max) 150°C ± 2°C:		

	E	D
Temperature (Max) 150°C ± 2°C:	150.3	

WANIONS IC QSM 5.0 Anion Run
211440 on 4/27/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1135344						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICV							
		Chloride		ICV							
		Sulfate		ICV							
	1135345						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICB							
		Chloride		ICB							
		Sulfate		ICB							
	1135214						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1135215						WANIONS IC QSM 5.0				
		Chloride		LCSW				0			
		Nitrate Nitrogen		LCSW				0			
		Sulfate		LCSW				0			
	1135216						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211440 on 4/27/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1135217							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	1135219							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB				0			
		Chloride			CCB				0			
		Sulfate			CCB				0			
169098	1134804		4/25/2022	12:10		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride			*							
		Nitrate Nitrogen			*							
		Sulfate			*							
	1135223		4/25/2022	12:10				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	1134804			0			
		Chloride			DUP	1134804			0			
		Sulfate			DUP	1134804			0			
	1135224		4/25/2022	12:10				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSW	1134804			0			
		Chloride			MSW	1134804			0			
		Sulfate			MSW	1134804			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211440 on 4/27/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1135225		4/25/2022	12:10					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSDW	1135224				0			
		Chloride			MSDW	1135224				0			
		Sulfate			MSDW	1135224				0			
169098	1134805		4/25/2022	14:55			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride											
		Nitrate Nitrogen											
		Sulfate											
169098	1134805		4/25/2022	14:55			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***										
		Sulfate	***RERUN***										
		Nitrate Nitrogen	***RERUN***										
	1135226								WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV					0			
		Chloride			CCV					0			
		Sulfate			CCV					0			
	1135228								WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB					0			
		Chloride			CCB					0			
		Sulfate			CCB					0			

45

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
211440 211441	04/26/2022	TMG	RLD	04/27/2022	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3	Yes		Yes		
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

Aquion Run Log - System 4

Start Date	Start Time	End Date	End Time	Analyst	Lims Run #(s)	Calibration ID#	Data File	CCV ID's	LCS ID's	Spike ID's	Total Cond.	Pressure (Mpa)	Flow (mL/min)	Comments	Reviewed/Date
03/21/22	12:11	03/22/22	09:51	TMG	210377 210378	IC4047A	032122 -	IC4040 IC4048	IC4041 IC4049	IC4042 IC4050	21.64	1131.35	0.98		
03/22/22	12:17	03/23/22	09:47	TMG	210433 210434	IC4047A	032222 -	IC4040 IC4048	IC4041 IC4049	IC4042 IC4050	21.93	1127.03	0.98		
03/23/22	10:53	03/24/22	08:19	TMG	ML IC4051	ML IC4051	032322 -	IC4052	IC4053	NA	22.08	1147.9	1		
03/24/22	9:42	03/24/22	13:06	TMG	210475 ML	ML IC4051	032422 -	IC4052	IC4053	IC4056	22.17	1152.07	1		
03/24/22	14:15	03/25/22	03:12	TMG	210506	IC3602A	032422 -	IC4054 IC4057	IC4055 IC4058	IC4056 IC4059	22.16	1128.11	0.98		
03/25/22	9:23	03/25/22	12:42	TMG	210528	IC4047A	032522 -	IC4054 IC4057	IC4055 IC4058	IC4056 IC4059	21.82	1109.71	0.96		
03/25/22	13:48	03/26/22	02:09	TMG	210540	IC4047A	032522 -	IC4054 IC4057	IC4055 IC4058	IC4056 IC4059	21.51	1082.87	0.96		
03/26/22	17:04	03/27/22	03:19	TMG	210556 210557	IC4047A	032622 -	IC4054 IC4057	IC4055 IC4058	IC4056 IC4059	21.12	1092.51	0.96		
03/28/22	8:38	03/29/22	10:44	TMG	210498 210499	IC4047A	032822 -	IC4054 IC4057	IC4055 IC4058	IC4056 IC4059	21.06	1090.93	0.96		
03/29/22	12:03	03/30/22	00:36	TMG	210498 210499	IC4047A	032922 -	IC4054 IC4057	IC4055 IC4058	IC4056 IC4059	21.39	1091.59	0.96		
03/30/22	11:28	03/31/22	11:56	TMG	210576 210646	IC4047A	033022 -	IC4054 IC4057	IC4055 IC4058	IC4056 IC4059	21.01	1091.35	0.96		
03/31/22	13:25	04/01/22	01:10	TMG	210662 210679	IC4047A	033122 -	IC4067 IC4070	IC4068 IC4071	IC4069 IC4072	21.34	1087.65	0.96		
04/01/22	11:18	04/02/22	00:34	TMG	210695 210696	IC4047A	040122 -	IC4067 IC4070	IC4068 IC4071	IC4069 IC4072	21.06	1090.04	0.96		
04/02/22	16:39	04/03/22	03:30	TMG	210704	IC4047A	040222 -	IC4067 IC4070	IC4068 IC4071	IC4069 IC4072	21.07	1092.74	0.96		
04/04/22	10:25	04/05/22	09:59	TMG	210706 210724	IC4047A	040422 -	IC4067 IC4070	IC4068 IC4071	IC4069 IC4072	21.08	1091.97	0.96		
04/05/22	12:54	04/06/22	18:40	TMG	210757 210770	IC4047A	040522 -	IC4067 IC4070	IC4068 IC4071	IC4069 IC4072	21.39	1096.87	0.96		
04/06/22	20:07	04/07/22	12:15	TMG	210802 210803	IC4047A	040622 -	IC4067 IC4073	IC4068 IC4074	IC4069 IC4075	21.54	1096.72	0.96		
04/07/22	13:13	04/08/22	09:05	TMG	210831 210842	IC4047A	040722 -	IC4076 IC4079	IC4077 IC4080	IC4078 IC4081	21.61	1100.23	0.96		
04/08/22	11:26	04/11/22	08:40	TMG	210880 210884	IC4047A	040822 -	IC4076 IC4079	IC4077 IC4080	IC4078 IC4081	21.55	1097.53	0.96		
04/11/22	15:52	04/12/22	00:17	TMG	210965	IC4047A	041122 -	IC4076 IC4079	IC4077 IC4080	IC4078 IC4081	21.75	1104.7	0.96		
04/11/22	9:27	04/11/22	14:34	TMG	IC4083A	IC4083A	041122 -	IC4076 IC4079	IC4077 IC4080	IC4078 IC4081	21.75	1148.79	1		
04/12/22	7:56	04/12/22	14:16	TMG	210988	IC4047A	041222 -	IC4076 IC4079	IC4077 IC4080	IC4078 IC4081	21.44	1104.85	0.96		
04/12/22	15:00	04/13/22	10:31	TMG	211004 211005	IC4047A	041222 -	IC4076 IC4079	IC4077 IC4080	IC4078 IC4081	21.8	1113.8	0.96		
04/13/22	11:18	04/14/22	11:46	TMG	211044 211046 211082	IC4083A	041322 -	IC4076 IC4086	IC4077 IC4087	IC4078 IC4088	21.88	1098.91	0.96		
04/14/22	12:52	04/14/22	23:25	TMG	211109 211110 211111	IC4083A	041422 -	IC4089 IC4092	IC4090 IC4093	IC4091 IC4094	21.98	1112.76	0.96		
04/15/22	12:43	04/18/22	09:04	TMG	210769 211157	IC4083A	041522 -	IC4089 IC4092	IC4090 IC4093	IC4091 IC4094	21.81	1103.23	0.96		
04/18/22	10:24	04/18/22	20:21	TMG	211188 211198	IC4083A	041822 -	IC4089 IC4092	IC4090 IC4093	IC4091 IC4094	22.07	1105.74	0.96		
04/19/22	14:13	04/20/22	09:01	TMG	211240 211243	4047A	041922 -	IC4089 IC4092	IC4090 IC4093	IC4091 IC4094	21.57	1120.21	0.96		
04/20/22	10:03	04/21/22	10:02	TMG	211280	IC4083A	042022 -	IC4089 IC4092	IC4090 IC4093	IC4091 IC4094	21.53	1104.78	0.96		
04/21/22	12:05	04/22/22	01:38	TMG	211318 211334	IC4083A	042122 -	IC4095 IC4098	IC4096 IC4099	IC4097 IC4100	21.48	1123.56	0.96		
04/22/22	8:36	04/22/22	13:17	TMG	IC4101LL	IC4101LL	042222 -	NA	IC4102	NA	21.39	1150.25	1		
04/22/22	16:11	04/25/22	07:53	TMG	211371 LL	IC4101LL	042222 -	IC4102	IC4102	NA	21.51	1171.04	1		
04/25/22	10:05	04/25/22	15:41	TMG	IC4103 LL	IC4103LL	042522 -	NA	IC4104	NA	21.29	1171.85	1		
04/26/22	11:09	04/27/22	23:52	TMG	211371 LL	IC4103LL	042622 -	IC4104	IC4104	NA	21.47	1174.24	1		
04/26/22	12:15	04/27/22	08:04	TMG	211440 211441 IC4106A	IC4083A	042622B -	IC4095 IC4098	IC4096 IC4107	IC4097 IC4100	21.37	1126.3	0.96		
04/28/22	8:26	04/29/22	01:56	TMG	211371LL	IC4103LL	042822 -	IC4108	IC4108	IC4108B	21.21	1163.44	1		
04/29/22	12:27	04/30/22	00:55	TMG	211579LL	IC4103LL	042922 -	IC4108	IC4108	IC4108B	21.41	1171.47	1		
05/02/22	21:20	05/03/22	11:48	TMG	PTS	IC4116A	050222 -	IC4109 IC4117	IC4110 IC4118	IC4111 IC4119	21.46	1133.2	0.96		
05/02/22	13:30	05/02/22	19:43	TMG	IC4116A	IC4116A	050222B -	IC4109 IC4117	IC4110 IC4118	IC4111 IC4119	21.43	1216.13	1		
05/04/22	10:54	05/04/22	15:35	TMG	IC4120LL	IC4120LL	050422 -	NA	IC4121	NA	21.49	1174.48	1		
05/05/22	9:25	05/05/22	21:08	TMG	211604 LL	IC4120LL	050522 -	IC4121	IC4121	IC4129	21.44	1178.56	1		
05/06/22	10:08	05/06/22	21:51	TMG	211767 LL	IC4120LL	050622 -	IC4128	IC4128	IC4129	21.49	1179.14	1		
05/09/22	14:51	05/10/22	10:57	TMG	IC4136 LL	IC4136LL	050922 -	NA	IC4130	NA	21.6	1178.72	1		
05/12/22	8:36	05/12/22	15:05	TMG	IC4138 LL	IC4138LL	051222 -	NA	IC4139	NA	21.49	1173.4	1		
05/13/22	14:20	05/14/22	02:03	TMG	211810 LL	IC4120LL	051322 -	IC4139	IC4139	IC4146	21.73	1169.65	1		
05/16/22				TMG	212012 LL	IC4120LL	051622 -	IC4149	IC4149	IC4148			1		

WANIONS IC QSM 5.0 Anion Run
211534 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1139965							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	1139966							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB				0			
		Chloride			CCB				0			
		Sulfate			CCB				0			
169156	1136205		4/26/2022	10:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
169156	1136206		4/26/2022	11:46		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
169156	1136207		4/26/2022	11:46		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Nitrate Nitrogen										
		Chloride										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211534 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169156	1136208		4/26/2022	12:47		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
169156	1136209		4/26/2022	14:59		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
169156	1136210		4/26/2022	14:59		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
169156	1136211		4/26/2022	16:44		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
169156	1136213		4/27/2022	08:32		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211534 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169156	1136214		4/27/2022 11:32		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
169156	1136215		4/27/2022 12:52		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
	1139967						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1139968						WANIONS IC QSM 5.0				
		Chloride		LCSW				0			
		Nitrate Nitrogen		LCSW				0			
		Sulfate		LCSW				0			
	1139969						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211534 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169156	1136216		4/27/2022	14:04		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
169156	1136217		4/27/2022	15:37		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
169156	1136203		4/26/2022	08:21		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Nitrate Nitrogen			*							
		Chloride			*							
		Sulfate			*							
169156	1136204		4/26/2022	09:25		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
	1139970		4/26/2022	08:21				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	1136203			0			
		Chloride			DUP	1136203			0			
		Sulfate			DUP	1136203			0			

Page 1783

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211534 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1139971		4/26/2022 08:21				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSW 1136203				0			
		Chloride		MSW 1136203				0			
		Sulfate		MSW 1136203				0			
	1139972		4/26/2022 08:21				ANIONS IC QSM 5.0				
		Sulfate		MSDW 1139971				0			
		Nitrate Nitrogen		MSDW 1139971				0			
		Chloride		MSDW 1139971				0			
169156	1136205		4/26/2022 10:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								
169156	1136217		4/27/2022 15:37		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Chloride	***RERUN***								
	1139973						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211534 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1139974						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
	1140132						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV							
		Chloride		CCV							
		Sulfate		CCV							
	1140133						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB							
		Chloride		CCB							
		Sulfate		CCB							
169156	1136207		4/26/2022 11:46		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate	***RERUN***								
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
169156	1136215		4/27/2022 12:52		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211534 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1140134							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV							
		Chloride			CCV							
		Sulfate			CCV							
	1140135							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB							
		Chloride			CCB							
		Sulfate			CCB							
	1140136							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV							
		Chloride			CCV							
		Sulfate			CCV							
	1140137							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB							
		Chloride			CCB							
		Sulfate			CCB							
169156	1136203		4/26/2022	08:21		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate		***RERUN***	*							
		Chloride		***RERUN***	*							
		Nitrate Nitrogen		***RERUN***	*							

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211534 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1139970		4/26/2022 08:21					ANIONS IC QSM 5.0				
		Sulfate		DUP	1136203				0			
		Chloride		DUP	1136203				0			
		Nitrate Nitrogen		DUP	1136203				0			
	1139971		4/26/2022 08:21					ANIONS IC QSM 5.0				
		Chloride		MSW	1136203				0			
		Nitrate Nitrogen		MSW	1136203				0			
		Sulfate		MSW	1136203				0			
	1139972		4/26/2022 08:21					ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW	1139971				0			
		Sulfate		MSDW	1139971				0			
		Chloride		MSDW	1139971				0			
	1140138							WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV								
		Chloride		CCV								
		Sulfate		CCV								
	1140139							WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB								
		Chloride		CCB								
		Sulfate		CCB								

120

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211592 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1143758						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICV							
		Chloride		ICV							
		Sulfate		ICV							
	1143759						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICB							
		Chloride		ICB							
		Sulfate		ICB							
	1139743						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1139744						WANIONS IC QSM 5.0				
		Sulfate		LCSW				0			
		Chloride		LCSW				0			
		Nitrate Nitrogen		LCSW				0			
	1139745						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211592 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169199	1136588		4/28/2022	09:48		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate										
		Nitrate Nitrogen										
		Chloride										
169199	1136588		4/28/2022	09:48		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate	***RERUN***									
		Chloride	***RERUN***									
		Nitrate Nitrogen	***RERUN***									
169199	1136671		4/28/2022	09:48		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Nitrate Nitrogen										
		Sulfate										
		Chloride										
169199	1136671		4/28/2022	09:48		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate	***RERUN***									
		Chloride	***RERUN***									
		Nitrate Nitrogen	***RERUN***									
169199	1136672		4/28/2022	12:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211592 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169199	1136673		4/28/2022 13:56		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
169199	1136674		4/28/2022 15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
	1139746						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1139747						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
	1139748		4/28/2022 15:20				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		DUP	1136674			0			
		Chloride		DUP	1136674			0			
		Sulfate		DUP	1136674			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211592 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1139749		4/28/2022 15:20				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSW 1136674				0			
		Chloride		MSW 1136674				0			
		Sulfate		MSW 1136674				0			
	1139750		4/28/2022 15:20				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW 1139749				0			
		Chloride		MSDW 1139749				0			
		Sulfate		MSDW 1139749				0			
	1139751						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1139752						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

57

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC37-01 Data Review Checklist

		Method: Anions by Ion Chromatography 300.0/9056		Independent Data Review Checklist		Instrument: DX120-System 2
LIMS Run #(s)	**Analysis Date**		**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes/No)**
211534 211537 211538 211592 211593 211714	04/28/2022		TMG	RLD	05/06/2022	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments**
		Yes	**No**	**Yes**	**No**	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3		No		No	Affected sample results were "H" flaggerd
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flaggerd
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WANIONS IC QSM 5.0 Anion Run
211602 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138735							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	1138736							WANIONS IC QSM 5.0				
		Chloride			LCSW				0			
		Nitrate Nitrogen			LCSW				0			
		Sulfate			LCSW				0			
	1138737							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			MBW				0			
		Chloride			MBW				0			
		Sulfate			MBW				0			
169227	1137438		4/29/2022	08:50		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
	1138738		4/29/2022	08:50				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	1137438			0			
		Chloride			DUP	1137438			0			
		Sulfate			DUP	1137438			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211602 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138739		4/29/2022 08:50				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSW 1137438				0			
		Chloride		MSW 1137438				0			
		Sulfate		MSW 1137438				0			
	1138740		4/29/2022 08:50				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW 1138739				0			
		Chloride		MSDW 1138739				0			
		Sulfate		MSDW 1138739				0			
	1138741						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1138742						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
	1138743						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211602 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138744								WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB					0			
		Chloride			CCB					0			
		Sulfate			CCB					0			
	1138738		4/29/2022	08:50					ANIONS IC QSM 5.0				
		Sulfate			DUP	1137438				0			
		Chloride			DUP	1137438				0			
		Nitrate Nitrogen			DUP	1137438				0			
	1138739		4/29/2022	08:50					ANIONS IC QSM 5.0				
		Sulfate			MSW	1137438				0			
		Chloride			MSW	1137438				0			
		Nitrate Nitrogen			MSW	1137438				0			
	1138740		4/29/2022	08:50					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSDW	1138739				0			
		Sulfate			MSDW	1138739				0			
		Chloride			MSDW	1138739				0			
	1138748								WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV					0			
		Chloride			CCV					0			
		Sulfate			CCV					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
211602 on 5/17/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1138749						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
169227	1137438		4/29/2022 08:50		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Sulfate	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
	1138750						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1138751						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

57

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC37-01 Data Review Checklist

		Method: Anions by Ion Chromatography 300.0/9056		Independent Data Review Checklist		Instrument: DX120-System 2
LIMS Run #(s)	**Analysis Date**		**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes/No)**
211602	04/30/2022		DGS/TMG	RLD	05/05/2022	Yes

Instructions: Complete one checklist per *analytical sequence*. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments**
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3	Yes		Yes		
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits	Yes		Yes		
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments: _____

Dionex Run Log - System 2

Start Date	Start Time	End Date	End Time	Analyst	Lims Run #(s)	Calibration ID#	Data File	CCV ID's	LCS ID's	Spike ID's	Total Cond.	Pressure (Mpa)	Flow (mL/min)	Comments	Reviwed by/Date
01/11/22	13:58	01/12/22	09:13	TMG	198749 198750	IC3675	011122 -	IC3926 IC3929	IC3927 IC3930	IC3928 IC3931	18.8	1630	0.88	IC3857	RLD 03/23/2022
01/17/22	13:55	01/17/22	17:07	TMG	198906	IC3675	011722 -	IC3936 IC3939	IC3937 IC3940	IC3938 IC3941	18.6	1625	0.88	IC3857	RLD 03/23/2022
01/18/22	9:24	01/19/22	11:36	TMG	198917 198922 198953	IC3675	011822 -	IC3936 IC3939	IC3937 IC3940	IC3938 IC3941	19.2	1666	0.91	IC3857	RLD 03/23/2022
01/20/22	12:45	01/20/22	18:50	TMG	198937 198938	IC3675	012022 -	IC3947 IC3950	IC3943	IC3943	18.7	1652	0.91	IC3857	RLD 03/23/2022
01/21/22	9:07	01/21/22	15:04	TMG	199037	IC3675	012122 -	IC3947 IC3950	IC3948 IC3951	IC3949 IC3952	18.8	1640	0.91	IC3857	RLD 03/23/2022
01/26/22	14:13	01/27/22	11:21	TMG	199111 199112	IC3675	012622 -	IC3947 IC3950	IC3948 IC3951	IC3949 IC3952	19.1	1684	0.91	IC3953	RLD 03/23/2022
01/27/22	12:18	01/27/22	22:51	TMG	199001 199004 199006	IC3675	012722 -	IC3957 IC3960	IC3943	IC3943	18.3	1583	0.88	IC3953	RLD 03/23/2022
02/01/22	12:08	02/02/22	10:53	TMG	199229	IC3675	020122 -	IC3957 IC3963	IC3958 IC3964	IC3959 IC3965	18.2	1562	0.86	IC3953	RLD 03/23/2022
02/07/22	11:42	02/08/22	12:17	TMG	199352 199353	IC3675	020722 -	IC3957 IC3963	IC3958 IC3964	IC3959 IC3965	19	1549	0.85	IC3953	RLD 03/23/2022
02/14/22	10:14	02/15/22	12:09	TMG	IC3992	IC3992	021422 -	IC3982 IC3988	IC3983 IC3989	IC3984 IC3990	18.6	1847	1	IC3953	RLD 03/23/2022
02/15/22	12:37	02/17/22	10:27	TMG	199578 199630 MDL	IC3992	021522 -	IC3982 IC3988	IC3983 IC3989	IC3984 IC3990	18.7	1832	0.98	IC3953	RLD 03/23/2022
02/17/22	12:36	02/22/22	10:07	TMG	199675 199676	IC3992	021722 -	IC3995 IC3998	IC3996 IC3999	IC3997 IC4000	19	1742	0.97	IC3953	RLD 03/23/2022
02/22/22	11:06	02/22/22	20:43	TMG	209760	IC3992	022222 -	IC3995 IC3998	IC3996 IC3999	IC3997 IC4000	18.7	1662	0.94	IC3993	RLD 03/23/2022
02/24/22	12:29	02/24/22	22:44	TMG	209808 209809 209823	IC3992	022422 -	IC4006 IC4009	IC4007 IC4010	IC4008 IC4011	18.8	1643	0.93	IC3993	RLD 03/23/2022
03/07/22	9:10	03/07/22	17:11	TMG	209843	IC3992	030722 -	IC4014 IC4017	IC4015 IC4018	IC4016 IC4019	18.9	1662	0.94	IC3993	RLD 03/23/2022
03/23/22	8:23	03/22/22	13:47	TMG	210275	IC3992	032322 -	IC4040 IC4048	IC4041 IC4049	IC4042 IC4050	19.2	1102	1.01	IC3993	RLD 03/23/2022
04/13/22	9:31	04/13/22	13:41	TMG	IC4085	IC4085	041322 -	IC4076 IC4086	IC4077 IC4087	IC4078 IC4088	19.8	1782	1	IC4032	
04/13/22	14:22	04/14/22	10:36	TMG	211089	IC4085	041322 -	IC4076 IC4086	IC4077 IC4087	IC4078 IC4088	20	1795	0.97	IC4032	
04/14/22	10:56	04/15/22	09:28	TMG	211100 211101	IC4085	041422 -	IC4089 IC4092	IC4090 IC4093	IC4091 IC4094	20.5	1785	0.97	IC4032	
04/15/22	11:56	04/19/22	09:38	TMG	211150 211151 211191	IC4085	041522 -	IC4089 IC4092	IC4090 IC4093	IC4091 IC4094	19.1	1825	0.98	IC4032	
04/19/22	10:28	04/20/22	10:02	TMG	211223 211224	IC4085	041822 -	IC4089 IC4092	IC4090 IC4093	IC4091 IC4094	18.9	1840	1.01	IC4032	
04/20/22	10:49	04/21/22	09:17	TMG	211281	IC4085	042022 -	IC4089 IC4092	IC4090 IC4093	IC4091 IC4094	18.6	1882	1.02	IC4032	
04/22/22	11:04	04/22/22	19:05	TMG	211362 211363	IC4085	042222 -	IC4095 IC4098	IC4096 IC4099	IC4097 IC4100	18.8	1872	1.01	IC4032	
04/25/22	11:23	04/26/22	08:35	TMG	IC4106	IC4106	042522 -	IC4095 IC4098	IC4096 IC4107	IC4097 IC4100	18.9	1852	0.99	IC4032	
04/26/22	9:21	04/27/22	09:21	TMG	211420 211436 211438	IC4106	042622 -	IC4095 IC4098	IC4096 IC4107	IC4097 IC4100	18.8	1830	0.99	IC4032	
04/27/22	12:41	04/28/22	09:51	TMG	211504 211505	IC4106	042722 -	IC4095 IC4098	IC4096 IC4107	IC4097 IC4100	18.9	1797	0.99	IC4032	
04/28/22	10:23	05/05/22	11:43	TMG	211534 211537 211538 211592 211593 211714	IC4106	042822 -	IC4109 IC4112	IC4110 IC4113	IC4111 IC4114	18.8	1802	0.99	IC4032	
04/30/22	12:02	05/02/22	11:23	DGS/TMG	211602	IC4106	043022 -	IC4109 IC4112	IC4110 IC4113	IC4111 IC4114	18.4	1806	0.99	IC4032	
05/02/22	14:56	05/02/22	19:12	TMG	211631	IC4106	050222 -	IC4109 IC4117	IC4110 IC4118	IC4111 IC4119	18.5	1810	0.98	IC4032	
05/02/22	21:21	05/03/22	18:35	TMG	211622 211623 211624 211631RR 211669	IC4106	050222B -	IC4109 IC4117	IC4110 IC4118	IC4111 IC4119	18.6	1807	0.98	IC4032	
05/05/22	12:52	05/05/22	19:59	TMG	211745	IC4106	050522 -	IC4122 IC4125	IC4123 IC4126	IC4124 IC4127	18.8	1812	0.98	IC4032	
05/06/22	12:47	05/07/22	00:52	TMG	211750 211786	IC4106	050622 -	IC4122 IC4125	IC4123 IC4126	IC4124 IC4127	18.3	1845	1	IC4032	
05/09/22	12:34	05/10/22	08:56	TMG	211821 211822 211825	IC4106	050922 -	IC4122 IC4125	IC4123 IC4126	IC4124 IC4127	18.6	1813	1	IC4032	
05/10/22	12:09	05/11/22	08:38	TMG	211859 211860 211871	IC4106	051022 -	IC4122 IC4125	IC4123 IC4126	IC4124 IC4127	18.9	1822	1	IC4032	
05/11/22	12:01	05/12/22	08:36	TMG	211905 211908	IC4106	051122 -	IC4122 IC4125	IC4123 IC4126	IC4124 IC4127	20	1812	1	IC4032	
05/12/22	12:23	05/13/22	12:05	TMG	211930 211931	IC4106	051222 -	IC4140 IC4143	IC4141 IC4144	IC4142 IC4145	18.4	1834	1	IC4032	
05/13/22	14:24	05/14/22	00:35	TMG	211888 211889 211977	IC4106	051322 -	IC4140 IC4143	IC4141 IC4144	IC4142 IC4145	18.8	1825	1.01	IC4147	

WPH Analytical Run
211555 on 4/29/2022

Date Analyzed:

Date Reviewed:

Date Entered:

Date Validated:

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169156	1136212		4/26/2022 17:44		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	PH		GW	**4**	
		54IDW									
	1137194		4/26/2022 17:44				PH				
		54IDW		DUP 1136212				0			

2 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

pH Data Validation Checklist

		Method: pH EPA 150.1, SM 4500-H+B, EPA 9040C, EPA 9045D			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
211555	04/28/2022	HLB	etk	05/11/2022	yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Was the calibration slope recorded on the bench sheet?	95-110%	Yes		Yes		
2. Were reagents/standards used before expiration date?	---	Yes		Yes		
3. Were duplicates analyzed at the appropriate frequency?	1 every 20 samples of the same matrix	Yes		Yes		
4. Were the duplicates within acceptable limits?	Differ by $\leq$ 0.10 pH units	Yes		Yes		
5. Are all samples on the job lists accounted for?	---	Yes		Yes		
6. Were SM 4500-H+B samples bracketed by calibration buffer 7?	Every 10 samples, Differ by $\leq$ 0.10 pH units	Yes		Yes		

WPH Analytical Run
211639 on 5/3/2022

Date Analyzed:

Date Reviewed:

Date Entered:

Date Validated:

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169227	1137439		4/29/2022 09:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	PH		GW	**4**	
		49IDW										
169232	1137501		5/2/2022 09:00					PH SM4500H+B		WW	**1**	
		EFFLUENT										
	1138141		4/29/2022 09:45					PH				
		49IDW		DUP	1137439				0			
	1138142		5/2/2022 09:00					PH SM4500H+B				
		EFFLUENT		DUP	1137501				0			

4 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution:

pH Data Validation Checklist

		Method: pH EPA 150.1, SM 4500-H+B, EPA 9040C, EPA 9045D			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
211639	05/02/2022	RLB/BRB	etk	05/03/2022	yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Was the calibration slope recorded on the bench sheet?	95-110%	Yes		yes		
2. Were reagents/standards used before expiration date?	---	Yes		Yes		
3. Were duplicates analyzed at the appropriate frequency?	1 every 20 samples of the same matrix	Yes		Yes		
4. Were the duplicates within acceptable limits?	Differ by $\leq$ 0.10 pH units	Yes		Yes		
5. Are all samples on the job lists accounted for?	---	Yes		Yes		
6. Were SM 4500-H+B samples bracketed by calibration buffer 7?	Every 10 samples, Differ by $\leq$ 0.10 pH units	Yes		Yes		

Mettler Toledo (Easy Seven) pH Calibration & Maintenance Run Logbook

		pH Buffer Reference ID #			3 Point Calibration						
Date	Analyst	pH 7	pH 4	pH 10	1st Buffer	2nd Buffer	3rd Buffer	Slope (95-110%)	Temp ° C	Comments	Review
04/18/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.03	98%	23.1		
04/19/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.01	98%	24.6		
04/20/22	KMT	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.02	98%	24.5		
04/21/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	100%	24.4		
04/22/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24.1		
04/23/22	ATJ	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.02	99%	23.5		
04/25/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	99%	24.3		
04/26/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24.4		
04/26/22	KMT	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	23.9	TITRATION PROBE CHECK	
04/27/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24.2		
04/27/22	KMT	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.03	98%	23.4	TITRATION PROBE CHECK	
04/27/22	KMT	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	99%	23.9		
04/28/22	HLB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24.4		
04/29/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.01	98%	24.6		
05/02/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24.4		
05/03/22	KMT	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.02	97%	24.4		
05/04/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.01	98%	24.5		
05/05/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC453 EX: 01/31/2024	7.01	4	10.06	100%	23.7		
05/06/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC453 EX: 01/31/2024	7.01	4	10.04	98%	22.4		
05/07/22	ATJ	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC453 EX: 01/31/2024	7.01	4	10.02	98	23.8		
05/10/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC453 EX: 01/31/2024	7	4	10.02	99%	24.3		
05/11/22	KMT	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC453 EX: 01/31/2024	7	4	10.01	98%	24.9		
05/12/22	BRB	WC398 EX: 11/30/22	WC205 EX: 10-31-2022	WC453 EX: 01/31/2024	7	4	10.01	98%	24.3		

Mettler Toledo (Easy Seven) Instrument Run Logbook

Date	Start Time	End Time	Analyst	Analyte	Lims Run #(s)	Comments
04/20/22	15:17	15:48	KMT	PH	211309	
04/21/22	15:00	15:45	HLB	PH	211337, 338	
04/23/22	12:30	12:55	ATJ	PH	211378	
04/25/22	14:00	14:50	RLB	PH	211408	
04/26/22	14:43	15:07	KMT	PH	211463	
04/27/22	15:32	16:53	KMT	PH	211513	
04/28/22	15:00	15:30	HLB	PH	211554, 555	
04/29/22	15:10	15:45	ATJ	JH	211595	
05/02/22	15:20	15:35	RLB	PH	211639	
05/03/22	13:40	14:28	KMT	PH	211668	
05/04/22	14:02	15:19	KMT	PH	211712	
05/05/22	14:00	14:20	HLB	PH	211749	
05/07/22	12:15	12:50	ATJ	PH	211797	
05/09/22	15:00	15:20	RLB	PH	211838, 839	
05/10/22	14:30	14:50	KMT	PH	211877, 878	
05/11/22	14:30	14:55	KMT	PH	211913	
05/12/22	14:00	14:30	HLB	PH	211940	
05/13/22	15:30	16:00	ATJ	PH	211984, 985	
05/16/22	14:10	14:20	RLB	PH	212037	

W CARBON, INORG & ORG Analytical Run
211530 on 5/6/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1140048							W CARBON, INORG & ORG				
					CCV				0			
	1140049							W CARBON, INORG & ORG				
					LCSW				0			
	1140050							W CARBON, INORG & ORG				
					MBW				0			
169098	1134804		4/25/2022	12:10		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	CARBON, INORG & ORG		GW	4	
		54MW13			Designated MS/MSD							
169098	1134805		4/25/2022	14:55		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	CARBON, INORG & ORG		GW	4	
		54MW10										
	1140051							W CARBON, INORG & ORG				
					CCV				0			
	1140052							W CARBON, INORG & ORG				
					CCB				0			

7 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
211530	04/28/2022	TMG	RLD	05/06/2022	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	NA		NA		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	NA		NA		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	NA		NA		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	NA		NA		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	NA		NA		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

W CARBON, INORG & ORG Analytical Run
211613 on 5/6/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1139918							W CARBON, INORG & ORG				
					CCV				0			
	1139919							W CARBON, INORG & ORG				
					LCSW				0			
	1139920							W CARBON, INORG & ORG				
					MBW				0			
169156	1136209		4/26/2022	14:59		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	CARBON, INORG & ORG		GW	4	
		54MW12										
169156	1136210		4/26/2022	14:59		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	CARBON, INORG & ORG		GW	4	
		54TW12										
169156	1136211		4/26/2022	16:44		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	CARBON, INORG & ORG		GW	4	
		54MW1										
	1139921							W CARBON, INORG & ORG				
					CCV				0			
	1139922							W CARBON, INORG & ORG				
					CCB				0			

8 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpEF8C.tmp

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
211613	05/02/2022	TMG	RLD	05/06/2022	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	NA		NA		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	NA		NA		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	NA		NA		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	NA		NA		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	NA		NA		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WORGANIC CARBON QSM 5.0 Analytical Run
211697 on 5/6/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1139943								WORGANIC CARBON QSM 5.0				
					CCV					0			
	1139944								WORGANIC CARBON QSM 5.0				
					LCSW					0			
	1139945								WORGANIC CARBON QSM 5.0				
					MBW					0			
	1139946								WORGANIC CARBON QSM 5.0				
					CCV					0			
	1139947								WORGANIC CARBON QSM 5.0				
					CCB					0			
169199	1136588		4/28/2022	09:48			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		50MW2											
	1139948		4/28/2022	09:48					ORGAN CARBON T QSM 5.0				
		50MW2			DUP	1136588				0			
	1139949		4/28/2022	09:48					ORGAN CARBON T QSM 5.0				
		50MW2			MSW	1136588				0			
	1139950		4/28/2022	09:48					ORGAN CARBON T QSM 5.0				
		50MW2			MSDW	1139949				0			
169199	1136671		4/28/2022	09:48			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		50TW2											
169199	1136672		4/28/2022	12:26			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		49MW01											
169199	1136673		4/28/2022	13:56			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		49MW03											
169199	1136674		4/28/2022	15:20			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		48MW7											
	1139951								WORGANIC CARBON QSM 5.0				
					CCV					0			
	1139952								WORGANIC CARBON QSM 5.0				
					CCB					0			
	1140070								WORGANIC CARBON QSM 5.0				
					CCV								
	1140071								WORGANIC CARBON QSM 5.0				
					CCB								
169227	1137438		4/29/2022	08:50			WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		48MW1											

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: WetChem C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpCC8C.tmp Page 1 of 1

WORGANIC CARBON QSM 5.0 Analytical Run
211697 on 5/6/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1140072						WORGANIC CARBON QSM 5.0				
				CCV							
	1140073						WORGANIC CARBON QSM 5.0				
				CCB							

20 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpCC8C.tmp

WORGANIC CARBON QSM 5.0 Analytical Run
211696 on 5/6/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1140057						WORGANIC CARBON QSM 5.0				
				ICV							
	1140058						WORGANIC CARBON QSM 5.0				
				ICB							
	1139923						WORGANIC CARBON QSM 5.0				
				CCV				0			
	1139924						WORGANIC CARBON QSM 5.0				
				LCSW				0			
	1139925						WORGANIC CARBON QSM 5.0				
				MBW				0			
169098	1134804		4/25/2022 12:10		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ORGAN CARBON T QSM 5.0		GW	4	
		54MW13		Designated MS/MSD							
	1139926		4/25/2022 12:10				ORGAN CARBON T QSM 5.0				
		54MW13		DUP 1134804				0			
	1139927		4/25/2022 12:10				ORGAN CARBON T QSM 5.0				
		54MW13		MSW 1134804				0			
	1140061		4/25/2022 12:10				ORGAN CARBON T QSM 5.0				
		54MW13		MSDW 1139927							
169098	1134805		4/25/2022 14:55		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU 54	ORGAN CARBON T QSM 5.0		GW	4	
		54MW10									
169156	1136203		4/26/2022 08:21		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		13MW5		Designated MS/MSD							
	1139928		4/26/2022 08:21				ORGAN CARBON T QSM 5.0				
		13MW5		DUP 1136203				0			
	1139929		4/26/2022 08:21				ORGAN CARBON T QSM 5.0				
		13MW5		MSW 1136203				0			
	1139930		4/26/2022 08:21				ORGAN CARBON T QSM 5.0				
		13MW5		MSDW 1139929				0			
169156	1136204		4/26/2022 09:25		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		13MW4									
	1139931						WORGANIC CARBON QSM 5.0				
				CCV				0			
	1140060						WORGANIC CARBON QSM 5.0				
				CCB							
169156	1136205		4/26/2022 10:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		13MW3									

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: WetChem C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp351C.tmp Page 1 of 1

WORGANIC CARBON QSM 5.0 Analytical Run
211696 on 5/6/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
169156	1136206		4/26/2022	11:46		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		49MW04										
169156	1136207		4/26/2022	11:46		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		49TW04										
169156	1136208		4/26/2022	12:47		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		13MW2										
169156	1136209		4/26/2022	14:59		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		54MW12										
169156	1136210		4/26/2022	14:59		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		54TW12										
169156	1136211		4/26/2022	16:44		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		54MW1										
169156	1136213		4/27/2022	08:32		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		49MW05										
169156	1136214		4/27/2022	11:32		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		49MW02										
169156	1136215		4/27/2022	12:52		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		48MW3										
	1139934							WORGANIC CARBON QSM 5.0				
					CCV				0			
	1139935							WORGANIC CARBON QSM 5.0				
					CCB				0			
169156	1136216		4/27/2022	14:04		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		48MW2										
169156	1136217		4/27/2022	15:37		WESTON SOLUTIONS, INC.	RADFORD AAP SWMUs 49&54	ORGAN CARBON T QSM 5.0		GW	4	
		48MW6										
	1139936							WORGANIC CARBON QSM 5.0				
					CCV				0			
	1139937							WORGANIC CARBON QSM 5.0				
					CCB				0			

33 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp351C.tmp

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
211696 211697	05/04/2022	TMG	RLD	05/06/2022	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	Yes		Yes		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

TOC Instrument Run Logbook

Start Date	Start Time	End Date	End Time	Analyst	LIMs Run #	Matrix (S or W)	Calibration ID #	COMMENTS
4/18/2022	10:16	4/18/2022	13:07	TMG	210998	W	0580	LOD, LOQ, MDL1
4/19/2022	8:44	4/19/2022	10:30	TMG	210998	W	0580	MDL2
4/21/2022	9:11	4/21/2022	14:27	TMG	211319	W	0580	
4/27/2022	9:18	4/27/2022	11:40	TMG	TOC0590	W	0590	
4/28/2022	9:08	4/28/2022	11:08	TMG	211530	W	0590	
4/29/2022	12:02	4/29/2022	15:21	TMG	211575, 211576	W	0590	PT
5/2/2022	9:21	5/2/2022	11:33	TMG	211613	W	0590	
5/4/2022	11:18	5/4/2022	22:35	TMG	211696, 211697	W	0590	
5/5/2022	10:11	5/5/2022	15:01	TMG	211734, 211697RR	W	0590	
				TMG	211851	W	0590	
5/11/2022	11:28	5/11/2022	12:53	TMG	~~211851~~ 211886*, 211887	S	0567	LOD, LOQ, MDL1
5/12/2022	10:45	5/12/2022	13:40	TMG	211887, 211922, 211923	S	0567	MDL2, PT
5/13/2022	9:14	5/13/2022	11:48	TMG	211851	W	0590	
5/16/2022				TMG	212006	S	0567	
5/17/2022				TMG	212006	S	0567	

Reviewed By:_____

SUBCONTRACTED ANALYSIS DOCUMENTS

eurofins | Environment Testing America

ANALYTICAL REPORT

Job Number: 810-22631-1

Job Description: 169098

For:
CT Laboratories
Environmental & Analytical Services
1230 Lange Court
Baraboo, WI 53913

Attention: Jodi Serstad

Approved for release.
Traci Chlebowski
Project Manager
5/5/2022 3:02 PM

Traci Chlebowski, Project Manager
110 S Hill Street, South Bend, IN, 46617
(574)233-4777
Traci.Chlebowski@et.eurofinsus.com
05/05/2022

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Table of Contents

Cover Title Page 1

Data Summaries 4

Definitions 4

Case Narrative 5

Detection Summary 6

Client Sample Results 7

Action Limits 8

Default Detection Limits 9

QC Sample Results 10

QC Association 11

Chronicle 12

Certification Summary 13

Method Summary 14

Sample Summary 15

Manual Integration Summary 16

Reagent Traceability 18

Organic Sample Data 19

HPLC/IC 19

Method 300.0 19

Method 300.0 QC Summary 20

Method 300.0 Sample Data 25

Standards Data 27

Method 300.0 ICAL Data 27

Method 300.0 CCAL Data 34

Raw QC Data 40

Method 300.0 Blank Data 40

Table of Contents

Method 300.0 LCS/LCSD Data 44

Method 300.0 MS/MSD Data 46

Method 300.0 Run Logs 48

Method 300.0 Prep Data 50

Shipping and Receiving Documents 51

Client Chain of Custody 52

Sample Receipt Checklist 53

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
810-22631-1

Comments
No additional comments.

Receipt
The samples were received on 4/28/2022 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.0º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Client Sample ID: 1134804/54MW13 — Lab Sample ID: 810-22631-1

No Detections.

Client Sample ID: 1134805/54MW10 — Lab Sample ID: 810-22631-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Client Sample ID: 1134804/54MW13

Lab Sample ID: 810-22631-1

Date Collected: 04/25/22 12:10
Matrix: Water
Date Received: 04/28/22 08:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			04/28/22 21:56	1
Chlorite	<10		10		ug/L			04/28/22 21:56	1

Client Sample ID: 1134805/54MW10

Lab Sample ID: 810-22631-2

Date Collected: 04/25/22 14:55
Matrix: Water
Date Received: 04/28/22 08:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			04/28/22 23:27	1
Chlorite	<10		10		ug/L			04/28/22 23:27	1

Action Limit Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Client Sample ID: 1134804/54MW13 — Lab Sample ID: 810-22631-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPA MCL P Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Client Sample ID: 1134805/54MW10 — Lab Sample ID: 810-22631-2

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPA MCL P Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Default Detection Limits

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Method: 300.0 - Anions, Ion Chromatography

Analyte	RL		Units
Chlorate	10	7.9	ug/L
Chlorite	10	5.9	ug/L

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 810-17793/4
Matrix: Water
Analysis Batch: 17793

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			04/28/22 13:47	1
Chlorite	<10		10		ug/L			04/28/22 13:47	1

Lab Sample ID: LCS 810-17793/5
Matrix: Water
Analysis Batch: 17793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			250	246		ug/L		99	90 - 110		
Chlorite			250	254		ug/L		102	90 - 110		

Lab Sample ID: LLCS 810-17793/1
Matrix: Water
Analysis Batch: 17793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			10.0	13.5		ug/L		135			
Chlorite			10.0	13.4		ug/L		134			

Lab Sample ID: 810-22631-1 MS
Matrix: Water
Analysis Batch: 17793

Client Sample ID: 1134804/54MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate	<10		250	243		ug/L		97	90 - 110		
Chlorite	<10		250	268		ug/L		107	90 - 110		

Lab Sample ID: 810-22631-1 MSD
Matrix: Water
Analysis Batch: 17793

Client Sample ID: 1134804/54MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorate	<10		250	242		ug/L		97	90 - 110	0	20
Chlorite	<10		250	268		ug/L		107	90 - 110	0	20

QC Association Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

HPLC/IC

Analysis Batch: 17793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-22631-1	1134804/54MW13	Total/NA	Water	300.0	
810-22631-2	1134805/54MW10	Total/NA	Water	300.0	
MB 810-17793/4	Method Blank	Total/NA	Water	300.0	
LCS 810-17793/5	Lab Control Sample	Total/NA	Water	300.0	
LLCS 810-17793/1	Lab Control Sample	Total/NA	Water	300.0	
810-22631-1 MS	1134804/54MW13	Total/NA	Water	300.0	
810-22631-1 MSD	1134804/54MW13	Total/NA	Water	300.0	

Lab Chronicle

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Client Sample ID: 1134804/54MW13

Lab Sample ID: 810-22631-1

Date Collected: 04/25/22 12:10

Matrix: Water

Date Received: 04/28/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	17793	04/28/22 21:56	JL	EA SB

Client Sample ID: 1134805/54MW10

Lab Sample ID: 810-22631-2

Date Collected: 04/25/22 14:55

Matrix: Water

Date Received: 04/28/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	17793	04/28/22 23:27	JL	EA SB

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Laboratory: Eurofins Eaton South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999766900	08-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chlorate
300.0		Water	Chlorite

Method Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-22631-1	1134804/54MW13	Water	04/25/22 12:10	04/28/22 08:00
810-22631-2	1134805/54MW10	Water	04/25/22 14:55	04/28/22 08:00

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Instrument ID: IC-FT Analysis Batch Number: 17609

Lab Sample ID: IC 810-17609/1 Client Sample ID:

Date Analyzed: 04/26/22 14:06 Lab File ID: 042622a_CAL_3.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide		Invalid Compound ID	lovickj	04/27/22 13:21

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Instrument ID: IC-FT Analysis Batch Number: 17793

Lab Sample ID: CCB 810-17793/19 Client Sample ID:

Date Analyzed: 04/28/22 21:25 Lab File ID: 042822a_26.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorate		Invalid Compound ID	lovickj	04/29/22 11:07

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC-300B CalSS_00004	07/21/22	03/03/22	MilliQ Water, Lot 111021	100 mL	IC-BR-CalSt_00002	2500 uL	Bromide	25 mg/L
					IC-CLO2-CalSt_00002	2500 uL	Chlorite	25 mg/L
					IC-CLO3-CalSt_00002	2500 uL	Chlorate	25 mg/L
.IC-BR-CalSt_00002	07/30/22	Inorganic Venture, Lot S2-BR704965			(Purchased Reagent)		Bromide	1000 ug/mL
.IC-CLO2-CalSt_00002	07/30/22	Inorganic Venture, Lot P2-CLOX687554			(Purchased Reagent)		Chlorite	1000 ug/mL
.IC-CLO3-CalSt_00002	07/30/22	Inorganic Venture, Lot R2-CLOX689874			(Purchased Reagent)		Chlorate	1000 ug/mL

Method 300.0

Anions (IC) by Method 300.0

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 042822a.d

Lab ID: LCS 810-17793/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chlorate	250	246	99	90-110	
Chlorite	250	254	102	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 042822a_8.d

Lab ID: LLCS 810-17793/1 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LLCS CONCENTRATION (ug/L)	LLCS % REC	QC LIMITS REC	#
Chlorate	10.0	13.5	135		
Chlorite	10.0	13.4	134		

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 042822a_28.d

Lab ID: 810-22631-1 MS Client ID: 1134804/54MW13 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chlorate	250	<10	243	97	90-110	
Chlorite	250	<10	268	107	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 042822a_29.d

Lab ID: 810-22631-1 MSD Client ID: 1134804/54MW13 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chlorate	250	242	97	0	20	90-110	
Chlorite	250	268	107	0	20	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Lab File ID: 042822a_11.d Lab Sample ID: MB 810-17793/4

Matrix: Water Date Extracted:

Instrument ID: IC-FT Date Analyzed: 04/28/2022 13:47

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LLCS 810-17793/1	042822a_8.d	04/28/2022 12:16
	LCS 810-17793/5	042822a.d	04/28/2022 14:18
1134804/54MW13	810-22631-1	042822a_27.d	04/28/2022 21:56
1134804/54MW13 MS	810-22631-1 MS	042822a_28.d	04/28/2022 22:26
1134804/54MW13 MSD	810-22631-1 MSD	042822a_29.d	04/28/2022 22:57
1134805/54MW10	810-22631-2	042822a_30.d	04/28/2022 23:27

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: 1134804/54MW13 Lab Sample ID: 810-22631-1

Matrix: Water Lab File ID: 042822a_27.d

Analysis Method: 300.0 Date Collected: 04/25/2022 12:10

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 04/28/2022 21:56

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<10		10
14998-27-7	Chlorite	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: 1134805/54MW10 Lab Sample ID: 810-22631-2

Matrix: Water Lab File ID: 042822a_30.d

Analysis Method: 300.0 Date Collected: 04/25/2022 14:55

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 04/28/2022 23:27

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<10		10
14998-27-7	Chlorite	<10		10

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1 Analy Batch No.: 17609

SDG No.:

Instrument ID: IC-FT GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2022 14:06 Calibration End Date: 04/26/2022 17:09 Calibration ID: 3440

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-17609/1	042622a_CAL_3.d
Level 2	IC 810-17609/2	042622a_CAL_4.d
Level 3	IC 810-17609/3	042622a_CAL_5.d
Level 4	IC 810-17609/4	042622a_CAL_6.d
Level 5	IC 810-17609/5	042622a_CAL_7.d
Level 6	ICRT 810-17609/6	042622a_CAL_8.d
Level 7	IC 810-17609/7	042622a_CAL_9.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Chlorite		5.467	5.497	5.497	5.480	5.497	+++++				0.000 - 0.000	5.488
Bromide		10.543	10.550	10.560	10.540	10.553	10.550				0.000 - 0.000	10.549
Chlorate		11.363	11.390	11.370	11.353	11.373	11.367				0.000 - 0.000	11.369

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1 Analy Batch No.: 17609

SDG No.:

Instrument ID: IC-FT GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2022 14:06 Calibration End Date: 04/26/2022 17:09 Calibration ID: 3440

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-17609/1	042622a_CAL_3.d
Level 2	IC 810-17609/2	042622a_CAL_4.d
Level 3	IC 810-17609/3	042622a_CAL_5.d
Level 4	IC 810-17609/4	042622a_CAL_6.d
Level 5	IC 810-17609/5	042622a_CAL_7.d
Level 6	ICRT 810-17609/6	042622a_CAL_8.d
Level 7	IC 810-17609/7	042622a_CAL_9.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Chlorite	44156232	41061800 46747758	40611150 +++++	43433870	Lin	-171842.42	46602522.2							0.9990		0.9950
Bromide	42987416	54836600 44804032	49023650 44737240	42696090	Lin	-61139.060	44740708.2							1.0000		0.9950
Chlorate	39139908	41483200 40735102	50565400 40650421	38563710	Lin	-48368.456	40651084.7							1.0000		0.9950

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1 Analy Batch No.: 17609

SDG No.:

Instrument ID: IC-FT GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2022 14:06 Calibration End Date: 04/26/2022 17:09 Calibration ID: 3440

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-17609/1	042622a_CAL_3.d
Level 2	IC 810-17609/2	042622a_CAL_4.d
Level 3	IC 810-17609/3	042622a_CAL_5.d
Level 4	IC 810-17609/4	042622a_CAL_6.d
Level 5	IC 810-17609/5	042622a_CAL_7.d
Level 6	ICRT 810-17609/6	042622a_CAL_8.d
Level 7	IC 810-17609/7	042622a_CAL_9.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorite	Lin	23373879	410618 +++++	812223	4343387	11039058	0.000000 0.500	0.0100 +++++	0.0200	0.100	0.250
Bromide	Lin	22402016	548366 44737240	980473	4269609	10746854	0.000000 0.500	0.0100 1.00	0.0200	0.100	0.250
Chlorate	Lin	20367551	414832 40650421	1011308	3856371	9784977	0.000000 0.500	0.0100 1.00	0.0200	0.100	0.250

Curve Type Legend
Lin = Linear

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1 Analy Batch No.: 17609

SDG No.:

Instrument ID: IC-FT GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2022 14:06 Calibration End Date: 04/26/2022 17:09 Calibration ID: 3440

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-17609/1	042622a_CAL_3.d
Level 2	IC 810-17609/2	042622a_CAL_4.d
Level 3	IC 810-17609/3	042622a_CAL_5.d
Level 4	IC 810-17609/4	042622a_CAL_6.d
Level 5	IC 810-17609/5	042622a_CAL_7.d
Level 6	ICRT 810-17609/6	042622a_CAL_8.d
Level 7	IC 810-17609/7	042622a_CAL_9.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Chlorite	+++++	25.0 *	5.6	-3.1	-3.8	1.0	50	10	10	10	10	10
Bromide	0.1	36.2 *	16.4 *	-3.2	-3.4	0.4	50 10	10	10	10	10	10
Chlorate	0.1	13.9 *	30.3 *	-3.9	-3.2	0.4	50 10	10	10	10	10	10

Calibration / Chlorite

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

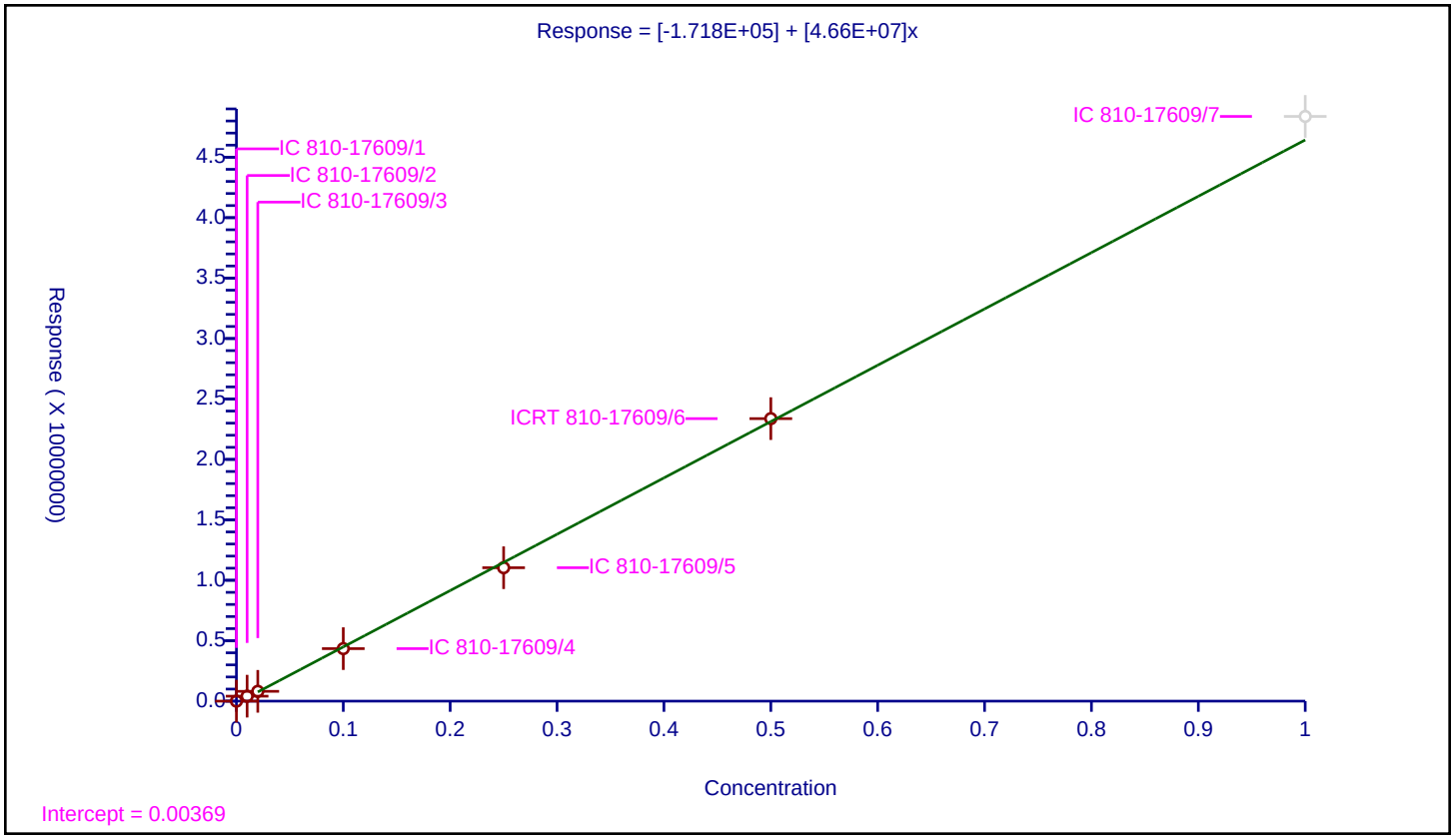
Curve Coefficients

Intercept:	-1.718E+05
Slope:	4.66E+07

Error Coefficients

Standard Error:	283000
Relative Standard Error:	15.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 810-17609/1	0.0	0.0			NaN	Y
2	IC 810-17609/2	0.01	410618.0			41061800.0	Y
3	IC 810-17609/3	0.02	812223.0			40611150.0	Y
4	IC 810-17609/4	0.1	4343387.0			43433870.0	Y
5	IC 810-17609/5	0.25	11039058.0			44156232.0	Y
6	ICRT 810-17609/6	0.5	23373879.0			46747758.0	Y
7	IC 810-17609/7	1.0	48375869.0			48375869.0	N



Calibration / Bromide

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

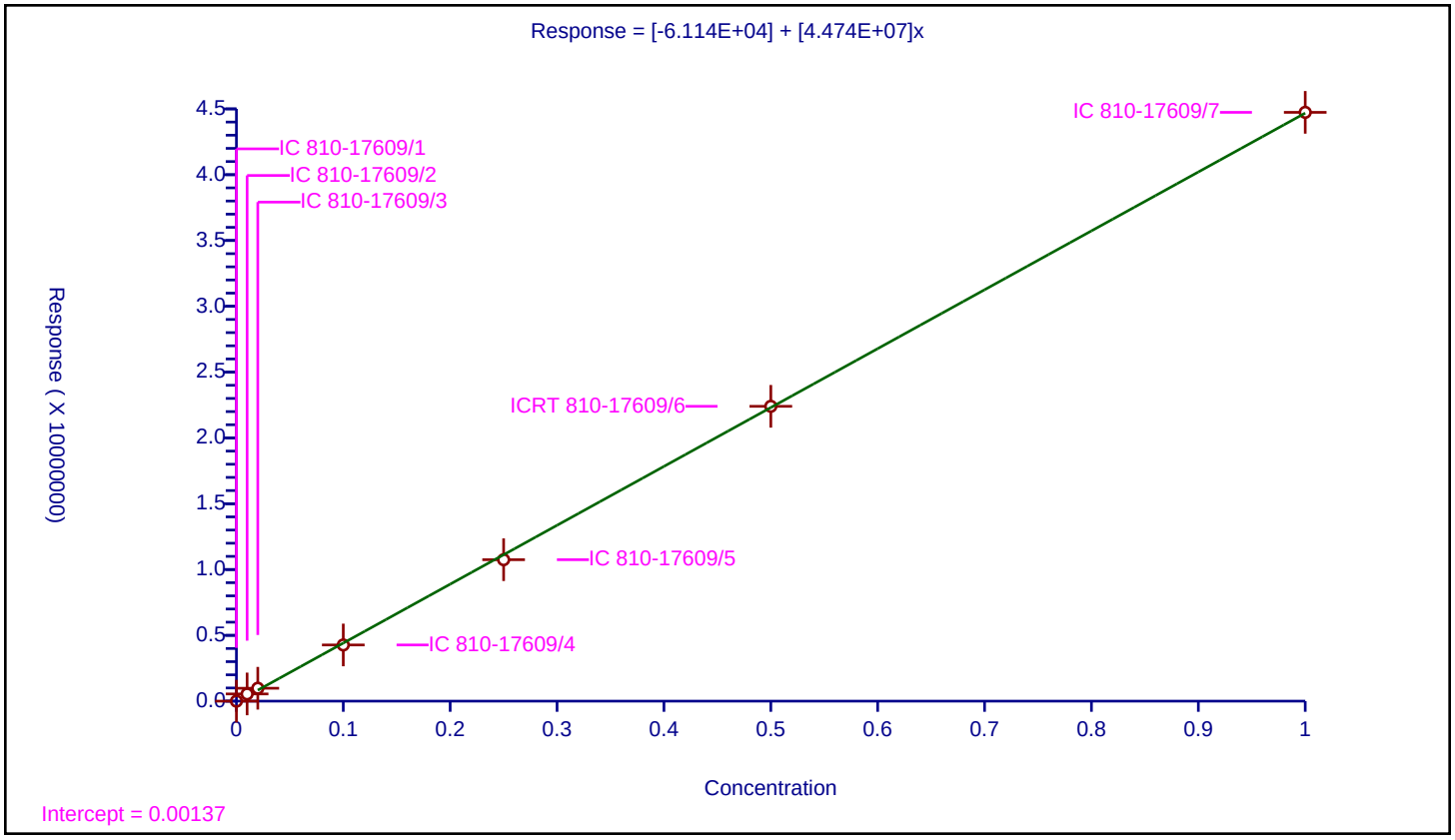
Curve Coefficients

Intercept:	-6.114E+04
Slope:	4.474E+07

Error Coefficients

Standard Error:	213000
Relative Standard Error:	20.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 810-17609/1	0.0	0.0			NaN	Y
2	IC 810-17609/2	0.01	548366.0			54836600.0	Y
3	IC 810-17609/3	0.02	980473.0			49023650.0	Y
4	IC 810-17609/4	0.1	4269609.0			42696090.0	Y
5	IC 810-17609/5	0.25	10746854.0			42987416.0	Y
6	ICRT 810-17609/6	0.5	22402016.0			44804032.0	Y
7	IC 810-17609/7	1.0	44737240.0			44737240.0	Y



Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

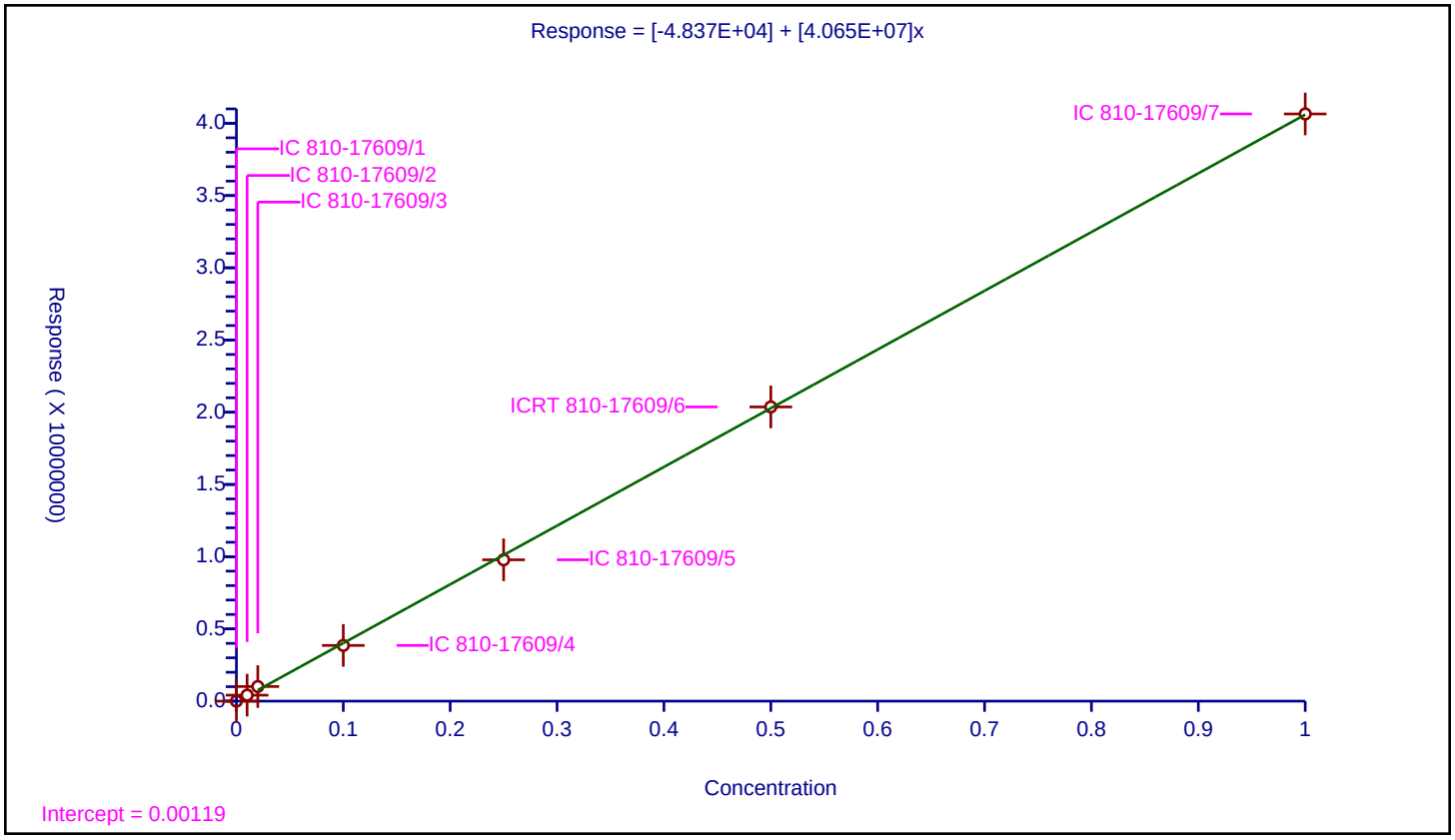
Curve Coefficients

Intercept:	-4.837E+04
Slope:	4.065E+07

Error Coefficients

Standard Error:	205000
Relative Standard Error:	16.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 810-17609/1	0.0	0.0			NaN	Y
2	IC 810-17609/2	0.01	414832.0			41483200.0	Y
3	IC 810-17609/3	0.02	1011308.0			50565400.0	Y
4	IC 810-17609/4	0.1	3856371.0			38563710.0	Y
5	IC 810-17609/5	0.25	9784977.0			39139908.0	Y
6	ICRT 810-17609/6	0.5	20367551.0			40735102.0	Y
7	IC 810-17609/7	1.0	40650421.0			40650421.0	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Lab Sample ID: CCV 810-17793/2 Calibration Date: 04/28/2022 12:46

Instrument ID: IC-FT Calib Start Date: 04/26/2022 14:06

GC Column: IonPac AS-19 ID: Calib End Date: 04/26/2022 17:09

Lab File ID: 042822a_9.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		45460120		248	250	99	90-110
Bromide	Lin		44527696		250	250	100	90-110
Chlorate	Lin		40487996		250	250	100	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Lab Sample ID: CCV 810-17793/2 Calibration Date: 04/28/2022 12:46

Instrument ID: IC-FT Calib Start Date: 04/26/2022 14:06

GC Column: IonPac AS-19 ID: Calib End Date: 04/26/2022 17:09

Lab File ID: 042822a_9.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.46	5.22	5.77
Bromide	10.47	10.03	11.08
Chlorate	11.28	10.81	11.94

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Lab Sample ID: CCV 810-17793/18 Calibration Date: 04/28/2022 20:55

Instrument ID: IC-FT Calib Start Date: 04/26/2022 14:06

GC Column: IonPac AS-19 ID: Calib End Date: 04/26/2022 17:09

Lab File ID: 042822a_25.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		45900676		250	250	100	90-110
Bromide	Lin		44188824		248	250	99	90-110
Chlorate	Lin		40340196		249	250	100	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Lab Sample ID: CCV 810-17793/18 Calibration Date: 04/28/2022 20:55

Instrument ID: IC-FT Calib Start Date: 04/26/2022 14:06

GC Column: IonPac AS-19 ID: Calib End Date: 04/26/2022 17:09

Lab File ID: 042822a_25.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.47	5.22	5.77
Bromide	10.48	10.03	11.08
Chlorate	11.29	10.81	11.94

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Lab Sample ID: CCV 810-17793/28 Calibration Date: 04/29/2022 02:00

Instrument ID: IC-FT Calib Start Date: 04/26/2022 14:06

GC Column: IonPac AS-19 ID: Calib End Date: 04/26/2022 17:09

Lab File ID: 042822a_35.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		46421292		253	250	101	90-110
Bromide	Lin		44151356		248	250	99	90-110
Chlorate	Lin		40051364		248	250	99	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Lab Sample ID: CCV 810-17793/28 Calibration Date: 04/29/2022 02:00

Instrument ID: IC-FT Calib Start Date: 04/26/2022 14:06

GC Column: IonPac AS-19 ID: Calib End Date: 04/26/2022 17:09

Lab File ID: 042822a_35.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.44	5.22	5.77
Bromide	10.45	10.03	11.08
Chlorate	11.25	10.81	11.94

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 810-17793/4

Matrix: Water Lab File ID: 042822a_11.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 04/28/2022 13:47

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<10		10
14998-27-7	Chlorite	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 810-17793/3

Matrix: Water Lab File ID: 042822a_10.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 04/28/2022 13:17

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<7.9		10
14998-27-7	Chlorite	<5.9		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 810-17793/19

Matrix: Water Lab File ID: 042822a_26.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: Date Analyzed: 04/28/2022 21:25

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<7.9		10
14998-27-7	Chlorite	<5.9		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 810-17793/29

Matrix: Water Lab File ID: 042822a_36.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 04/29/2022 02:30

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<7.9		10
14998-27-7	Chlorite	<5.9		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 810-17793/5

Matrix: Water Lab File ID: 042822a.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 04/28/2022 14:18

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	246		10
14998-27-7	Chlorite	254		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: Lab Sample ID: LLCS 810-17793/1

Matrix: Water Lab File ID: 042822a_8.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 04/28/2022 12:16

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	13.5		10
14998-27-7	Chlorite	13.4		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: 1134804/54MW13 MS Lab Sample ID: 810-22631-1 MS

Matrix: Water Lab File ID: 042822a_28.d

Analysis Method: 300.0 Date Collected: 04/25/2022 12:10

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 04/28/2022 22:26

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	243		10
14998-27-7	Chlorite	268		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Client Sample ID: 1134804/54MW13 MSD Lab Sample ID: 810-22631-1 MSD

Matrix: Water Lab File ID: 042822a_29.d

Analysis Method: 300.0 Date Collected: 04/25/2022 12:10

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 04/28/2022 22:57

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 17793 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	242		10
14998-27-7	Chlorite	268		10

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Instrument ID: IC-FT Start Date: 04/26/2022 14:06

Analysis Batch Number: 17609 End Date: 04/27/2022 10:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 810-17609/1		04/26/2022 14:06	1	042622a_CAL_3.d	IonPac AS-19
IC 810-17609/2		04/26/2022 14:36	1	042622a_CAL_4.d	IonPac AS-19
IC 810-17609/3		04/26/2022 15:07	1	042622a_CAL_5.d	IonPac AS-19
IC 810-17609/4		04/26/2022 15:37	1	042622a_CAL_6.d	IonPac AS-19
IC 810-17609/5		04/26/2022 16:08	1	042622a_CAL_7.d	IonPac AS-19
ICRT 810-17609/6		04/26/2022 16:38	1	042622a_CAL_8.d	IonPac AS-19
IC 810-17609/7		04/26/2022 17:09	1	042622a_CAL_9.d	IonPac AS-19
ICV 810-17609/8		04/26/2022 17:39	1		IonPac AS-19
ZZZZZ		04/26/2022 18:10	1		IonPac AS-19
CCV 810-17609/10		04/26/2022 18:40	1		IonPac AS-19
CCB 810-17609/11		04/26/2022 19:11	1		IonPac AS-19
ZZZZZ		04/26/2022 19:42	1		IonPac AS-19
ZZZZZ		04/26/2022 20:12	1		IonPac AS-19
ZZZZZ		04/26/2022 20:43	10000		IonPac AS-19
ZZZZZ		04/26/2022 21:13	1		IonPac AS-19
ZZZZZ		04/26/2022 21:44	1		IonPac AS-19
ZZZZZ		04/26/2022 22:14	1		IonPac AS-19
ZZZZZ		04/26/2022 22:45	1		IonPac AS-19
ZZZZZ		04/26/2022 23:15	1		IonPac AS-19
ZZZZZ		04/26/2022 23:46	1		IonPac AS-19
ZZZZZ		04/27/2022 00:16	1		IonPac AS-19
ZZZZZ		04/27/2022 00:47	1		IonPac AS-19
ZZZZZ		04/27/2022 01:17	1		IonPac AS-19
ZZZZZ		04/27/2022 01:48	1		IonPac AS-19
ZZZZZ		04/27/2022 02:18	1		IonPac AS-19
CCV 810-17609/26		04/27/2022 02:49	1		IonPac AS-19
CCB 810-17609/27		04/27/2022 03:19	1		IonPac AS-19
ZZZZZ		04/27/2022 03:50	1		IonPac AS-19
ZZZZZ		04/27/2022 04:20	1		IonPac AS-19
ZZZZZ		04/27/2022 04:51	1		IonPac AS-19
ZZZZZ		04/27/2022 05:22	1		IonPac AS-19
ZZZZZ		04/27/2022 05:52	1		IonPac AS-19
ZZZZZ		04/27/2022 06:23	1		IonPac AS-19
ZZZZZ		04/27/2022 06:53	1		IonPac AS-19
ZZZZZ		04/27/2022 07:24	1		IonPac AS-19
ZZZZZ		04/27/2022 07:55	1		IonPac AS-19
ZZZZZ		04/27/2022 08:26	1		IonPac AS-19
ZZZZZ		04/27/2022 08:56	1		IonPac AS-19
ZZZZZ		04/27/2022 09:27	1		IonPac AS-19
CCV 810-17609/40		04/27/2022 09:58	1		IonPac AS-19
CCB 810-17609/41		04/27/2022 10:28	1		IonPac AS-19

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Instrument ID: IC-FT Start Date: 04/28/2022 12:16

Analysis Batch Number: 17793 End Date: 04/29/2022 02:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
LLCS 810-17793/1		04/28/2022 12:16	1	042822a_8.d	IonPac AS-19
CCV 810-17793/2		04/28/2022 12:46	1	042822a_9.d	IonPac AS-19
CCB 810-17793/3		04/28/2022 13:17	1	042822a_10.d	IonPac AS-19
MB 810-17793/4		04/28/2022 13:47	1	042822a_11.d	IonPac AS-19
LCS 810-17793/5		04/28/2022 14:18	1	042822a.d	IonPac AS-19
ZZZZZ		04/28/2022 14:49	1		IonPac AS-19
ZZZZZ		04/28/2022 15:19	1		IonPac AS-19
ZZZZZ		04/28/2022 15:50	1		IonPac AS-19
ZZZZZ		04/28/2022 16:20	1		IonPac AS-19
ZZZZZ		04/28/2022 16:51	1		IonPac AS-19
ZZZZZ		04/28/2022 17:21	1		IonPac AS-19
ZZZZZ		04/28/2022 17:52	1		IonPac AS-19
ZZZZZ		04/28/2022 18:22	1		IonPac AS-19
ZZZZZ		04/28/2022 18:53	1		IonPac AS-19
ZZZZZ		04/28/2022 19:23	1		IonPac AS-19
ZZZZZ		04/28/2022 19:54	1		IonPac AS-19
ZZZZZ		04/28/2022 20:24	1		IonPac AS-19
CCV 810-17793/18		04/28/2022 20:55	1	042822a_25.d	IonPac AS-19
CCB 810-17793/19		04/28/2022 21:25	1	042822a_26.d	IonPac AS-19
810-22631-1	1134804/54MW13	04/28/2022 21:56	1	042822a_27.d	IonPac AS-19
810-22631-1 MS	1134804/54MW13 MS	04/28/2022 22:26	1	042822a_28.d	IonPac AS-19
810-22631-1 MSD	1134804/54MW13 MSD	04/28/2022 22:57	1	042822a_29.d	IonPac AS-19
810-22631-2	1134805/54MW10	04/28/2022 23:27	1	042822a_30.d	IonPac AS-19
ZZZZZ		04/28/2022 23:58	1		IonPac AS-19
ZZZZZ		04/29/2022 00:28	1		IonPac AS-19
ZZZZZ		04/29/2022 00:59	1		IonPac AS-19
ZZZZZ		04/29/2022 01:29	1		IonPac AS-19
CCV 810-17793/28		04/29/2022 02:00	1	042822a_35.d	IonPac AS-19
CCB 810-17793/29		04/29/2022 02:30	1	042822a_36.d	IonPac AS-19

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22631-1

SDG No.:

Batch Number: 17793 Batch Start Date: 04/28/22 12:16 Batch Analyst: Lovick, James

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC-300B CalSS 00004					
LLCS 810-17793/1		300.0		40 uL					
CCV 810-17793/2		300.0		1000 uL					
LCS 810-17793/5		300.0		100 uL					
CCV 810-17793/18		300.0		1000 uL					
810-22631-A-1 MS	1134804/54MW13	300.0	T	100 uL					
810-22631-A-1 MSD	1134804/54MW13	300.0	T	100 uL					
CCV 810-17793/28		300.0		1000 uL					

Batch Notes	
Filter ID	17046739
Eluent 1 ID	251424

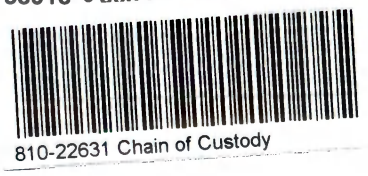
Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.c



Sub-Contract Laboratory Chain-of-Custody and Purchase Order

PURCHASE ORDER #: 169098 EEA-IN

The PO# must appear on all invoice and reports!

Upon Receipt of Samples, please verify that samples were received in acceptable condition then sign this form and fax to (608)356-2766 or email to the project manager. Sample temperature, upon receipt, must be recorded on this document unless thermal preservation is not a method requirement.

Ship to: **Eurofins Eaton Analytical - IN**
110 South Hill Street
South Bend, IN 46617

Return Invoice and Results to: **bszymanski@ctlaboratories.com**

CTLaboratories
Brett M Szymanski
1230 Lange Court
Baraboo WI 53913

Government UPS Shipping Acct ? Y (N)

Ship by: Speedee ☐ UPS Grnd ☐ UPS 2nd ☐ UPS NDA ☒

Date Due: Standard TAT ***RUSH TURNAROUND NEEDED? Y or (N) (Circle One)***

Project Name: RADFORD AAP SWMU 54 **Project State:** VA

Analytical/QC Criteria: NONE INDICATED STATE (DOD QSM) NELAP (Circle one) OTHER_____

Report results as EDD? N (Y) (Circle one and indicate type: ERIS + Excel) Data Deliverable Package LEVEL: IV

CTLabs ID#	Sample Date/Time		Matrix	Sample Description	Analyses / Method		Cost
1134804	4/25/2022	12:10	GROUND WATER	54MW13 (Designated MS/MSD)	CHLORATE/CHLORITE	300.1	
1134805	4/25/2022	14:55	GROUND WATER	54MW10	CHLORATE/CHLORITE	300.1	

Relinquished by: Brett Szymanski Date/Time: 04/27/2022 13:00

Received by: [signature] Date/Time: 4-28-22 0800 Receipt Temperature (C) 3.0°C

COMMENTS: PLEASE LOG USING THE SAMPLE DESCRIPTIONS. 54MW13 IS A DESIGNATED MS/MSD SAMPLE.

REPORT ALL SOLIDS ON A DRY WEIGHT BASIS UNLESS OTHERWISE INDICATED

Form #: FPM1-01
Effective Date: 02/15/14

Login Sample Receipt Checklist

Client: CT Laboratories

Job Number: 810-22631-1

Login Number: 22631
List Number: 1
Creator: Spurgeon, Sheri

List Source: Eurofins Eaton South Bend

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

eurofins | Environment Testing America

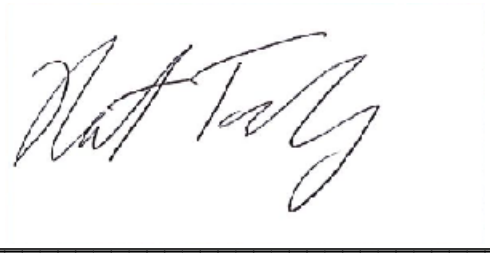
ANALYTICAL REPORT

Job Number: 810-22876-1

Job Description: 169156

For:
CT Laboratories
Environmental & Analytical Services
1230 Lange Court
Baraboo, WI 53913

Attention: Jodi Serstad



Approved for release.
Nathan Trowbridge
Manager of Project Management
5/11/2022 9:15 AM

Designee for
Traci Chlebowski, Project Manager
110 S Hill Street, South Bend, IN, 46617
(574)233-4777
Traci.Chlebowski@et.eurofinsus.com
05/11/2022

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Table of Contents

Cover Title Page 1

Data Summaries 4

Definitions 4

Case Narrative 5

Detection Summary 6

Client Sample Results 7

Action Limits 8

Default Detection Limits 9

QC Sample Results 10

QC Association 11

Chronicle 12

Certification Summary 13

Method Summary 14

Sample Summary 15

Manual Integration Summary 16

Reagent Traceability 17

Organic Sample Data 18

HPLC/IC 18

Method 300.0 18

Method 300.0 QC Summary 19

Method 300.0 Sample Data 24

Standards Data 27

Method 300.0 ICAL Data 27

Method 300.0 CCAL Data 34

Raw QC Data 42

Method 300.0 Blank Data 42

Table of Contents

Method 300.0 LCS/LCSD Data 46
Method 300.0 MS/MSD Data 48
Method 300.0 Run Logs 50
Method 300.0 Prep Data 51
Shipping and Receiving Documents 52
Client Chain of Custody 53
Sample Receipt Checklist 55

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
810-22876-1

Comments
No additional comments.

Receipt
The samples were received on 4/29/2022 8:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.0º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Client Sample ID: 1136209/54MW12 — Lab Sample ID: 810-22876-1

No Detections.

Client Sample ID: 1136210/54TW12 — Lab Sample ID: 810-22876-2

No Detections.

Client Sample ID: 1136211/54MW1 — Lab Sample ID: 810-22876-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client: CT Laboratories
Job ID: 810-22876-1
Project/Site: 169156

Client Sample ID: 1136209/54MW12
Lab Sample ID: 810-22876-1
Date Collected: 04/26/22 14:59
Matrix: Water
Date Received: 04/29/22 08:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			05/03/22 09:19	1
Chlorite	<10		10		ug/L			05/03/22 09:19	1

Client Sample ID: 1136210/54TW12
Lab Sample ID: 810-22876-2
Date Collected: 04/26/22 14:59
Matrix: Water
Date Received: 04/29/22 08:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			05/03/22 04:20	1
Chlorite	<10		10		ug/L			05/03/22 04:20	1

Client Sample ID: 1136211/54MW1
Lab Sample ID: 810-22876-3
Date Collected: 04/26/22 16:44
Matrix: Water
Date Received: 04/29/22 08:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			05/03/22 05:40	1
Chlorite	<10		10		ug/L			05/03/22 05:40	1

Action Limit Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Client Sample ID: 1136209/54MW12 — Lab Sample ID: 810-22876-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPA MCL P Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Client Sample ID: 1136210/54TW12 — Lab Sample ID: 810-22876-2

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPA MCL P Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Client Sample ID: 1136211/54MW1 — Lab Sample ID: 810-22876-3

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPA MCL P Limit	RL	Method	Prep Type
Chlorite	<10		ug/L	1000	10	300.0	Total/NA

Default Detection Limits

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Method: 300.0 - Anions, Ion Chromatography

Analyte	RL		Units
Chlorate	10	7.9	ug/L
Chlorite	10	5.9	ug/L

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 810-18080/12
Matrix: Water
Analysis Batch: 18080

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			05/02/22 21:42	1
Chlorite	<10		10		ug/L			05/02/22 21:42	1

Lab Sample ID: LCS 810-18080/13
Matrix: Water
Analysis Batch: 18080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			250	248		ug/L		99	90 - 110		
Chlorite			250	243		ug/L		97	90 - 110		

Lab Sample ID: LLCS 810-18080/9
Matrix: Water
Analysis Batch: 18080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			10.0	10.7		ug/L		107			
Chlorite			10.0	13.3		ug/L		133			

Lab Sample ID: 810-22876-2 MS
Matrix: Water
Analysis Batch: 18080

Client Sample ID: 1136210/54TW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate	<10		250	230		ug/L		92	90 - 110		
Chlorate	<10		250	230		ug/L		92	90 - 110		
Chlorite	<10		250	271		ug/L		108	90 - 110		
Chlorite	<10		250	271		ug/L		108	90 - 110		

Lab Sample ID: 810-22876-2 MSD
Matrix: Water
Analysis Batch: 18080

Client Sample ID: 1136210/54TW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorate	<10		250	241		ug/L		97	90 - 110	5	20
Chlorate	<10		250	241		ug/L		97	90 - 110	5	20
Chlorite	<10		250	274		ug/L		110	90 - 110	1	20
Chlorite	<10		250	274		ug/L		110	90 - 110	1	20

QC Association Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

HPLC/IC

Analysis Batch: 18080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-22876-1	1136209/54MW12	Total/NA	Water	300.0	
810-22876-2	1136210/54TW12	Total/NA	Water	300.0	
810-22876-3	1136211/54MW1	Total/NA	Water	300.0	
MB 810-18080/12	Method Blank	Total/NA	Water	300.0	
LCS 810-18080/13	Lab Control Sample	Total/NA	Water	300.0	
LLCS 810-18080/9	Lab Control Sample	Total/NA	Water	300.0	
810-22876-2 MS	1136210/54TW12	Total/NA	Water	300.0	
810-22876-2 MSD	1136210/54TW12	Total/NA	Water	300.0	

Lab Chronicle

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Client Sample ID: 1136209/54MW12
Lab Sample ID: 810-22876-1
Date Collected: 04/26/22 14:59
Matrix: Water
Date Received: 04/29/22 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	18080	05/03/22 09:19	JL	EA SB

Client Sample ID: 1136210/54TW12
Lab Sample ID: 810-22876-2
Date Collected: 04/26/22 14:59
Matrix: Water
Date Received: 04/29/22 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	18080	05/03/22 04:20	JL	EA SB

Client Sample ID: 1136211/54MW1
Lab Sample ID: 810-22876-3
Date Collected: 04/26/22 16:44
Matrix: Water
Date Received: 04/29/22 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	18080	05/03/22 05:40	JL	EA SB

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Laboratory: Eurofins Eaton South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999766900	08-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chlorate

Method Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-22876-1	1136209/54MW12	Water	04/26/22 14:59	04/29/22 08:15
810-22876-2	1136210/54TW12	Water	04/26/22 14:59	04/29/22 08:15
810-22876-3	1136211/54MW1	Water	04/26/22 16:44	04/29/22 08:15

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Instrument ID: IC-GP Analysis Batch Number: 18080

Lab Sample ID: IC 810-18080/2 Client Sample ID:

Date Analyzed: 05/02/22 17:18 Lab File ID: 050222a_2.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	10.54	Incomplete Integration	lovickj	05/05/22 10:06
Chlorate	11.42	Incomplete Integration	lovickj	05/05/22 10:06

Lab Sample ID: 810-22876-3 Client Sample ID: 1136211/54MW1

Date Analyzed: 05/03/22 05:40 Lab File ID: 050222a_30.d GC Column: IonPac AS-19 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite		Invalid Compound ID	lovickj	05/03/22 11:46

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC-300B CalSS_00004	07/21/22	03/03/22	MilliQ Water, Lot 111021	100 mL	IC-BR-CalSt_00002	2500 uL	Bromide	25 mg/L
					IC-CLO2-CalSt_00002	2500 uL	Chlorite	25 mg/L
					IC-CLO3-CalSt_00002	2500 uL	Chlorate	25 mg/L
.IC-BR-CalSt_00002	07/30/22	Inorganic Venture, Lot S2-BR704965			(Purchased Reagent)		Bromide	1000 ug/mL
.IC-CLO2-CalSt_00002	07/30/22	Inorganic Venture, Lot P2-CLOX687554			(Purchased Reagent)		Chlorite	1000 ug/mL
.IC-CLO3-CalSt_00002	07/30/22	Inorganic Venture, Lot R2-CLOX689874			(Purchased Reagent)		Chlorate	1000 ug/mL
IC-300B QCSS_00006	07/21/22	03/03/22	MilliQ Water, Lot 111021	100 mL	IC-CL03-QCST_00001	2.5 mL	Chlorate	25 mg/L
					IC-CLO2-QCST_00001	2.5 mL	Chlorite	25 mg/L
.IC-CL03-QCST_00001	05/31/23	Agilent, Lot 0006459654			(Purchased Reagent)		Chlorate	1000 ug/mL
.IC-CLO2-QCST_00001	05/31/23	Sigma Aldrich, Lot LRAC6304			(Purchased Reagent)		Chlorite	1000 ug/mL

Method 300.0

Anions (IC) by Method 300.0

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 050222a_13.d

Lab ID: LCS 810-18080/13 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chlorate	250	248	99	90-110	
Chlorite	250	243	97	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 050222a_9.d

Lab ID: LLCS 810-18080/9 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LLCS CONCENTRATION (ug/L)	LLCS % REC	QC LIMITS REC	#
Chlorate	10.0	10.7	107		
Chlorite	10.0	13.3	133		

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 050222a_28.d

Lab ID: 810-22876-2 MS Client ID: 1136210/54TW12 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chlorate	250	<10	230	92	90-110	
Chlorate	250	<10	230	92	90-110	
Chlorite	250	<10	271	108	90-110	
Chlorite	250	<10	271	108	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 050222a_29.d

Lab ID: 810-22876-2 MSD Client ID: 1136210/54TW12 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chlorate	250	241	97	5	20	90-110	
Chlorate	250	241	97	5	20	90-110	
Chlorite	250	274	110	1	20	90-110	
Chlorite	250	274	110	1	20	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Lab File ID: 050222a_12.d Lab Sample ID: MB 810-18080/12

Matrix: Water Date Extracted:

Instrument ID: IC-GP Date Analyzed: 05/02/2022 21:42

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LLCS 810-18080/9	050222a_9.d	05/02/2022 20:22
	LCS 810-18080/13	050222a_13.d	05/02/2022 22:09
1136210/54TW12	810-22876-2	050222a_27.d	05/03/2022 04:20
1136210/54TW12 MS	810-22876-2 MS	050222a_28.d	05/03/2022 04:46
1136210/54TW12 MSD	810-22876-2 MSD	050222a_29.d	05/03/2022 05:13
1136211/54MW1	810-22876-3	050222a_30.d	05/03/2022 05:40
1136209/54MW12	810-22876-1	050222a_38.d	05/03/2022 09:19

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: 1136209/54MW12 Lab Sample ID: 810-22876-1

Matrix: Water Lab File ID: 050222a_38.d

Analysis Method: 300.0 Date Collected: 04/26/2022 14:59

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/03/2022 09:19

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<10		10
14998-27-7	Chlorite	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: 1136210/54TW12 Lab Sample ID: 810-22876-2

Matrix: Water Lab File ID: 050222a_27.d

Analysis Method: 300.0 Date Collected: 04/26/2022 14:59

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/03/2022 04:20

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<10		10
14998-27-7	Chlorite	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: 1136211/54MW1 Lab Sample ID: 810-22876-3

Matrix: Water Lab File ID: 050222a_30.d

Analysis Method: 300.0 Date Collected: 04/26/2022 16:44

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/03/2022 05:40

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<10		10
14998-27-7	Chlorite	<10		10

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1 Analy Batch No.: 18080

SDG No.:

Instrument ID: IC-GP GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2022 16:49 Calibration End Date: 05/02/2022 19:29 Calibration ID: 3487

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-18080/1	050222a_1.d
Level 2	IC 810-18080/2	050222a_2.d
Level 3	IC 810-18080/3	050222a_3.d
Level 4	IC 810-18080/4	050222a_4.d
Level 5	IC 810-18080/5	050222a_5.d
Level 6	ICRT 810-18080/6	050222a_6.d
Level 7	IC 810-18080/7	050222a_7.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Chlorite		5.333	5.343	5.333	5.360	5.367	5.367				0.000 - 0.000	5.351
Bromide		10.537	10.533	10.537	10.557	10.560	10.567				0.000 - 0.000	10.549
Chlorate		11.420	11.393	11.393	11.423	11.423	11.433				0.000 - 0.000	11.414

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1 Analy Batch No.: 18080

SDG No.:

Instrument ID: IC-GP GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2022 16:49 Calibration End Date: 05/02/2022 19:29 Calibration ID: 3487

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-18080/1	050222a_1.d
Level 2	IC 810-18080/2	050222a_2.d
Level 3	IC 810-18080/3	050222a_3.d
Level 4	IC 810-18080/4	050222a_4.d
Level 5	IC 810-18080/5	050222a_5.d
Level 6	ICRT 810-18080/6	050222a_6.d
Level 7	IC 810-18080/7	050222a_7.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Chlorite	31822852	26083500 33121036	26648250 33773617	31777610	Lin	-183527.77	33801118.8							1.0000		0.9950
Bromide	32253560	32095600 32970146	41125950 33553865	33412930	Lin	-40062.844	33440178.7							1.0000		0.9950
Chlorate	30434224	46214100 29987412	38608000 30914448	30602700	Lin	14320.0741	30697362.0							1.0000		0.9950

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1 Analy Batch No.: 18080

SDG No.:

Instrument ID: IC-GP GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2022 16:49 Calibration End Date: 05/02/2022 19:29 Calibration ID: 3487

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-18080/1	050222a_1.d
Level 2	IC 810-18080/2	050222a_2.d
Level 3	IC 810-18080/3	050222a_3.d
Level 4	IC 810-18080/4	050222a_4.d
Level 5	IC 810-18080/5	050222a_5.d
Level 6	ICRT 810-18080/6	050222a_6.d
Level 7	IC 810-18080/7	050222a_7.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorite	Lin	16560518	260835 33773617	532965	3177761	7955713	0.000000 0.500	0.0100 1.00	0.0200	0.100	0.250
Bromide	Lin	16485073	320956 33553865	822519	3341293	8063390	0.000000 0.500	0.0100 1.00	0.0200	0.100	0.250
Chlorate	Lin	14993706	462141 30914448	772160	3060270	7608556	0.000000 0.500	0.0100 1.00	0.0200	0.100	0.250

Curve Type Legend
Lin = Linear

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1 Analy Batch No.: 18080

SDG No.:

Instrument ID: IC-GP GC Column: IonPac AS-1 ID: Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2022 16:49 Calibration End Date: 05/02/2022 19:29 Calibration ID: 3487

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 810-18080/1	050222a_1.d
Level 2	IC 810-18080/2	050222a_2.d
Level 3	IC 810-18080/3	050222a_3.d
Level 4	IC 810-18080/4	050222a_4.d
Level 5	IC 810-18080/5	050222a_5.d
Level 6	ICRT 810-18080/6	050222a_6.d
Level 7	IC 810-18080/7	050222a_7.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Chlorite	0.5	31.5 *	6.0	-0.6	-3.7	-0.9	50 10	10	10	10	10	10
Bromide	0.5	8.0	29.0 *	1.1	-3.1	-1.2	50 10	10	10	10	10	10
Chlorate	0.7	45.9 *	23.4 *	-0.8	-1.0	-2.4	50 10	10	10	10	10	10

Calibration / Chlorite

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

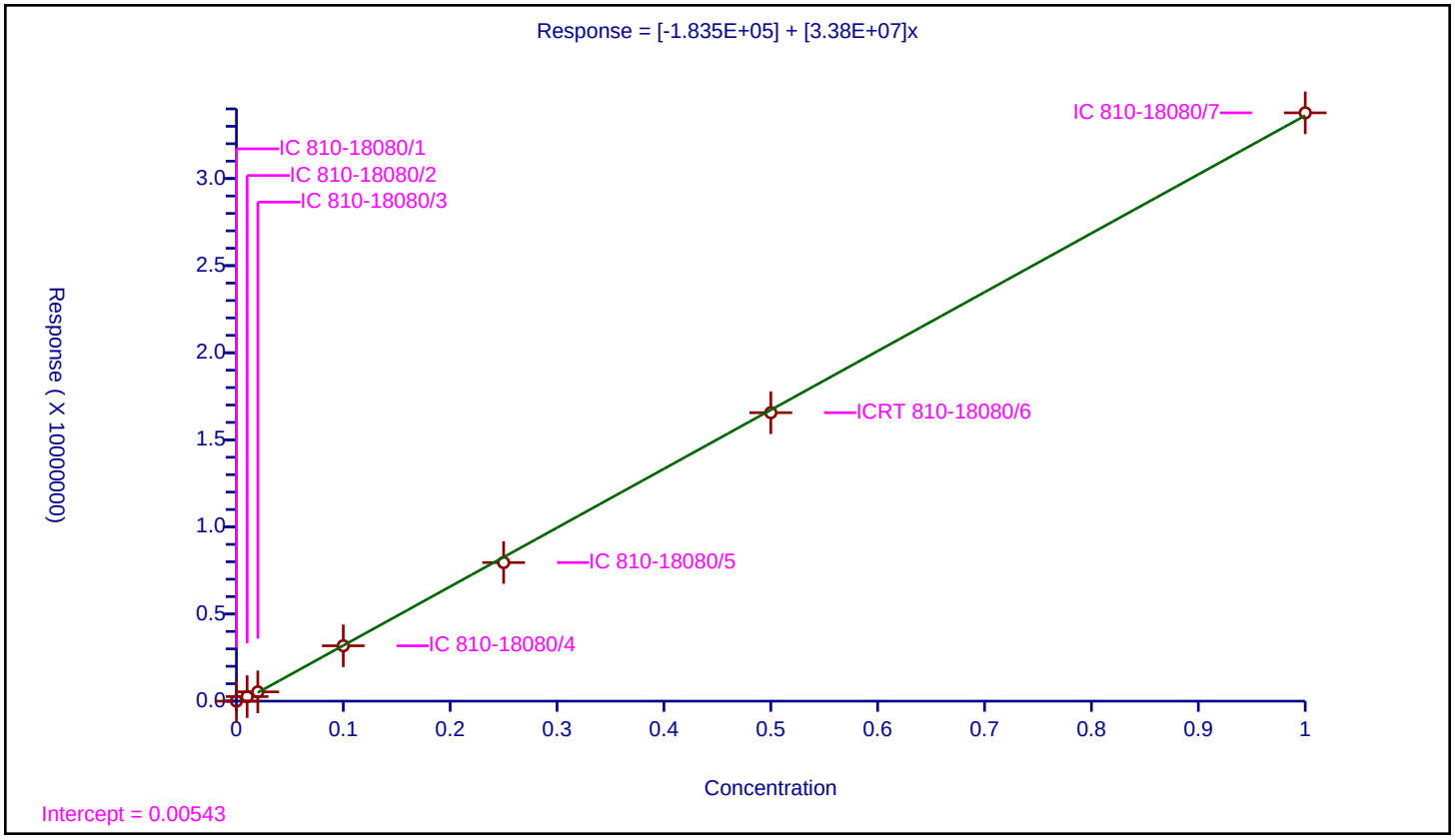
Curve Coefficients

Intercept:	-1.835E+05
Slope:	3.38E+07

Error Coefficients

Standard Error:	196000
Relative Standard Error:	16.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 810-18080/1	0.0	0.0			NaN	Y
2	IC 810-18080/2	0.01	260835.0			26083500.0	Y
3	IC 810-18080/3	0.02	532965.0			26648250.0	Y
4	IC 810-18080/4	0.1	3177761.0			31777610.0	Y
5	IC 810-18080/5	0.25	7955713.0			31822852.0	Y
6	ICRT 810-18080/6	0.5	16560518.0			33121036.0	Y
7	IC 810-18080/7	1.0	33773617.0			33773617.0	Y



Calibration / Bromide

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

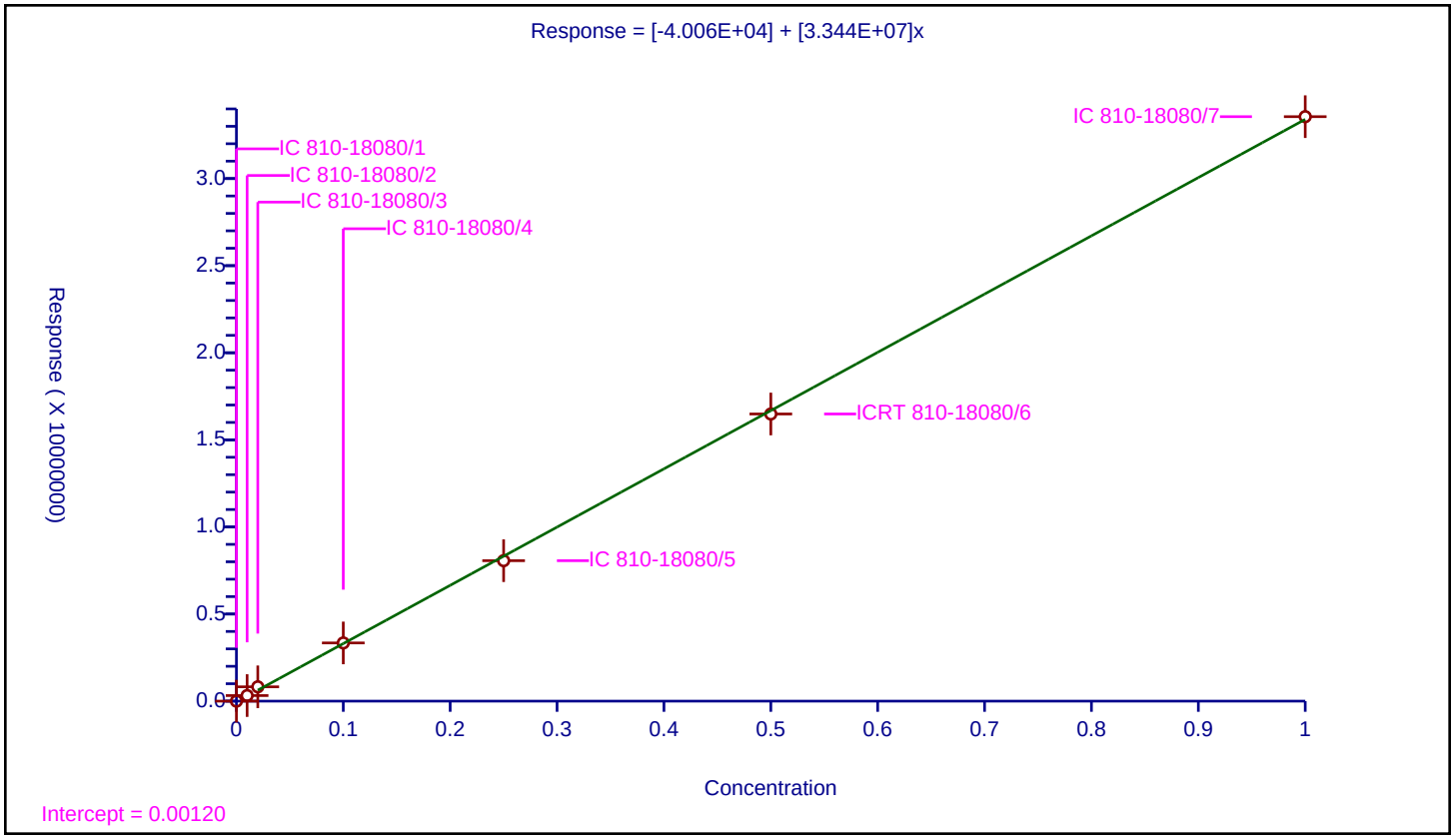
Curve Coefficients

Intercept:	-4.006E+04
Slope:	3.344E+07

Error Coefficients

Standard Error:	184000
Relative Standard Error:	15.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 810-18080/1	0.0	0.0			NaN	Y
2	IC 810-18080/2	0.01	320956.0			32095600.0	Y
3	IC 810-18080/3	0.02	822519.0			41125950.0	Y
4	IC 810-18080/4	0.1	3341293.0			33412930.0	Y
5	IC 810-18080/5	0.25	8063390.0			32253560.0	Y
6	ICRT 810-18080/6	0.5	16485073.0			32970146.0	Y
7	IC 810-18080/7	1.0	33553865.0			33553865.0	Y



Calibration / Chlorate

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

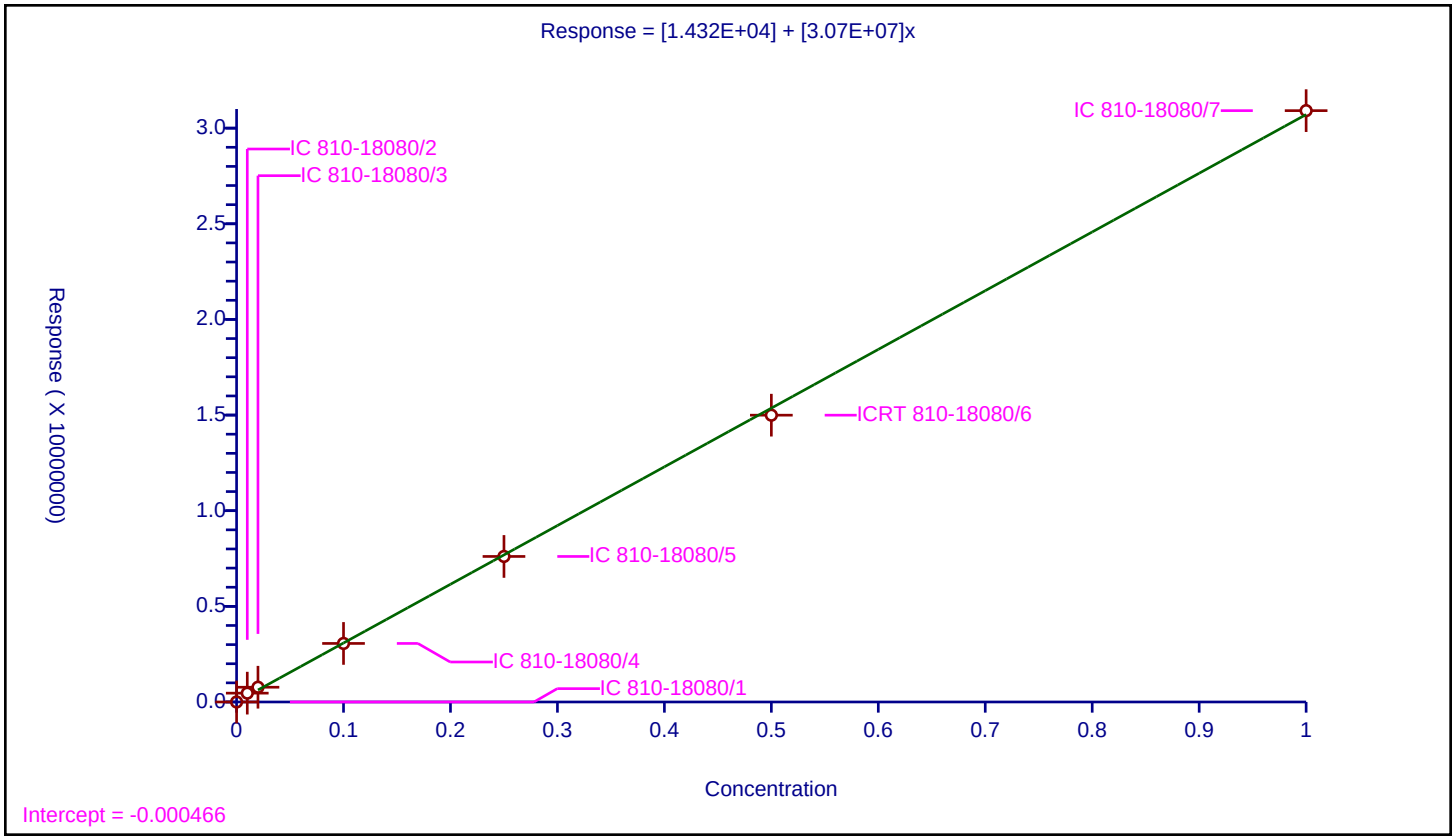
Curve Coefficients

Intercept:	1.432E+04
Slope:	3.07E+07

Error Coefficients

Standard Error:	212000
Relative Standard Error:	25.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 810-18080/1	0.0	0.0			NaN	Y
2	IC 810-18080/2	0.01	462141.0			46214100.0	Y
3	IC 810-18080/3	0.02	772160.0			38608000.0	Y
4	IC 810-18080/4	0.1	3060270.0			30602700.0	Y
5	IC 810-18080/5	0.25	7608556.0			30434224.0	Y
6	ICRT 810-18080/6	0.5	14993706.0			29987412.0	Y
7	IC 810-18080/7	1.0	30914448.0			30914448.0	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Lab Sample ID: ICV 810-18080/8 Calibration Date: 05/02/2022 19:56

Instrument ID: IC-GP Calib Start Date: 05/02/2022 16:49

GC Column: IonPac AS-19 ID: Calib End Date: 05/02/2022 19:29

Lab File ID: 050222a_8.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		33513440		253	250	101	90-110
Bromide	Lin		32444148		244	250	98	90-110
Chlorate	Lin		29459476		239	250	96	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Lab Sample ID: ICV 810-18080/8 Calibration Date: 05/02/2022 19:56

Instrument ID: IC-GP Calib Start Date: 05/02/2022 16:49

GC Column: IonPac AS-19 ID: Calib End Date: 05/02/2022 19:29

Lab File ID: 050222a_8.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.36	5.10	5.64
Bromide	10.56	10.03	11.09
Chlorate	11.43	10.85	12.00

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Lab Sample ID: CCV 810-18080/10 Calibration Date: 05/02/2022 20:49

Instrument ID: IC-GP Calib Start Date: 05/02/2022 16:49

GC Column: IonPac AS-19 ID: Calib End Date: 05/02/2022 19:29

Lab File ID: 050222a_10.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		32402356		245	250	98	90-110
Bromide	Lin		32616712		245	250	98	90-110
Chlorate	Lin		30037892		244	250	98	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Lab Sample ID: CCV 810-18080/10 Calibration Date: 05/02/2022 20:49

Instrument ID: IC-GP Calib Start Date: 05/02/2022 16:49

GC Column: IonPac AS-19 ID: Calib End Date: 05/02/2022 19:29

Lab File ID: 050222a_10.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.34	5.10	5.64
Bromide	10.53	10.03	11.09
Chlorate	11.40	10.85	12.00

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Lab Sample ID: CCV 810-18080/25 Calibration Date: 05/03/2022 03:27

Instrument ID: IC-GP Calib Start Date: 05/02/2022 16:49

GC Column: IonPac AS-19 ID: Calib End Date: 05/02/2022 19:29

Lab File ID: 050222a_25.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		32448568		245	250	98	90-110
Bromide	Lin		32726964		246	250	98	90-110
Chlorate	Lin		30462816		248	250	99	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Lab Sample ID: CCV 810-18080/25 Calibration Date: 05/03/2022 03:27

Instrument ID: IC-GP Calib Start Date: 05/02/2022 16:49

GC Column: IonPac AS-19 ID: Calib End Date: 05/02/2022 19:29

Lab File ID: 050222a_25.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.33	5.10	5.64
Bromide	10.52	10.03	11.09
Chlorate	11.38	10.85	12.00

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Lab Sample ID: CCV 810-18080/40 Calibration Date: 05/03/2022 10:11

Instrument ID: IC-GP Calib Start Date: 05/02/2022 16:49

GC Column: IonPac AS-19 ID: Calib End Date: 05/02/2022 19:29

Lab File ID: 050222a_40.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Chlorite	Lin		32473040		246	250	98	90-110
Bromide	Lin		32857676		247	250	99	90-110
Chlorate	Lin		30124364		245	250	98	90-110

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Lab Sample ID: CCV 810-18080/40 Calibration Date: 05/03/2022 10:11

Instrument ID: IC-GP Calib Start Date: 05/02/2022 16:49

GC Column: IonPac AS-19 ID: Calib End Date: 05/02/2022 19:29

Lab File ID: 050222a_40.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	5.36	5.10	5.64
Bromide	10.55	10.03	11.09
Chlorate	11.41	10.85	12.00

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 810-18080/12

Matrix: Water Lab File ID: 050222a_12.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/02/2022 21:42

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<10		10
14998-27-7	Chlorite	<10		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 810-18080/11

Matrix: Water Lab File ID: 050222a_11.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/02/2022 21:15

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<7.9		10
14998-27-7	Chlorite	<5.9		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 810-18080/26

Matrix: Water Lab File ID: 050222a_26.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/03/2022 03:53

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<7.9		10
14998-27-7	Chlorite	<5.9		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 810-18080/41

Matrix: Water Lab File ID: 050222a_41.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/03/2022 10:38

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	<7.9		10
14998-27-7	Chlorite	<5.9		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 810-18080/13

Matrix: Water Lab File ID: 050222a_13.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/02/2022 22:09

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	248		10
14998-27-7	Chlorite	243		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: Lab Sample ID: LLCS 810-18080/9

Matrix: Water Lab File ID: 050222a_9.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/02/2022 20:22

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	10.7		10
14998-27-7	Chlorite	13.3		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: 1136210/54TW12 MS Lab Sample ID: 810-22876-2 MS

Matrix: Water Lab File ID: 050222a_28.d

Analysis Method: 300.0 Date Collected: 04/26/2022 14:59

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/03/2022 04:46

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	230		10
14866-68-3	Chlorate	230		10
14998-27-7	Chlorite	271		10
14998-27-7	Chlorite	271		10

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Client Sample ID: 1136210/54TW12 MSD Lab Sample ID: 810-22876-2 MSD

Matrix: Water Lab File ID: 050222a_29.d

Analysis Method: 300.0 Date Collected: 04/26/2022 14:59

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 05/03/2022 05:13

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 1(uL) GC Column: IonPac AS-19 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 18080 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
14866-68-3	Chlorate	241		10
14866-68-3	Chlorate	241		10
14998-27-7	Chlorite	274		10
14998-27-7	Chlorite	274		10

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Instrument ID: IC-GP Start Date: 05/02/2022 16:49

Analysis Batch Number: 18080 End Date: 05/03/2022 10:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 810-18080/1		05/02/2022 16:49	1	050222a_1.d	IonPac AS-19
IC 810-18080/2		05/02/2022 17:18	1	050222a_2.d	IonPac AS-19
IC 810-18080/3		05/02/2022 17:44	1	050222a_3.d	IonPac AS-19
IC 810-18080/4		05/02/2022 18:10	1	050222a_4.d	IonPac AS-19
IC 810-18080/5		05/02/2022 18:36	1	050222a_5.d	IonPac AS-19
ICRT 810-18080/6		05/02/2022 19:03	1	050222a_6.d	IonPac AS-19
IC 810-18080/7		05/02/2022 19:29	1	050222a_7.d	IonPac AS-19
ICV 810-18080/8		05/02/2022 19:56	1	050222a_8.d	IonPac AS-19
LLCS 810-18080/9		05/02/2022 20:22	1	050222a_9.d	IonPac AS-19
CCV 810-18080/10		05/02/2022 20:49	1	050222a_10.d	IonPac AS-19
CCB 810-18080/11		05/02/2022 21:15	1	050222a_11.d	IonPac AS-19
MB 810-18080/12		05/02/2022 21:42	1	050222a_12.d	IonPac AS-19
LCS 810-18080/13		05/02/2022 22:09	1	050222a_13.d	IonPac AS-19
ZZZZZ		05/02/2022 22:35	1		IonPac AS-19
ZZZZZ		05/02/2022 23:02	1		IonPac AS-19
ZZZZZ		05/02/2022 23:28	1		IonPac AS-19
ZZZZZ		05/02/2022 23:55	1		IonPac AS-19
ZZZZZ		05/03/2022 00:21	1		IonPac AS-19
ZZZZZ		05/03/2022 00:48	1		IonPac AS-19
ZZZZZ		05/03/2022 01:14	1		IonPac AS-19
ZZZZZ		05/03/2022 01:41	1		IonPac AS-19
ZZZZZ		05/03/2022 02:07	1		IonPac AS-19
ZZZZZ		05/03/2022 02:34	1		IonPac AS-19
ZZZZZ		05/03/2022 03:00	1		IonPac AS-19
CCV 810-18080/25		05/03/2022 03:27	1	050222a_25.d	IonPac AS-19
CCB 810-18080/26		05/03/2022 03:53	1	050222a_26.d	IonPac AS-19
810-22876-2	1136210/54TW12	05/03/2022 04:20	1	050222a_27.d	IonPac AS-19
810-22876-2 MS	1136210/54TW12 MS	05/03/2022 04:46	1	050222a_28.d	IonPac AS-19
810-22876-2 MSD	1136210/54TW12 MSD	05/03/2022 05:13	1	050222a_29.d	IonPac AS-19
810-22876-3	1136211/54MW1	05/03/2022 05:40	1	050222a_30.d	IonPac AS-19
ZZZZZ		05/03/2022 06:06	5		IonPac AS-19
ZZZZZ		05/03/2022 06:33	1		IonPac AS-19
ZZZZZ		05/03/2022 06:59	1		IonPac AS-19
ZZZZZ		05/03/2022 07:26	1		IonPac AS-19
ZZZZZ		05/03/2022 07:52	1		IonPac AS-19
ZZZZZ		05/03/2022 08:19	1		IonPac AS-19
ZZZZZ		05/03/2022 08:45	1		IonPac AS-19
810-22876-1	1136209/54MW12	05/03/2022 09:19	1	050222a_38.d	IonPac AS-19
ZZZZZ		05/03/2022 09:45	1		IonPac AS-19
CCV 810-18080/40		05/03/2022 10:11	1	050222a_40.d	IonPac AS-19
CCB 810-18080/41		05/03/2022 10:38	1	050222a_41.d	IonPac AS-19

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Eaton South Bend Job No.: 810-22876-1

SDG No.:

Batch Number: 18080 Batch Start Date: 05/02/22 16:49 Batch Analyst: Lovick, James

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC-300B CalSS 00004	IC-300B QCSS 00006				
IC 810-18080/2		300.0		40 uL					
IC 810-18080/3		300.0		80 uL					
IC 810-18080/4		300.0		400 uL					
IC 810-18080/5		300.0		1000 uL					
ICRT 810-18080/6		300.0		1000 uL					
IC 810-18080/7		300.0		1000 uL					
ICV 810-18080/8		300.0			1000 uL				
LLCS 810-18080/9		300.0		40 uL					
CCV 810-18080/10		300.0		1000 uL					
LCS 810-18080/13		300.0		100 uL					
CCV 810-18080/25		300.0		1000 uL					
810-22876-A-2 MS	1136210/54TW12	300.0	T	100 uL					
810-22876-A-2 MSD	1136210/54TW12	300.0	T	100 uL					
CCV 810-18080/40		300.0		1000 uL					

Batch Notes	
Filter ID	17046739
Eluent 1 ID	251424

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

810-22876 Chain of Custody

RIES
ntal analyses

-Contract Laboratory Chain-of-Custody and Purchase Order

PURCHASE ORDER #: 169156 EEA-IN

The PO# must appear on all invoice and reports!

Upon Receipt of Samples, please verify that samples were received in acceptable condition then sign this form and fax to (608)356-2766 or email to the project manager. Sample temperature, upon receipt, must be recorded on this document unless thermal preservation is not a method requirement.

Ship to: **Eurofins Eaton Analytical - IN**
110 South Hill Street
South Bend, IN 46617

Return Invoice and Results to: **bszymanski@ctlaboratories.com**

CTLaboratories
Brett M Szymanski
1230 Lange Court
Baraboo WI 53913

Government UPS Shipping Acct ? Y (N)

Ship by: Speedee ☐ UPS Grnd ☐ UPS 2nd ☐ UPS NDA ☒

Date Due: Standard TAT ***RUSH TURNAROUND NEEDED?*** Y or (N) ***(Circle One)***

Project Name: RADFORD AAP SWMU 54 **Project State:** VA

Analytical/QC Criteria: NONE INDICATED STATE (DOD QSM) NELAP (Circle one) OTHER_____

Report results as EDD? N (Y) (Circle one and indicate type: ERIS + Excel) Data Deliverable Package LEVEL: IV

CTLabs ID#	Sample Date/Time	Matrix	Sample Description	Analyses / Method		Cost
1136209	4/26/2022 14:59	GROUND WATER	54MW12	CHLORATE/CHLORITE	300.1	
1136210	4/26/2022 14:59	GROUND WATER	54TW12	CHLORATE/CHLORITE	300.1	
1136211	4/26/2022 16:44	GROUND WATER	54MW1	CHLORATE/CHLORITE	300.1	

Relinquished by: Brett Szymanski Date/ Time: 04/28/2022 10:40

Received by: Penny Pehling Wright Date/ Time: 04/29/22 0815 Receipt Temperature (C) 0.0 Wet

COMMENTS: **PLEASE LOG USING THE SAMPLE DESCRIPTIONS**

REPORT ALL SOLIDS ON A DRY WEIGHT BASIS UNLESS OTHERWISE INDICATED

Form #: FPM1-01
Effective Date: 02/15/14

CT Laboratories Terms and Conditions

1. ORDERS AND RECEIPT OF SAMPLES (Sample Acceptance Policy) - not applicable

2. PAYMENT TERMS

2.1 Services performed by CTL will be in accordance with prices quoted and later confirmed in writing or as stated in the Price Schedule . Invoices may be submitted to Client upon completion of any sample delivery group. Payment in advance is required for all Clients except those whose credit has been established with CTL. For Clients with approved credit, payment terms are net 30 days from the date of invoice by CTL. All overdue payments are subject to an additional interest and service charge of one and one -half percent (1.5%) (or the maximum rate permissible by law, whichever is lesser) per month or portion thereof from the due date until the date of payment. All fees are charged or billed directly to the Client. The billing of a third party will not be accepted without a statement, signed by the third party that acknowledges and accepts payment responsibility. CTL may suspend work and withhold delivery of data under this order at any time in the event Client fails to make timely payment of its invoices . Client shall be responsible for all costs and expenses of collection including reasonable attorneyâ€™s fees. CTL reserves the right to refuse to proceed with work at any time based upon an unfavorable Client credit report.

3. CHANGE ORDERS, TERMINATION

3.1 Changes to the Scope of Work, price, or result delivery date may be initiated by CTL after Sample Acceptance due to any condition which conflicts with analytical , QA or other protocols warranted in these Terms and Conditions. CTL will not proceed with such changes until an agreement with the Client is reached on the amount of any cost, schedule change or technical change to the Scope of Work , and such agreement is documented in writing.

3.2 Changes to the Scope of Work , including but not limited to increasing or decreasing the work, changing test and analysis specification or acceleration in the performance of the work may be initiated by the Client after sample acceptance. Such a change will be documented in writing and may result in a change in cost and turnaround time commitment. CTL's acceptance of such changes is contingent upon technical feasibility and operational capacity.

3.3 Suspension or termination of all or any part of the work may be initiated by the Client. CTL will be compensated consistent with Section 2 of these Terms and Conditions. CTL will complete all work in progress and be paid in full for all work completed.

4. WARRANTIES AND LIABILITY

4.1 Where applicable, CTL will use analytical methodologies which are in substantial conformity with published test methods . CTL has implemented these methods in its Laboratory Quality Manuals and referenced Standard Operating Procedures and where the nature or composition of the sample requires it, CTL reserves the right to deviate from these methodologies as necessary or appropriate , based on the reasonable judgment of CTL, which deviations, if any, will be made on a basis consistent with recognized standards of the industry and/or CTL's Laboratory Quality Manuals. Client may request that CTL perform according to a mutually agreed Quality Assurance Project Plan (QAPP). In the event that samples arrive prior to agreement on a QAPP, CTL will proceed with analyses under its standard Quality Manuals then in effect , and CTL will not be responsible for any resampling or other charges if work must be repeated to comply with a subsequently finalized QAPP .

4.2 CTL shall start preparation and/or analysis within holding times provided that Sample Acceptance occurs within 48 hours of sampling or 1/2 of the holding time for the test, whichever is less. Where resolution of inconsistencies leading to Sample Acceptance does not occur within this period , CTL will use its best efforts to meet holding times and will proceed with the work provided that , in CTL's judgment, the chain-of-custody or definition of the Scope of Work provide sufficient guidance . Reanalysis of samples to comply with CTL's Quality Manuals will be deemed to have met holding times provided the initial analysis was performed within the applicable holding time. Where reanalysis demonstrates that sample matrix interference is the cause of failure to meet any Quality Manual requirements, the warranty will be deemed to have been met.

4.3 CTL warrants that it possesses and maintains all licenses and certifications which are required to perform services under these Terms and Conditions provided that such requirements are specified in writing to CTL prior to Sample Acceptance . CTL will notify the Client in writing of any decertification or revocation of any license, or notice of either, which affects work in progress.

4.4 The warranty obligations set forth in Sections 4.1, 4.2 and 4.3 are the sole and exclusive warranties given by CTL in connection with any services performed by CTL or any Results generated from such services , and CTL gives and makes NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. No representative of CTL is authorized to give or make any other representation or warranty or modify this warranty in any way .

4.5 Client's sole and exclusive remedy for the breach of warranty in connection with any services performed by CTL, will be limited to repeating any services performed, contingent on the Client's providing, at the request of CTL and at the Client's expense, additional sample(s) if necessary. Any reanalysis requested by the Client generating Results consistent with the original Results will be at the Client's expense. If resampling is necessary, CTL's liability for resampling costs will be limited to actual cost or one hundred or one hundred fifty dollars ($150) per sample, whichever is less.

4.6 CTL's liability for any and all causes of action arising hereunder, whether based in contract, tort, warranty, negligence or otherwise, shall be limited to the lesser amount of compensation for the services performed or $100,000. All claims, including those for negligence, shall be deemed waived unless suit thereon is filed within one year after CTL's completion of the services. Under no circumstances, whether arising in contract, tort (including negligence), or otherwise, shall CTL be responsible for loss of use, loss of profits, or for any special, indirect, incidental or consequential damages occasioned by the services performed or by application or use of the reports prepared.

4.7 In no event shall CTL have any responsibility or liability to the Client for any failure or delay in performance by CTL which results , directly or indirectly, in whole or in part, from any cause or circumstance beyond the reasonable control of CTL. Such causes and circumstances shall include, but not be limited to, acts of God, acts of Client, acts or orders of any governmental authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, equipment breakdown, matrix interference or unknown highly contaminated samples that impact instrument operation, unavailability of supplies from usual suppliers, difficulties or delays in transportation, mail or delivery services, or any other cause beyond CTL's reasonable control.

5. RESULTS, WORK PRODUCT - not applicable

6. INSURANCE

6.1 CTL shall maintain in force during the performance of services under these Terms and Conditions , Workers' Compensation and Employer's Liability Insurance in accordance with the laws of the states having jurisdiction over CTL's employees who are engaged in the performance of the work. CTL shall also maintain during such period, Comprehensive General and Contractual Liability (limit of $2,000,000 per occurrence/ aggregate), Comprehensive Automobile Liability, owned and hired, ($1,000,000 combined single limit), and Professional/Pollution Liability Insurance (limit of $5,000,000 per occurrence/aggregate).Â Any Client required changes to these limits or conditions may result in a change in cost to the Client.

7. AUDIT

7.1 Upon prior notice to CTL, the Client may audit and inspect CTL's records and accounts covering reimbursable costs related to work done for the Client, for a period of one (1) year after completion of the work. The purpose of any such audit shall be only for verification of such costs, and CTL shall not be required to provide access to cost records where prices are expressed as fixed fees or published unit prices

Login Sample Receipt Checklist

Client: CT Laboratories

Job Number: 810-22876-1

Login Number: 22876
List Number: 1
Creator: Pehling-Wright, Penny

List Source: Eurofins Eaton South Bend

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

CHAIN OF CUSTODY,
PM CONFIRMATION
AND
SAMPLE CONDITION FORMS
DOCUMENTS

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757) 819-5310
Project Name: Radford AAP
Project #: SWMU 54
Location: Radford, VA
Sampled By: T. Vas, P. Taylor

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 169098
Company: WESTON SOLUTIONS, INC
Project: RADFORD AAP SWMU 54
Logged By: erc PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: Pacea@WestonSolutions.com
Company: Weston Solutions
Address: 2 Eaton St. Ste. 603 Hampton, VA 23669

Invoice To:* Same
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

2022 Collection Date	Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	ANALYSES REQUESTED: TOC 9060A	Anions 9056A	TIC 9060A	Chlorate/Chlorite (300.1)											Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test																
4/25	1210	GW	G		54MW13	N	3	3	9	3			MS/MSD										1134804
4/25	1955	GW	G		54MW10	N	1	1	3	1													05

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
	4/25/2022 1730	Fedex	4/25/2022 1730
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			1000

Lab Use Only
Ice Present (Yes) No
Temp 1.5 IR Gun 27
Cooler # C585

Cooler Receipt Form

Ice Present YES NO

Observed Temperature 1-5

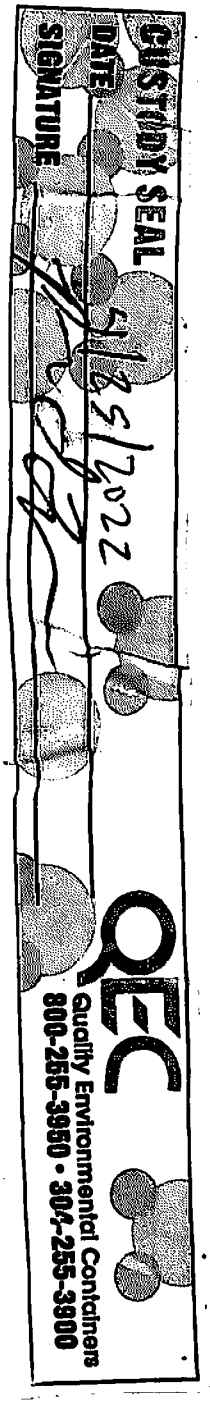
Actual Temperature

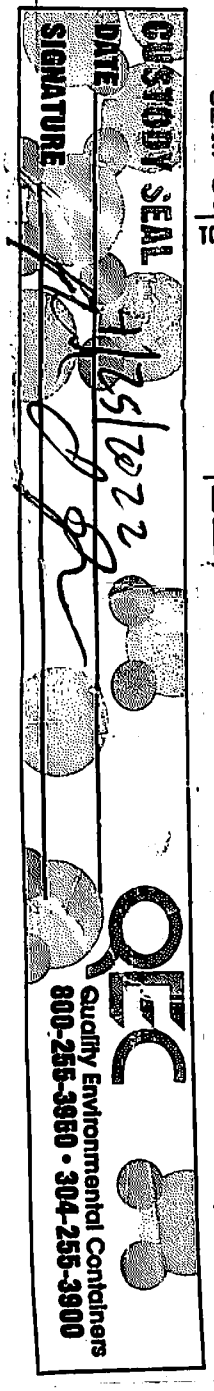
IR Gun # 27

Initials Ehe

Date 4/26/22 Time 1000

Cooler #: 6585





PM Login Confirmation

Folder #: 169098

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU 54 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 169768

Project Manager: *BMS* **Date Received:** 04/26/22 **Log Date:** 04/26/2022

Report To: ANTHONY PACE CC:
2 EATON STREET
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1.5 oC

SAMPLE #: 1134804 **DESCR:** 54MW13 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/25/2022 **Time:** 12:10

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)			***DESIGNATED MATRIX SPIKE***	5/9/2022	5/8/2022		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)			***DESIGNATED MATRIX SPIKE***	4/27/2022	5/8/2022		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)			***DESIGNATED MATRIX SPIKE***	5/23/2022	5/8/2022		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)			***DESIGNATED MATRIX SPIKE***		5/8/2022		Logged

SAMPLE #: 1134805 **DESCR:** 54MW10 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/25/2022 **Time:** 14:55

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)				5/9/2022	5/8/2022		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/27/2022	5/8/2022		Entered

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpC481.tmp

Folder #: 169098 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU 54

SAMPLE #: 1134805 **DESCR:** 54MW10 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/25/2022 **Time:** 14:55

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/23/2022	5/8/2022		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)					5/8/2022		Logged

Invoice Number: 169768 **Preliminary Invoice Estimate:** $364.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	4	$12.00	0.00	$48.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	4	$12.00	0.00	$48.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	4	$12.00	0.00	$48.00
CARBON, INORG & ORG	GROUND WATER	4	$28.00	0.00	$112.00
ORGAN CARBON T QSM 5.0	GROUND WATER	4	$28.00	0.00	$112.00
SUB CHLORATE/CHLORITE	GROUND WATER	4	$90.00	0.00	$360.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**4**	TOC
MISC	**4**	CHLORATE/CHLORITE
UNPRES PL	**4**	ANIONS
VOA	**12**	

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpC481.tmp

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	169098	Print Date / Time:	04/26/2022	10:43	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	04/26/2022	10:00	erc
Project Name:	RADFORD AAP SWMU 54	Log-In Date / Time / By:	04/26/2022	10:43	erc
Project Phase:	RADFORD, VA	Project #:		PM:	BMS
Coolers:	6585	Temperature:	1.5 C	On Ice:	**Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	2724 0964 8910		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 4/25/2022 AND SIGNED.

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?		Tests
1134804	54MW13					
		VOA	1	/		
		VOA	1	/		
		VOA	1	/		
		VOA	1	N /	N	
		VOA	1	N /	N	
		VOA	1	N /	N	
		VOA	1	N /	N	
		VOA	1	N /	N	
		VOA	1	N /	N	
		Total # of Containers of Type (*VOA*) = 9				
1134804	54MW13					
		UNPRES PL	1	N /	N	ANIONS
		UNPRES PL	1	N /	N	ANIONS
		UNPRES PL	1	/		Anions
		Total # of Containers of Type (*UNPRES PL*) = 3				
1134804	54MW13					
		MISC	1	N /	N	CHLORATE/CHLORITE
		MISC	1	N /	N	CHLORATE/CHLORITE
		MISC	1	N /	N	CHLORATE/CHLORITE
		Total # of Containers of Type (*MISC*) = 3				
1134804	54MW13					
		H2SO4 PL	1	N /	N	TOC
		H2SO4 PL	1	N /	N	TOC

		H2SO4 PL	1	/	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 3**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1134805	54MW10				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type	**(*VOA*) = 3**		
1134805	54MW10				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1134805	54MW10				
		MISC	1	/	CHLORATE/CHLORITE
		Total # of Containers of Type	**(*MISC*) = 1**		
1134805	54MW10				
		H2SO4 PL	1	/	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Condition Code *Condition Description*

1 Sample Received OK

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 2

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757)819-5310
Project Name: Radford AAP
Project #: SWMUs 49+54
Location: Radford, VA
Sampled By: T. Vas & P. Taylor

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 169156
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMUS 49+54
Logged By: erc PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: PaceA@WestonSolutions.com
Company: Weston Solutions
Address: 2 Eaton St. Ste. 603 Hampton, VA 23669

Invoice To:* Same
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC 9060A	Anions 9056	VOC 8260C	MEE RSK-175	TIC 9060A	Chlorate/Chlorite	COD 410.4	pH 9040C	TAL Metals 6010C 7470A							Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test																		
4/26	00:00	GW	G		TB1	N			2						Trip Blank									1136202
4/26	08:21	GW	G		13MW5	N	3	3	9	6					MS/MSD									03
4/26	09:25	GW	G		13MW4	N	1	1	3	2														04
4/26	10:26	GW	G		13MW3	N	1	1	3	2														05
4/26	11:46	GW	G		49MW04	N	1	1	3	2														06
4/26	11:46	GW	G		49TW04	N	1	1	3	2														07
4/26	12:47	GW	G		13MW2	N	1	1	3	2														08
4/26	14:59	GW	G		54MW12	N	1	1			3	1												09
4/26	14:59	GW	G		54TW12	N	1	1			3	1												10
4/26	16:44	GW	G		54MW1	N	1	1			3	1												11
4/26	17:44	GW	G		54IDW	N							1	1	1									12
4/27	08:32	GW	G		49MW05	N	1	1	3	2														13

Relinquished By:	Date/Time	Received By:	Date/Time
	4/27/2022 1800	Fedex	4/27/2022 1806
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			4/28/22 930

Lab Use Only
Ice Present Yes No
Temp 2.4 IR Gun 27
Cooler # 6116, 6680

4/29/22 1010

Rev. 02/2017

CHAIN OF CUSTODY

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757) 819-5316
Project Name: Radford AAP SWMUs 49+54
Project #:
Location: Radford, VA
Sampled By: T. Vas + P. Taylor

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Lab Use Only
Place Header Sticker Here:

169186

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: PaceA@WestonSolutions.com
Company: Weston Solutions
Address: 2 Eaton St. Ste. 603 Hampton, VA 23669

Invoice To:* Same
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

2022 Collection Date	Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC 9060A	Anions 9056	VOC 8260C	MEE RSK-175	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
4/27	1132	GW	G		49MW02	N	1	1	3	2			169174
4/27	1252	GW	G		48MW3	N	1	1	3	2			15
4/27	1404	GW	G		48MW2	N	1	1	3	2			16
4/27	1537	GW	G		48MW6	N	1	1	3	2			17

ANALYSES REQUESTED — Fill in Spaces with Bottles per Test

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
	4/27/2022 1800	Fedex	4/27/2022 1800
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			930
			1010

Lab Use Only
Ice Present Yes No
Temp 0.4 IR Gun 77
Cooler # 6116, 6660

Cooler Receipt Form

Ice Present YES NO

Observed Temperature 3.3

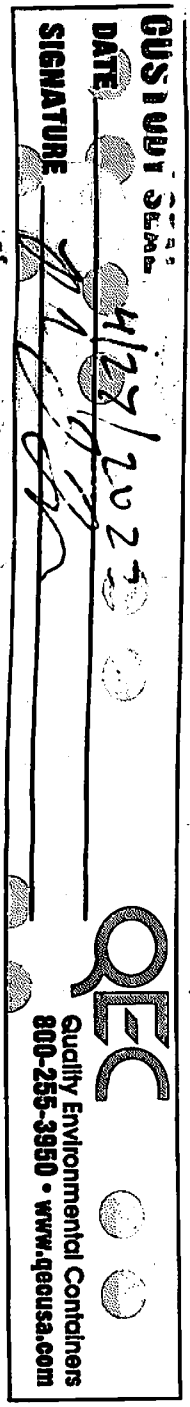
Actual Temperature _____

IR Gun # 27

Initials EC

Date 4/28/22 Time 930

Cooler #: 6116



ORIGIN ID:WALA (770) 855-6275
PAUL I TAYLO
WESTON SOLUTIONS INC/OU 1203
380 ARBOR DRIVE

PEACHTREE CORNERS, GA 30092
UNITED STATES US

SHIP DATE: 27APR22
ACTWGT: 52.00 LB
CAD: 8885155/SSFE2300
DIMS: 22x14x18 IN

BILL THIRD PARTY

TO CT LAB
CT LAB
1230 LANGE CT

BARABOO WI 53913
(608) 356-2760 REF: 03826.552.500.2320
INV:
PO: DEPT:

FedEx Express

2 of 2
MPS# 0263 2725 0659 3096
Mstr# 2725 0659 3065

0201

XN LNRA

THU - 28 APR 10:30A
PRIORITY OVERNIGHT
AHS
53913
WI-US MSN

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 28

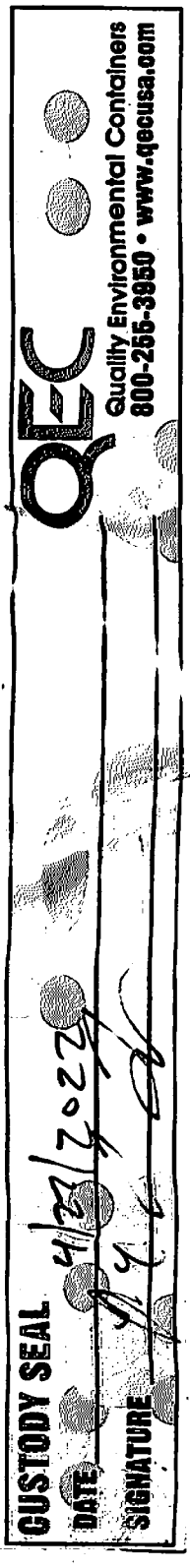
Actual Temperature _____

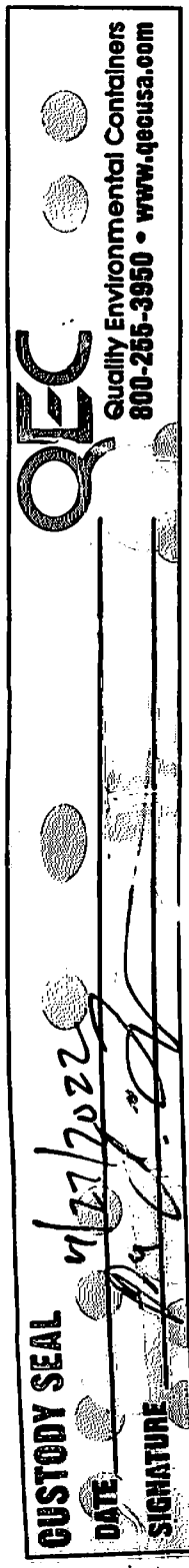
IR Gun # 27

Initials KAE

Date 4/28/22 Time 930

Cooler #: 680





PM Login Confirmation

Folder #: 169156

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMUs 49&54 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 169826

Project Manager: *BMS* **Date Received:** 04/28/22 **Log Date:** 04/28/2022

Report To: ANTHONY PACE CC:
2 EATON STREET
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 3.3 oC

SAMPLE #: 1136202 DESCR: TB1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED: 4/26/2022 Time: 00:00**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		5/10/2022	5/10/2022		Logged

SAMPLE #: 1136203 DESCR: 13MW5 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED: 4/26/2022 Time: 08:21**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	***DESIGNATED MATRIX SPIKE***	5/10/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				***DESIGNATED MATRIX SPIKE***	5/10/2022	5/10/2022		NeedPrep
			Ethane							
			Ethene							
			Methane							
1227	ANIONS IC QSM 5.0	(EPA 9056A)				***DESIGNATED MATRIX SPIKE***	4/28/2022	5/10/2022		Logged
			Chloride							
			Nitrate Nitrogen							

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp580E.tmp

Folder #: 169156 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136203 **DESCR:** 13MW5 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 08:21

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)			***DESIGNATED MATRIX SPIKE***	5/24/2022	5/10/2022		Logged

SAMPLE #: 1136204 **DESCR:** 13MW4 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 09:25

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			***Y***	5/10/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/10/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/28/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/24/2022	5/10/2022		Logged

SAMPLE #: 1136205 **DESCR:** 13MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 10:26

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			***Y***	5/10/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/10/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/28/2022	5/10/2022		Logged
			Chloride						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp580E.tmp

Folder #: 169156 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136205 **DESCR:** 13MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 10:26

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/24/2022	5/10/2022		Logged

SAMPLE #: 1136206 **DESCR:** 49MW04 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 11:46

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/10/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/10/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/28/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/24/2022	5/10/2022		Logged

SAMPLE #: 1136207 **DESCR:** 49TW04 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 11:46

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/10/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/10/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/28/2022	5/10/2022		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp580E.tmp

Folder #: 169156 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136207 **DESCR:** 49TW04 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 11:46

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/24/2022	5/10/2022		Logged

SAMPLE #: 1136208 **DESCR:** 13MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 12:47

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/10/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/10/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/28/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/24/2022	5/10/2022		Logged

SAMPLE #: 1136209 **DESCR:** 54MW12 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 14:59

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)				5/10/2022	5/10/2022		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/28/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp580E.tmp

Folder #: 169156 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136209 **DESCR:** 54MW12 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 14:59

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/24/2022	5/10/2022		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)					5/10/2022		Logged

SAMPLE #: 1136210 **DESCR:** 54TW12 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 14:59

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)				5/10/2022	5/10/2022		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/28/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/24/2022	5/10/2022		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)					5/10/2022		Logged

SAMPLE #: 1136211 **DESCR:** 54MW1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 16:44

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
759	CARBON, INORG & ORG	(EPA 9060A)				5/10/2022	5/10/2022		Logged
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/28/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/24/2022	5/10/2022		Logged
1279	SUB CHLORATE/CHLORITE	(300.1)					5/10/2022		Logged

Folder #: 169156 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136212 **DESCR:** 54IDW **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/26/2022 **Time:** 17:44

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
203	PH	(EPA 9040C)					5/10/2022		Logged
989	COD QSM	(EPA 410.4)				5/24/2022	5/10/2022		NeedPrep
1183	ICP K TOTAL QSM 5.0	(EPA 6010C)				10/23/2022	5/10/2022		NeedPrep
1190	ICP NA TOTAL QSM 5.0	(EPA 6010C)				10/23/2022	5/10/2022		NeedPrep
1200	ICP TOTAL QSM 5.0	(EPA 6010C)				10/23/2022	5/10/2022		NeedPrep
			Total Aluminum						
			Total Antimony						
			Total Arsenic						
			Total Barium						
			Total Beryllium						
			Total Cadmium						
			Total Calcium						
			Total Chromium						
			Total Cobalt						
			Total Copper						
			Total Iron						
			Total Lead						
			Total Magnesium						
			Total Manganese						
			Total Nickel						
			Total Selenium						
			Total Silver						
			Total Thallium						
			Total Vanadium						
			Total Zinc						
1208	MERCURY TOTAL QSM 5.0	(EPA 7470A)				5/24/2022	5/10/2022		NeedPrep

Folder #: 169156 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136213 **DESCR:** 49MW05 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/27/2022 **Time:** 08:32

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/11/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/11/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/29/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/25/2022	5/10/2022		Logged

SAMPLE #: 1136214 **DESCR:** 49MW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/27/2022 **Time:** 11:32

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/11/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/11/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/29/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/25/2022	5/10/2022		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp580E.tmp

Folder #: 169156 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136215 **DESCR:** 48MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/27/2022 **Time:** 12:52

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/11/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/11/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/29/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/25/2022	5/10/2022		Logged

SAMPLE #: 1136216 **DESCR:** 48MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/27/2022 **Time:** 14:04

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/11/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/11/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/29/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/25/2022	5/10/2022		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp580E.tmp

Folder #: 169156 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136217 **DESCR:** 48MW6 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/27/2022 **Time:** 15:37

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/11/2022	5/10/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/11/2022	5/10/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/29/2022	5/10/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/25/2022	5/10/2022		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp580E.tmp

Folder #: 169156 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

Invoice Number: 169826 **Preliminary Invoice Estimate:** $3,002.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	16	$12.00	0.00	$192.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	14	$16.00	0.00	$224.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	16	$12.00	0.00	$192.00
CARBON, INORG & ORG	GROUND WATER	3	$28.00	0.00	$84.00
COD QSM	GROUND WATER	1	$18.00	0.00	$18.00
ICP K TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP NA TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Aluminum	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Antimony	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Arsenic	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Barium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Beryllium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cadmium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Calcium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Chromium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cobalt	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Copper	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Iron	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Lead	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Magnesium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Manganese	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Nickel	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Selenium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Silver	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Thallium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Vanadium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Zinc	GROUND WATER	1	$3.50	0.00	$3.50
MERCURY TOTAL QSM 5.0	GROUND WATER	1	$23.00	0.00	$23.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	13	$16.00	0.00	$208.00

METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	13	$16.00	0.00	$208.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	13	$16.00	0.00	$208.00
ORGAN CARBON T QSM 5.0	GROUND WATER	16	$28.00	0.00	$448.00
PH	GROUND WATER	1	$10.00	0.00	$10.00
SUB CHLORATE/CHLORITE	GROUND WATER	3	$90.00	0.00	$270.00
VOC 8260 QSM 5.0	GROUND WATER	13	$60.00	0.00	$780.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$60.00	0.00	$60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**17**	TOC
HNO3	**1**	HG,ICP,K,NA
MISC	**3**	CHLORATE/CHLORITE
UNPRES PL	**17**	ANIONS
VOA	**9**	
VOA HCL	**67**	GAS,VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	169156	Print Date / Time:	04/28/2022	09:55	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	04/28/2022	09:30	erc
Project Name:	RADFORD AAP SWMUs 49&54	Log-In Date / Time / By:	04/28/2022	09:55	ETK
Project Phase:	RADFORD, VA	Project #:		PM:	BMS
Coolers:	6116, 6680	Temperature:	<3.4 C	On Ice:	**Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	2725 0659 3085,"3096		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

SEVERAL SAMPLES WERE RECEIVED PAST THE 48-HOUR HOLD TIME FOR NITRATE. THE CLIENT INSTRUCTED THE LAB TO PROCEED WITH THE ANALYSIS.

TWO CUSTODY SEALS WERE PRESENT AND INTACT ON EACH COOLER UPON RECEIPT - ALL WERE DATED 4/27/2022 AND SIGNED.

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136202	TB1				
		VOA HCL	1	/	VOC
		VOA HCL	1	/	VOC
		Total # of Containers of Type	(***VOA HCL***) = **2**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136203	13MW5				
		UNPRES PL	1	/	Anions
		UNPRES PL	1 N	/ N	ANIONS
		UNPRES PL	1 N	/ N	ANIONS
		Total # of Containers of Type	(***UNPRES PL***) = **3**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136203	13MW5				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1 N	/ N	GAS,VOC
		VOA HCL	1 N	/ N	GAS,VOC
		VOA HCL	1 N	/ N	GAS,VOC
		VOA HCL	1 N	/ N	GAS,VOC
		VOA HCL	1 N	/ N	GAS,VOC
		VOA HCL	1 N	/ N	GAS,VOC

		VOA HCL	1	N	/ N	GAS,VOC
		VOA HCL	1	N	/ N	GAS,VOC
		VOA HCL	1	N	/ N	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 15**			
1136203	13MW5					
		H2SO4 PL	1	Y	/ N	TOC
		H2SO4 PL	1	Y	/ N	TOC
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 3**			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136204	13MW4				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136204	13MW4				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1136204	13MW4				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136205	13MW3				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136205	13MW3				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1136205	13MW3				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136206	49MW04				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136206	49MW04				

		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1136206	49MW04				
		H2SO4 PL	1 Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136207	49TW04				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136207	49TW04				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1136207	49TW04				
		H2SO4 PL	1 Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136208	13MW2				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136208	13MW2				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1136208	13MW2				
		H2SO4 PL	1 Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136209	54MW12				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type	**(*VOA*) = 3**		

1136209	54MW12						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**				
1136209	54MW12						
		MISC	1		/		CHLORATE/CHLORITE
		Total # of Containers of Type	(***MISC***) = **1**				
1136209	54MW12						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				

Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**			**Tests**
1136210	54TW12						
		VOA	1		/		
		VOA	1		/		
		VOA	1		/		
		Total # of Containers of Type	(***VOA***) = **3**				
1136210	54TW12						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**				
1136210	54TW12						
		MISC	1		/		CHLORATE/CHLORITE
		Total # of Containers of Type	(***MISC***) = **1**				
1136210	54TW12						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				

Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**			**Tests**
1136211	54MW1						
		VOA	1		/		
		VOA	1		/		
		VOA	1		/		
		Total # of Containers of Type	(***VOA***) = **3**				
1136211	54MW1						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**				
1136211	54MW1						
		MISC	1		/		CHLORATE/CHLORITE
		Total # of Containers of Type	(***MISC***) = **1**				
1136211	54MW1						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				

Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**

1136212	54IDW						
		H2SO4 PL	1	Y	/	N	COD
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				
1136212	54IDW						
		HNO3	1	Y	/	N	HG,ICP,K,NA
		Total # of Containers of Type	(***HNO3***) = **1**				
1136212	54IDW						
		UNPRES PL	1		/		pH
		Total # of Containers of Type	(***UNPRES PL***) = **1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1136213	49MW05						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**				
1136213	49MW05						
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		Total # of Containers of Type	(***VOA HCL***) = **5**				
1136213	49MW05						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1136214	49MW02						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**				
1136214	49MW02						
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		Total # of Containers of Type	(***VOA HCL***) = **5**				
1136214	49MW02						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1136215	48MW3						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**				

1136215	48MW3					
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**		
1136215	48MW3					
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136216	48MW2				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**	
1136216	48MW2				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**	
1136216	48MW2				
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**	

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136217	48MW6				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**	
1136217	48MW6				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**	
1136217	48MW6				
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**	

Condition Code *Condition Description*

1 Sample Received OK

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757) 819-5310
Project Name: Radford AAP
Project #: SWMUs 49 & 54
Location: Radford, VA
Sampled By: T. Vas & P. Taylor

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 169199
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMUS 49+54
Logged By: erc PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: pacea@WestonSolutions.com
Company: Weston Solutions
Address: 2 Eaton St. Ste. 603 Hampton, VA 23669

Invoice To:*
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

2022 Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC 9060A	Anions 9056	VOC 8260C	MEE RSK-175	COD 410.4	pH 9040C	TAL Metals 6010C 7470A	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test									
4/28	00:00	GW	G		TB2	N			2				Trip Blank			136587
4/28	0948	GW	G		50MW2	N	1	1	3	2						588
4/28	0948	GW	G		50TW2	N	1	1	3	2						671
4/28	1226	GW	G		49MW01	N	1	1	3	2						672
4/28	1356	GW	G		49MW03	N	1	1	3	2						673
4/28	1520	GW	G		48MW7	N	1	1	3	2						674

Relinquished By: [signature]
Date/Time 4/28/2022 1730
Received by: [signature]
Date/Time

Received By: Fedex
Date/Time 4/28/2022 1730
Received for Laboratory by: [signature] 927
Date/Time [signature] 1011

Lab Use Only
Ice Present Yes No
Temp 1.8 IR Gun 27
Cooler # 6454

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 6.8

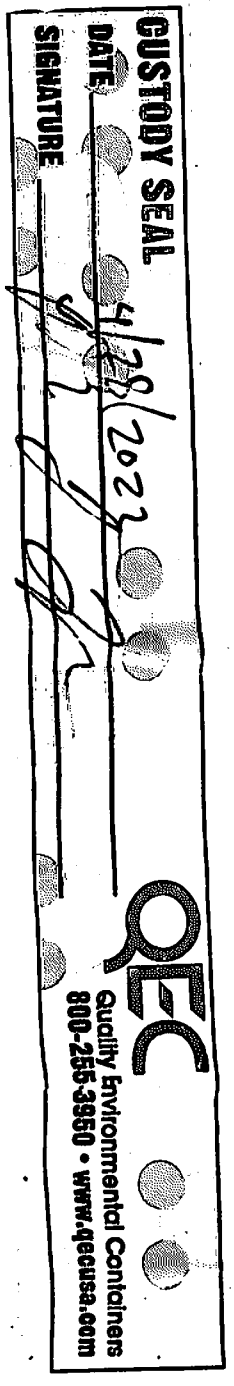
Actual Temperature _____

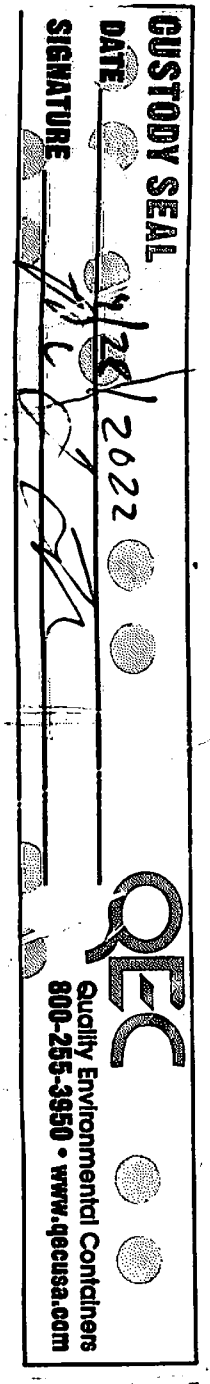
IR Gun # 27

Initials Ew

Date 4/29/22 Time 927

Cooler #: 6454





ORIGIN ID:WALA (770) 855-6275
WESTON SOLUTIONS INC/OU 1203
380 ARBOR DRIVE
CHRISTIANSBURG, VA 24073
UNITED STATES US

SHIP DATE: 28APR22
ACTWGT: 40.35 LB
CAD: 6995155/66FE2300
DIMS: 24x13x14 IN
BILL THIRD PARTY

TO CT LAB
CT LAB
1230 LANGE CT

BARABOO WI 53913
(608) 356-2760 REF: 03886.552.500.2320
INV:
PO: DEPT:

FedEx Express

TRK# 0201 2725 5198 8734

FRI - 29 APR 10:30A
PRIORITY OVERNIGHT
AHS
53913
WI-US MSN

XN LNRA

Part # 156297-845-DEDB EXP 06/22

PM Login Confirmation

Folder #: 169199

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMUs 49&54 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 169869

Project Manager: *BMS* **Date Received:** 04/29/22 **Log Date:** 04/29/2022

Report To: ANTHONY PACE CC:
2 EATON STREET
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1.8 oC

SAMPLE #: 1136587 DESCR: TB2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED: 4/28/2022 Time: 00:00**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/12/2022	5/11/2022		Logged

SAMPLE #: 1136588 DESCR: 50MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED: 4/28/2022 Time: 09:48**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/12/2022	5/11/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/12/2022	5/11/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/30/2022	5/11/2022		Logged
			Chloride						
			Nitrate Nitrogen						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp57BC.tmp

Folder #: 169199 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136588 **DESCR:** 50MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/28/2022 **Time:** 09:48

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/26/2022	5/11/2022		Logged

SAMPLE #: 1136671 **DESCR:** 50TW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/28/2022 **Time:** 09:48

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/12/2022	5/11/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/12/2022	5/11/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/30/2022	5/11/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/26/2022	5/11/2022		Logged

SAMPLE #: 1136672 **DESCR:** 49MW01 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/28/2022 **Time:** 12:26

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/12/2022	5/11/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/12/2022	5/11/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/30/2022	5/11/2022		Logged
			Chloride						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp57BC.tmp

Folder #: 169199 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136672 **DESCR:** 49MW01 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/28/2022 **Time:** 12:26

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/26/2022	5/11/2022		Logged

SAMPLE #: 1136673 **DESCR:** 49MW03 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/28/2022 **Time:** 13:56

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/12/2022	5/11/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/12/2022	5/11/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/30/2022	5/11/2022		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/26/2022	5/11/2022		Logged

SAMPLE #: 1136674 **DESCR:** 48MW7 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/28/2022 **Time:** 15:20

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/12/2022	5/11/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/12/2022	5/11/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/30/2022	5/11/2022		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp57BC.tmp

Folder #: 169199 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1136674 **DESCR:** 48MW7 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/28/2022 **Time:** 15:20

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/26/2022	5/11/2022		Logged

Invoice Number: 169869 **Preliminary Invoice Estimate:** $920.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	5	$12.00	0.00	$60.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	5	$12.00	0.00	$60.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	5	$12.00	0.00	$60.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	5	$16.00	0.00	$80.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	5	$16.00	0.00	$80.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	5	$16.00	0.00	$80.00
ORGAN CARBON T QSM 5.0	GROUND WATER	5	$28.00	0.00	$140.00
VOC 8260 QSM 5.0	GROUND WATER	5	$60.00	0.00	$300.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$60.00	0.00	$60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**5**	TOC
UNPRES PL	**5**	Anions
VOA HCL	**27**	VOC

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp57BC.tmp

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	169199	Print Date / Time:	04/29/2022 10:08
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	04/29/2022 09:27 erc
Project Name:	RADFORD AAP SWMUs 49&54	Log-In Date / Time / By:	04/29/2022 10:08 erc
Project Phase:	RADFORD, VA	Project #:	PM: BMS
Coolers:	6454	Temperature:	1.8 C On Ice: **Y**
Custody Seals Present :	**Y**	COC Present:? **Y**	Complete? **Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED
Ship Method:	FEDEX EXPRESS	Tracking Number:	2725 5198 8734
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 4/28/2022 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136587 TB2				
	VOA HCL	1	/	VOC
	VOA HCL	1	/	VOC
	Total # of Containers of Type	(***VOA HCL***) = **2**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
1136588 50MW2				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
1136588 50MW2				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
1136588 50MW2				
	H2SO4 PL	1	Y / N	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
1136671 50TW2				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		

1136671	50TW2					
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**			
1136671	50TW2					
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136672	49MW01				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136672	49MW01				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1136672	49MW01				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136673	49MW03				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136673	49MW03				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1136673	49MW03				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136674	48MW7				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		

1136674 48MW7

VOA HCL	1		/		GAS,VOC
VOA HCL	1		/		GAS,VOC
VOA HCL	1		/		GAS,VOC
VOA HCL	1		/		GAS,VOC
VOA HCL	1		/		GAS,VOC

Total # of Containers of Type (*VOA HCL*) = 5

1136674 48MW7

H2SO4 PL	1	Y	/	N	TOC

Total # of Containers of Type (*H2SO4 PL*) = 1

Condition Code *Condition Description*

1 Sample Received OK

Rev. 02/2017

CHAIN OF CUSTODY

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757) 819-5310
Project Name: Radford AAP
Project #: SWMU 48/49
Location: Radford, VA
Sampled By: T. Vas & P. Taylor

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 169227
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMU 48/49
Logged By: erc FM BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: pacea@WestonSolutions.com
Company: Weston Solutions
Address: 2 Eaton St. Ste. 603 Hampton, VA 23669

Invoice To:* Same
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC 9060A	Anions 9056	VOC 8260C	MEE RSK-175	COD 410.4	pH 9040C	TAL Metals 6010C 7470A								Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test																	
4/29	0800	GW	G		TB3	N			2							Trip Blank							137137
4/29	0850	GW	G		48MW1	N	1	1	3	2													138
4/29	0945	GW	G		49IDW						1	1	1										139

Relinquished By: [signature]
Received by: [signature]
Date/Time: 4/29/2022 1400
Date/Time

Received By: Fedex
Received for Laboratory by: Eric
Date/Time: 4/29/2022 1400
Date/Time: 4/30/22 1040
Eric 4/30/22 1057

Lab Use Only
Ice Present (Yes) No
Temp 1.4 IR Gun 27
Cooler # XXX

Cooler Receipt Form

Ice Present YES NO

Observed Temperature 1.4

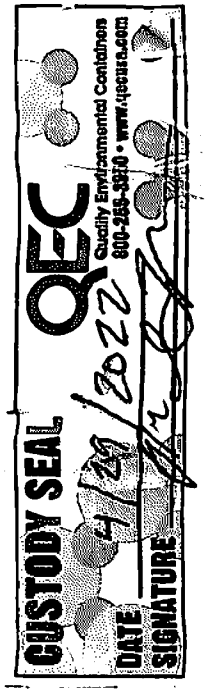
Actual Temperature _____

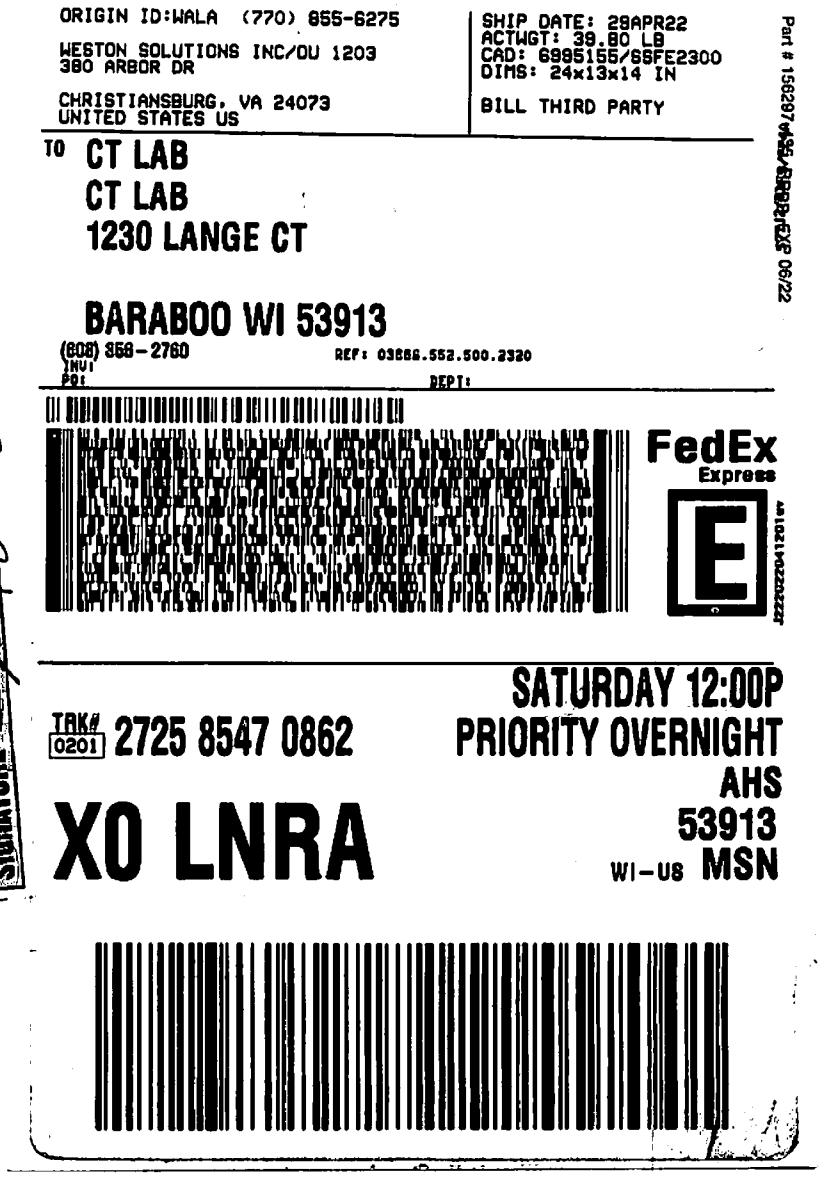
IR Gun # 27

Initials EMC

Date 4/30/22 Time 1040

Cooler #: XXX





PM Login Confirmation

Folder #: 169227

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMUs 49&54 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 169897

Project Manager: *BMS* **Date Received:** 04/30/22 **Log Date:** 04/30/2022

Report To: ANTHONY PACE CC:
2 EATON STREET
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1.4 oC

SAMPLE #: 1137437 DESCR: TB3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED: 4/29/2022 Time: 08:00**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/13/2022	5/12/2022		Logged

SAMPLE #: 1137438 DESCR: 48MW1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED: 4/29/2022 Time: 08:50**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	5/13/2022	5/12/2022		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				5/13/2022	5/12/2022		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				5/1/2022	5/12/2022		Logged
			Chloride						
			Nitrate Nitrogen						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpD960.tmp

Folder #: 169227 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1137438 **DESCR:** 48MW1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/29/2022 **Time:** 08:50

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/27/2022	5/12/2022		Logged

SAMPLE #: 1137439 **DESCR:** 49IDW **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/29/2022 **Time:** 09:45

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
203	PH	(EPA 9040C)					5/12/2022		Logged
989	COD QSM	(EPA 410.4)				5/27/2022	5/12/2022		NeedPrep
1183	ICP K TOTAL QSM 5.0	(EPA 6010C)				10/26/2022	5/12/2022		NeedPrep
1190	ICP NA TOTAL QSM 5.0	(EPA 6010C)				10/26/2022	5/12/2022		NeedPrep
1200	ICP TOTAL QSM 5.0	(EPA 6010C)				10/26/2022	5/12/2022		NeedPrep
			Total Aluminum						
			Total Antimony						
			Total Arsenic						
			Total Barium						
			Total Beryllium						
			Total Cadmium						
			Total Calcium						
			Total Chromium						
			Total Cobalt						
			Total Copper						
			Total Iron						
			Total Lead						
			Total Magnesium						
			Total Manganese						
			Total Nickel						
			Total Selenium						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpD960.tmp

Folder #: 169227 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

SAMPLE #: 1137439 **DESCR:** 49IDW **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/29/2022 **Time:** 09:45

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Total Silver						
			Total Thallium						
			Total Vanadium						
			Total Zinc						
1208	MERCURY TOTAL QSM 5.0	(EPA 7470A)				5/27/2022	5/12/2022		NeedPrep

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpD960.tmp

Folder #: 169227 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMUs 49&54

Invoice Number: 169897 **Preliminary Invoice Estimate:** $360.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	1	$12.00	0.00	$12.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	1	$12.00	0.00	$12.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	1	$12.00	0.00	$12.00
COD QSM	GROUND WATER	1	$18.00	0.00	$18.00
ICP K TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP NA TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Aluminum	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Antimony	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Arsenic	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Barium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Beryllium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cadmium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Calcium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Chromium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cobalt	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Copper	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Iron	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Lead	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Magnesium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Manganese	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Nickel	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Selenium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Silver	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Thallium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Vanadium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Zinc	GROUND WATER	1	$3.50	0.00	$3.50
MERCURY TOTAL QSM 5.0	GROUND WATER	1	$23.00	0.00	$23.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	1	$16.00	0.00	$16.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	1	$16.00	0.00	$16.00

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpD960.tmp

METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	1	$16.00	0.00	$16.00
ORGAN CARBON T QSM 5.0	GROUND WATER	1	$28.00	0.00	$28.00
PH	GROUND WATER	1	$10.00	0.00	$10.00
VOC 8260 QSM 5.0	GROUND WATER	1	$60.00	0.00	$60.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$60.00	0.00	$60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**2**	COD
HNO3	**1**	HG,ICP,K,NA
UNPRES PL	**2**	Anions
VOA HCL	**7**	VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	169227	Print Date / Time:	04/30/2022	10:54	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	04/30/2022	10:40	erc
Project Name:	RADFORD AAP SWMUs 49&54	Log-In Date / Time / By:	04/30/2022	10:54	erc
Project Phase:	RADFORD, VA	Project #:		PM:	BMS
Coolers:	UNMARKED	Temperature:	1.4 C	On Ice:	**Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	2725 8547 0862		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 4/29/2022 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1137437 TB3				
	VOA HCL	1	/	VOC
	VOA HCL	1	/	VOC
	Total # of Containers of Type	(***VOA HCL***) = **2**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
1137438 48MW1				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
1137438 48MW1				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
1137438 48MW1				
	H2SO4 PL	1	Y / N	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
1137439 49IDW				
	H2SO4 PL	1	Y / N	COD
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

1137439 49IDW

HNO3	1	Y	/	N	HG,ICP,K,NA

Total # of Containers of Type (*HNO3*) = 1

1137439 49IDW

UNPRES PL	1	/	pH

Total # of Containers of Type (*UNPRES PL*) = 1

Condition Code	*Condition Description*
1	Sample Received OK

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760

www.ctlaboratories.com

ANALYTICAL SUMMARY REPORT

This report at a minimum contains the following information:

Analytical Report of Test Results
Description of QC Qualifiers
Chain of Custody (copy)
Quality Control Summary (if applicable)
Case Narrative (if applicable)
Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

ANALYTICAL SAMPLE DATA

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU 54
Project Phase: RADFORD, VA
Project #:
Folder #: 169098
Purchase Order #:
Contract #: 3313

Arrival Temperature: 1.5
Report Date: 5/12/2022
Date Received: 4/26/2022
Reprint Date: 5/12/2022

CT LAB#: 1134804 Sample Description: 54MW13 Client Sample #: Sampled: 4/25/2022 12:10

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Total Inorganic Carbon	***83***	mg/L	0.5	1.5	3.0	3.0	1.00				4/28/22 10:12	TMG	EPA 9060A ^
Chloride	***6.5***	mg/L	1.0	1.5	3.0	3.0	1.00				4/26/22 17:55	TMG	EPA 9056A
Nitrate Nitrogen	***0.64***	mg/L	0.12	0.20	0.40	0.40	1.00				4/26/22 17:55	TMG	EPA 9056A
Sulfate	***33***	mg/L	0.80	1.5	3.0	3.0	1.00	M			4/26/22 17:55	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 12:22	TMG	EPA 9060A
Sub Lab Results													
Chlorate	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1
Chlorite	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1

CT LAB#: 1134805 Sample Description: 54MW10 Client Sample #: Sampled: 4/25/2022 14:55

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Total Inorganic Carbon	***78***	mg/L	0.5	1.5	3.0	3.0	1.00				4/28/22 10:26	TMG	EPA 9060A ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1134805 Sample Description: 54MW10 Client Sample #: Sampled: 4/25/2022 14:55

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Chloride	***5.1***	mg/L	1.0	1.5	3.0	3.0	1.00				4/26/22 19:08	TMG	EPA 9056A
Nitrate Nitrogen	***0.30***	mg/L	0.12	0.20	0.40	0.40	1.00	J			4/26/22 19:08	TMG	EPA 9056A
Sulfate	***72***	mg/L	4.0	7.5	15	15	5.00				4/26/22 19:26	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 13:20	TMG	EPA 9060A
Sub Lab Results													
Chlorate	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1
Chlorite	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method . DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted . The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

Submitted by: Brett M. Szymanski
Project Manager
608-356-2760

QC Qualifiers

Code	Description
B	Analyte detected in the associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
I	Incubator temperature was outside acceptance limits during test period.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was below detection limit.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Specified calibration criteria was not met.

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
Wisconsin (DATCP) Bacteriology ID# 289
Louisiana NELAP (primary) ID# ACC20190002
Illinois NELAP Lab ID# 200073
Kansas NELAP Lab ID# E-10368
Virginia NELAP Lab ID# 460203
ISO/IEC 17025-2005 A2LA Cert # 3806.01
DoD-ELAP A2LA 3806.01
GA EPD Stipulation ID ACC20190002

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court• Baraboo, WI 53913• 608356-2760
www.ctlaboratories.com

QC Summary Report

WESTON SOLUTIONS, INC. **Project Name: RADFORD AAP SWMU 54**

SDG #: 0 **Folder #: 169098** **Project #:**

Duplicate

Analytical Run #:	211440	Analysis Date:	4/26/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1135223	Analysis Time:	18:13	Prep Date/Time:		Method:	SW9056A
Parent Sample #:	1134804	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	6.46	mg/L	6.5				3.0	1	10
Nitrate Nitrogen	0.644	mg/L	0.64				0.40	1	10
Sulfate	32.7	mg/L	33				3.0	1	10

Lab Control Spike Water

Analytical Run #:	211440	Analysis Date:	4/26/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1135215	Analysis Time:	12:29	Prep Date/Time:		Method:	SW9056A
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Chloride	13.85	mg/L			15.00	92	87	---	111		
Nitrate Nitrogen	3.507	mg/L			3.500	100	88	---	111		
Sulfate	24.20	mg/L			25.00	97	87	---	112		

Method Blank Water

Analytical Run #:	211440	Analysis Date:	4/26/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1135216	Analysis Time:	12:47	Prep Date/Time:		Method:	SW9056A
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	1.0	mg/L		U	0		1.5		
Nitrate Nitrogen	0.12	mg/L		U	0		0.20		
Sulfate	0.8	mg/L		U	0		1.5		

Matrix Spike Duplicate Water

Analytical Run #:	211440	Analysis Date:	4/26/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1135225	Analysis Time:	18:50	Prep Date/Time:		Method:	SW9056A
Parent Sample #:	1135224	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	13.9	mg/L	6.5		8.00	92	87 --- 111	2	15
Nitrate Nitrogen	2.65	mg/L	0.64		2.00	100	88 --- 111	2	15
Sulfate	39.3	mg/L	33		8.00	79	87 --- 112	1	15

Matrix Spike Water

Analytical Run #:	211440	Analysis Date:	4/26/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1135224	Analysis Time:	18:31	Prep Date/Time:		Method:	SW9056A
Parent Sample #:	1134804	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	13.7	mg/L	6.5		8.00	90	87 --- 111		15
Nitrate Nitrogen	2.60	mg/L	0.64		2.00	98	88 --- 111		15
Sulfate	39.1	mg/L	33		8.00	76	87 --- 112		15

Lab Control Spike Water

Analytical Run #:	211530	Analysis Date:	4/28/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1140049	Analysis Time:	09:41	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Inorganic Carbon	49.87	mg/L			50.0	100	85 --- 111		

Method Blank Water

Analytical Run #:	211530	Analysis Date:	4/28/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1140050	Analysis Time:	09:55	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Inorganic Carbon	0.5	mg/L		U	0		1.5		

Duplicate

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139926	Analysis Time:	12:36	Prep Date/Time:		Method:	SW9060
Parent Sample #:	1134804	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	0.5	mg/L	<0.5	U			1.5	0	20

Lab Control Spike Water

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139924	Analysis Time:	11:51	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	48.33	mg/L			50.0	97	85 --- 111		20

Method Blank Water

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139925	Analysis Time:	12:04	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	0.5	mg/L		U	0		1.5		

Matrix Spike Duplicate Water

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1140061	Analysis Time:	13:07	Prep Date/Time:		Method:	SW9060
Parent Sample #:	1139927	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	48.4	mg/L	BDL		50.0	97	85 --- 111	1	20

Matrix Spike Water

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139927	Analysis Time:	12:54	Prep Date/Time:		Method:	SW9060
Parent Sample #:	1134804	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	48.9	mg/L	BDL		50.0	98	85 --- 111		20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	169098	Print Date / Time:	04/26/2022 10:43
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	04/26/2022 10:00 erc
Project Name:	RADFORD AAP SWMU 54	Log-In Date / Time / By:	04/26/2022 10:43 erc
Project Phase:	RADFORD, VA	Project #:	PM: BMS
Coolers:	6585	Temperature:	1.5 C On Ice: **Y**
Custody Seals Present :	**Y**	COC Present:?	**Y** Complete? **Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED
Ship Method:	FEDEX EXPRESS	Tracking Number:	2724 0964 8910
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 4/25/2022 AND SIGNED.

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1134804	54MW13				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		VOA	1	N / N	
		VOA	1	N / N	
		VOA	1	N / N	
		VOA	1	N / N	
		VOA	1	N / N	
		VOA	1	N / N	
		Total # of Containers of Type (*VOA*) = 9			
1134804	54MW13				
		UNPRES PL	1	N / N	ANIONS
		UNPRES PL	1	N / N	ANIONS
		UNPRES PL	1	/	Anions
		Total # of Containers of Type (*UNPRES PL*) = 3			
1134804	54MW13				
		MISC	1	N / N	CHLORATE/CHLORITE
		MISC	1	N / N	CHLORATE/CHLORITE
		MISC	1	N / N	CHLORATE/CHLORITE
		Total # of Containers of Type (*MISC*) = 3			
1134804	54MW13				
		H2SO4 PL	1	N / N	TOC
		H2SO4 PL	1	N / N	TOC

		H2SO4 PL	1	/	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 3**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1134805	54MW10				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type	**(*VOA*) = 3**		
1134805	54MW10				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1134805	54MW10				
		MISC	1	/	CHLORATE/CHLORITE
		Total # of Containers of Type	**(*MISC*) = 1**		
1134805	54MW10				
		H2SO4 PL	1	/	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Condition Code *Condition Description*

1 Sample Received OK

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757) 819-5310
Project Name: Radford AAP
Project #: SWMU 54
Location: Radford, VA
Sampled By: T. Vas, P. Taylor

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 169098
Company: WESTON SOLUTIONS, INC
Project: RADFORD AAP SWMU 54
Logged By: erc PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: Pacea@WestonSolutions.com
Company: Weston Solutions
Address: 2 Eaton St. Ste. 603 Hampton, VA 23669

Invoice To:* Same
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

2022 Collection Date	Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	ANALYSES REQUESTED: TOC 9060A	Anions 9056A	TIC 9060A	Chlorate/Chlorite (300.1)											Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test																
4/25	1210	GW	G		54MW13	N	3	3	9	3			MS/MSD										1134804
4/25	1955	GW	G		54MW10	N	1	1	3	1													05

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
	4/25/2022 1730	Fedex	4/25/2022 1730
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			1000

Lab Use Only
Ice Present (Yes) No
Temp 1.5 IR Gun 27
Cooler # C585

Cooler Receipt Form

Ice Present YES NO

Observed Temperature 1-5

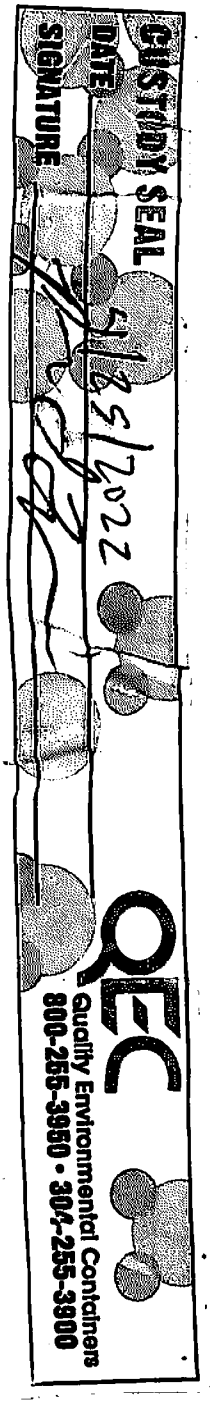
Actual Temperature _____

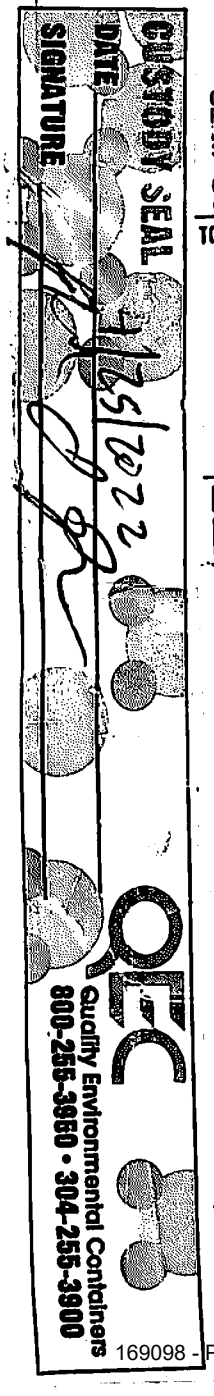
IR Gun # 27

Initials Ehe

Date 4/26/22 Time 1000

Cooler #: 6585





eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Eaton South Bend
110 S Hill Street
South Bend, IN 46617
Tel: (574)233-4777

Laboratory Job ID: 810-22631-1
Client Project/Site: 169098

For:
CT Laboratories
Environmental & Analytical Services
1230 Lange Court
Baraboo, Wisconsin 53913

Attn: Jodi Serstad

Authorized for release by:
5/11/2022 9:14:49 AM
Nathan Trowbridge, Manager of Project Management
(574)233-4777
Nathan.Trowbridge@et.eurofinsus.com

Designee for

Traci Chlebowski, Project Manager
(574)233-4777
Traci.Chlebowski@et.eurofinsus.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
QC Sample Results 7
QC Association Summary 8
Lab Chronicle 9
Certification Summary 10
Method Summary 11
Sample Summary 12
Chain of Custody 13
Receipt Checklists 14

Definitions/Glossary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Job ID: 810-22631-1

Laboratory: Eurofins Eaton South Bend

Narrative

Job Narrative
810-22631-1

Comments
No additional comments.

Receipt
The samples were received on 4/28/2022 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.0º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Client Sample ID: 1134804/54MW13 — Lab Sample ID: 810-22631-1

No Detections.

Client Sample ID: 1134805/54MW10 — Lab Sample ID: 810-22631-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Client Sample ID: 1134804/54MW13

Lab Sample ID: 810-22631-1

Date Collected: 04/25/22 12:10

Matrix: Water

Date Received: 04/28/22 08:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			04/28/22 21:56	1
Chlorite	<10		10		ug/L			04/28/22 21:56	1

Client Sample ID: 1134805/54MW10

Lab Sample ID: 810-22631-2

Date Collected: 04/25/22 14:55

Matrix: Water

Date Received: 04/28/22 08:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			04/28/22 23:27	1
Chlorite	<10		10		ug/L			04/28/22 23:27	1

QC Sample Results

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 810-17793/4
Matrix: Water
Analysis Batch: 17793

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			04/28/22 13:47	1
Chlorite	<10		10		ug/L			04/28/22 13:47	1

Lab Sample ID: LCS 810-17793/5
Matrix: Water
Analysis Batch: 17793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			250	246		ug/L		99	90 - 110		
Chlorite			250	254		ug/L		102	90 - 110		

Lab Sample ID: LLCS 810-17793/1
Matrix: Water
Analysis Batch: 17793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			10.0	13.5		ug/L		135			
Chlorite			10.0	13.4		ug/L		134			

Lab Sample ID: 810-22631-1 MS
Matrix: Water
Analysis Batch: 17793

Client Sample ID: 1134804/54MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate	<10		250	243		ug/L		97	90 - 110		
Chlorite	<10		250	268		ug/L		107	90 - 110		

Lab Sample ID: 810-22631-1 MSD
Matrix: Water
Analysis Batch: 17793

Client Sample ID: 1134804/54MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorate	<10		250	242		ug/L		97	90 - 110	0	20
Chlorite	<10		250	268		ug/L		107	90 - 110	0	20

QC Association Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

HPLC/IC

Analysis Batch: 17793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-22631-1	1134804/54MW13	Total/NA	Water	300.0	
810-22631-2	1134805/54MW10	Total/NA	Water	300.0	
MB 810-17793/4	Method Blank	Total/NA	Water	300.0	
LCS 810-17793/5	Lab Control Sample	Total/NA	Water	300.0	
LLCS 810-17793/1	Lab Control Sample	Total/NA	Water	300.0	
810-22631-1 MS	1134804/54MW13	Total/NA	Water	300.0	
810-22631-1 MSD	1134804/54MW13	Total/NA	Water	300.0	

Lab Chronicle

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Client Sample ID: 1134804/54MW13

Lab Sample ID: 810-22631-1

Date Collected: 04/25/22 12:10

Matrix: Water

Date Received: 04/28/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	17793	04/28/22 21:56	JL	EA SB

Client Sample ID: 1134805/54MW10

Lab Sample ID: 810-22631-2

Date Collected: 04/25/22 14:55

Matrix: Water

Date Received: 04/28/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	17793	04/28/22 23:27	JL	EA SB

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Laboratory: Eurofins Eaton South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999766900	08-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chlorate
300.0		Water	Chlorite

Method Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-22631-1	1134804/54MW13	Water	04/25/22 12:10	04/28/22 08:00
810-22631-2	1134805/54MW10	Water	04/25/22 14:55	04/28/22 08:00

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.c

810-22631 Chain of Custody

Sub-Contract Laboratory Chain-of-Custody and Purchase Order

PURCHASE ORDER #: 169098 EEA-IN *The PO# must appear on all invoice and reports!*

Upon Receipt of Samples, please verify that samples were received in acceptable condition then sign this form and fax to (608)356-2766 or email to the project manager. Sample temperature, upon receipt, must be recorded on this document unless thermal preservation is not a method requirement.

Ship to: **Eurofins Eaton Analytical - IN**
110 South Hill Street
South Bend, IN 46617

Return Invoice and Results to: **bszymanski@ctlaboratories.com**

CTLaboratories
Brett M Szymanski
1230 Lange Court
Baraboo WI 53913

Government UPS Shipping Acct ? Y (N)

Ship by: Speedee ☐ UPS Grnd ☐ UPS 2nd ☐ UPS NDA [X]

Date Due: Standard TAT *RUSH TURNAROUND NEEDED? Y or (N) (Circle One)*

Project Name: RADFORD AAP SWMU 54 **Project State:** VA

Analytical/QC Criteria: NONE INDICATED STATE (DOD QSM) NELAP (Circle one) OTHER_____

Report results as EDD? N (Y) (Circle one and indicate type: ERIS + Excel) Data Deliverable Package LEVEL: IV

CTLabs ID#	Sample Date/Time		Matrix	Sample Description	Analyses / Method		Cost
1134804	4/25/2022	12:10	GROUND WATER	54MW13 (Designated MS/MSD)	CHLORATE/CHLORITE	300.1	
1134805	4/25/2022	14:55	GROUND WATER	54MW10	CHLORATE/CHLORITE	300.1	

Relinquished by: Brett Szymanski Date/ Time: 04/27/2022 13:00

Received by: [signature] Date/ Time: 4-28-22 0800 Receipt Temperature (C) 3.0°C

COMMENTS: **PLEASE LOG USING THE SAMPLE DESCRIPTIONS. 54MW13 IS A DESIGNATED MS/MSD SAMPLE.**

REPORT ALL SOLIDS ON A DRY WEIGHT BASIS UNLESS OTHERWISE INDICATED

Form #: FPM1-01
Effective Date: 02/15/14

Login Sample Receipt Checklist

Client: CT Laboratories

Job Number: 810-22631-1

Login Number: 22631
List Number: 1
Creator: Spurgeon, Sheri

List Source: Eurofins Eaton South Bend

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760

www.ctlaboratories.com

ANALYTICAL SUMMARY REPORT

This report at a minimum contains the following information:

Analytical Report of Test Results
Description of QC Qualifiers
Chain of Custody (copy)
Quality Control Summary (if applicable)
Case Narrative (if applicable)
Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

ANALYTICAL SAMPLE DATA

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMUs 49&54
Project Phase: RADFORD, VA
Project #:
Folder #: 169156
Purchase Order #:
Contract #: 3313

Arrival Temperature: 3.3
Report Date: 5/12/2022
Date Received: 4/28/2022
Reprint Date: 5/12/2022

CT LAB#: 1136202 Sample Description: TB1 Client Sample #: Sampled: 4/26/2022 00:00

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 09:23	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 09:23	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 09:23	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136202 Sample Description: TB1 Client Sample #: Sampled: 4/26/2022 00:00

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 09:23	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Carbon tetrachloride	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Chloroform	<1.0	ug/L	0.46	1.0	1.4	1.4	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 09:23	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 09:23	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136202 Sample Description: TB1 Client Sample #: Sampled: 4/26/2022 00:00

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Trichloroethene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 09:23	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 09:23	DGS	EPA 8260C
1,2 Dichloroethane-d4	99.0	% Recovery	81			118	1.00				5/5/22 09:23	DGS	EPA 8260C
Bromofluorobenzene	98.0	% Recovery	85			114	1.00				5/5/22 09:23	DGS	EPA 8260C
d8-Toluene	101	% Recovery	89			112	1.00				5/5/22 09:23	DGS	EPA 8260C
Dibromofluoromethane	102	% Recovery	80			119	1.00				5/5/22 09:23	DGS	EPA 8260C

CT LAB#: 1136203 Sample Description: 13MW5 Client Sample #: Sampled: 4/26/2022 08:21

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***5.0***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 14:25	TMG	EPA 9056A
Nitrate Nitrogen	***0.82***	mg/L	0.12	0.20	0.40	0.40	1.00	H			4/28/22 14:25	TMG	EPA 9056A
Sulfate	***120***	mg/L	4.0	7.5	15	15	5.00	M			4/29/22 08:39	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 13:31	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136203 Sample Description: 13MW5 Client Sample #: Sampled: 4/26/2022 08:21

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 10:52	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 10:52	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 10:52	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 10:52	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Carbon tetrachloride	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Chloroform	<1.0	ug/L	0.46	1.0	1.4	1.4	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 10:52	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136203 Sample Description: 13MW5 Client Sample #: Sampled: 4/26/2022 08:21

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 10:52	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Trichloroethene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 10:52	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 10:52	DGS	EPA 8260C
1,2 Dichloroethane-d4	100	% Recovery	81			118	1.00				5/5/22 10:52	DGS	EPA 8260C
Bromofluorobenzene	99.0	% Recovery	85			114	1.00				5/5/22 10:52	DGS	EPA 8260C
d8-Toluene	101	% Recovery	89			112	1.00				5/5/22 10:52	DGS	EPA 8260C
Dibromofluoromethane	101	% Recovery	80			119	1.00				5/5/22 10:52	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:05	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 09:05	DGS	RSK 175
Methane	<0.90	ug/L	0.45	0.90	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:05	DGS	RSK 175

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136204 Sample Description: 13MW4 Client Sample #: Sampled: 4/26/2022 09:25

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***6.2***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 14:39	TMG	EPA 9056A
Nitrate Nitrogen	***0.57***	mg/L	0.12	0.20	0.40	0.40	1.00	H			4/28/22 14:39	TMG	EPA 9056A
Sulfate	***51***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 14:39	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 14:31	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 13:55	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 13:55	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 13:55	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 13:55	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136204 Sample Description: 13MW4 Client Sample #: Sampled: 4/26/2022 09:25

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Carbon tetrachloride	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Chloroform	<1.0	ug/L	0.46	1.0	1.4	1.4	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 13:55	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 13:55	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Trichloroethene	***0.68***	ug/L	0.39	1.0	1.2	1.2	1.00	J			5/5/22 13:55	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136204 Sample Description: 13MW4 Client Sample #: Sampled: 4/26/2022 09:25

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 13:55	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 13:55	DGS	EPA 8260C
1,2 Dichloroethane-d4	101	% Recovery	81			118	1.00				5/5/22 13:55	DGS	EPA 8260C
Bromofluorobenzene	98.0	% Recovery	85			114	1.00				5/5/22 13:55	DGS	EPA 8260C
d8-Toluene	101	% Recovery	89			112	1.00				5/5/22 13:55	DGS	EPA 8260C
Dibromofluoromethane	101	% Recovery	80			119	1.00				5/5/22 13:55	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:26	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 09:26	DGS	RSK 175
Methane	<0.90	ug/L	0.45	0.90	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:26	DGS	RSK 175

CT LAB#: 1136205 Sample Description: 13MW3 Client Sample #: Sampled: 4/26/2022 10:26

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***5.1***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 10:52	TMG	EPA 9056A
Nitrate Nitrogen	***1.9***	mg/L	0.12	0.20	0.40	0.40	1.00				4/28/22 10:52	TMG	EPA 9056A
Sulfate	***120***	mg/L	4.0	7.5	15	15	5.00				4/28/22 15:36	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 15:34	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136205 Sample Description: 13MW3 Client Sample #: Sampled: 4/26/2022 10:26

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 14:24	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 14:24	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 14:24	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 14:24	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Carbon tetrachloride	***6.0***	ug/L	0.37	1.0	1.2	1.2	1.00				5/5/22 14:24	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Chloroform	***0.61***	ug/L	0.46	1.0	1.4	1.4	1.00	J			5/5/22 14:24	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 14:24	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136205 Sample Description: 13MW3 Client Sample #: Sampled: 4/26/2022 10:26

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 14:24	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Trichloroethene	***0.95***	ug/L	0.39	1.0	1.2	1.2	1.00	J			5/5/22 14:24	DGS	EPA 8260C
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 14:24	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 14:24	DGS	EPA 8260C
1,2 Dichloroethane-d4	101	% Recovery	81			118	1.00				5/5/22 14:24	DGS	EPA 8260C
Bromofluorobenzene	100	% Recovery	85			114	1.00				5/5/22 14:24	DGS	EPA 8260C
d8-Toluene	101	% Recovery	89			112	1.00				5/5/22 14:24	DGS	EPA 8260C
Dibromofluoromethane	104	% Recovery	80			119	1.00				5/5/22 14:24	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:30	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 09:30	DGS	RSK 175
Methane	<0.90	ug/L	0.45	0.90	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:30	DGS	RSK 175

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136206 Sample Description: 49MW04 Client Sample #: Sampled: 4/26/2022 11:46

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***8.7***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 11:06	TMG	EPA 9056A
Nitrate Nitrogen	***0.40***	mg/L	0.12	0.20	0.40	0.40	1.00				4/28/22 11:06	TMG	EPA 9056A
Sulfate	***69***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 11:06	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 15:48	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 14:53	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 14:53	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 14:53	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 14:53	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136206 Sample Description: 49MW04 Client Sample #: Sampled: 4/26/2022 11:46

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Carbon tetrachloride	***0.74***	ug/L	0.37	1.0	1.2	1.2	1.00	J			5/5/22 14:53	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Chloroform	<1.0	ug/L	0.46	1.0	1.4	1.4	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 14:53	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 14:53	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Trichloroethene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 14:53	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136206 Sample Description: 49MW04 Client Sample #: Sampled: 4/26/2022 11:46

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 14:53	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 14:53	DGS	EPA 8260C
1,2 Dichloroethane-d4	98.0	% Recovery	81			118	1.00				5/5/22 14:53	DGS	EPA 8260C
Bromofluorobenzene	102	% Recovery	85			114	1.00				5/5/22 14:53	DGS	EPA 8260C
d8-Toluene	101	% Recovery	89			112	1.00				5/5/22 14:53	DGS	EPA 8260C
Dibromofluoromethane	102	% Recovery	80			119	1.00				5/5/22 14:53	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:42	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 09:42	DGS	RSK 175
Methane	<0.90	ug/L	0.45	0.90	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:42	DGS	RSK 175

CT LAB#: 1136207 Sample Description: 49TW04 Client Sample #: Sampled: 4/26/2022 11:46

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***8.0***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 11:20	TMG	EPA 9056A
Nitrate Nitrogen	***0.39***	mg/L	0.12	0.20	0.40	0.40	1.00	J			4/28/22 11:20	TMG	EPA 9056A
Sulfate	***67***	mg/L	4.0	7.5	15	15	5.00				4/29/22 01:34	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 16:02	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136207 Sample Description: 49TW04 Client Sample #: Sampled: 4/26/2022 11:46

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 15:22	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 15:22	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 15:22	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 15:22	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Carbon tetrachloride	***0.70***	ug/L	0.37	1.0	1.2	1.2	1.00	J			5/5/22 15:22	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Chloroform	<1.0	ug/L	0.46	1.0	1.4	1.4	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 15:22	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136207 Sample Description: 49TW04 Client Sample #: Sampled: 4/26/2022 11:46

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 15:22	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Trichloroethene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 15:22	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 15:22	DGS	EPA 8260C
1,2 Dichloroethane-d4	99.0	% Recovery	81			118	1.00				5/5/22 15:22	DGS	EPA 8260C
Bromofluorobenzene	99.0	% Recovery	85			114	1.00				5/5/22 15:22	DGS	EPA 8260C
d8-Toluene	102	% Recovery	89			112	1.00				5/5/22 15:22	DGS	EPA 8260C
Dibromofluoromethane	103	% Recovery	80			119	1.00				5/5/22 15:22	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:46	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 09:46	DGS	RSK 175
Methane	<0.90	ug/L	0.45	0.90	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:46	DGS	RSK 175

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136208 Sample Description: 13MW2 Client Sample #: Sampled: 4/26/2022 12:47

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***4.9***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 11:35	TMG	EPA 9056A
Nitrate Nitrogen	***0.30***	mg/L	0.12	0.20	0.40	0.40	1.00	J			4/28/22 11:35	TMG	EPA 9056A
Sulfate	***45***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 11:35	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 16:17	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 15:51	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 15:51	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 15:51	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 15:51	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136208 Sample Description: 13MW2 Client Sample #: Sampled: 4/26/2022 12:47

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Carbon tetrachloride	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Chloroform	<1.0	ug/L	0.46	1.0	1.4	1.4	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 15:51	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 15:51	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Trichloroethene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 15:51	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136208 Sample Description: 13MW2 Client Sample #: Sampled: 4/26/2022 12:47

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 15:51	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 15:51	DGS	EPA 8260C
1,2 Dichloroethane-d4	101	% Recovery	81			118	1.00				5/5/22 15:51	DGS	EPA 8260C
Bromofluorobenzene	100	% Recovery	85			114	1.00				5/5/22 15:51	DGS	EPA 8260C
d8-Toluene	101	% Recovery	89			112	1.00				5/5/22 15:51	DGS	EPA 8260C
Dibromofluoromethane	103	% Recovery	80			119	1.00				5/5/22 15:51	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:50	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 09:50	DGS	RSK 175
Methane	<0.90	ug/L	0.45	0.90	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:50	DGS	RSK 175

CT LAB#: 1136209 Sample Description: 54MW12 Client Sample #: Sampled: 4/26/2022 14:59

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Total Inorganic Carbon	***82***	mg/L	0.5	1.5	3.0	3.0	1.00				5/2/22 10:26	TMG	EPA 9060A ^
Chloride	***7.5***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 11:49	TMG	EPA 9056A
Nitrate Nitrogen	***0.73***	mg/L	0.12	0.20	0.40	0.40	1.00				4/28/22 11:49	TMG	EPA 9056A
Sulfate	***33***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 11:49	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 16:37	TMG	EPA 9060A
Sub Lab Results													
Chlorate	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1
Chlorite	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136210 Sample Description: 54TW12 Client Sample #: Sampled: 4/26/2022 14:59

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results														
Total Inorganic Carbon	***83***	mg/L	0.5	1.5	3.0	3.0	1.00				5/2/22 10:40	TMG	EPA 9060A	^
Chloride	***7.3***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 12:03	TMG	EPA 9056A	
Nitrate Nitrogen	***0.75***	mg/L	0.12	0.20	0.40	0.40	1.00				4/28/22 12:03	TMG	EPA 9056A	
Sulfate	***33***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 12:03	TMG	EPA 9056A	
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 16:52	TMG	EPA 9060A	
Sub Lab Results														
Chlorate	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1	
Chlorite	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1	

CT LAB#: 1136211 Sample Description: 54MW1 Client Sample #: Sampled: 4/26/2022 16:44

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results														
Total Inorganic Carbon	***60***	mg/L	0.5	1.5	3.0	3.0	1.00				5/2/22 10:53	TMG	EPA 9060A	^
Chloride	***3.1***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 12:17	TMG	EPA 9056A	
Nitrate Nitrogen	***0.13***	mg/L	0.12	0.20	0.40	0.40	1.00	J			4/28/22 12:17	TMG	EPA 9056A	
Sulfate	***31***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 12:17	TMG	EPA 9056A	
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 17:07	TMG	EPA 9060A	
Sub Lab Results														
Chlorate	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1	
Chlorite	***ATTACHED***						1.00				5/11/22 00:00	SUB	300.1	

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136212 Sample Description: 54IDW Client Sample #: Sampled: 4/26/2022 17:44

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
pH	***7.37***	S.U.	0.1	0.1	0.1	0.1	1.00				4/28/22 15:00	HLB	EPA 9040C ^
COD	***160***	mg/L	18	50	75	75	1.00			4/29/22 09:05	4/29/22 16:52	RLB	EPA 410.4 ^
Metals Results													
Total Potassium	***828***	ug/L	120	250	500	500	1.00			4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Sodium	***25800***	ug/L	200	500	700	700	1.00			4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Aluminum	***171***	ug/L	29	60	120	120	1.00			4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Antimony	<10	ug/L	4.4	10	20	20	1.00	U		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Arsenic	<20	ug/L	7.7	20	40	40	1.00	U		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Barium	***78.5***	ug/L	0.71	2.0	4.0	4.0	1.00			4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Beryllium	<3.0	ug/L	0.95	3.0	8.0	8.0	1.00	U		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Cadmium	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Calcium	***58700***	ug/L	17	50	100	100	1.00			4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Chromium	***3.1***	ug/L	1.1	2.5	5.0	5.0	1.00	J		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Cobalt	<2.5	ug/L	0.55	2.5	5.0	5.0	1.00	U		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Copper	***8.7***	ug/L	5.2	20	40	40	1.00	J		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Iron	***209***	ug/L	11	40	80	80	1.00			4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Lead	<2.0	ug/L	1.4	2.0	4.0	4.0	1.00	U		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Magnesium	***24500***	ug/L	10	25	40	40	1.00			4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Manganese	***8.6***	ug/L	1.4	3.0	5.0	5.0	1.00			4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Nickel	<3.0	ug/L	1.5	3.0	5.0	5.0	1.00	U		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Selenium	<20	ug/L	10	20	40	40	1.00	U		4/29/22 10:19	5/9/22 13:18	NAH	EPA 6010C
Total Silver	<2.5	ug/L	1.1	2.5	5.0	5.0	1.00	U		4/29/22 10:19	5/9/22 13:18	NAH	EPA 6010C
Total Thallium	<20	ug/L	6.8	20	40	40	1.00	U		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Vanadium	<3.0	ug/L	1.3	3.0	5.0	5.0	1.00	U		4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Zinc	***51.6***	ug/L	4.5	10	20	20	1.00			4/29/22 10:19	5/3/22 15:57	NAH	EPA 6010C
Total Mercury	<0.080	ug/L	0.020	0.080	0.12	0.12	1.00	U M,Y		5/3/22 14:15	5/4/22 10:38	MDS	EPA 7470A

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136212 Sample Description: 54IDW Client Sample #: Sampled: 4/26/2022 17:44

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method

CT LAB#: 1136213 Sample Description: 49MW05 Client Sample #: Sampled: 4/27/2022 08:32

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***3.4***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 12:31	TMG	EPA 9056A
Nitrate Nitrogen	<0.20	mg/L	0.12	0.20	0.40	0.40	1.00	U			4/28/22 12:31	TMG	EPA 9056A
Sulfate	***53***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 12:31	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 17:25	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 16:20	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 16:20	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 16:20	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136213 Sample Description: 49MW05 Client Sample #: Sampled: 4/27/2022 08:32

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 16:20	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Carbon tetrachloride	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Chloroform	<1.0	ug/L	0.46	1.0	1.4	1.4	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 16:20	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 16:20	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136213 Sample Description: 49MW05 Client Sample #: Sampled: 4/27/2022 08:32

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Trichloroethene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 16:20	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 16:20	DGS	EPA 8260C
1,2 Dichloroethane-d4	100	% Recovery	81			118	1.00				5/5/22 16:20	DGS	EPA 8260C
Bromofluorobenzene	98.0	% Recovery	85			114	1.00				5/5/22 16:20	DGS	EPA 8260C
d8-Toluene	101	% Recovery	89			112	1.00				5/5/22 16:20	DGS	EPA 8260C
Dibromofluoromethane	103	% Recovery	80			119	1.00				5/5/22 16:20	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:55	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 09:55	DGS	RSK 175
Methane	<0.90	ug/L	0.45	0.90	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:55	DGS	RSK 175

CT LAB#: 1136214 Sample Description: 49MW02 Client Sample #: Sampled: 4/27/2022 11:32

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***2.6***	mg/L	1.0	1.5	3.0	3.0	1.00	J			4/28/22 12:46	TMG	EPA 9056A
Nitrate Nitrogen	***0.35***	mg/L	0.12	0.20	0.40	0.40	1.00	J			4/28/22 12:46	TMG	EPA 9056A
Sulfate	***13***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 12:46	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 17:42	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 16:49	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136214 Sample Description: 49MW02 Client Sample #: Sampled: 4/27/2022 11:32

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 16:49	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 16:49	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 16:49	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 16:49	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Carbon tetrachloride	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Chloroform	<1.0	ug/L	0.46	1.0	1.4	1.4	1.00	U			5/5/22 16:49	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136214 Sample Description: 49MW02 Client Sample #: Sampled: 4/27/2022 11:32

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 16:49	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 16:49	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Trichloroethene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 16:49	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 16:49	DGS	EPA 8260C
1,2 Dichloroethane-d4	102	% Recovery	81			118	1.00				5/5/22 16:49	DGS	EPA 8260C
Bromofluorobenzene	98.0	% Recovery	85			114	1.00				5/5/22 16:49	DGS	EPA 8260C
d8-Toluene	102	% Recovery	89			112	1.00				5/5/22 16:49	DGS	EPA 8260C
Dibromofluoromethane	103	% Recovery	80			119	1.00				5/5/22 16:49	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 09:58	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 09:58	DGS	RSK 175

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136214 Sample Description: 49MW02 Client Sample #: Sampled: 4/27/2022 11:32

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Methane	***2.7***	ug/L	0.45	0.90	1.0	1.0	1.00			5/4/22 08:50	5/4/22 09:58	DGS	RSK 175

CT LAB#: 1136215 Sample Description: 48MW3 Client Sample #: Sampled: 4/27/2022 12:52

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***3.3***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 13:00	TMG	EPA 9056A
Nitrate Nitrogen	***6.5***	mg/L	0.60	1.0	2.0	2.0	5.00				4/29/22 01:48	TMG	EPA 9056A
Sulfate	***35***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 13:00	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 18:00	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/6/22 09:24	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136215 Sample Description: 48MW3 Client Sample #: Sampled: 4/27/2022 12:52

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/6/22 09:24	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/6/22 09:24	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/6/22 09:24	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Carbon tetrachloride	***75***	ug/L	0.37	1.0	1.2	1.2	1.00				5/6/22 09:24	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Chloroform	***10***	ug/L	0.46	1.0	1.4	1.4	1.00				5/6/22 09:24	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/6/22 09:24	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/6/22 09:24	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136215 Sample Description: 48MW3 Client Sample #: Sampled: 4/27/2022 12:52

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Trichloroethene	***13***	ug/L	0.39	1.0	1.2	1.2	1.00				5/6/22 09:24	DGS	EPA 8260C
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/6/22 09:24	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/6/22 09:24	DGS	EPA 8260C
1,2 Dichloroethane-d4	104	% Recovery	81			118	1.00				5/6/22 09:24	DGS	EPA 8260C
Bromofluorobenzene	99.0	% Recovery	85			114	1.00				5/6/22 09:24	DGS	EPA 8260C
d8-Toluene	103	% Recovery	89			112	1.00				5/6/22 09:24	DGS	EPA 8260C
Dibromofluoromethane	102	% Recovery	80			119	1.00				5/6/22 09:24	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 10:03	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 10:03	DGS	RSK 175
Methane	<0.90	ug/L	0.45	0.90	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 10:03	DGS	RSK 175

CT LAB#: 1136216 Sample Description: 48MW2 Client Sample #: Sampled: 4/27/2022 14:04

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***2.3***	mg/L	1.0	1.5	3.0	3.0	1.00	J			4/28/22 13:57	TMG	EPA 9056A
Nitrate Nitrogen	***0.78***	mg/L	0.12	0.20	0.40	0.40	1.00				4/28/22 13:57	TMG	EPA 9056A
Sulfate	***3.4***	mg/L	0.8	1.5	3.0	3.0	1.00				4/28/22 13:57	TMG	EPA 9056A
Total Organic Carbon	<1.5	mg/L	0.5	1.5	3.0	3.0	1.00	U			5/4/22 18:49	TMG	EPA 9060A

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136216 Sample Description: 48MW2 Client Sample #: Sampled: 4/27/2022 14:04

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,1-Dichloroethane	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 17:47	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 17:47	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 17:47	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 17:47	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Carbon tetrachloride	***29***	ug/L	0.37	1.0	1.2	1.2	1.00				5/5/22 17:47	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 17:47	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136216 Sample Description: 48MW2 Client Sample #: Sampled: 4/27/2022 14:04

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Chloroform	***3.4***	ug/L	0.46	1.0	1.4	1.4	1.00				5/5/22 17:47	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
cis-1,2-Dichloroethene	<1.0	ug/L	0.41	1.0	1.3	1.3	1.00	U			5/5/22 17:47	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 17:47	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Trichloroethene	***1.7***	ug/L	0.39	1.0	1.2	1.2	1.00				5/5/22 17:47	DGS	EPA 8260C
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 17:47	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 17:47	DGS	EPA 8260C
1,2 Dichloroethane-d4	101	% Recovery	81			118	1.00				5/5/22 17:47	DGS	EPA 8260C
Bromofluorobenzene	100	% Recovery	85			114	1.00				5/5/22 17:47	DGS	EPA 8260C
d8-Toluene	102	% Recovery	89			112	1.00				5/5/22 17:47	DGS	EPA 8260C
Dibromofluoromethane	103	% Recovery	80			119	1.00				5/5/22 17:47	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136216 Sample Description: 48MW2 Client Sample #: Sampled: 4/27/2022 14:04

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 10:07	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 10:07	DGS	RSK 175
Methane	***0.58***	ug/L	0.45	0.90	1.0	1.0	1.00	J		5/4/22 08:50	5/4/22 10:07	DGS	RSK 175

CT LAB#: 1136217 Sample Description: 48MW6 Client Sample #: Sampled: 4/27/2022 15:37

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results													
Chloride	***12***	mg/L	1.0	1.5	3.0	3.0	1.00				4/28/22 14:11	TMG	EPA 9056A
Nitrate Nitrogen	***1.0***	mg/L	0.12	0.20	0.40	0.40	1.00				4/28/22 14:11	TMG	EPA 9056A
Sulfate	***74***	mg/L	4.0	7.5	15	15	5.00				4/28/22 15:51	TMG	EPA 9056A
Total Organic Carbon	***0.50***	mg/L	0.5	1.5	3.0	3.0	1.00	J			5/4/22 19:00	TMG	EPA 9060A
Organic Results													
1,1,1-Trichloroethane	<1.0	ug/L	0.38	1.0	1.2	1.2	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,1,2,2-Tetrachloroethane	<1.0	ug/L	0.36	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,1,2-Trichloroethane	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,1-Dichloroethane	***1.0***	ug/L	0.28	1.0	1.1	1.1	1.00	J			5/5/22 18:15	DGS	EPA 8260C
1,1-Dichloroethene	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,2,3-Trichlorobenzene	<1.0	ug/L	0.43	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,2,4-Trichlorobenzene	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,2-Dibromo-3-chloropropane	<1.0	ug/L	0.35	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,2-Dibromoethane	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,2-Dichlorobenzene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,2-Dichloroethane	<2.0	ug/L	0.69	2.0	2.1	2.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,2-Dichloropropane	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 18:15	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136217 Sample Description: 48MW6 Client Sample #: Sampled: 4/27/2022 15:37

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,3-Dichlorobenzene	<1.0	ug/L	0.30	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,4-Dioxane	<50	ug/L	34	50	100	100	1.00	U			5/5/22 18:15	DGS	EPA 8260C
112Trichloro122trifluoroethane	<4.0	ug/L	1.5	4.0	4.5	4.5	1.00	U			5/5/22 18:15	DGS	EPA 8260C
2-Butanone	<10	ug/L	2.9	10	11	11	1.00	U			5/5/22 18:15	DGS	EPA 8260C
2-Hexanone	<10	ug/L	3.3	10	11	11	1.00	U			5/5/22 18:15	DGS	EPA 8260C
4-Methyl-2-pentanone	<10	ug/L	3.7	10	12	12	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Acetone	<10	ug/L	4.1	10	20	20	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Benzene	<1.0	ug/L	0.47	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Bromochloromethane	<1.0	ug/L	0.26	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Bromodichloromethane	<0.25	ug/L	0.080	0.25	0.50	0.50	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Bromoform	<1.0	ug/L	0.50	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Bromomethane	<1.0	ug/L	0.49	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Carbon disulfide	<2.0	ug/L	0.83	2.0	4.0	4.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Carbon tetrachloride	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Chlorobenzene	<1.0	ug/L	0.37	1.0	1.2	1.2	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Chloroethane	<1.0	ug/L	0.36	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Chloroform	<1.0	ug/L	0.46	1.0	1.4	1.4	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Chloromethane	<1.0	ug/L	0.39	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
cis-1,2-Dichloroethene	***2.0***	ug/L	0.41	1.0	1.3	1.3	1.00				5/5/22 18:15	DGS	EPA 8260C
cis-1,3-Dichloropropene	<1.0	ug/L	0.34	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Cyclohexane	<2.0	ug/L	0.71	2.0	2.2	2.2	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Dibromochloromethane	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Dichlorodifluoromethane	<2.0	ug/L	0.63	2.0	2.1	2.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Ethylbenzene	<1.0	ug/L	0.42	1.0	1.3	1.3	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Isopropylbenzene	<1.0	ug/L	0.39	1.0	1.2	1.2	1.00	U			5/5/22 18:15	DGS	EPA 8260C
m & p-Xylene	<2.0	ug/L	0.74	2.0	2.3	2.3	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Methyl acetate	<1.0	ug/L	0.34	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Methyl tert-butyl ether	<1.0	ug/L	0.28	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 1136217 Sample Description: 48MW6 Client Sample #: Sampled: 4/27/2022 15:37

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Leach Date	Prep Date/Time	Analysis Date/Time	Analyst	Method
Methylcyclohexane	<2.0	ug/L	0.78	2.0	2.4	2.4	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Methylene chloride	<4.0	ug/L	1.2	4.0	4.1	4.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
o-Xylene	<2.0	ug/L	0.72	2.0	2.2	2.2	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Styrene	<1.0	ug/L	0.33	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Tetrachloroethene	<1.0	ug/L	0.54	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Toluene	<1.0	ug/L	0.27	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
trans-1,2-Dichloroethene	<1.0	ug/L	0.35	1.0	1.1	1.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
trans-1,3-Dichloropropene	<2.0	ug/L	0.56	2.0	2.1	2.1	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Trichloroethene	***1.4***	ug/L	0.39	1.0	1.2	1.2	1.00				5/5/22 18:15	DGS	EPA 8260C
Trichlorofluoromethane	<1.0	ug/L	0.41	1.0	2.0	2.0	1.00	U			5/5/22 18:15	DGS	EPA 8260C
Vinyl chloride	<0.25	ug/L	0.12	0.25	0.50	0.50	1.00	U			5/5/22 18:15	DGS	EPA 8260C
1,2 Dichloroethane-d4	103	% Recovery	81			118	1.00				5/5/22 18:15	DGS	EPA 8260C
Bromofluorobenzene	99.0	% Recovery	85			114	1.00				5/5/22 18:15	DGS	EPA 8260C
d8-Toluene	101	% Recovery	89			112	1.00				5/5/22 18:15	DGS	EPA 8260C
Dibromofluoromethane	100	% Recovery	80			119	1.00				5/5/22 18:15	DGS	EPA 8260C
Ethane	<0.80	ug/L	0.38	0.80	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 10:38	DGS	RSK 175
Ethene	<1.2	ug/L	0.59	1.2	1.4	1.4	1.00	U		5/4/22 08:50	5/4/22 10:38	DGS	RSK 175
Methane	<0.90	ug/L	0.45	0.90	1.0	1.0	1.00	U		5/4/22 08:50	5/4/22 10:38	DGS	RSK 175

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method . DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted . The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

Submitted by: Brett M. Szymanski
Project Manager
608-356-2760

QC Qualifiers

Code	Description
B	Analyte detected in the associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
I	Incubator temperature was outside acceptance limits during test period.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was below detection limit.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Specified calibration criteria was not met.

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
Wisconsin (DATCP) Bacteriology ID# 289
Louisiana NELAP (primary) ID# ACC20190002
Illinois NELAP Lab ID# 200073
Kansas NELAP Lab ID# E-10368
Virginia NELAP Lab ID# 460203
ISO/IEC 17025-2005 A2LA Cert # 3806.01
DoD-ELAP A2LA 3806.01
GA EPD Stipulation ID ACC20190002

CT LABORATORIES
delivering more than data from your environmental analyses

1230 Lange Court• Baraboo, WI 53913• 608356-2760
www.ctlaboratories.com

QC Summary Report

WESTON SOLUTIONS, INC. **Project Name: RADFORD AAP SWMUs 49&54**

SDG #: 0 **Folder #: 169156** **Project #:**

Duplicate

Analytical Run #:	211534	Analysis Date:	4/28/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139970	Analysis Time:	14:54	Prep Date/Time:		Method:	SW9056A
Parent Sample #:	1136203	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	5.03	mg/L	5.0				3.0	1	10
Nitrate Nitrogen	0.822	mg/L	0.82				0.40	0	10
Sulfate	120	mg/L	120				3.0	0	10

Lab Control Spike Water

Analytical Run #:	211534	Analysis Date:	4/28/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139968	Analysis Time:	13:28	Prep Date/Time:		Method:	SW9056A
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Chloride	14.58	mg/L			15.00	97	87	---	111		
Nitrate Nitrogen	3.553	mg/L			3.50	102	88	---	111		
Sulfate	24.46	mg/L			25.00	98	87	---	112		

Method Blank Water

Analytical Run #:	211534	Analysis Date:	4/28/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139969	Analysis Time:	13:43	Prep Date/Time:		Method:	SW9056A
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	1.0	mg/L		U	0		1.5		
Nitrate Nitrogen	0.12	mg/L		U	0		0.20		
Sulfate	0.8	mg/L		U	0		1.5		

Matrix Spike Duplicate Water

Analytical Run #:	211534	Analysis Date:	4/28/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139972	Analysis Time:	15:22	Prep Date/Time:		Method:	SW9056A
Parent Sample #:	1139971	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	12.3	mg/L	5.0		8.0	91	87 --- 111	0	15
Nitrate Nitrogen	2.93	mg/L	0.82		2.0	106	88 --- 111	0	15
Sulfate	156	mg/L	120		40.0	90	87 --- 112	2	15

Matrix Spike Water

Analytical Run #:	211534	Analysis Date:	4/28/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139971	Analysis Time:	15:08	Prep Date/Time:		Method:	SW9056A
Parent Sample #:	1136203	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chloride	12.4	mg/L	5.0		8.0	92	87 --- 111		15
Nitrate Nitrogen	2.95	mg/L	0.82		2.0	106	88 --- 111		15
Sulfate	153	mg/L	120		40.0	82	87 --- 112		15

Duplicate

Analytical Run #:	211565	Analysis Date:	4/29/2022	Prep Batch #:	95239	Matrix:	GROUND WATER
CTLab #:	1136535	Analysis Time:	16:52	Prep Date/Time:	04/29/2022 09:05	Method:	E410.4
Parent Sample #:	1136212	Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
COD	159	mg/L	160					1	20

Lab Control Spike Water

Analytical Run #:	211565	Analysis Date:	4/29/2022	Prep Batch #:	95239	Matrix:	LIQUID
CTLab #:	1136534	Analysis Time:	16:52	Prep Date/Time:	04/29/2022 09:05	Method:	E410.4
Parent Sample #:		Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
COD	404.2	mg/L			400.0	101	90 --- 110		

Method Blank Water

Analytical Run #:	211565	Analysis Date:	4/29/2022	Prep Batch #:	95239	Matrix:	LIQUID
CTLab #:	1136533	Analysis Time:	16:52	Prep Date/Time:	04/29/2022 09:05	Method:	E410.4
Parent Sample #:		Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total COD	18	mg/L		U	0		37		

Matrix Spike Duplicate Water

Analytical Run #:	211565	Analysis Date:	4/29/2022	Prep Batch #:	95239	Matrix:	GROUND WATER
CTLab #:	1136537	Analysis Time:	16:52	Prep Date/Time:	04/29/2022 09:05	Method:	E410.4
Parent Sample #:	1136536	Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
COD	306	mg/L	160		148	99	90 --- 110	0	20

Matrix Spike Water

Analytical Run #:	211565	Analysis Date:	4/29/2022	Prep Batch #:	95239	Matrix:	GROUND WATER
CTLab #:	1136536	Analysis Time:	16:52	Prep Date/Time:	04/29/2022 09:05	Method:	E410.4
Parent Sample #:	1136212	Analyst:	RLB	Prep Analyst:	RLB		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
COD	306	mg/L	160		148	99	90 --- 110		20

Lab Control Spike Water

Analytical Run #:	211613	Analysis Date:	5/2/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139919	Analysis Time:	09:54	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Inorganic Carbon	48.64	mg/L			50.0	97	85 --- 111		

Method Blank Water

Analytical Run #:	211613	Analysis Date:	5/2/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139920	Analysis Time:	10:08	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Inorganic Carbon	0.5	mg/L		U	0		1.5		

Duplicate

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139928	Analysis Time:	13:49	Prep Date/Time:		Method:	SW9060
Parent Sample #:	1136203	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	0.5	mg/L	<0.5	U			1.5	0	20

Lab Control Spike Water

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139924	Analysis Time:	11:51	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	48.33	mg/L			50.0	97	85 --- 111		20

Method Blank Water

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139925	Analysis Time:	12:04	Prep Date/Time:		Method:	SW9060
Parent Sample #:		Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	0.5	mg/L		U	0		1.5		

Matrix Spike Duplicate Water

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139930	Analysis Time:	14:19	Prep Date/Time:		Method:	SW9060
Parent Sample #:	1139929	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	47.2	mg/L	BDL		50.0	94	85 --- 111	0	20

Matrix Spike Water

Analytical Run #:	211696	Analysis Date:	5/4/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139929	Analysis Time:	14:07	Prep Date/Time:		Method:	SW9060
Parent Sample #:	1136203	Analyst:	TMG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Organic Carbon	47.1	mg/L	BDL		50.0	94	85 --- 111		20

Duplicate

Analytical Run #:	211581	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	GROUND WATER
CTLab #:	1136457	Analysis Time:	16:13	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:	1136212	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Aluminum	172	ug/L	171				120	1	20
Total Antimony	4.40	ug/L	<4.40	U			20	0	20
Total Arsenic	7.70	ug/L	<7.70	U			40	0	20
Total Barium	78.4	ug/L	78.5				4.0	0	20
Total Beryllium	0.950	ug/L	<0.950	U			8.0	0	20
Total Cadmium	0.410	ug/L	<0.410	U			2.0	0	20
Total Calcium	59600	ug/L	58700				100	2	20
Total Chromium	3.4	ug/L	3.1				5.0	9	20
Total Cobalt	0.550	ug/L	<0.550	U			5.0	0	20
Total Copper	6.7	ug/L	8.7				40	26	20
Total Iron	211	ug/L	209				80	1	20
Total Lead	1.40	ug/L	<1.40	U			4.0	0	20
Total Magnesium	24800	ug/L	24500				40	1	20
Total Manganese	8.5	ug/L	8.6				5.0	1	20
Total Nickel	1.50	ug/L	<1.50	U			5.0	0	20
Total Selenium	10.0	ug/L	<10.0	U			40	0	20
Total Silver	1.10	ug/L	<1.10	U			5.0	0	20
Total Thallium	6.80	ug/L	<6.80	U			40	0	20
Total Vanadium	1.30	ug/L	<1.30	U			5.0	0	20
Total Zinc	51.5	ug/L	51.6				20	0	20

Lab Control Spike Water

Analytical Run #:	211581	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	LIQUID
CTLab #:	1136456	Analysis Time:	15:42	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	100.0	ug/L			100.0	100	86 --- 114		

Lab Control Spike Water

Analytical Run #:	211581	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	LIQUID
CTLab #:	1136456	Analysis Time:	15:42	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	98.20	ug/L			100.0	98	87 --- 115		

Lab Control Spike Water

Analytical Run #:	211581	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	LIQUID
CTLab #:	1136456	Analysis Time:	15:42	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Total Aluminum	793.0	ug/L			800.0	99	86	---	115		
Total Antimony	218.0	ug/L			200.0	109	88	---	113		
Total Arsenic	835.0	ug/L			800.0	104	87	---	113		
Total Barium	855.0	ug/L			800.0	107	88	---	113		
Total Beryllium	20.60	ug/L			20.0	103	89	---	112		
Total Cadmium	19.60	ug/L			20.0	98	88	---	113		
Total Calcium	204000	ug/L			200000	102	87	---	113		
Total Chromium	83.60	ug/L			80.0	104	90	---	113		
Total Cobalt	209.0	ug/L			200.0	104	89	---	114		
Total Copper	108.0	ug/L			100.0	108	86	---	114		
Total Iron	420.0	ug/L			400.0	105	87	---	115		
Total Lead	195.0	ug/L			200.0	98	86	---	113		
Total Magnesium	104000	ug/L			100000	104	85	---	113		
Total Manganese	209.0	ug/L			200.0	104	90	---	114		
Total Nickel	210.0	ug/L			200.0	105	88	---	113		
Total Selenium	916.0	ug/L			800.0	114	83	---	114		
Total Silver	19.80	ug/L			20.0	99	84	---	115		
Total Thallium	814.0	ug/L			800.0	102	85	---	114		
Total Vanadium	204.0	ug/L			200.0	102	90	---	111		
Total Zinc	211.0	ug/L			200.0	106	87	---	115		

Method Blank Water

Analytical Run #:	211581	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	LIQUID
CTLab #:	1136455	Analysis Time:	15:49	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	120	ug/L		U	0		250		

Method Blank Water

Analytical Run #:	211581	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	LIQUID
CTLab #:	1136455	Analysis Time:	15:49	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	200	ug/L		U	0		350		

Method Blank Water

Analytical Run #:	211581	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	LIQUID
CTLab #:	1136455	Analysis Time:	15:49	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Aluminum	29	ug/L		U	0		60		
Total Antimony	4.4	ug/L		U	0		10		
Total Arsenic	7.7	ug/L		U	0		20		
Total Barium	0.71	ug/L		U	0		2.0		
Total Beryllium	0.95	ug/L		U	0		4.0		
Total Cadmium	0.41	ug/L		U	0		1.0		
Total Calcium	19	ug/L		U	0		50		
Total Chromium	1.1	ug/L		U	0		2.5		
Total Cobalt	0.55	ug/L		U	0		2.5		
Total Copper	5.2	ug/L		U	0		20		
Total Iron	11	ug/L		U	0		40		
Total Lead	1.4	ug/L		U	0		2.0		
Total Magnesium	10	ug/L		U	0		20		
Total Manganese	1.4	ug/L		U	0		2.5		
Total Nickel	1.5	ug/L		U	0		2.5		
Total Selenium	10	ug/L		U	0		20		
Total Silver	1.1	ug/L		U	0		2.5		
Total Thallium	6.8	ug/L		U	0		20		
Total Vanadium	1.3	ug/L		U	0		2.5		
Total Zinc	4.5	ug/L		U	0		10		

Matrix Spike Duplicate Water

Analytical Run #:	211581	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	GROUND WATER
CTLab #:	1136459	Analysis Time:	16:28	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:	1136458	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Total Aluminum	978	ug/L	171		800	101	86	---	115	2	20
Total Antimony	221	ug/L	BDL		200	110	88	---	113	0	20
Total Arsenic	852	ug/L	BDL		800	106	87	---	113	1	20
Total Barium	946	ug/L	78.5		800	108	88	---	113	1	20
Total Beryllium	20.9	ug/L	BDL		20.0	104	89	---	112	0	20
Total Cadmium	19.9	ug/L	BDL		20.0	100	88	---	113	1	20
Total Calcium	268000	ug/L	58700		200000	105	87	---	113	0	20
Total Chromium	87.4	ug/L	3.1		80.0	105	90	---	113	1	20
Total Cobalt	211	ug/L	BDL		200	106	89	---	114	1	20
Total Copper	116	ug/L	8.7		100	107	86	---	114	3	20
Total Iron	648	ug/L	209		400	110	87	---	115	3	20
Total Lead	196	ug/L	BDL		200	98	86	---	113	1	20
Total Magnesium	131000	ug/L	24500		100000	106	85	---	113	0	20
Total Manganese	218	ug/L	8.6		200	105	90	---	114	1	20
Total Nickel	211	ug/L	BDL		200	106	88	---	113	1	20
Total Selenium	884	ug/L	BDL		800	110	83	---	114	1	20
Total Silver	18.6	ug/L	BDL		20.0	93	84	---	115	3	20
Total Thallium	824	ug/L	BDL		800	103	85	---	114	2	20
Total Vanadium	206	ug/L	BDL		200	103	90	---	111	1	20
Total Zinc	266	ug/L	51.6		200	107	87	---	115	1	20

Matrix Spike Water

Analytical Run #:	211581	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	GROUND WATER
CTLab #:	1136458	Analysis Time:	16:21	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:	1136212	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Aluminum	962	ug/L	171		800	99	86 --- 115		20
Total Antimony	222	ug/L	BDL		200	111	88 --- 113		20
Total Arsenic	845	ug/L	BDL		800	106	87 --- 113		20
Total Barium	932	ug/L	78.5		800	107	88 --- 113		20
Total Beryllium	20.8	ug/L	BDL		20.0	104	89 --- 112		20
Total Cadmium	19.7	ug/L	BDL		20.0	98	88 --- 113		20
Total Calcium	267000	ug/L	58700		200000	104	87 --- 113		20
Total Chromium	86.7	ug/L	3.1		80.0	104	90 --- 113		20
Total Cobalt	208	ug/L	BDL		200	104	89 --- 114		20
Total Copper	113	ug/L	8.7		100	104	86 --- 114		20
Total Iron	626	ug/L	209		400	104	87 --- 115		20
Total Lead	195	ug/L	BDL		200	98	86 --- 113		20
Total Magnesium	131000	ug/L	24500		100000	106	85 --- 113		20
Total Manganese	216	ug/L	8.6		200	104	90 --- 114		20
Total Nickel	209	ug/L	BDL		200	104	88 --- 113		20
Total Selenium	872	ug/L	BDL		800	109	83 --- 114		20
Total Silver	18.0	ug/L	BDL		20.0	90	84 --- 115		20
Total Thallium	810	ug/L	BDL		800	101	85 --- 114		20
Total Vanadium	204	ug/L	BDL		200	102	90 --- 111		20
Total Zinc	263	ug/L	51.6		200	106	87 --- 115		20

Duplicate

Analytical Run #:	211582	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	GROUND WATER
CTLab #:	1136457	Analysis Time:	16:13	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:	1136212	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	777	ug/L	828				500	6	20

Duplicate

Analytical Run #:	211582	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	GROUND WATER
CTLab #:	1136457	Analysis Time:	16:13	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:	1136212	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	25600	ug/L	25800				700	1	20

Matrix Spike Duplicate Water

Analytical Run #:	211582	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	GROUND WATER
CTLab #:	1136459	Analysis Time:	16:28	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:	1136458	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	102000	ug/L	828		100000	101	86 --- 114	1	20

Matrix Spike Duplicate Water

Analytical Run #:	211582	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	GROUND WATER
CTLab #:	1136459	Analysis Time:	16:28	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:	1136458	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	125000	ug/L	25800		100000	99	87 --- 115	1	20

Matrix Spike Water

Analytical Run #:	211582	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	GROUND WATER
CTLab #:	1136458	Analysis Time:	16:21	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:	1136212	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Potassium	101000	ug/L	828		100000	100	86 --- 114		20

Matrix Spike Water

Analytical Run #:	211582	Analysis Date:	5/3/2022	Prep Batch #:	95236	Matrix:	GROUND WATER
CTLab #:	1136458	Analysis Time:	16:21	Prep Date/Time:	04/29/2022 10:19	Method:	SW6010
Parent Sample #:	1136212	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Sodium	124000	ug/L	25800		100000	98	87 --- 115		20

Duplicate

Analytical Run #:	211699	Analysis Date:	5/4/2022	Prep Batch #:	95243	Matrix:	GROUND WATER
CTLab #:	1136567	Analysis Time:	12:48	Prep Date/Time:	05/03/2022 14:15	Method:	SW7470A
Parent Sample #:	1136212	Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Mercury	0.0200	ug/L	<0.0200	U			0.12	0	20

Lab Control Spike Water

Analytical Run #:	211699	Analysis Date:	5/4/2022	Prep Batch #:	95243	Matrix:	LIQUID
CTLab #:	1136566	Analysis Time:	10:28	Prep Date/Time:	05/03/2022 14:15	Method:	SW7470A
Parent Sample #:		Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Mercury	1.91	ug/L			2.00	96	82 --- 119		

Method Blank Water

Analytical Run #:	211699	Analysis Date:	5/4/2022	Prep Batch #:	95243	Matrix:	LIQUID
CTLab #:	1136565	Analysis Time:	10:35	Prep Date/Time:	05/03/2022 14:15	Method:	SW7470A
Parent Sample #:		Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Mercury	0.020	ug/L		U	0		0.06		

Matrix Spike Duplicate Water

Analytical Run #:	211699	Analysis Date:	5/4/2022	Prep Batch #:	95243	Matrix:	GROUND WATER
CTLab #:	1136569	Analysis Time:	12:57	Prep Date/Time:	05/03/2022 14:15	Method:	SW7470A
Parent Sample #:	1136568	Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Total Mercury	0.51	ug/L	BDL		2.0	26	82	---	119	137	20

Matrix Spike Water

Analytical Run #:	211699	Analysis Date:	5/4/2022	Prep Batch #:	95243	Matrix:	GROUND WATER
CTLab #:	1136568	Analysis Time:	12:54	Prep Date/Time:	05/03/2022 14:15	Method:	SW7470A
Parent Sample #:	1136212	Analyst:	MDS	Prep Analyst:	MDS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Total Mercury	0.095	ug/L	BDL		2.0	5	82 --- 119		20

Lab Control Spike Water

Analytical Run #:	211603	Analysis Date:	5/5/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1138907	Analysis Time:	07:54	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1-Trichloroethane	10.3	ug/L			10.0	103	74 --- 131		20
1,1,2,2-Tetrachloroethane	9.19	ug/L			10.0	92	71 --- 121		20
1,1,2-Trichloroethane	10.0	ug/L			10.0	100	80 --- 119		20
1,1-Dichloroethane	9.92	ug/L			10.0	99	77 --- 125		20
1,1-Dichloroethene	10.6	ug/L			10.0	106	71 --- 131		20
1,2,3-Trichlorobenzene	9.01	ug/L			10.0	90	69 --- 129		20
1,2,4-Trichlorobenzene	9.06	ug/L			10.0	91	69 --- 130		20
1,2-Dibromo-3-chloropropane	8.90	ug/L			10.0	89	62 --- 128		20
1,2-Dibromoethane	9.38	ug/L			10.0	94	77 --- 121		20
1,2-Dichlorobenzene	9.43	ug/L			10.0	94	80 --- 119		20
1,2-Dichloroethane	10.1	ug/L			10.0	101	73 --- 128		20
1,2-Dichloropropane	9.62	ug/L			10.0	96	78 --- 122		20
1,3-Dichlorobenzene	9.48	ug/L			10.0	95	80 --- 119		20
112Trichloro122trifluoroethane	21.7	ug/L			20.0	108	70 --- 136		20
2-Butanone	95.1	ug/L			100	95	56 --- 143		20
2-Hexanone	92.6	ug/L			100	93	57 --- 139		20
4-Methyl-2-pentanone	99.2	ug/L			100	99	67 --- 130		20
Acetone	92.1	ug/L			100	92	39 --- 160		20
Benzene	10.3	ug/L			10.0	103	79 --- 120		20
Bromochloromethane	9.55	ug/L			10.0	96	78 --- 123		20
Bromodichloromethane	9.68	ug/L			10.0	97	79 --- 125		20
Bromoform	9.69	ug/L			10.0	97	66 --- 130		20
Bromomethane	10.4	ug/L			10.0	104	53 --- 141		20
Carbon disulfide	20.6	ug/L			20.0	103	64 --- 133		20
Carbon tetrachloride	10.9	ug/L			10.0	109	72 --- 136		20
Chlorobenzene	9.65	ug/L			10.0	96	82 --- 118		20
Chloroethane	9.47	ug/L			10.0	95	60 --- 138		20
Chloroform	9.82	ug/L			10.0	98	79 --- 124		20
Chloromethane	9.31	ug/L			10.0	93	50 --- 139		20
cis-1,2-Dichloroethene	9.90	ug/L			10.0	99	78 --- 123		20
cis-1,3-Dichloropropene	9.84	ug/L			10.0	98	75 --- 124		20
Cyclohexane	10.8	ug/L			10.0	108	71 --- 130		20
Dibromochloromethane	9.52	ug/L			10.0	95	74 --- 126		20
Dichlorodifluoromethane	11.0	ug/L			10.0	110	32 --- 152		20
Ethylbenzene	10.0	ug/L			10.0	100	79 --- 121		20
Isopropylbenzene	10.4	ug/L			10.0	104	72 --- 131		20
m & p-Xylene	20.6	ug/L			20.0	103	80 --- 121		20
Methyl acetate	8.49	ug/L			10.0	85	56 --- 136		20
Methyl tert-butyl ether	9.79	ug/L			10.0	98	71 --- 124		20
Methylcyclohexane	9.95	ug/L			10.0	100	72 --- 132		20
Methylene chloride	9.25	ug/L			10.0	92	74 --- 124		20
o-Xylene	9.73	ug/L			10.0	97	78 --- 122		20
Styrene	10.0	ug/L			10.0	100	78 --- 123		20

Lab Control Spike Water

Analytical Run #:	211603	Analysis Date:	5/5/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1138907	Analysis Time:	07:54	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Tetrachloroethene	10.5	ug/L			10.0	105	74 --- 129		20
Toluene	10.2	ug/L			10.0	102	80 --- 121		20
trans-1,2-Dichloroethene	10.1	ug/L			10.0	101	75 --- 124		20
trans-1,3-Dichloropropene	9.77	ug/L			10.0	98	73 --- 127		20
Trichloroethene	9.92	ug/L			10.0	99	79 --- 123		20
Trichlorofluoromethane	10.8	ug/L			10.0	108	65 --- 141		20
Vinyl chloride	10.1	ug/L			10.0	101	58 --- 137		20

Method Blank Water

Analytical Run #:	211603	Analysis Date:	5/5/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139090	Analysis Time:	08:55	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.38	ug/L		U	0		0.60		
1,1,2,2-Tetrachloroethane	0.36	ug/L		U	0		0.55		
1,1,2-Trichloroethane	0.27	ug/L		U	0		0.55		
1,1-Dichloroethane	0.28	ug/L		U	0		0.55		
1,1-Dichloroethene	0.49	ug/L		U	0		1.0		
1,2,3-Trichlorobenzene	0.43	ug/L		U	0		1.0		
1,2,4-Trichlorobenzene	0.50	ug/L		U	0		1.0		
1,2-Dibromo-3-chloropropane	0.35	ug/L		U	0		1.0		
1,2-Dibromoethane	0.33	ug/L		U	0		0.55		
1,2-Dichlorobenzene	0.35	ug/L		U	0		0.55		
1,2-Dichloroethane	0.69	ug/L		U	0		1.05		
1,2-Dichloropropane	0.37	ug/L		U	0		0.60		
1,3-Dichlorobenzene	0.30	ug/L		U	0		0.55		
112Trichloro122trifluoroethane	1.5	ug/L		U	0		2.25		
2-Butanone	2.9	ug/L		U	0		5.5		
2-Hexanone	3.3	ug/L		U	0		5.5		
4-Methyl-2-pentanone	3.7	ug/L		U	0		6.0		
Acetone	4.1	ug/L		U	0		10		
Benzene	0.47	ug/L		U	0		1.0		
Bromochloromethane	0.26	ug/L		U	0		0.55		
Bromodichloromethane	0.080	ug/L		U	0		0.25		
Bromoform	0.50	ug/L		U	0		1.0		
Bromomethane	0.49	ug/L		U	0		1.0		
Carbon disulfide	0.83	ug/L		U	0		2.0		
Carbon tetrachloride	0.37	ug/L		U	0		0.60		
Chlorobenzene	0.37	ug/L		U	0		0.60		
Chloroethane	0.36	ug/L		U	0		1.0		
Chloroform	0.46	ug/L		U	0		0.70		
Chloromethane	0.39	ug/L		U	0		1.0		
cis-1,2-Dichloroethene	0.41	ug/L		U	0		0.65		
cis-1,3-Dichloropropene	0.34	ug/L		U	0		0.55		
Cyclohexane	0.71	ug/L		U	0		1.1		
Dibromochloromethane	0.35	ug/L		U	0		0.55		
Dichlorodifluoromethane	0.63	ug/L		U	0		1.05		
Ethylbenzene	0.42	ug/L		U	0		0.65		
Isopropylbenzene	0.39	ug/L		U	0		0.60		
m & p-Xylene	0.74	ug/L		U	0		1.15		
Methyl acetate	0.34	ug/L		U	0		1.0		
Methyl tert-butyl ether	0.28	ug/L		U	0		0.55		
Methylcyclohexane	0.78	ug/L		U	0		1.2		
Methylene chloride	1.2	ug/L		U	0		2.05		
o-Xylene	0.72	ug/L		U	0		1.1		
Styrene	0.33	ug/L		U	0		0.55		

Method Blank Water

Analytical Run #:	211603	Analysis Date:	5/5/2022	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1139090	Analysis Time:	08:55	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Tetrachloroethene	0.54	ug/L		U	0		1.0		
Toluene	0.27	ug/L		U	0		0.55		
trans-1,2-Dichloroethene	0.35	ug/L		U	0		0.55		
trans-1,3-Dichloropropene	0.56	ug/L		U	0		1.05		
Trichloroethene	0.39	ug/L		U	0		0.60		
Trichlorofluoromethane	0.41	ug/L		U	0		1.0		
Vinyl chloride	0.12	ug/L		U	0		0.25		

Matrix Spike Duplicate Water

Analytical Run #:	211603	Analysis Date:	5/5/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139723	Analysis Time:	22:10	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	1139722	Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1-Trichloroethane	11.4	ug/L	BDL		10.0	114	74 --- 131	8	20
1,1,2,2-Tetrachloroethane	10.1	ug/L	BDL		10.0	101	71 --- 121	8	20
1,1,2-Trichloroethane	10.4	ug/L	BDL		10.0	104	80 --- 119	3	20
1,1-Dichloroethane	11.0	ug/L	BDL		10.0	110	77 --- 125	7	20
1,1-Dichloroethene	12.1	ug/L	BDL		10.0	121	71 --- 131	8	20
1,2 Dichloroethane-d4	98.0	% Recovery			100	98.0	81 --- 118	0	
1,2,3-Trichlorobenzene	10.1	ug/L	BDL		10.0	101	69 --- 129	12	20
1,2,4-Trichlorobenzene	9.80	ug/L	BDL		10.0	98	69 --- 130	10	20
1,2-Dibromo-3-chloropropane	9.75	ug/L	BDL		10.0	98	62 --- 128	18	20
1,2-Dibromoethane	10.2	ug/L	BDL		10.0	102	77 --- 121	9	20
1,2-Dichlorobenzene	9.89	ug/L	BDL		10.0	99	80 --- 119	9	20
1,2-Dichloroethane	10.8	ug/L	BDL		10.0	108	73 --- 128	6	20
1,2-Dichloropropane	10.6	ug/L	BDL		10.0	106	78 --- 122	6	20
1,3-Dichlorobenzene	10.2	ug/L	BDL		10.0	102	80 --- 119	7	20
1,4-Dioxane	479	ug/L	BDL		500	96	59 --- 139	6	20
112Trichloro122trifluoroethane	23.0	ug/L	BDL		20.0	115	70 --- 136	9	20
2-Butanone	102	ug/L	BDL		100	102	56 --- 143	6	20
2-Hexanone	98.2	ug/L	BDL		100	98	57 --- 139	11	20
4-Methyl-2-pentanone	107	ug/L	BDL		100	107	67 --- 130	8	20
Acetone	84.7	ug/L	BDL		100	85	39 --- 160	6	20
Benzene	11.4	ug/L	BDL		10.0	114	79 --- 120	6	20
Bromochloromethane	10.9	ug/L	BDL		10.0	109	78 --- 123	7	20
Bromodichloromethane	10.6	ug/L	BDL		10.0	106	79 --- 125	6	20
Bromofluorobenzene	97.0	% Recovery			100	97.0	85 --- 114	0	
Bromoform	9.89	ug/L	BDL		10.0	99	66 --- 130	6	20
Bromomethane	11.6	ug/L	BDL		10.0	116	53 --- 141	9	20
Carbon disulfide	23.7	ug/L	BDL		20.0	118	64 --- 133	8	20
Carbon tetrachloride	12.2	ug/L	BDL		10.0	122	72 --- 136	9	20
Chlorobenzene	10.6	ug/L	BDL		10.0	106	82 --- 118	8	20
Chloroethane	10.7	ug/L	BDL		10.0	107	60 --- 138	5	20
Chloroform	11.1	ug/L	BDL		10.0	111	79 --- 124	6	20
Chloromethane	11.2	ug/L	BDL		10.0	112	50 --- 139	10	20
cis-1,2-Dichloroethene	11.2	ug/L	BDL		10.0	112	78 --- 123	8	20
cis-1,3-Dichloropropene	10.5	ug/L	BDL		10.0	105	75 --- 124	8	20
Cyclohexane	12.0	ug/L	BDL		10.0	120	71 --- 130	7	20
d8-Toluene	101	% Recovery			100	101	89 --- 112	0	
Dibromochloromethane	10.4	ug/L	BDL		10.0	104	74 --- 126	15	20
Dibromofluoromethane	100	% Recovery			100	100	80 --- 119	0	
Dichlorodifluoromethane	12.1	ug/L	BDL		10.0	121	32 --- 152	6	20
Ethylbenzene	11.2	ug/L	BDL		10.0	112	79 --- 121	10	20
Isopropylbenzene	11.5	ug/L	BDL		10.0	115	72 --- 131	10	20
m & p-Xylene	22.4	ug/L	BDL		20.0	112	80 --- 121	9	20
Methyl acetate	9.16	ug/L	BDL		10.0	92	56 --- 136	4	20

Matrix Spike Duplicate Water

Analytical Run #:	211603	Analysis Date:	5/5/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139723	Analysis Time:	22:10	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	1139722	Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Methyl tert-butyl ether	10.6	ug/L	BDL		10.0	106	71 --- 124	9	20
Methylcyclohexane	9.99	ug/L	BDL		10.0	100	72 --- 132	6	20
Methylene chloride	10.2	ug/L	BDL		10.0	102	74 --- 124	10	20
o-Xylene	10.8	ug/L	BDL		10.0	108	78 --- 122	9	20
Styrene	11.0	ug/L	BDL		10.0	110	78 --- 123	11	20
Tetrachloroethene	11.7	ug/L	BDL		10.0	117	74 --- 129	8	20
Toluene	11.2	ug/L	BDL		10.0	112	80 --- 121	6	20
trans-1,2-Dichloroethene	11.3	ug/L	BDL		10.0	113	75 --- 124	8	20
trans-1,3-Dichloropropene	10.0	ug/L	BDL		10.0	100	73 --- 127	10	20
Trichloroethene	10.9	ug/L	BDL		10.0	109	79 --- 123	6	20
Trichlorofluoromethane	12.4	ug/L	BDL		10.0	124	65 --- 141	8	20
Vinyl chloride	11.4	ug/L	BDL		10.0	114	58 --- 137	5	20

Matrix Spike Water

Analytical Run #:	211603	Analysis Date:	5/5/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139722	Analysis Time:	21:40	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	1136203	Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1-Trichloroethane	10.5	ug/L	BDL		10.0	105	74 --- 131		20
1,1,2,2-Tetrachloroethane	9.34	ug/L	BDL		10.0	93	71 --- 121		20
1,1,2-Trichloroethane	10.1	ug/L	BDL		10.0	101	80 --- 119		20
1,1-Dichloroethane	10.2	ug/L	BDL		10.0	102	77 --- 125		20
1,1-Dichloroethene	11.2	ug/L	BDL		10.0	112	71 --- 131		20
1,2 Dichloroethane-d4	98.0	% Recovery			100	98.0	81 --- 118		
1,2,3-Trichlorobenzene	8.96	ug/L	BDL		10.0	90	69 --- 129		20
1,2,4-Trichlorobenzene	8.85	ug/L	BDL		10.0	88	69 --- 130		20
1,2-Dibromo-3-chloropropane	8.16	ug/L	BDL		10.0	82	62 --- 128		20
1,2-Dibromoethane	9.39	ug/L	BDL		10.0	94	77 --- 121		20
1,2-Dichlorobenzene	9.03	ug/L	BDL		10.0	90	80 --- 119		20
1,2-Dichloroethane	10.2	ug/L	BDL		10.0	102	73 --- 128		20
1,2-Dichloropropane	10.0	ug/L	BDL		10.0	100	78 --- 122		20
1,3-Dichlorobenzene	9.57	ug/L	BDL		10.0	96	80 --- 119		20
1,4-Dioxane	452	ug/L	BDL		500	90	59 --- 139		20
112Trichloro122trifluoroethane	21.1	ug/L	BDL		20.0	106	70 --- 136		20
2-Butanone	96.3	ug/L	BDL		100	96	56 --- 143		20
2-Hexanone	88.1	ug/L	BDL		100	88	57 --- 139		20
4-Methyl-2-pentanone	99.3	ug/L	BDL		100	99	67 --- 130		20
Acetone	80.1	ug/L	BDL		100	80	39 --- 160		20
Benzene	10.7	ug/L	BDL		10.0	107	79 --- 120		20
Bromochloromethane	10.1	ug/L	BDL		10.0	101	78 --- 123		20
Bromodichloromethane	9.93	ug/L	BDL		10.0	99	79 --- 125		20
Bromofluorobenzene	98.0	% Recovery			100	98.0	85 --- 114		
Bromoform	9.27	ug/L	BDL		10.0	93	66 --- 130		20
Bromomethane	10.6	ug/L	BDL		10.0	106	53 --- 141		20
Carbon disulfide	21.8	ug/L	BDL		20.0	109	64 --- 133		20
Carbon tetrachloride	11.1	ug/L	BDL		10.0	111	72 --- 136		20
Chlorobenzene	9.76	ug/L	BDL		10.0	98	82 --- 118		20
Chloroethane	10.2	ug/L	BDL		10.0	102	60 --- 138		20
Chloroform	10.4	ug/L	BDL		10.0	104	79 --- 124		20
Chloromethane	10.2	ug/L	BDL		10.0	102	50 --- 139		20
cis-1,2-Dichloroethene	10.3	ug/L	BDL		10.0	103	78 --- 123		20
cis-1,3-Dichloropropene	9.68	ug/L	BDL		10.0	97	75 --- 124		20
Cyclohexane	11.2	ug/L	BDL		10.0	112	71 --- 130		20
d8-Toluene	103	% Recovery			100	103	89 --- 112		
Dibromochloromethane	8.90	ug/L	BDL		10.0	89	74 --- 126		20
Dibromofluoromethane	101	% Recovery			100	101	80 --- 119		
Dichlorodifluoromethane	11.4	ug/L	BDL		10.0	114	32 --- 152		20
Ethylbenzene	10.2	ug/L	BDL		10.0	102	79 --- 121		20
Isopropylbenzene	10.4	ug/L	BDL		10.0	104	72 --- 131		20
m & p-Xylene	20.4	ug/L	BDL		20.0	102	80 --- 121		20
Methyl acetate	8.77	ug/L	BDL		10.0	88	56 --- 136		20

Matrix Spike Water

Analytical Run #:	211603	Analysis Date:	5/5/2022	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	1139722	Analysis Time:	21:40	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	1136203	Analyst:	DGS	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Methyl tert-butyl ether	9.67	ug/L	BDL		10.0	97	71 --- 124		20
Methylcyclohexane	9.43	ug/L	BDL		10.0	94	72 --- 132		20
Methylene chloride	9.24	ug/L	BDL		10.0	92	74 --- 124		20
o-Xylene	9.94	ug/L	BDL		10.0	99	78 --- 122		20
Styrene	9.83	ug/L	BDL		10.0	98	78 --- 123		20
Tetrachloroethene	10.8	ug/L	BDL		10.0	108	74 --- 129		20
Toluene	10.6	ug/L	BDL		10.0	106	80 --- 121		20
trans-1,2-Dichloroethene	10.4	ug/L	BDL		10.0	104	75 --- 124		20
trans-1,3-Dichloropropene	9.08	ug/L	BDL		10.0	91	73 --- 127		20
Trichloroethene	10.3	ug/L	BDL		10.0	103	79 --- 123		20
Trichlorofluoromethane	11.5	ug/L	BDL		10.0	115	65 --- 141		20
Vinyl chloride	10.9	ug/L	BDL		10.0	109	58 --- 137		20

Lab Control Spike Water

Analytical Run #:	211667	Analysis Date:	5/4/2022	Prep Batch #:	95280	Matrix:	LIQUID
CTLab #:	1138361	Analysis Time:	08:57	Prep Date/Time:	05/04/2022 08:50	Method:	RSK175
Parent Sample #:		Analyst:	DGS	Prep Analyst:	DGS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Ethane	3.78	ug/L			4.76	79	74 --- 131		20
Ethene	5.52	ug/L			6.77	82	72 --- 133		20
Methane	2.50	ug/L			2.28	110	73 --- 125		20

Method Blank Water

Analytical Run #:	211667	Analysis Date:	5/4/2022	Prep Batch #:	95280	Matrix:	LIQUID
CTLab #:	1138360	Analysis Time:	09:02	Prep Date/Time:	05/04/2022 08:50	Method:	RSK175
Parent Sample #:		Analyst:	DGS	Prep Analyst:	DGS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Ethane	0.38	ug/L		U	0		0.4		
Ethene	0.59	ug/L		U	0		0.6		
Methane	0.45	ug/L		U	0		0.4		

Matrix Spike Water

Analytical Run #:	211667	Analysis Date:	5/4/2022	Prep Batch #:	95280	Matrix:	GROUND WATER
CTLab #:	1138358	Analysis Time:	09:15	Prep Date/Time:	05/04/2022 08:50	Method:	RSK175
Parent Sample #:	1136203	Analyst:	DGS	Prep Analyst:	DGS		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Ethane	3.70	ug/L	BDL		4.76	78	74 --- 131		30
Ethene	5.35	ug/L	BDL		6.77	79	72 --- 133		30
Methane	1.79	ug/L	BDL		2.28	79	73 --- 125		30

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	169156	Print Date / Time:	04/28/2022	09:55	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	04/28/2022	09:30	erc
Project Name:	RADFORD AAP SWMUs 49&54	Log-In Date / Time / By:	04/28/2022	09:55	ETK
Project Phase:	RADFORD, VA	Project #:		PM:	BMS
Coolers:	6116, 6680	Temperature:	<3.4 C	On Ice:	**Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	2725 0659 3085,"3096		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

SEVERAL SAMPLES WERE RECEIVED PAST THE 48-HOUR HOLD TIME FOR NITRATE. THE CLIENT INSTRUCTED THE LAB TO PROCEED WITH THE ANALYSIS.

TWO CUSTODY SEALS WERE PRESENT AND INTACT ON EACH COOLER UPON RECEIPT - ALL WERE DATED 4/27/2022 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136202 TB1				
	VOA HCL	1	/	VOC
	VOA HCL	1	/	VOC
	Total # of Containers of Type (*VOA HCL*) = 2			

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136203 13MW5				
	UNPRES PL	1	/	Anions
	UNPRES PL	1	N / N	ANIONS
	UNPRES PL	1	N / N	ANIONS
	Total # of Containers of Type (*UNPRES PL*) = 3			

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136203 13MW5				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	N / N	GAS,VOC
	VOA HCL	1	N / N	GAS,VOC
	VOA HCL	1	N / N	GAS,VOC
	VOA HCL	1	N / N	GAS,VOC
	VOA HCL	1	N / N	GAS,VOC
	VOA HCL	1	N / N	GAS,VOC

		VOA HCL	1	N	/ N	GAS,VOC
		VOA HCL	1	N	/ N	GAS,VOC
		VOA HCL	1	N	/ N	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 15**			

1136203	13MW5					
		H2SO4 PL	1	Y	/ N	TOC
		H2SO4 PL	1	Y	/ N	TOC
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 3**			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136204	13MW4				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136204	13MW4				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1136204	13MW4				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136205	13MW3				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136205	13MW3				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1136205	13MW3				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136206	49MW04				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1136206	49MW04				

	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC

Total # of Containers of Type (*VOA HCL*) = 5

1136206 49MW04

	H2SO4 PL	1	Y	/ N	TOC

Total # of Containers of Type (*H2SO4 PL*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

1136207 49TW04

	UNPRES PL	1		/	Anions

Total # of Containers of Type (*UNPRES PL*) = 1

1136207 49TW04

	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC

Total # of Containers of Type (*VOA HCL*) = 5

1136207 49TW04

	H2SO4 PL	1	Y	/ N	TOC

Total # of Containers of Type (*H2SO4 PL*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

1136208 13MW2

	UNPRES PL	1		/	Anions

Total # of Containers of Type (*UNPRES PL*) = 1

1136208 13MW2

	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC

Total # of Containers of Type (*VOA HCL*) = 5

1136208 13MW2

	H2SO4 PL	1	Y	/ N	TOC

Total # of Containers of Type (*H2SO4 PL*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

1136209 54MW12

	VOA	1		/
	VOA	1		/
	VOA	1		/

Total # of Containers of Type (*VOA*) = 3

1136209	54MW12					
		UNPRES PL	1		/	Anions
		Total # of Containers of Type (*UNPRES PL*) = 1				
1136209	54MW12					
		MISC	1		/	CHLORATE/CHLORITE
		Total # of Containers of Type (*MISC*) = 1				
1136209	54MW12					
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type (*H2SO4 PL*) = 1				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136210	54TW12				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type (*VOA*) = 3			
1136210	54TW12				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type (*UNPRES PL*) = 1			
1136210	54TW12				
		MISC	1	/	CHLORATE/CHLORITE
		Total # of Containers of Type (*MISC*) = 1			
1136210	54TW12				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type (*H2SO4 PL*) = 1			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136211	54MW1				
		VOA	1	/	
		VOA	1	/	
		VOA	1	/	
		Total # of Containers of Type (*VOA*) = 3			
1136211	54MW1				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type (*UNPRES PL*) = 1			
1136211	54MW1				
		MISC	1	/	CHLORATE/CHLORITE
		Total # of Containers of Type (*MISC*) = 1			
1136211	54MW1				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type (*H2SO4 PL*) = 1			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

1136212	54IDW						
		H2SO4 PL	1	Y	/	N	COD
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**				
1136212	54IDW						
		HNO3	1	Y	/	N	HG,ICP,K,NA
		Total # of Containers of Type	**(*HNO3*) = 1**				
1136212	54IDW						
		UNPRES PL	1		/		pH
		Total # of Containers of Type	**(*UNPRES PL*) = 1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1136213	49MW05						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**				
1136213	49MW05						
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**				
1136213	49MW05						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1136214	49MW02						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**				
1136214	49MW02						
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**				
1136214	49MW02						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**				

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1136215	48MW3						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**				

1136215	48MW3					
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		VOA HCL	1		/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**		
1136215	48MW3					
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136216	48MW2				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**	
1136216	48MW2				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**	
1136216	48MW2				
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**	

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1136217	48MW6				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**	
1136217	48MW6				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**	
1136217	48MW6				
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**	

Condition Code *Condition Description*

1 Sample Received OK

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 2

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757)819-5310
Project Name: Radford AAP
Project #: SWMUs 49+54
Location: Radford, VA
Sampled By: T. Vas & P. Taylor

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 169156
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMUS 49+54
Logged By: erc PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: PaceA@WestonSolutions.com
Company: Weston Solutions
Address: 2 Eaton St. Ste. 603 Hampton, VA 23669

Invoice To:* Same
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

2022 Collection Date	Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC 9060A	Anions 9056	VOC 8260C	MEE RSK-175	TIC 9060A	Chlorate/Chlorite	COD 410.4	pH 9040C	TAL Metals 6010C 7470A							Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test																	
4/26	00:00	GW	G		TB1	N			2						Trip Blank									1136202
4/26	08:21	GW	G		13MW5	N	3	3	9	6					MS/MSD									03
4/26	09:25	GW	G		13MW4	N	1	1	3	2														04
4/26	10:26	GW	G		13MW3	N	1	1	3	2														05
4/26	11:46	GW	G		49MW04	N	1	1	3	2														06
4/26	11:46	GW	G		49TW04	N	1	1	3	2														07
4/26	12:47	GW	G		13MW2	N	1	1	3	2														08
4/26	14:59	GW	G		54MW12	N	1	1			3	1												09
4/26	14:59	GW	G		54TW12	N	1	1			3	1												10
4/26	16:44	GW	G		54MW1	N	1	1			3	1												11
4/26	17:44	GW	G		54IDW	N							1	1	1									12
4/27	08:32	GW	G		49MW05	N	1	1	3	2														13

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
	4/27/2022 1800	Fedex	4/27/2022 1806
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			4/28/22 930

Lab Use Only
Ice Present Yes No
Temp 2.4 IR Gun 27
Cooler # 6116, 6680

Fed 4/28/22 1010

Rev. 02/2017

CHAIN OF CUSTODY

Company: Weston Solutions
Project Contact: Tony Pace
Telephone: (757) 819-5316
Project Name: Radford AAP SWMUs 49+54
Project #:
Location: Radford, VA
Sampled By: T. Vas + P. Taylor

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Lab Use Only
Place Header Sticker Here:
169186

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: PaceA@WestonSolutions.com
Company: Weston Solutions
Address: 2 Eaton St. Ste. 603 Hampton, VA 23669

Invoice To:* Same
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

2022 Collection Date	Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	ANALYSES REQUESTED: TOC 9060A	Anions 9056	VOC 8260C	MEE RSK-175	Fill in Spaces with Bottles per Test	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
4/27	1132	GW	G		49MW02	N	1	1	3	2				136714
4/27	1252	GW	G		48MW3	N	1	1	3	2				15
4/27	1404	GW	G		48MW2	N	1	1	3	2				16
4/27	1537	GW	G		48MW6	N	1	1	3	2				17

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
	4/27/2022 1800	Fedex	4/27/2022 1800
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			930

1010

Lab Use Only
Ice Present Yes No
Temp 0.4 IR Gun 77
Cooler # 6116, 6660

Cooler Receipt Form

Ice Present YES NO

Observed Temperature 3.3

Actual Temperature _____

IR Gun # 27

Initials EC

Date 4/28/22 Time 930

Cooler #: 6116

CUSTODY SEAL
DATE 4/27/2022
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • www.qecusa.com

CUSTODY SEAL
DATE 4/27/2022
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • www.qecusa.com

ORIGIN ID:WALA (770) 855-6275
PAUL I TAYLO
WESTON SOLUTIONS INC/OU 1203
380 ARBOR DRIVE

PEACHTREE CORNERS, GA 30092
UNITED STATES US

SHIP DATE: 27APR22
ACTWGT: 52.00 LB
CAD: 8885155/SSFE2300
DIMS: 22x14x18 IN

BILL THIRD PARTY

TO CT LAB
CT LAB
1230 LANGE CT

BARABOO WI 53913
(608) 356-2760 REF: 03826.552.500.2320
INV:
PO: DEPT:

FedEx Express

2 of 2
MPS# 0263 2725 0659 3096
Mstr# 2725 0659 3065

0201

XN LNRA

THU - 28 APR 10:30A
PRIORITY OVERNIGHT
AHS
53913
WI-US MSN

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 28

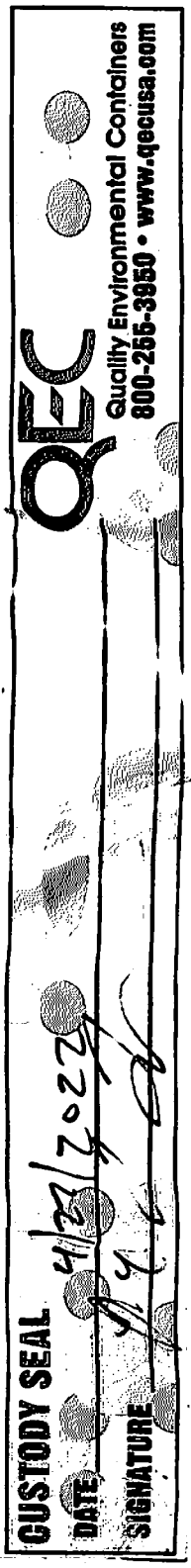
Actual Temperature _____

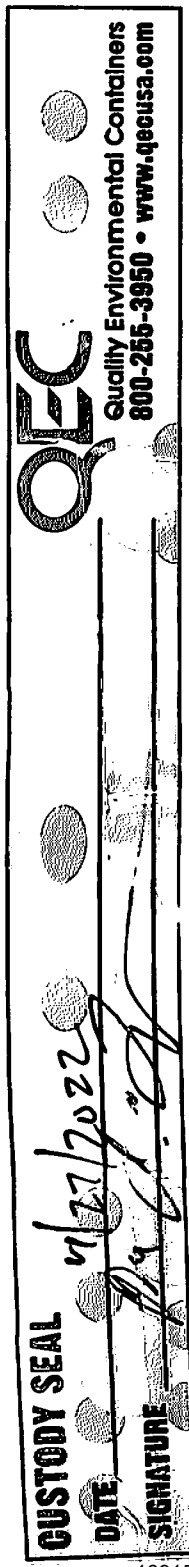
IR Gun # 27

Initials KAE

Date 4/28/22 Time 930

Cooler #: 680





eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Eaton South Bend
110 S Hill Street
South Bend, IN 46617
Tel: (574)233-4777

Laboratory Job ID: 810-22876-1
Client Project/Site: 169156

For:
CT Laboratories
Environmental & Analytical Services
1230 Lange Court
Baraboo, Wisconsin 53913

Attn: Jodi Serstad

Authorized for release by:
5/11/2022 9:16:27 AM
Nathan Trowbridge, Manager of Project Management
(574)233-4777
Nathan.Trowbridge@et.eurofinsus.com

Designee for

Traci Chlebowski, Project Manager
(574)233-4777
Traci.Chlebowski@et.eurofinsus.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
QC Sample Results 7
QC Association Summary 8
Lab Chronicle 9
Certification Summary 10
Method Summary 11
Sample Summary 12
Chain of Custody 13
Receipt Checklists 15

Definitions/Glossary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Job ID: 810-22876-1

Laboratory: Eurofins Eaton South Bend

Narrative

Job Narrative
810-22876-1

Comments
No additional comments.

Receipt
The samples were received on 4/29/2022 8:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.0º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Client Sample ID: 1136209/54MW12 — Lab Sample ID: 810-22876-1

No Detections.

Client Sample ID: 1136210/54TW12 — Lab Sample ID: 810-22876-2

No Detections.

Client Sample ID: 1136211/54MW1 — Lab Sample ID: 810-22876-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Client Sample ID: 1136209/54MW12

Lab Sample ID: 810-22876-1

Date Collected: 04/26/22 14:59
Matrix: Water
Date Received: 04/29/22 08:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			05/03/22 09:19	1
Chlorite	<10		10		ug/L			05/03/22 09:19	1

Client Sample ID: 1136210/54TW12

Lab Sample ID: 810-22876-2

Date Collected: 04/26/22 14:59
Matrix: Water
Date Received: 04/29/22 08:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			05/03/22 04:20	1
Chlorite	<10		10		ug/L			05/03/22 04:20	1

Client Sample ID: 1136211/54MW1

Lab Sample ID: 810-22876-3

Date Collected: 04/26/22 16:44
Matrix: Water
Date Received: 04/29/22 08:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			05/03/22 05:40	1
Chlorite	<10		10		ug/L			05/03/22 05:40	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 810-18080/12
Matrix: Water
Analysis Batch: 18080

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			05/02/22 21:42	1
Chlorite	<10		10		ug/L			05/02/22 21:42	1

Lab Sample ID: LCS 810-18080/13
Matrix: Water
Analysis Batch: 18080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			250	248		ug/L		99	90 - 110		
Chlorite			250	243		ug/L		97	90 - 110		

Lab Sample ID: LLCS 810-18080/9
Matrix: Water
Analysis Batch: 18080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			10.0	10.7		ug/L		107			
Chlorite			10.0	13.3		ug/L		133			

Lab Sample ID: 810-22876-2 MS
Matrix: Water
Analysis Batch: 18080

Client Sample ID: 1136210/54TW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate	<10		250	230		ug/L		92	90 - 110		
Chlorate	<10		250	230		ug/L		92	90 - 110		
Chlorite	<10		250	271		ug/L		108	90 - 110		
Chlorite	<10		250	271		ug/L		108	90 - 110		

Lab Sample ID: 810-22876-2 MSD
Matrix: Water
Analysis Batch: 18080

Client Sample ID: 1136210/54TW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorate	<10		250	241		ug/L		97	90 - 110	5	20
Chlorate	<10		250	241		ug/L		97	90 - 110	5	20
Chlorite	<10		250	274		ug/L		110	90 - 110	1	20
Chlorite	<10		250	274		ug/L		110	90 - 110	1	20

QC Association Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

HPLC/IC

Analysis Batch: 18080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-22876-1	1136209/54MW12	Total/NA	Water	300.0	
810-22876-2	1136210/54TW12	Total/NA	Water	300.0	
810-22876-3	1136211/54MW1	Total/NA	Water	300.0	
MB 810-18080/12	Method Blank	Total/NA	Water	300.0	
LCS 810-18080/13	Lab Control Sample	Total/NA	Water	300.0	
LLCS 810-18080/9	Lab Control Sample	Total/NA	Water	300.0	
810-22876-2 MS	1136210/54TW12	Total/NA	Water	300.0	
810-22876-2 MSD	1136210/54TW12	Total/NA	Water	300.0	

Lab Chronicle

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Client Sample ID: 1136209/54MW12
Lab Sample ID: 810-22876-1
Date Collected: 04/26/22 14:59
Matrix: Water
Date Received: 04/29/22 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	18080	05/03/22 09:19	JL	EA SB

Client Sample ID: 1136210/54TW12
Lab Sample ID: 810-22876-2
Date Collected: 04/26/22 14:59
Matrix: Water
Date Received: 04/29/22 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	18080	05/03/22 04:20	JL	EA SB

Client Sample ID: 1136211/54MW1
Lab Sample ID: 810-22876-3
Date Collected: 04/26/22 16:44
Matrix: Water
Date Received: 04/29/22 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	18080	05/03/22 05:40	JL	EA SB

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Laboratory: Eurofins Eaton South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999766900	08-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chlorate

Method Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

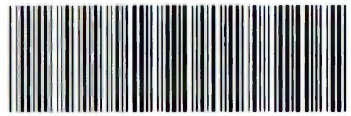
EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: CT Laboratories
Project/Site: 169156

Job ID: 810-22876-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-22876-1	1136209/54MW12	Water	04/26/22 14:59	04/29/22 08:15
810-22876-2	1136210/54TW12	Water	04/26/22 14:59	04/29/22 08:15
810-22876-3	1136211/54MW1	Water	04/26/22 16:44	04/29/22 08:15



RIES
ntal analyses

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

5/11/2022

-Contract Laboratory Chain-of-Custody and Purchase Order

PURCHASE ORDER #: 169156 EEA-IN

The PO# must appear on all invoice and reports!

Upon Receipt of Samples, please verify that samples were received in acceptable condition then sign this form and fax to (608)356-2766 or email to the project manager. Sample temperature, upon receipt, must be recorded on this document unless thermal preservation is not a method requirement.

Ship to: **Eurofins Eaton Analytical - IN**
110 South Hill Street
South Bend, IN 46617

Return Invoice and Results to: **bszymanski@ctlaboratories.com**

CTLaboratories
Brett M Szymanski
1230 Lange Court
Baraboo WI 53913

Government UPS Shipping Acct ? Y (N)

Ship by: Speedee ☐ UPS Grnd ☐ UPS 2nd ☐ UPS NDA ☒

Date Due: Standard TAT ***RUSH TURNAROUND NEEDED?*** Y or (N) ***(Circle One)***

Project Name: RADFORD AAP SWMU 54 **Project State:** VA

Analytical/QC Criteria: NONE INDICATED STATE (DOD QSM) NELAP (Circle one) OTHER_____

Report results as EDD? N (Y) (Circle one and indicate type: ERIS + Excel) Data Deliverable Package LEVEL: IV

CTLabs ID#	Sample Date/Time	Matrix	Sample Description	Analyses / Method		Cost
1136209	4/26/2022 14:59	GROUND WATER	54MW12	CHLORATE/CHLORITE	300.1	
1136210	4/26/2022 14:59	GROUND WATER	54TW12	CHLORATE/CHLORITE	300.1	
1136211	4/26/2022 16:44	GROUND WATER	54MW1	CHLORATE/CHLORITE	300.1	

Relinquished by: Brett Szymanski Date/Time: 04/28/2022 10:40

Received by: Penny Pebley Wright Date/Time: 04/29/22 0815 Receipt Temperature (C) 0.0 Wet

COMMENTS: **PLEASE LOG USING THE SAMPLE DESCRIPTIONS**

REPORT ALL SOLIDS ON A DRY WEIGHT BASIS UNLESS OTHERWISE INDICATED

Form #: FPM1-01
Effective Date: 02/15/14

CT Laboratories Terms and Conditions

1. ORDERS AND RECEIPT OF SAMPLES (Sample Acceptance Policy) - not applicable

2. PAYMENT TERMS

2.1 Services performed by CTL will be in accordance with prices quoted and later confirmed in writing or as stated in the Price Schedule. Invoices may be submitted to Client upon completion of any sample delivery group. Payment in advance is required for all Clients except those whose credit has been established with CTL. For Clients with approved credit, payment terms are net 30 days from the date of invoice by CTL. All overdue payments are subject to an additional interest and service charge of one and one-half percent (1.5%) (or the maximum rate permissible by law, whichever is lesser) per month or portion thereof from the due date until the date of payment. All fees are charged or billed directly to the Client. The billing of a third party will not be accepted without a statement, signed by the third party that acknowledges and accepts payment responsibility. CTL may suspend work and withhold delivery of data under this order at any time in the event Client fails to make timely payment of its invoices. Client shall be responsible for all costs and expenses of collection including reasonable attorneyâ€™s fees. CTL reserves the right to refuse to proceed with work at any time based upon an unfavorable Client credit report.

3. CHANGE ORDERS, TERMINATION

3.1 Changes to the Scope of Work, price, or result delivery date may be initiated by CTL after Sample Acceptance due to any condition which conflicts with analytical, QA or other protocols warranted in these Terms and Conditions. CTL will not proceed with such changes until an agreement with the Client is reached on the amount of any cost, schedule change or technical change to the Scope of Work, and such agreement is documented in writing.

3.2 Changes to the Scope of Work, including but not limited to increasing or decreasing the work, changing test and analysis specification or acceleration in the performance of the work may be initiated by the Client after sample acceptance. Such a change will be documented in writing and may result in a change in cost and turnaround time commitment. CTL's acceptance of such changes is contingent upon technical feasibility and operational capacity.

3.3 Suspension or termination of all or any part of the work may be initiated by the Client. CTL will be compensated consistent with Section 2 of these Terms and Conditions. CTL will complete all work in progress and be paid in full for all work completed.

4. WARRANTIES AND LIABILITY

4.1 Where applicable, CTL will use analytical methodologies which are in substantial conformity with published test methods. CTL has implemented these methods in its Laboratory Quality Manuals and referenced Standard Operating Procedures and where the nature or composition of the sample requires it, CTL reserves the right to deviate from these methodologies as necessary or appropriate, based on the reasonable judgment of CTL, which deviations, if any, will be made on a basis consistent with recognized standards of the industry and/or CTL's Laboratory Quality Manuals. Client may request that CTL perform according to a mutually agreed Quality Assurance Project Plan (QAPP). In the event that samples arrive prior to agreement on a QAPP, CTL will proceed with analyses under its standard Quality Manuals then in effect, and CTL will not be responsible for any resampling or other charges if work must be repeated to comply with a subsequently finalized QAPP.

4.2 CTL shall start preparation and/or analysis within holding times provided that Sample Acceptance occurs within 48 hours of sampling or 1/2 of the holding time for the test, whichever is less. Where resolution of inconsistencies leading to Sample Acceptance does not occur within this period, CTL will use its best efforts to meet holding times and will proceed with the work provided that, in CTL's judgment, the chain-of-custody or definition of the Scope of Work provide sufficient guidance. Reanalysis of samples to comply with CTL's Quality Manuals will be deemed to have met holding times provided the initial analysis was performed within the applicable holding time. Where reanalysis demonstrates that sample matrix interference is the cause of failure to meet any Quality Manual requirements, the warranty will be deemed to have been met.

4.3 CTL warrants that it possesses and maintains all licenses and certifications which are required to perform services under these Terms and Conditions provided that such requirements are specified in writing to CTL prior to Sample Acceptance. CTL will notify the Client in writing of any decertification or revocation of any license, or notice of either, which affects work in progress.

4.4 The warranty obligations set forth in Sections 4.1, 4.2 and 4.3 are the sole and exclusive warranties given by CTL in connection with any services performed by CTL or any Results generated from such services, and CTL gives and makes NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. No representative of CTL is authorized to give or make any other representation or warranty or modify this warranty in any way.

4.5 Client's sole and exclusive remedy for the breach of warranty in connection with any services performed by CTL, will be limited to repeating any services performed, contingent on the Client's providing, at the request of CTL and at the Client's expense, additional sample(s) if necessary. Any reanalysis requested by the Client generating Results consistent with the original Results will be at the Client's expense. If resampling is necessary, CTL's liability for resampling costs will be limited to actual cost or one hundred or one hundred fifty dollars ($150) per sample, whichever is less.

4.6 CTL's liability for any and all causes of action arising hereunder, whether based in contract, tort, warranty, negligence or otherwise, shall be limited to the lesser amount of compensation for the services performed or $100,000. All claims, including those for negligence, shall be deemed waived unless suit thereon is filed within one year after CTL's completion of the services. Under no circumstances, whether arising in contract, tort (including negligence), or otherwise, shall CTL be responsible for loss of use, loss of profits, or for any special, indirect, incidental or consequential damages occasioned by the services performed or by application or use of the reports prepared.

4.7 In no event shall CTL have any responsibility or liability to the Client for any failure or delay in performance by CTL which results, directly or indirectly, in whole or in part, from any cause or circumstance beyond the reasonable control of CTL. Such causes and circumstances shall include, but not be limited to, acts of God, acts of Client, acts or orders of any governmental authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, equipment breakdown, matrix interference or unknown highly contaminated samples that impact instrument operation, unavailability of supplies from usual suppliers, difficulties or delays in transportation, mail or delivery services, or any other cause beyond CTL's reasonable control.

5. RESULTS, WORK PRODUCT - not applicable

6. INSURANCE

6.1 CTL shall maintain in force during the performance of services under these Terms and Conditions, Workers' Compensation and Employer's Liability Insurance in accordance with the laws of the states having jurisdiction over CTL's employees who are engaged in the performance of the work. CTL shall also maintain during such period, Comprehensive General and Contractual Liability (limit of $2,000,000 per occurrence/ aggregate), Comprehensive Automobile Liability, owned and hired, ($1,000,000 combined single limit), and Professional/Pollution Liability Insurance (limit of $5,000,000 per occurrence/aggregate) Â Any Client required changes to these limits or conditions may result in a change in cost to the Client.

7. AUDIT

7.1 Upon prior notice to CTL, the Client may audit and inspect CTL's records and accounts covering reimbursable costs related to work done for the Client, for a period of one (1) year after completion of the work. The purpose of any such audit shall be only for verification of such costs, and CTL shall not be required to provide access to cost records where prices are expressed as fixed fees or published unit prices

Login Sample Receipt Checklist

Client: CT Laboratories

Job Number: 810-22876-1

Login Number: 22876
List Number: 1
Creator: Pehling-Wright, Penny

List Source: Eurofins Eaton South Bend

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc

Radford AAP; VA

SGS Job Number: FA90260

Sampling Date: 10/27/21

Report to:

Weston Solutions, Inc
2 Eaton St Suite 603
Hampton, VA 23669
pacea@westonsolutions.com

ATTN: Tony Pace

Total number of pages in report: 735

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

Table of Contents

Section 1: Sample Summary **4**
Section 2: Case Narrative/Conformance Summary **5**
Section 3: Summary of Hits **6**
Section 4: Sample Results **8**
4.1: FA90260-1: 54MW13 9
4.2: FA90260-2: 54MW10 11
4.3: FA90260-3: 54TW10 13
4.4: FA90260-4: 54MW12 15
4.5: FA90260-5: 54MW1 17
Section 5: Misc. Forms **19**
5.1: Chain of Custody 20
5.2: QC Evaluation: DOD QSM5.x Limits 22
Section 6: MS Semi-volatiles - QC Data Summaries **25**
6.1: Method Blank Summary 26
6.2: Blank Spike Summary 29
6.3: Matrix Spike/Matrix Spike Duplicate Summary 30
6.4: Internal Standard Area Summaries 32
6.5: Initial and Continuing Calibration Summaries 34
6.6: Run Sequence Reports 41
Section 7: MS Semi-volatiles - Raw Data **43**
7.1: Samples 44
7.2: Method Blanks 56
7.3: Blank Spikes 62
7.4: Matrix Spike/Matrix Spike Duplicates 64
7.5: Initial and Continuing Calibrations 72
7.6: Instrument Run Logs 102
7.7: Prep Logs 104
Section 8: GC/LC Semi-volatiles - QC Data Summaries **105**
8.1: Method Blank Summary 106
8.2: Blank Spike Summary 108
8.3: Matrix Spike/Matrix Spike Duplicate Summary 109
8.4: GC Identification Summaries (Explosives) 110
8.5: Surrogate Recovery Summaries 114
8.6: GC Surrogate Retention Time Summaries 115
8.7: Initial and Continuing Calibration Summaries 120
8.8: Run Sequence Reports 150
Section 9: GC/LC Semi-volatiles - Raw Data **157**
9.1: Samples 158
9.2: Method Blanks 264
9.3: Blank Spikes 270
9.4: Matrix Spike/Matrix Spike Duplicates 275
9.5: Initial and Continuing Calibrations 313

Table of Contents

9.6: Instrument Run Logs 726
9.7: Prep Logs 734

SGS North America Inc.

Sample Summary

Weston Solutions, Inc

Radford AAP; VA

Job No: FA90260

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA90260-1	10/27/21	09:00	PT	10/28/21	AQ	Ground Water	54MW13
FA90260-1D	10/27/21	09:00	PT	10/28/21	AQ	Water Dup/MSD	54MW13
FA90260-1S	10/27/21	09:00	PT	10/28/21	AQ	Water Matrix Spike	54MW13
FA90260-2	10/27/21	10:40	PT	10/28/21	AQ	Ground Water	54MW10
FA90260-3	10/27/21	10:40	PT	10/28/21	AQ	Ground Water	54TW10
FA90260-4	10/27/21	12:10	PT	10/28/21	AQ	Ground Water	54MW12
FA90260-5	10/27/21	13:07	PT	10/28/21	AQ	Ground Water	54MW1

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Weston Solutions, Inc **Job No:** FA90260

Site: Radford AAP; VA **Report Date:** 11/16/2021 10:03:17

On 10/28/2021, 5 Sample(s), 0 Trip Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 5.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA90260 was Assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Semi-volatiles By Method SW846 6850

Matrix: AQ **Batch ID:** OP88299

Sample(s) FA90260-1MS, FA90260-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Perchlorate are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Perchlorate are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Perchlorate are outside control limits for sample OP88299-MSD. Probable cause is due to sample non-homogeneity.

GC/LC Semi-volatiles By Method SW846 8330B

Matrix: AQ **Batch ID:** OP88132

Sample(s) FA90260-1MS, FA90260-1MSD were used as the QC samples indicated.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for 1,3,5-Trinitrobenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for 2,4,6-Trinitrotoluene, 3,5-Dinitroaniline are outside control limits. Probable cause is due to matrix interference.

Sample(s) FA90260-1, FA90260-3, FA90260-4 have surrogates outside control limits.

FA90260-1 for 3,4-Dinitrotoluene: Outside control limits due to matrix interference.

FA90260-1 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA90260-1: All hits confirmed by reanalysis on a dissimilar column.

FA90260-1: Confirmation run.

FA90260-2 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA90260-2: All hits confirmed by reanalysis on a dissimilar column.

FA90260-2: Confirmation run.

FA90260-3 for 3,4-Dinitrotoluene: Outside control limits due to matrix interference.

FA90260-3: All hits confirmed by reanalysis on a dissimilar column.

FA90260-3: Confirmation run.

FA90260-4 for 3,4-Dinitrotoluene: Outside control limits due to matrix interference.

FA90260-4 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA90260-4: All hits confirmed by reanalysis on a dissimilar column.

FA90260-4: Confirmation run.

Matrix: AQ **Batch ID:** OP88250

FA90260-3: Confirmation run.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA90260
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 10/27/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA90260-1	**54MW13**					
Perchlorate		0.14 J	0.20	0.10	ug/l	SW846 6850
HMX [a]		3.9	0.20	0.098	ug/l	SW846 8330B
RDX [b]		0.58	0.20	0.098	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.53	0.20	0.098	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		2.3	0.20	0.098	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.3	0.20	0.098	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		22.3	0.20	0.098	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		11.8	0.20	0.098	ug/l	SW846 8330B
FA90260-2	**54MW10**					
Perchlorate		0.072 J	0.20	0.10	ug/l	SW846 6850
HMX [a]		2.6	0.20	0.098	ug/l	SW846 8330B
RDX [a]		1.4	0.20	0.098	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.40	0.20	0.098	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		1.5	0.20	0.098	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.6	0.20	0.098	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		2.2	0.20	0.098	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		5.4	0.20	0.098	ug/l	SW846 8330B
FA90260-3	**54TW10**					
Perchlorate		0.076 J	0.20	0.10	ug/l	SW846 6850
HMX [a]		2.5	0.20	0.098	ug/l	SW846 8330B
RDX [a]		1.0	0.20	0.098	ug/l	SW846 8330B
3,5-Dinitroaniline [a]		0.47	0.20	0.098	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		1.5	0.20	0.098	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.4	0.20	0.098	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		0.98	0.20	0.098	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		4.0	0.20	0.098	ug/l	SW846 8330B
FA90260-4	**54MW12**					
Perchlorate		0.44	0.20	0.10	ug/l	SW846 6850
HMX [a]		10.1	0.19	0.096	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.63	0.19	0.096	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		3.3	0.19	0.096	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.9	0.19	0.096	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		12.8	0.19	0.096	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		9.3	0.19	0.096	ug/l	SW846 8330B

Summary of Hits

Job Number: FA90260
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 10/27/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA90260-5	**54MW1**					

No hits reported in this sample.

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) All hits confirmed by reanalysis on a dissimilar column. Primary and confirmation results differ by more than 40%.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA90260-1
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 10/27/21
Date Received: 10/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86199.D	1	11/15/21 14:41	NG	11/11/21 13:00	OP88299	SQ1871
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.14	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA90260-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 10/27/21
Date Received: 10/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB070813.D	1	11/04/21 14:18	JB	11/02/21 08:00	OP88132	GBB2121
Run #2 [b]	GG622725.D	1	11/05/21 15:58	JB	11/02/21 08:00	OP88132	GGG3063

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2	1020 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	3.9	0.20	0.098	0.078	ug/l	
121-82-4	RDX [c]	0.58	0.20	0.098	0.078	ug/l	
	DNX	0.098 U	0.20	0.098	0.078	ug/l	
	MNX	0.098 U	0.20	0.098	0.078	ug/l	
	TNX	0.098 U	0.20	0.098	0.078	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.53	0.20	0.098	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.098 U	0.20	0.098	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	2.3	0.20	0.098	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.3	0.20	0.098	0.078	ug/l	
98-95-3	Nitrobenzene	0.098 U	0.20	0.098	0.095	ug/l	
88-72-2	o-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
479-45-8	Tetryl	0.098 U	0.20	0.098	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	22.3	0.20	0.098	0.097	ug/l	
118-96-7	2,4,6-Trinitrotoluene	11.8	0.20	0.098	0.078	ug/l	
55-63-0	Nitroglycerine	0.98 U	2.0	0.98	0.49	ug/l	
78-11-5	PETN	0.98 U	2.0	0.98	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	125%	141% [d]	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Outside control limits due to matrix interference.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA90260-2	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86174.D	1	11/12/21 18:08	NG	11/11/21 13:00	OP88299	SQ1870
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.072	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW10
Lab Sample ID: FA90260-2
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 10/27/21
Date Received: 10/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB070814.D	1	11/04/21 14:49	JB	11/02/21 08:00	OP88132	GBB2121
Run #2 [b]	GG622726.D	1	11/05/21 16:30	JB	11/02/21 08:00	OP88132	GGG3063

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2	1020 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	2.6	0.20	0.098	0.078	ug/l	
121-82-4	RDX	1.4	0.20	0.098	0.078	ug/l	
	DNX	0.098 U	0.20	0.098	0.078	ug/l	
	MNX	0.098 U	0.20	0.098	0.078	ug/l	
	TNX	0.098 U	0.20	0.098	0.078	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.40	0.20	0.098	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.098 U	0.20	0.098	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.5	0.20	0.098	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.6	0.20	0.098	0.078	ug/l	
98-95-3	Nitrobenzene	0.098 U	0.20	0.098	0.095	ug/l	
88-72-2	o-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
479-45-8	Tetryl	0.098 U	0.20	0.098	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	2.2	0.20	0.098	0.097	ug/l	
118-96-7	2,4,6-Trinitrotoluene	5.4	0.20	0.098	0.078	ug/l	
55-63-0	Nitroglycerine	0.98 U	2.0	0.98	0.49	ug/l	
78-11-5	PETN	0.98 U	2.0	0.98	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	123%	132%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW10		
Lab Sample ID:	FA90260-3	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86175.D	1	11/12/21 18:17	NG	11/11/21 13:00	OP88299	SQ1870
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.076	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW10		
Lab Sample ID:	FA90260-3	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB070815.D	1	11/04/21 15:20	JB	11/02/21 08:00	OP88132	GBB2121
Run #2 [b]	GG622727.D	1	11/05/21 17:01	JB	11/02/21 08:00	OP88132	GGG3063
Run #3 [b]	PP391676.D	1	11/11/21 12:55	JB	11/08/21 06:00	OP88250	GPP2493

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2	1020 ml	10.0 ml
Run #3	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	2.5	0.20	0.098	0.078	ug/l	
121-82-4	RDX	1.0	0.20	0.098	0.078	ug/l	
	DNX	0.098 U	0.20	0.098	0.078	ug/l	
	MNX	0.098 U	0.20	0.098	0.078	ug/l	
	TNX	0.098 U	0.20	0.098	0.078	ug/l	
618-87-1	3,5-Dinitroaniline	0.47	0.20	0.098	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.098 U	0.20	0.098	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.5	0.20	0.098	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.4	0.20	0.098	0.078	ug/l	
98-95-3	Nitrobenzene	0.098 U	0.20	0.098	0.095	ug/l	
88-72-2	o-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
479-45-8	Tetryl	0.098 U	0.20	0.098	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.98	0.20	0.098	0.097	ug/l	
118-96-7	2,4,6-Trinitrotoluene	4.0	0.20	0.098	0.078	ug/l	
55-63-0	Nitroglycerine	0.98 U	2.0	0.98	0.49	ug/l	
78-11-5	PETN	0.98 U	2.0	0.98	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
610-39-9	3,4-Dinitrotoluene	143% [c]	151% [c]	111%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Outside control limits due to matrix interference.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA90260-4	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86176.D	1	11/12/21 18:25	NG	11/11/21 13:00	OP88299	SQ1870
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.44	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA90260-4
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 10/27/21
Date Received: 10/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB070816.D	1	11/04/21 15:51	JB	11/02/21 08:00	OP88132	GBB2121
Run #2 [b]	GG622728.D	1	11/05/21 17:33	JB	11/02/21 08:00	OP88132	GGG3063

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	10.1	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.63	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	3.3	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.9	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	12.8	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	9.3	0.19	0.096	0.077	ug/l	
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	135%	144% [d]	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Outside control limits due to matrix interference.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW1		
Lab Sample ID:	FA90260-5	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86177.D	1	11/12/21 18:33	NG	11/11/21 13:00	OP88299	SQ1870
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.10 U	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA90260-5
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 10/27/21
Date Received: 10/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB070817.D	1	11/04/21 16:22	JB	11/02/21 08:00	OP88132	GBB2121
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.098 U	0.20	0.098	0.078	ug/l	
121-82-4	RDX	0.098 U	0.20	0.098	0.078	ug/l	
	DNX	0.098 U	0.20	0.098	0.078	ug/l	
	MNX	0.098 U	0.20	0.098	0.078	ug/l	
	TNX	0.098 U	0.20	0.098	0.078	ug/l	
618-87-1	3,5-Dinitroaniline	0.098 U	0.20	0.098	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.098 U	0.20	0.098	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
98-95-3	Nitrobenzene	0.098 U	0.20	0.098	0.095	ug/l	
88-72-2	o-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
479-45-8	Tetryl	0.098 U	0.20	0.098	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.098 U	0.20	0.098	0.097	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
55-63-0	Nitroglycerine	0.98 U	2.0	0.98	0.49	ug/l	
78-11-5	PETN	0.98 U	2.0	0.98	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	129%		70-136%

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

SGS North America Inc - Orlando

Chain of Custody

FA90260

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Weston Solutions
Address: 2 Eaton St. Ste. 603
City: Hampton State: VA Zip: 23669
Project Contact: Tony Pace Email: pacea@westonsolutions.com
Phone #: (757) 819-5310
Sampler(s) Name(s) (Printed)
Sampler 1: Sampler 2:

Project Information

Project Name: Radford AAP SWMU 54
Street
City Radford State VA
Project # 20255.001.001.0001.00
Fax #
Client Purchase Order #

Analytical Information

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	LC6850 PERCHLT	LC8330B, XLC3NX									LAB USE ONLY
1	54MW13	10/27/2021	0900	PT	GW	9		X								3	69	MS/MSD								
2	54MW10	10/27	1040	PT	GW	3		X								1	2									
3	54TW10	10/27	1040	PT	GW	3		X								1	2									
4	54MW12	10/27	1210	PT	GW	3		X								1	2									
5	54MW1	10/27	1307	PT	GW	3		X								1	2									

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other 14 Day

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

INITIAL ASSESSMENT
LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	Weston	10/27/2021 1730	2 Fedex	3	10/28/21 1015	4
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 5.6 IR 2.6

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

FA90260: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA90260 **Client:** WESTON SOLUTIONS **Project:** RADFORD AAP SWMU54

Date / Time Received: 10/28/2021 10:15:00 AM **Delivery Method:** FED EX **Airbill #'s:** 7750 3585 5022

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 2

Cooler Temps (Raw Measured) °C: Cooler 1: (5.6); Cooler 2: (2.6);

Cooler Temps (Corrected) °C: Cooler 1: (5.8); Cooler 2: (2.8);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: CARLOSD Date: 10/28/2021 10:15:00 Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FA90260
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 10/27/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP88299	SW846 6850						
OP88299-BS	14797-73-0	Perchlorate	BSP	REC	85	%	84-119
OP88299-MS	14797-73-0	Perchlorate	MS	REC	50	%	84-119
OP88299-MS	14797-73-0	Perchlorate	MS	REC	10	%	84-119
OP88299-MSD	14797-73-0	Perchlorate	MSD	REC	55	%	84-119
OP88299-MSD	14797-73-0	Perchlorate	MSD	REC	35	%	84-119
OP88299-MSD	14797-73-0	Perchlorate	MSD	RPD	27	%	15
OP88299-MSD	14797-73-0	Perchlorate	MSD	RPD	4	%	15
OP88132	SW846 8330B						
OP88132-BS	2691-41-0	HMX	BSP	REC	110	%	65-135
OP88132-BS	121-82-4	RDX	BSP	REC	110	%	68-130
OP88132-BS		DNX	BSP	REC	100	%	66-119
OP88132-BS		MNX	BSP	REC	81	%	57-132
OP88132-BS	618-87-1	3,5-Dinitroaniline	BSP	REC	112	%	71-117
OP88132-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	112	%	78-120
OP88132-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	114	%	77-127
OP88132-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	112	%	78-120
OP88132-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	112	%	79-120
OP88132-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	110	%	76-125
OP88132-BS	98-95-3	Nitrobenzene	BSP	REC	110	%	65-134
OP88132-BS	88-72-2	o-Nitrotoluene	BSP	REC	108	%	70-127
OP88132-BS	99-08-1	m-Nitrotoluene	BSP	REC	110	%	73-125
OP88132-BS	99-99-0	p-Nitrotoluene	BSP	REC	112	%	71-127
OP88132-BS	479-45-8	Tetryl	BSP	REC	94	%	64-128
OP88132-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	108	%	73-125
OP88132-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	104	%	71-123
OP88132-BS	55-63-0	Nitroglycerine	BSP	REC	114	%	74-127
OP88132-BS	78-11-5	PETN	BSP	REC	118	%	73-127
OP88132-MS	2691-41-0	HMX	MS	REC	104	%	65-135
OP88132-MS	121-82-4	RDX	MS	REC	116	%	68-130
OP88132-MS		DNX	MS	REC	116	%	66-119
OP88132-MS		MNX	MS	REC	108	%	57-132
OP88132-MS	618-87-1	3,5-Dinitroaniline	MS	REC	113	%	71-117
OP88132-MS	99-65-0	1,3-Dinitrobenzene	MS	REC	112	%	78-120
OP88132-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	115	%	77-127
OP88132-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	109	%	78-120
OP88132-MS	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	98	%	79-120
OP88132-MS	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	108	%	76-125
OP88132-MS	98-95-3	Nitrobenzene	MS	REC	108	%	65-134
OP88132-MS	88-72-2	o-Nitrotoluene	MS	REC	112	%	70-127
OP88132-MS	99-08-1	m-Nitrotoluene	MS	REC	111	%	73-125

* Sample used for QC is not from job FA90260

QC Evaluation: DOD QSM5.x Limits

Job Number: FA90260
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 10/27/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP88132-MS	99-99-0	p-Nitrotoluene	MS	REC	111	%	71-127
OP88132-MS	479-45-8	Tetryl	MS	REC	92	%	64-128
OP88132-MS	99-35-4	1,3,5-Trinitrobenzene	MS	REC	131 [a]	%	73-125
OP88132-MS	118-96-7	2,4,6-Trinitrotoluene	MS	REC	100	%	71-123
OP88132-MS	55-63-0	Nitroglycerine	MS	REC	110	%	74-127
OP88132-MS	78-11-5	PETN	MS	REC	116	%	73-127
OP88132-MSD	2691-41-0	HMX	MSD	REC	105	%	65-135
OP88132-MSD	2691-41-0	HMX	MSD	RPD	4	%	20
OP88132-MSD	121-82-4	RDX	MSD	REC	117	%	68-130
OP88132-MSD	121-82-4	RDX	MSD	RPD	4	%	20
OP88132-MSD		DNX	MSD	REC	114	%	66-119
OP88132-MSD		DNX	MSD	RPD	2	%	20
OP88132-MSD		MNX	MSD	REC	109	%	57-132
OP88132-MSD		MNX	MSD	RPD	5	%	20
OP88132-MSD	618-87-1	3,5-Dinitroaniline	MSD	REC	117	%	71-117
OP88132-MSD	618-87-1	3,5-Dinitroaniline	MSD	RPD	7	%	20
OP88132-MSD	99-65-0	1,3-Dinitrobenzene	MSD	REC	116	%	78-120
OP88132-MSD	99-65-0	1,3-Dinitrobenzene	MSD	RPD	7	%	20
OP88132-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	124	%	77-127
OP88132-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	9	%	20
OP88132-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	113	%	78-120
OP88132-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	7	%	20
OP88132-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	95	%	79-120
OP88132-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	1	%	20
OP88132-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	114	%	76-125
OP88132-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	8	%	20
OP88132-MSD	98-95-3	Nitrobenzene	MSD	REC	114	%	65-134
OP88132-MSD	98-95-3	Nitrobenzene	MSD	RPD	9	%	20
OP88132-MSD	88-72-2	o-Nitrotoluene	MSD	REC	115	%	70-127
OP88132-MSD	88-72-2	o-Nitrotoluene	MSD	RPD	6	%	20
OP88132-MSD	99-08-1	m-Nitrotoluene	MSD	REC	116	%	73-125
OP88132-MSD	99-08-1	m-Nitrotoluene	MSD	RPD	8	%	20
OP88132-MSD	99-99-0	p-Nitrotoluene	MSD	REC	115	%	71-127
OP88132-MSD	99-99-0	p-Nitrotoluene	MSD	RPD	7	%	20
OP88132-MSD	479-45-8	Tetryl	MSD	REC	96	%	64-128
OP88132-MSD	479-45-8	Tetryl	MSD	RPD	9	%	20
OP88132-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	169 [a]	%	73-125
OP88132-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	11	%	20
OP88132-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	121	%	71-123
OP88132-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	11	%	20
OP88132-MSD	55-63-0	Nitroglycerine	MSD	REC	118	%	74-127
OP88132-MSD	55-63-0	Nitroglycerine	MSD	RPD	11	%	20
OP88132-MSD	78-11-5	PETN	MSD	REC	131	%	73-127
OP88132-MSD	78-11-5	PETN	MSD	RPD	15	%	20

* Sample used for QC is not from job FA90260

QC Evaluation: DOD QSM5.x Limits

Job Number: FA90260
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 10/27/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

(a) Outside control limits due to high level in sample relative to spike amount.

* Sample used for QC is not from job FA90260

MS Semi-volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Instrument Blank

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
SQ1870-IBLK	Q86190.D	1	11/12/21	NG	n/a	n/a	SQ1870

The QC reported here applies to the following samples: **Method:** SW846 6850

FA90260-2, FA90260-3, FA90260-4, FA90260-5

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Instrument Blank

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
SQ1871-IBLK	Q86204.D	1	11/15/21	NG	n/a	n/a	SQ1871

The QC reported here applies to the following samples: **Method:** SW846 6850

FA90260-1

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Method Blank Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP88299-MB	Q86170.D	1	11/12/21	NG	11/11/21	OP88299	SQ1870

The QC reported here applies to the following samples: **Method:** SW846 6850

FA90260-1, FA90260-2, FA90260-3, FA90260-4, FA90260-5

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Blank Spike Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP88299-BS	Q86169.D	1	11/12/21	NG	11/11/21	OP88299	SQ1870

The QC reported here applies to the following samples: **Method:** SW846 6850

FA90260-1, FA90260-2, FA90260-3, FA90260-4, FA90260-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
14797-73-0	Perchlorate	0.2	0.17	85	80-120

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP88299-MS	Q86172.D	1	11/12/21	NG	11/11/21	OP88299	SQ1870
OP88299-MSD	Q86173.D	1	11/12/21	NG	11/11/21	OP88299	SQ1870
FA90260-1	Q86199.D	1	11/15/21	NG	11/11/21	OP88299	SQ1871

The QC reported here applies to the following samples: **Method:** SW846 6850

FA90260-1, FA90260-2, FA90260-3, FA90260-4, FA90260-5

CAS No.	Compound	FA90260-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
14797-73-0	Perchlorate	0.14	J	0.2	0.24	50*	0.2	0.25	55*	4	80-120/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP88299-MS	Q86200.D	1	11/15/21	NG	11/11/21	OP88299	SQ1871
OP88299-MSD	Q86201.D	1	11/15/21	NG	11/11/21	OP88299	SQ1871
FA90260-1	Q86199.D	1	11/15/21	NG	11/11/21	OP88299	SQ1871

The QC reported here applies to the following samples: **Method:** SW846 6850

FA90260-1, FA90260-2, FA90260-3, FA90260-4, FA90260-5

CAS No.	Compound	FA90260-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
14797-73-0	Perchlorate	0.14	J	0.2	0.16	10*	0.2	0.21	35*	27*	80-120/15

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1870-ICC1870	**Injection Date:**	11/12/21
Lab File ID:	Q86162.D	**Injection Time:**	16:27
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	346972	6.06
Check Std [b]	371023	6.06
Upper Limit [c]	520458	8.06
Lower Limit [d]	173486	4.06

Lab Sample ID	IS 1 AREA	RT
OP88299-BS	374004	6.04
OP88299-MB	374397	6.04
OP88299-MS	191009	5.49
OP88299-MSD	193434	5.49
FA90260-2	215156	5.45
FA90260-3	217267	5.46
FA90260-4	229767	5.61
FA90260-5	228078	5.64
ZZZZZZ	223210	5.55

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1870-ICC1870 Q86162.D 11/12/21 16:27. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Internal Standard Area Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1871-CC1870	**Injection Date:**	11/15/21
Lab File ID:	Q86197.D	**Injection Time:**	14:25
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	346972	6.06
Check Std [b]	402512	5.86
Upper Limit [c]	520458	7.86
Lower Limit [d]	173486	3.86

Lab Sample ID	IS 1 AREA	RT
FA90260-1	373787	5.38
OP88299-MS	338296	5.36
OP88299-MSD	256571	5.36

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1870-ICC1870 Q86162.D 11/12/21 16:27. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Initial Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1870-ICC1870
Lab FileID: Q86162.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	6850_111221_SQ1870.quantmethod.xml
Batch Name	D:\MassHunter\Data\1112_6850_SQ1870\QuantResults\sq1870.batch.bin
Last Calib Update	11/15/2021 1:46:27 PM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\1112_6850_SQ1870\Q86159.d	11/12/2021 4:02:45 PM	11/15/2021 1:46:27 PM
2	D:\MassHunter\Data\1112_6850_SQ1870\Q86160.d	11/12/2021 4:11:09 PM	11/15/2021 1:46:27 PM
3	D:\MassHunter\Data\1112_6850_SQ1870\Q86161.d	11/12/2021 4:19:34 PM	11/15/2021 1:46:27 PM
4	D:\MassHunter\Data\1112_6850_SQ1870\Q86162.d	11/12/2021 4:27:57 PM	11/15/2021 1:46:27 PM
5	D:\MassHunter\Data\1112_6850_SQ1870\Q86163.d	11/12/2021 4:36:21 PM	11/15/2021 1:46:27 PM
6	D:\MassHunter\Data\1112_6850_SQ1870\Q86164.d	11/12/2021 4:44:47 PM	11/15/2021 1:46:27 PM
7	D:\MassHunter\Data\1112_6850_SQ1870\Q86165.d	11/12/2021 4:53:10 PM	11/15/2021 1:46:27 PM

Compound	Curve Fit	1	2	3	4	5	6	7	Avg RF	%RSD
I Cl18O4				---------- ISTD ----------						
T Perchlorate	Avg RF	1.0125	1.0345	1.0876	1.1249	1.2020	1.2428	1.2791	1.1405	9.065

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1870-ICV1870
Lab FileID: Q86167.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1112_6850_SQ1870\sq1870.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1112_6850_SQ1870\Q86159.d
2:D:\MassHunter\Data\1112_6850_SQ1870\Q86160.d
3:D:\MassHunter\Data\1112_6850_SQ1870\Q86161.d
4:D:\MassHunter\Data\1112_6850_SQ1870\Q86162.d
5:D:\MassHunter\Data\1112_6850_SQ1870\Q86163.d
6:D:\MassHunter\Data\1112_6850_SQ1870\Q86164.d
7:D:\MassHunter\Data\1112_6850_SQ1870\Q86165.d
8:D:\MassHunter\Data\1112_6850_SQ1870\Q86166.d

Data File: Q86167
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.892	-5.4	94.6

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1870-CC1870
Lab FileID: Q86179.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1112_6850_SQ1870\sq1870.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1112_6850_SQ1870\Q86159.d
2:D:\MassHunter\Data\1112_6850_SQ1870\Q86160.d
3:D:\MassHunter\Data\1112_6850_SQ1870\Q86161.d
4:D:\MassHunter\Data\1112_6850_SQ1870\Q86162.d
5:D:\MassHunter\Data\1112_6850_SQ1870\Q86163.d
6:D:\MassHunter\Data\1112_6850_SQ1870\Q86164.d
7:D:\MassHunter\Data\1112_6850_SQ1870\Q86165.d
8:D:\MassHunter\Data\1112_6850_SQ1870\Q86166.d

Data File: Q86179
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.961	-2.0	98.0

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1870-CC1870
Lab FileID: Q86180.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1112_6850_SQ1870\sq1870.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1112_6850_SQ1870\Q86159.d
2:D:\MassHunter\Data\1112_6850_SQ1870\Q86160.d
3:D:\MassHunter\Data\1112_6850_SQ1870\Q86161.d
4:D:\MassHunter\Data\1112_6850_SQ1870\Q86162.d
5:D:\MassHunter\Data\1112_6850_SQ1870\Q86163.d
6:D:\MassHunter\Data\1112_6850_SQ1870\Q86164.d
7:D:\MassHunter\Data\1112_6850_SQ1870\Q86165.d
8:D:\MassHunter\Data\1112_6850_SQ1870\Q86166.d

Data File: Q86180
Type : QC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	0.200	0.170	-14.8	85.2

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1871-CC1870
Lab FileID: Q86197.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1115_6850_SQ1871\sq1871.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1112_6850_SQ1870\Q86159.d
2:D:\MassHunter\Data\1112_6850_SQ1870\Q86160.d
3:D:\MassHunter\Data\1112_6850_SQ1870\Q86161.d
4:D:\MassHunter\Data\1112_6850_SQ1870\Q86162.d
5:D:\MassHunter\Data\1112_6850_SQ1870\Q86163.d
6:D:\MassHunter\Data\1112_6850_SQ1870\Q86164.d
7:D:\MassHunter\Data\1112_6850_SQ1870\Q86165.d
8:D:\MassHunter\Data\1112_6850_SQ1870\Q86166.d

Data File: Q86197
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.960	-2.0	98.0

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1871-CC1870
Lab FileID: Q86198.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1115_6850_SQ1871\sq1871.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1112_6850_SQ1870\Q86159.d
2:D:\MassHunter\Data\1112_6850_SQ1870\Q86160.d
3:D:\MassHunter\Data\1112_6850_SQ1870\Q86161.d
4:D:\MassHunter\Data\1112_6850_SQ1870\Q86162.d
5:D:\MassHunter\Data\1112_6850_SQ1870\Q86163.d
6:D:\MassHunter\Data\1112_6850_SQ1870\Q86164.d
7:D:\MassHunter\Data\1112_6850_SQ1870\Q86165.d
8:D:\MassHunter\Data\1112_6850_SQ1870\Q86166.d

Data File: Q86198
Type : QC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	0.200	0.181	-9.4	90.6

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1871-CC1870
Lab FileID: Q86202.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1115_6850_SQ1871\sq1871.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1112_6850_SQ1870\Q86159.d
2:D:\MassHunter\Data\1112_6850_SQ1870\Q86160.d
3:D:\MassHunter\Data\1112_6850_SQ1870\Q86161.d
4:D:\MassHunter\Data\1112_6850_SQ1870\Q86162.d
5:D:\MassHunter\Data\1112_6850_SQ1870\Q86163.d
6:D:\MassHunter\Data\1112_6850_SQ1870\Q86164.d
7:D:\MassHunter\Data\1112_6850_SQ1870\Q86165.d
8:D:\MassHunter\Data\1112_6850_SQ1870\Q86166.d

Data File: Q86202
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.971	-1.5	98.5

CC Criteria: +/- 15%

Run Sequence Report

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1870 **Method:** SW846 6850 **Instrument ID:** GCMSQ

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1870-IC1870	Q86158.D	11/12/21 15:54	n/a	Mass Calibration Verification
SQ1870-IC1870	Q86159.D	11/12/21 16:02	n/a	Initial cal 0.2
SQ1870-IC1870	Q86160.D	11/12/21 16:11	n/a	Initial cal 0.5
SQ1870-IC1870	Q86161.D	11/12/21 16:19	n/a	Initial cal 1.0
SQ1870-ICC1870	Q86162.D	11/12/21 16:27	n/a	Initial cal 2.0
SQ1870-IC1870	Q86163.D	11/12/21 16:36	n/a	Initial cal 5.0
SQ1870-IC1870	Q86164.D	11/12/21 16:44	n/a	Initial cal 10
SQ1870-IC1870	Q86165.D	11/12/21 16:53	n/a	Initial cal 25
SQ1870-IC1870	Q86166.D	11/12/21 17:01	n/a	Initial cal 50
SQ1870-ICV1870	Q86167.D	11/12/21 17:09	n/a	Initial cal verification 2
OP88299-BS	Q86169.D	11/12/21 17:26	OP88299	Blank Spike
OP88299-MB	Q86170.D	11/12/21 17:35	OP88299	Method Blank
OP88299-MS	Q86172.D	11/12/21 17:51	OP88299	Matrix Spike
OP88299-MSD	Q86173.D	11/12/21 18:00	OP88299	Matrix Spike Duplicate
FA90260-2	Q86174.D	11/12/21 18:08	OP88299	54MW10
FA90260-3	Q86175.D	11/12/21 18:17	OP88299	54TW10
FA90260-4	Q86176.D	11/12/21 18:25	OP88299	54MW12
FA90260-5	Q86177.D	11/12/21 18:33	OP88299	54MW1
ZZZZZZ	Q86178.D	11/12/21 18:42	OP88299	(unrelated sample)
SQ1870-CC1870	Q86179.D	11/12/21 18:50	n/a	Continuing cal 2.0
SQ1870-CC1870	Q86180.D	11/12/21 18:59	n/a	Continuing cal 0.2
ZZZZZZ	Q86182.D	11/12/21 19:16	OP88299	(unrelated sample)
ZZZZZZ	Q86185.D	11/12/21 19:41	OP88299	(unrelated sample)
ZZZZZZ	Q86186.D	11/12/21 19:49	OP88299	(unrelated sample)
ZZZZZZ	Q86187.D	11/12/21 19:57	OP88299	(unrelated sample)
SQ1870-CC1870	Q86188.D	11/12/21 20:06	n/a	Continuing cal 2.0
SQ1870-ECC1870	Q86189.D	11/12/21 20:14	n/a	Ending cal 0.2
SQ1870-IBLK	Q86190.D	11/12/21 20:23	n/a	Instrument Blank

Run Sequence Report

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1871	**Method:** SW846 6850	**Instrument ID:** GCMSQ

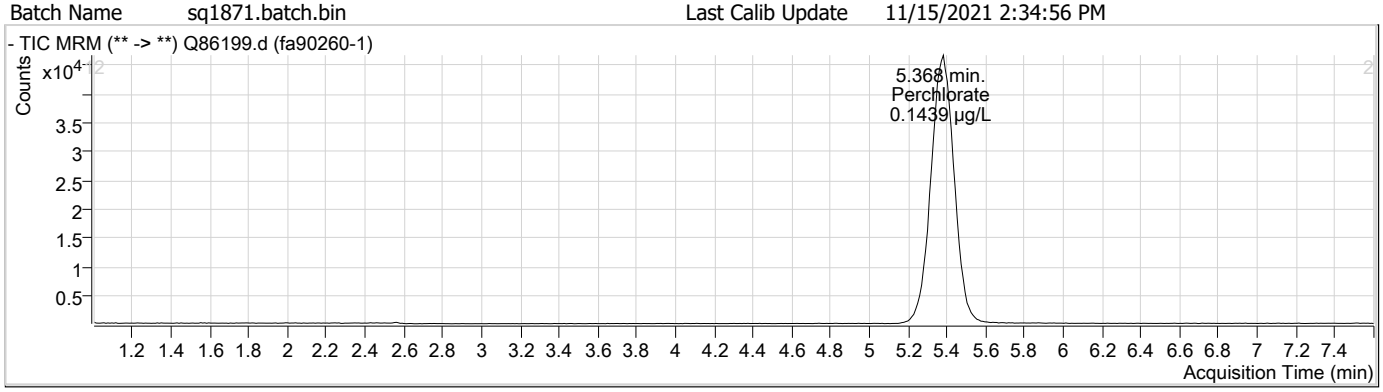
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1871-CC1870	Q86197.D	11/15/21 14:25	n/a	Continuing cal 2.0
SQ1871-CC1870	Q86198.D	11/15/21 14:33	n/a	Continuing cal 0.2
FA90260-1	Q86199.D	11/15/21 14:41	OP88299	54MW13
OP88299-MS	Q86200.D	11/15/21 14:50	OP88299	Matrix Spike
OP88299-MSD	Q86201.D	11/15/21 14:58	OP88299	Matrix Spike Duplicate
SQ1871-CC1870	Q86202.D	11/15/21 15:07	n/a	Continuing cal 2.0
SQ1871-ECC1870	Q86203.D	11/15/21 15:15	n/a	Ending cal 0.2
SQ1871-IBLK	Q86204.D	11/15/21 15:23	n/a	Instrument Blank

MS Semi-volatiles

Raw Data

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86199.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/15/2021 2:41:55 PM
Sample Name	fa90260-1	Instrument	Instrument 1
Vial	P1-B7	Sample Information	OP88299,SQ1871,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	#1
Batch Name	sq1871.batch.bin	Last Calib Update	11/15/2021 2:34:56 PM

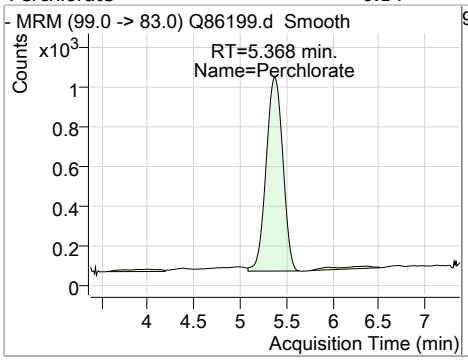


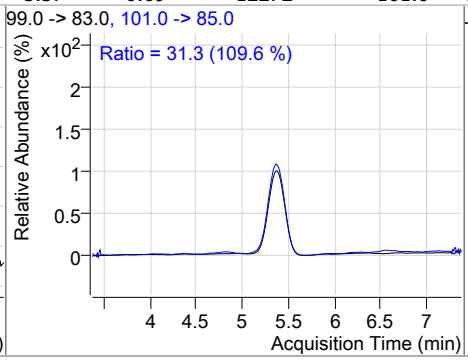
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.382	107.0 -> 89.0	373787	NoQ	5.00 µg/L	-0.682
System Monitoring Compounds						
Target Compounds						QValue
Perchlorate	5.368	99.0 -> 83.0	12272	3.2	0.14 µg/L	95

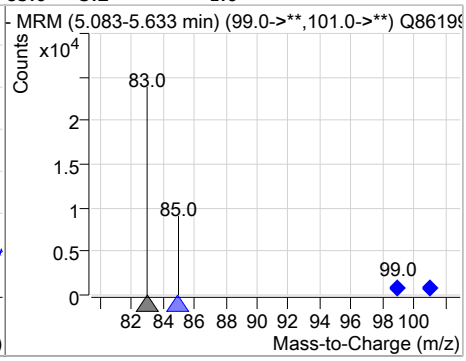
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.14	5.37	-0.69	12272	101.0 -> 85.0	3.2	1.6	



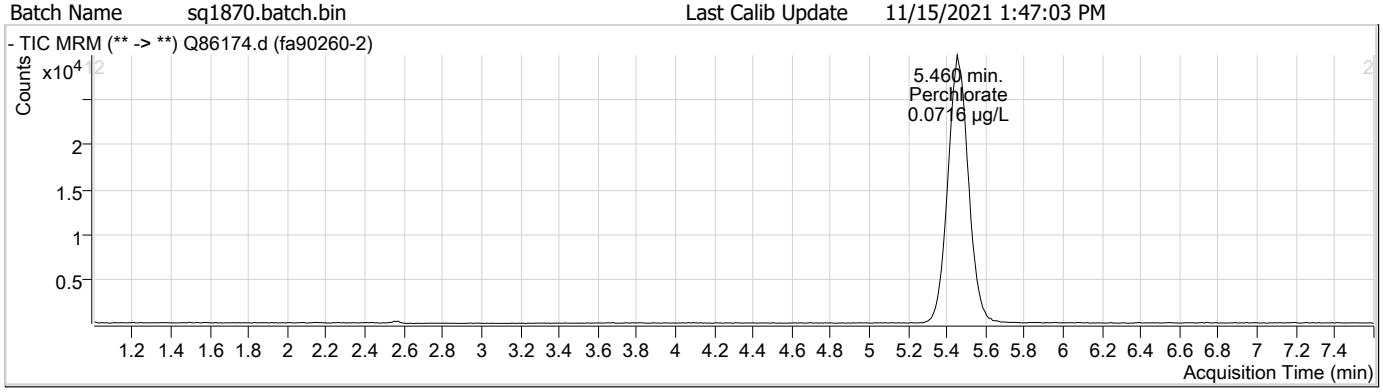




Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 11/15/21 14:53

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86174.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 6:08:47 PM
Sample Name	fa90260-2	Instrument	Instrument 1
Vial	P1-E8	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

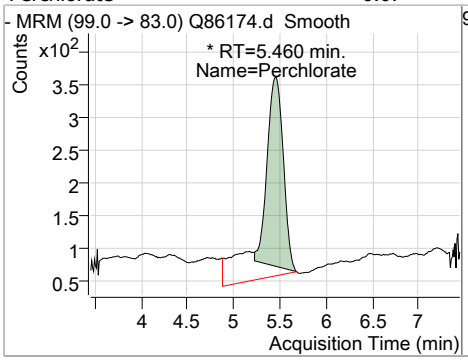


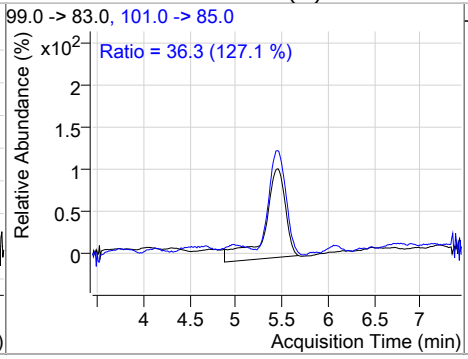
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	5.453	107.0 -> 89.0	215156	NoQ	5.00	µg/L		-0.611
System Monitoring Compounds								
Target Compounds								QValue
Perchlorate	5.460	99.0 -> 83.0	3512	2.8	0.07	µg/L	m	85

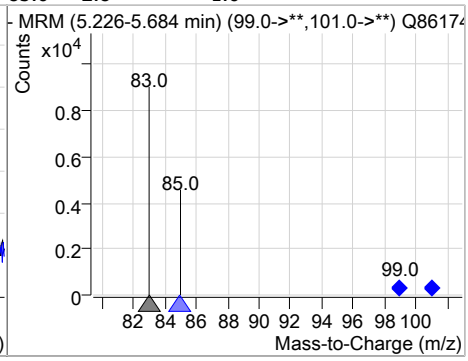
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.07	5.46	-0.60	3512 (m)	101.0 -> 85.0	2.8	1.6	







Manual Integration Approval Summary

Sample Number: FA90260-2
Lab FileID: Q86174.D
Injection Time: 11/12/21 18:08

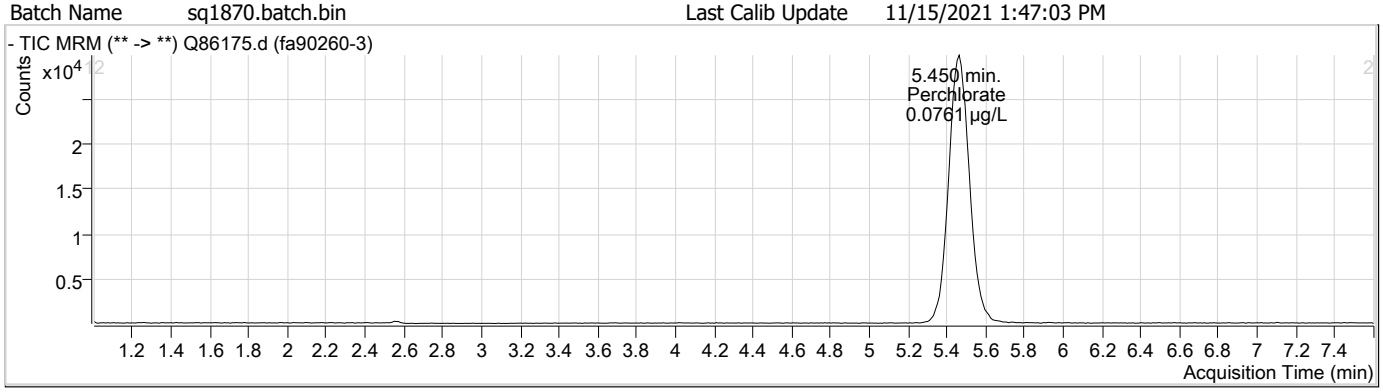
Method: SW846 6850
Analyst approved: 11/15/21 13:59 Natasha Gumtie
Supervisor approved: 11/15/21 14:53 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perchlorate	14797-73-0		5.46	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 11/15/21 14:53

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86175.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 6:17:11 PM
Sample Name	fa90260-3	Instrument	Instrument 1
Vial	P1-E9	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

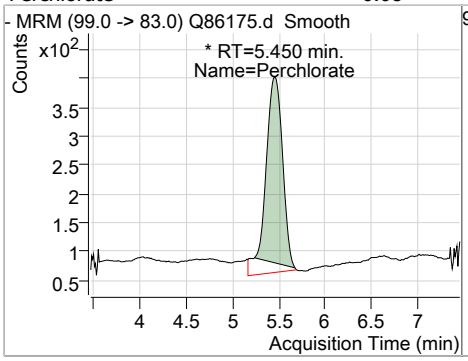


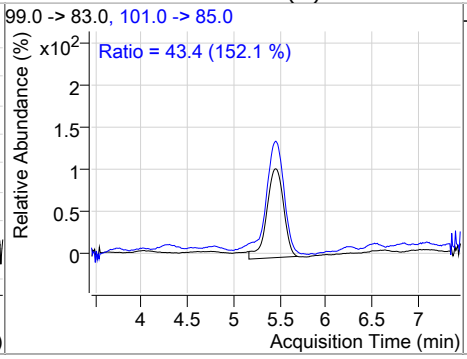
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	5.463	107.0 -> 89.0	217267	NoQ	5.00	µg/L		-0.601
System Monitoring Compounds								
Target Compounds								QValue
Perchlorate	5.450	99.0 -> 83.0	3771	2.3	0.08	µg/L	m	72

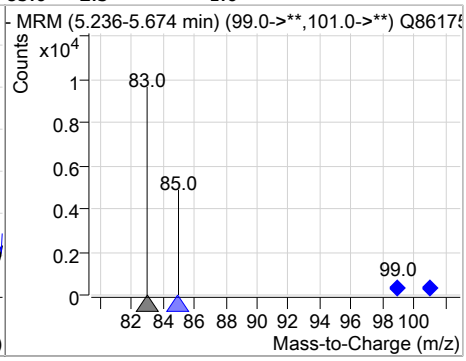
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.08	5.45	-0.61	3771 (m)	101.0 -> 85.0	2.3	1.6	







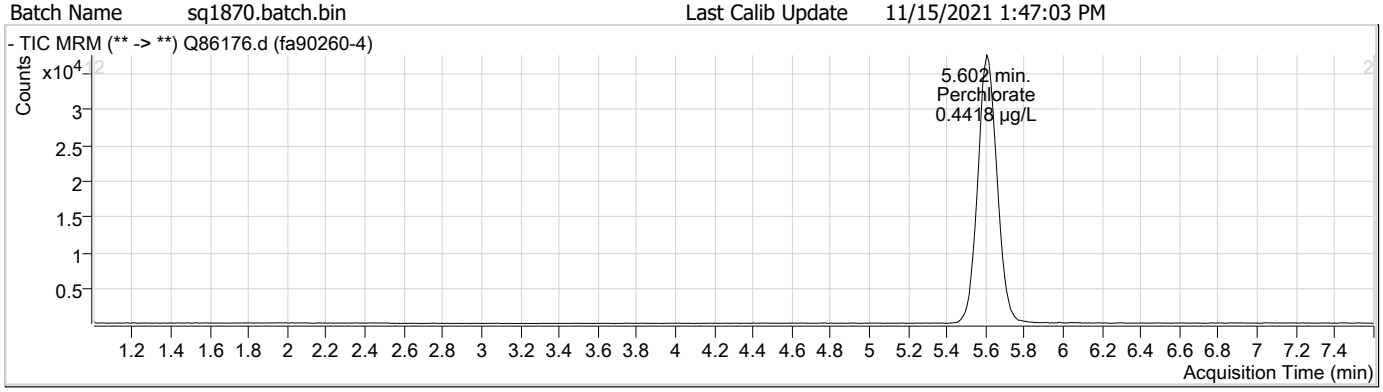
Manual Integration Approval Summary

Sample Number:	FA90260-3	**Method:**	SW846 6850
Lab FileID:	Q86175.D	**Analyst approved:**	11/15/21 13:59 Natasha Gumtie
Injection Time:	11/12/21 18:17	**Supervisor approved:**	11/15/21 14:53 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perchlorate	14797-73-0		5.45	Poor instrument integration

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86176.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 6:25:35 PM
Sample Name	fa90260-4	Instrument	Instrument 1
Vial	P1-F1	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

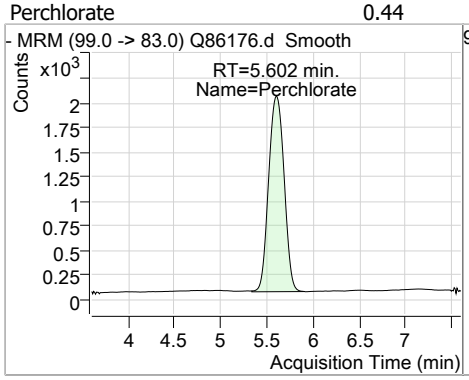


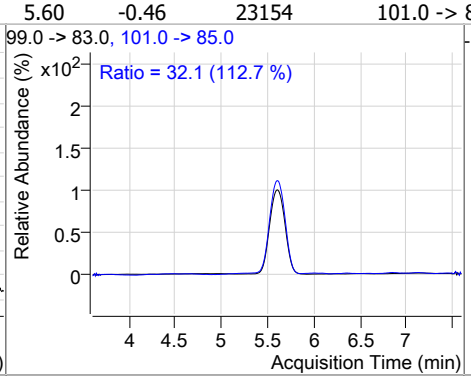
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.606	107.0 -> 89.0	229767	NoQ	5.00	µg/L	-0.458
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.602	99.0 -> 83.0	23154	3.1	0.44	µg/L	93

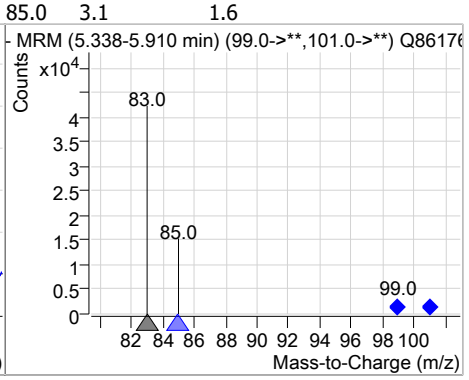
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.44	5.60	-0.46	23154	101.0 -> 85.0	3.1	1.6	

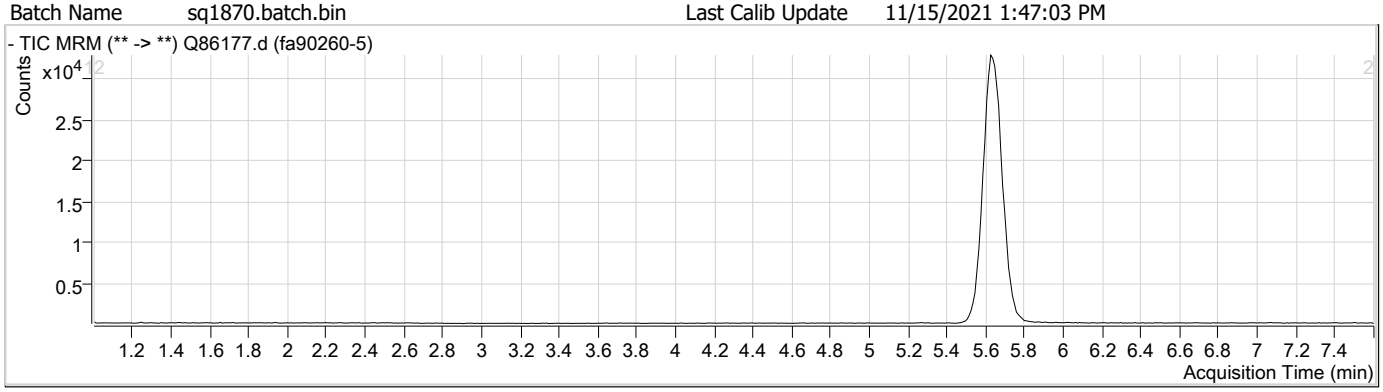






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86177.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 6:33:59 PM
Sample Name	fa90260-5	Instrument	Instrument 1
Vial	P1-F2	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

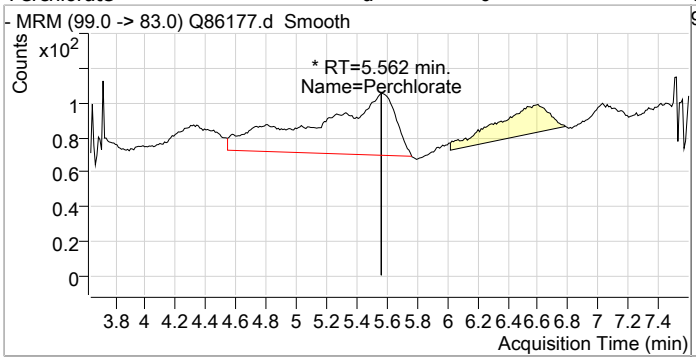


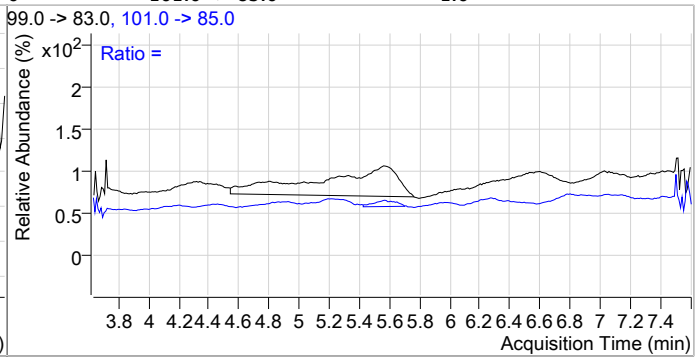
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	5.636	107.0 -> 89.0	228078	NoQ	5.00	µg/L		-0.428
System Monitoring Compounds								
Target Compounds								QValue
Perchlorate	5.562	99.0 -> 83.0	0		0.00	µg/L	md	1

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

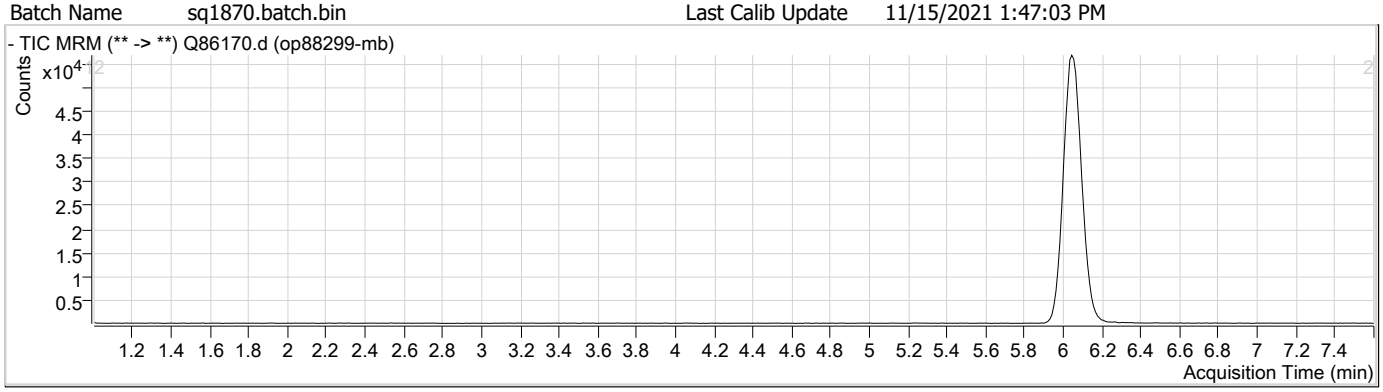
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	d	0		0	101.0 -> 85.0		1.6	





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86170.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 5:35:11 PM
Sample Name	op88299-mb	Instrument	Instrument 1
Vial	P1-E4	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

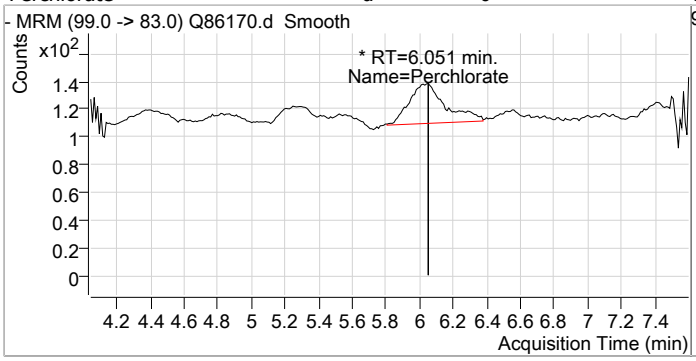


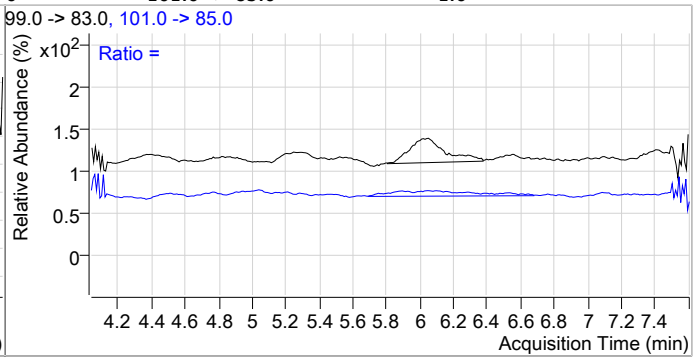
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	6.044	107.0 -> 89.0	374397	NoQ	5.00	µg/L		-0.020
System Monitoring Compounds								
Target Compounds								QValue
Perchlorate	6.051	99.0 -> 83.0	0		0.00	µg/L	md	1

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

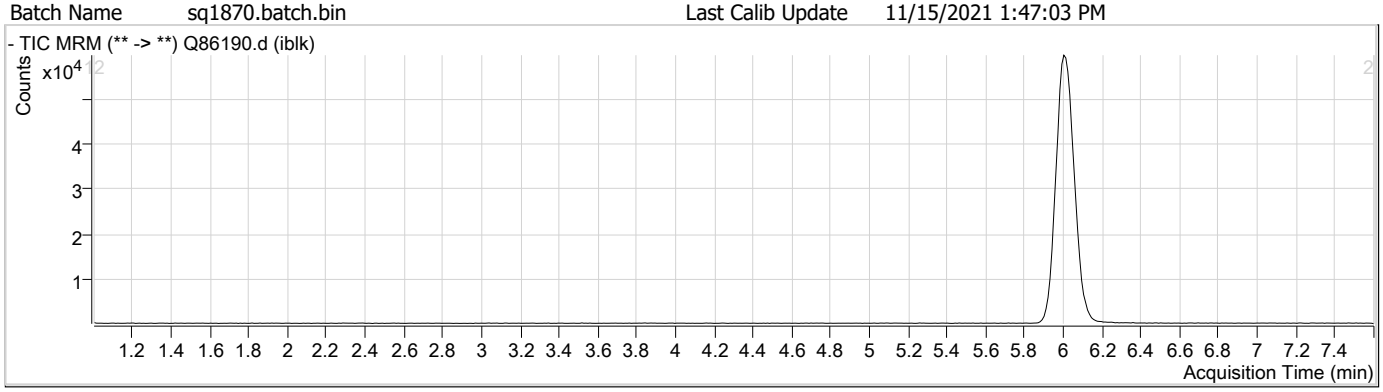
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	d	0		0	101.0 -> 85.0		1.6	





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86190.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 8:23:11 PM
Sample Name	iblk	Instrument	Instrument 1
Vial	P1-D1	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

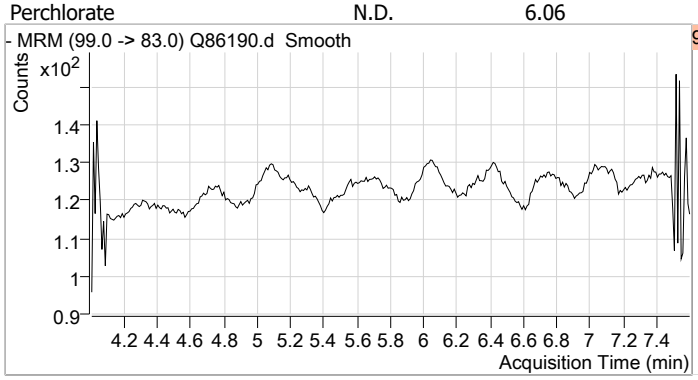


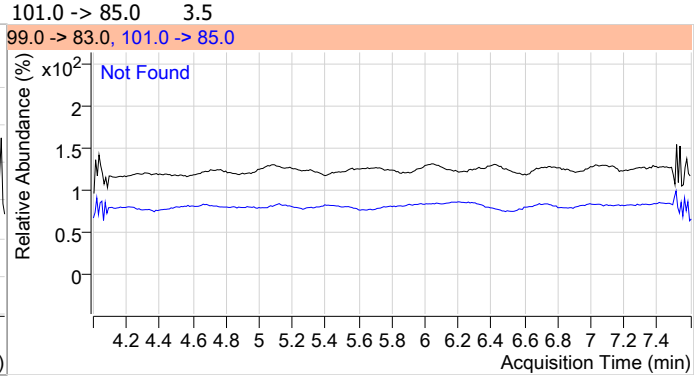
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.003	107.0 -> 89.0	394686	NoQ	5.00 µg/L	-0.061
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

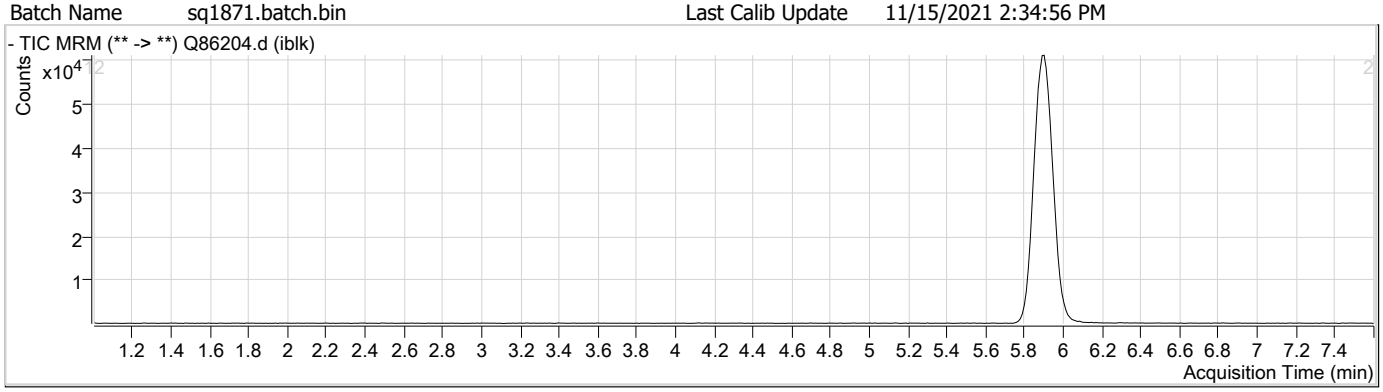
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	6.06	101.0 -> 85.0	3.5





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86204.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/15/2021 3:23:53 PM
Sample Name	iblk	Instrument	Instrument 1
Vial	P1-D1	Sample Information	OP88299,SQ1871,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1871.batch.bin	Last Calib Update	11/15/2021 2:34:56 PM

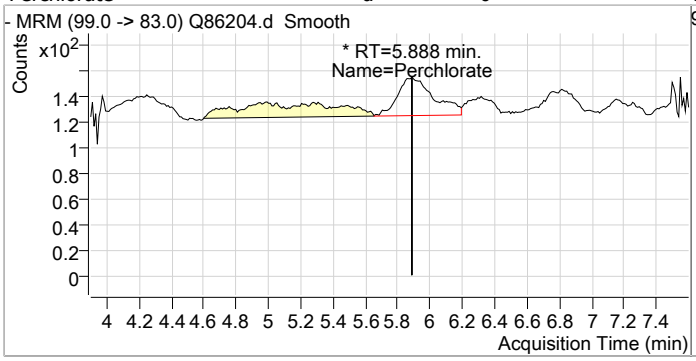


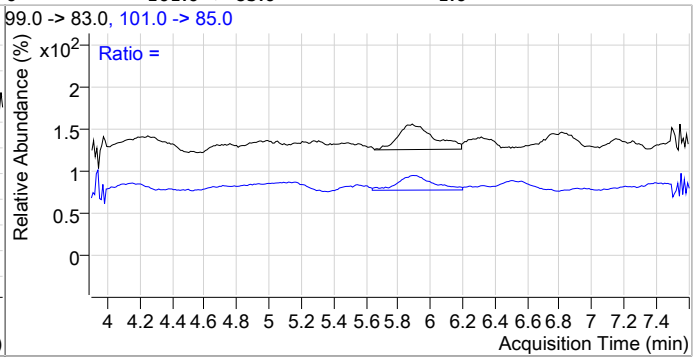
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	5.901	107.0 -> 89.0	420006	NoQ	5.00	µg/L		-0.163
System Monitoring Compounds								
Target Compounds								QValue
Perchlorate	5.888	99.0 -> 83.0	0		0.00	µg/L	md	1

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

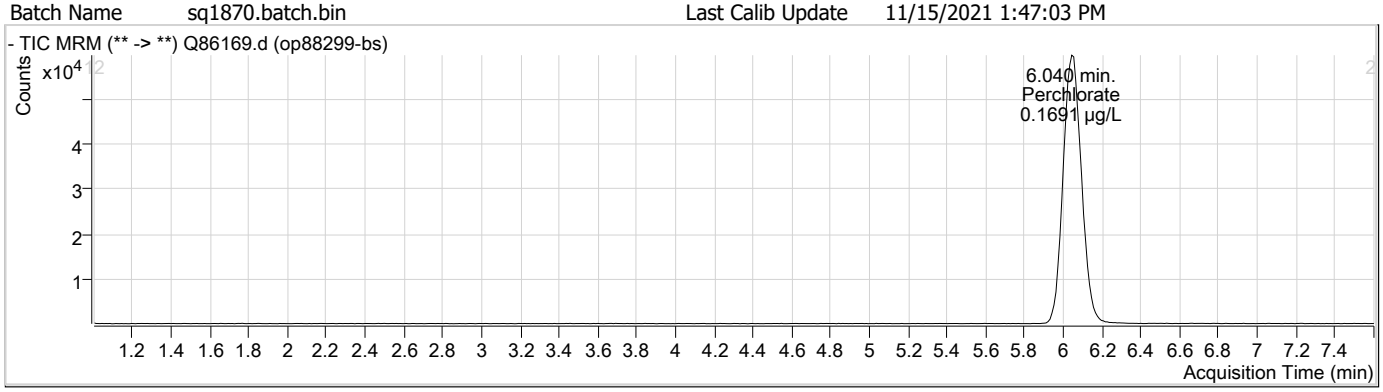
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	d	0		0	101.0 -> 85.0		1.6	





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86169.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 5:26:47 PM
Sample Name	op88299-bs	Instrument	Instrument 1
Vial	P1-E3	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

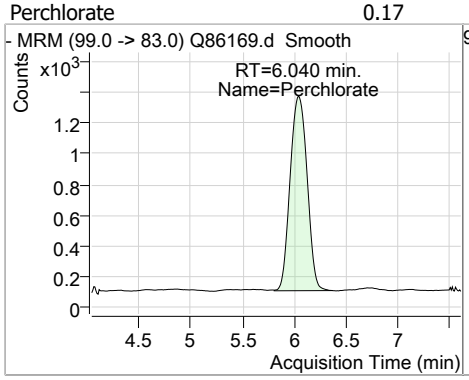


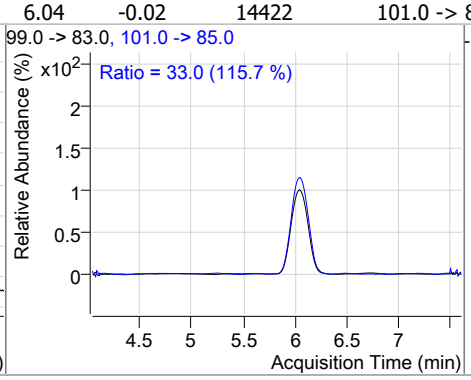
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.044	107.0 -> 89.0	374004	NoQ	5.00 µg/L	-0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.040	99.0 -> 83.0	14422	3.0	0.17 µg/L	92

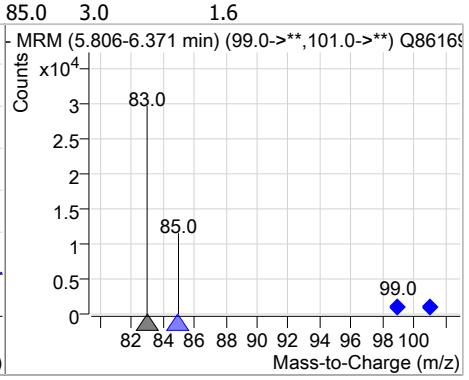
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.17	6.04	-0.02	14422	101.0 -> 85.0	3.0	1.6	

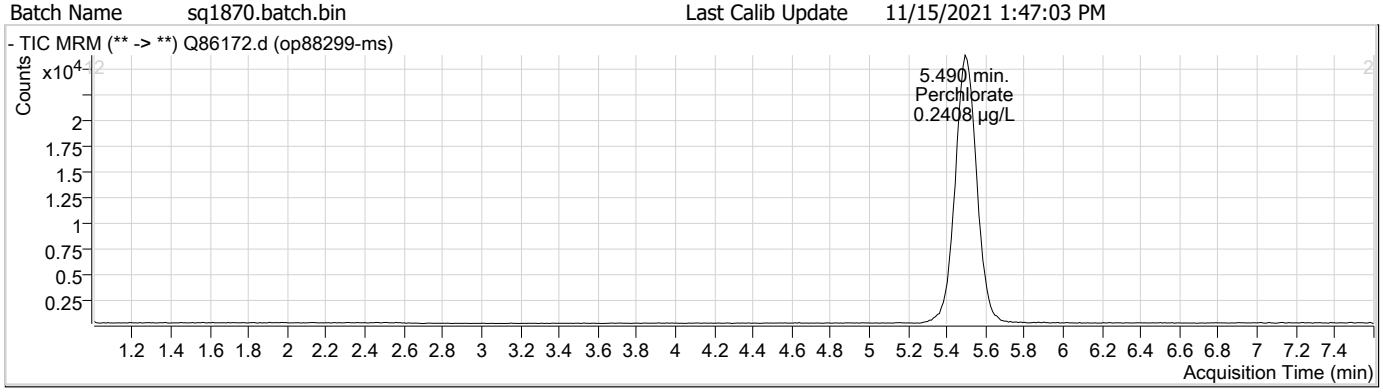






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86172.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 5:51:59 PM
Sample Name	op88299-ms	Instrument	Instrument 1
Vial	P1-E6	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

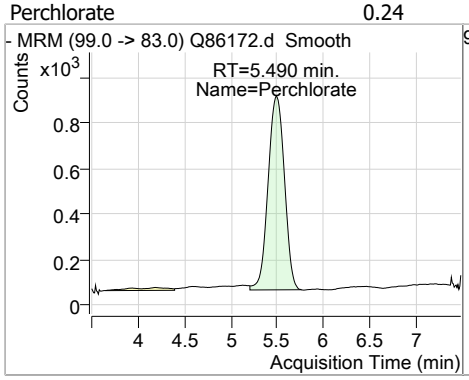


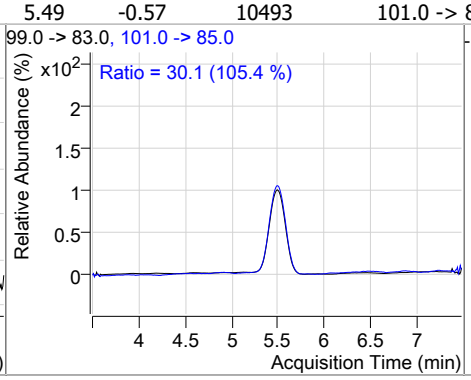
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.494	107.0 -> 89.0	191009	NoQ	5.00 µg/L	-0.570
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.490	99.0 -> 83.0	10493	3.3	0.24 µg/L	97

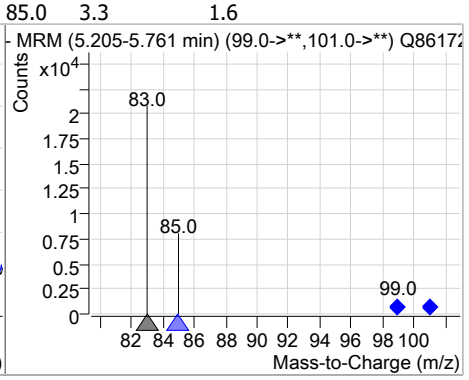
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.24	5.49	-0.57	10493	101.0 -> 85.0	3.3	1.6	

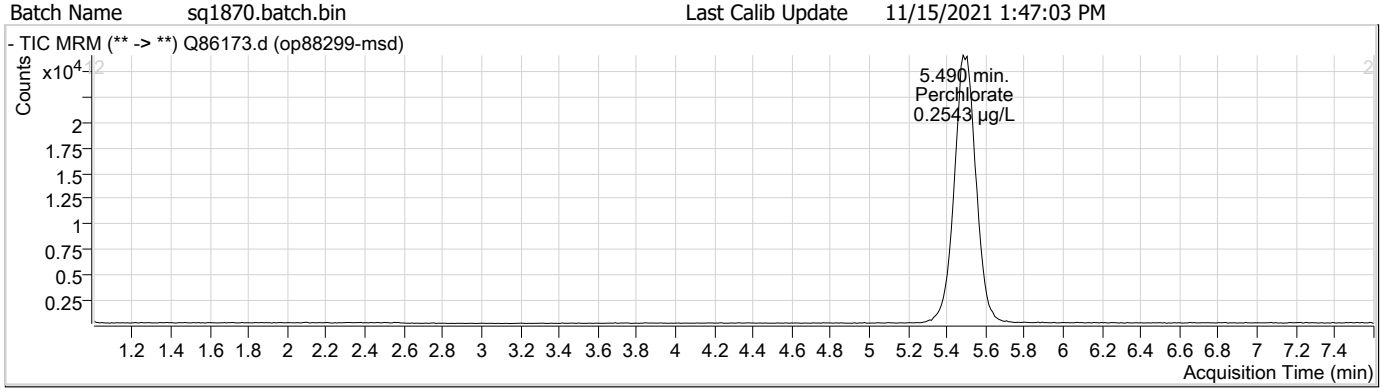






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86173.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 6:00:23 PM
Sample Name	op88299-msd	Instrument	Instrument 1
Vial	P1-E7	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

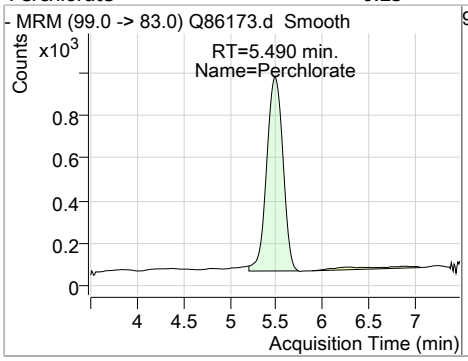


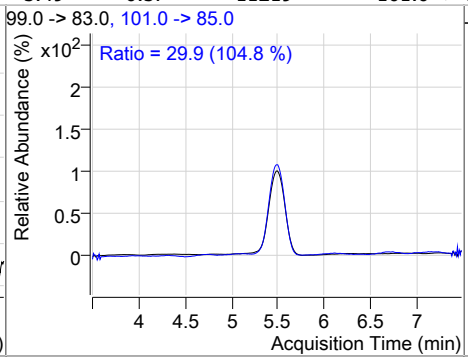
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.494	107.0 -> 89.0	193434	NoQ	5.00	µg/L	-0.570
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	5.490	99.0 -> 83.0	11219	3.3	0.25	µg/L	97

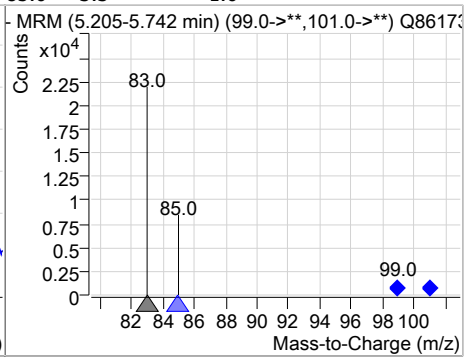
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.25	5.49	-0.57	11219	101.0 -> 85.0	3.3	1.6	

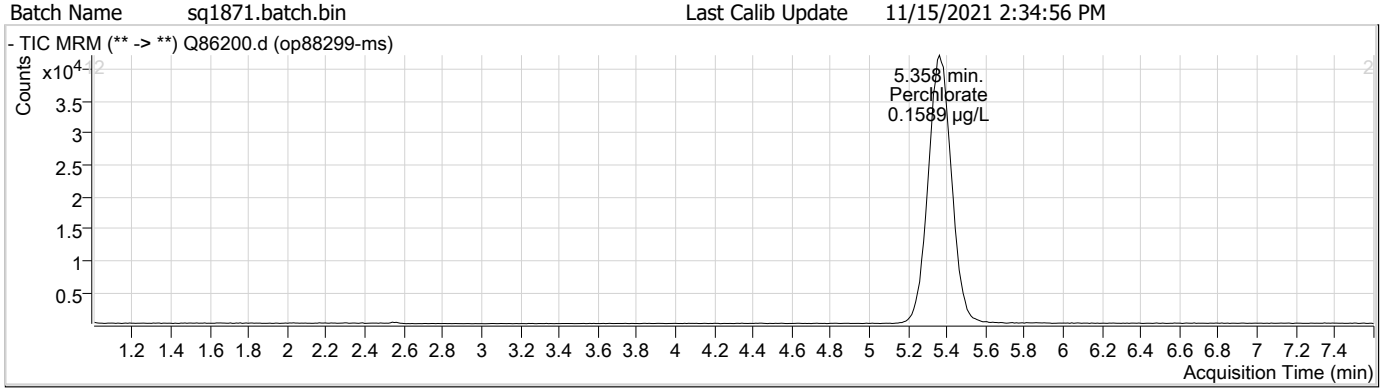






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86200.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/15/2021 2:50:19 PM
Sample Name	op88299-ms	Instrument	Instrument 1
Vial	P1-B8	Sample Information	OP88299,SQ1871,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	#2
Batch Name	sq1871.batch.bin	Last Calib Update	11/15/2021 2:34:56 PM

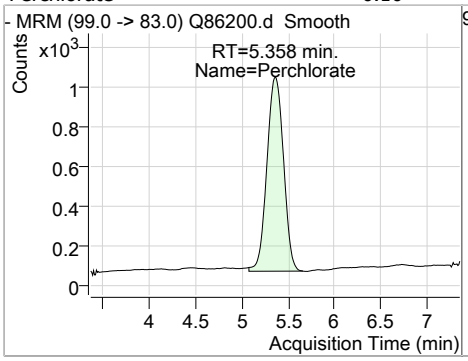


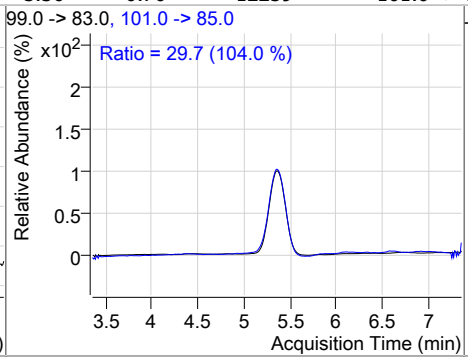
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.361	107.0 -> 89.0	338296	NoQ	5.00	µg/L	-0.703
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.358	99.0 -> 83.0	12259	3.4	0.16	µg/L	98

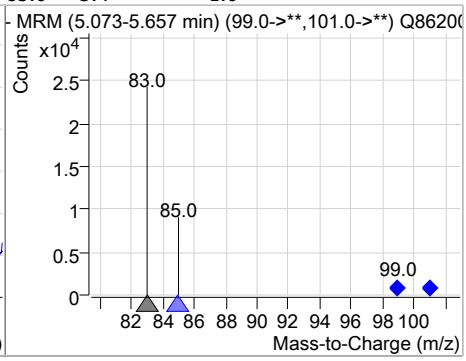
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.16	5.36	-0.70	12259	101.0 -> 85.0	3.4	1.6	

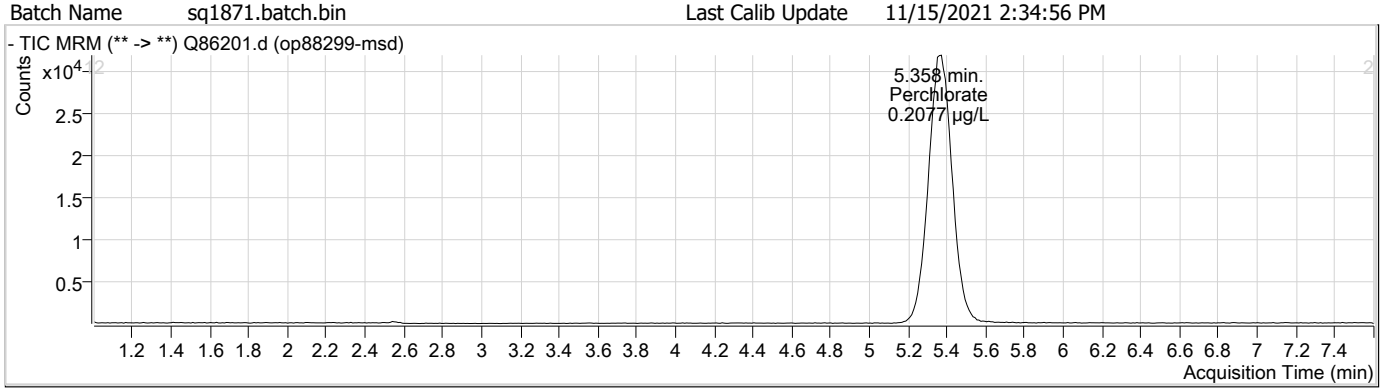






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86201.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/15/2021 2:58:42 PM
Sample Name	op88299-msd	Instrument	Instrument 1
Vial	P1-B9	Sample Information	OP88299,SQ1871,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	#3
Batch Name	sq1871.batch.bin	Last Calib Update	11/15/2021 2:34:56 PM

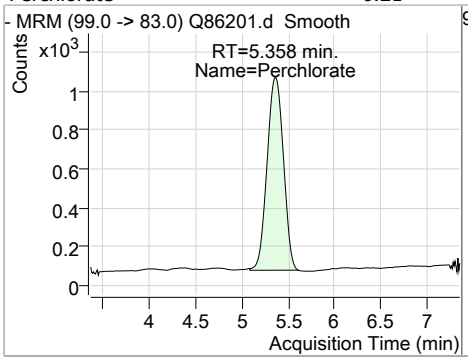


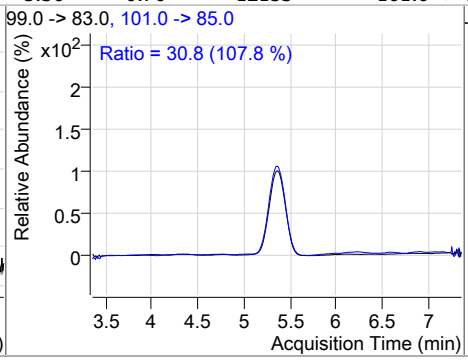
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.361	107.0 -> 89.0	256571	NoQ	5.00	µg/L	-0.703
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.358	99.0 -> 83.0	12153	3.3	0.21	µg/L	96

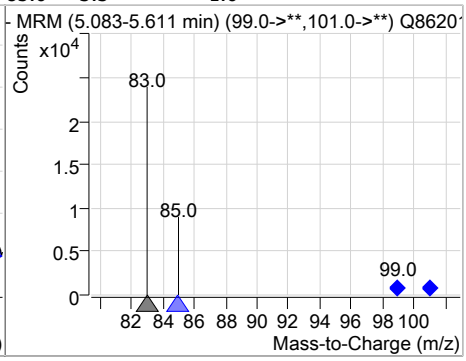
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.21	5.36	-0.70	12153	101.0 -> 85.0	3.3	1.6	







QQQ Check Tune Report

Agilent Technologies

Instrument Name	Instrument 1
MS Model	G6460A
MS Instrument Serial	SG10447001
Software_Firmware Version	B.08.02.B8260.0, FW: A.00.08.62
Tune Date & Time	08 November 2021 10:54:55
Data Path	D:\MassHunter\Tune\QQQ\G6460A\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.61E+0[R]; 2.50E-5[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	10
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

QQQ Check Tune Report

Agilent Technologies

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.93	-0.06	Pass	0.70	0.69	-0.01	Pass	172155
302.00	302.01	0.01	Pass	0.70	0.69	-0.01	Pass	97593
601.98	602.00	0.02	Pass	0.70	0.65	-0.05	Pass	80378
1033.99	1033.98	-0.01	Pass	0.70	0.71	0.01	Pass	259297
1633.95	1633.83	-0.12	Pass	0.70	0.72	0.02	Pass	505535
2233.91	2233.68	-0.23	Pass	0.70	0.77	0.07	Pass	369057

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.00	0.00	Pass	0.70	0.73	0.03	Pass	57630
112.99	112.95	-0.04	Pass	0.70	0.75	0.05	Pass	374375
302.00	301.90	-0.10	Pass	0.70	0.75	0.05	Pass	146022
601.98	601.86	-0.12	Pass	0.70	0.76	0.06	Pass	131206
1033.99	1033.85	-0.14	Pass	0.70	0.79	0.09	Pass	403325
1633.95	1633.78	-0.17	Pass	0.70	0.78	0.08	Pass	833107
2233.91	2233.74	-0.17	Pass	0.70	0.62	-0.08	Pass	106241

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.88	-0.11	Pass	1.20	1.12	-0.08	Pass	246732
302.00	301.97	-0.03	Pass	1.20	1.44	0.24	Pass	137253
601.98	601.93	-0.05	Pass	1.20	1.53	0.33	Pass	131424
1033.99	1033.86	-0.13	Pass	1.20	1.57	0.37	Pass	518696
1633.95	1633.81	-0.14	Pass	1.20	1.41	0.21	Pass	1232841
2233.91	2233.71	-0.20	Pass	1.20	1.27	0.07	Pass	836498

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	68.99	-0.01	Pass	1.20	1.25	0.05	Pass	73326
112.99	112.92	-0.07	Pass	1.20	1.28	0.08	Pass	461053
302.00	301.86	-0.14	Pass	1.20	1.39	0.19	Pass	193061
601.98	601.80	-0.18	Pass	1.20	1.31	0.11	Pass	185706
1033.99	1033.76	-0.23	Pass	1.20	1.11	-0.09	Pass	579691
1633.95	1633.71	-0.24	Pass	1.20	1.11	-0.09	Pass	1547056
2233.91	2233.68	-0.23	Pass	1.20	1.24	0.04	Pass	1505886

Analyzer: MS1 Polarity: Negative Width: Widest

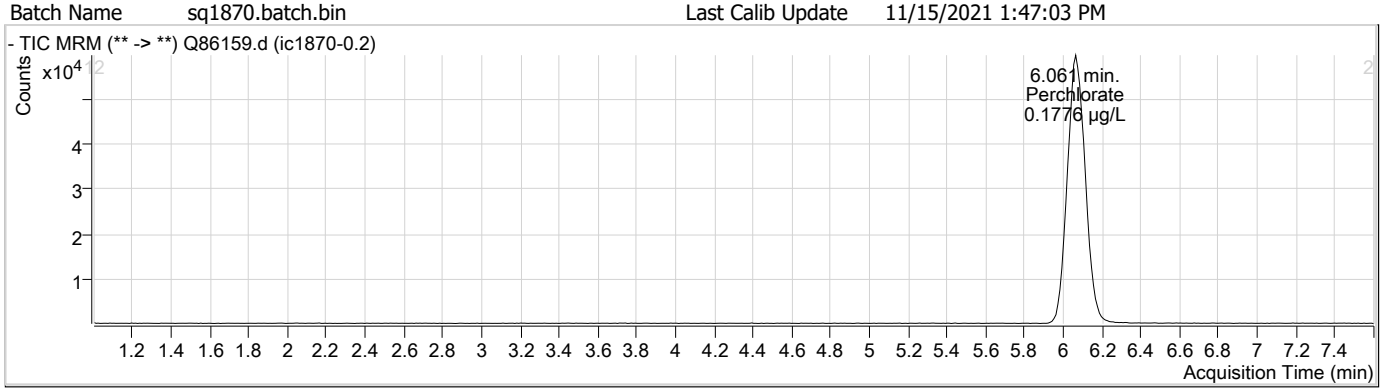
m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.60	-0.39	Pass	2.50	2.60	0.10	Pass	356027
302.00	301.94	-0.06	Pass	2.50	2.97	0.47	Pass	163572
601.98	601.88	-0.10	Pass	2.50	3.06	0.56	Pass	161320
1033.99	1033.82	-0.17	Pass	2.50	2.98	0.48	Pass	762447
1633.95	1633.70	-0.25	Pass	2.50	2.87	0.37	Pass	1954517
2233.91	2233.63	-0.28	Pass	2.50	2.58	0.08	Pass	1561439

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.02	0.02	Pass	2.50	2.52	0.02	Pass	84056
112.99	112.96	-0.03	Pass	2.50	2.58	0.08	Pass	479542
302.00	301.87	-0.13	Pass	2.50	2.64	0.14	Pass	225304
601.98	601.78	-0.20	Pass	2.50	2.56	0.06	Pass	240835
1033.99	1033.77	-0.22	Pass	2.50	2.33	-0.17	Pass	1080700
1633.95	1633.73	-0.22	Pass	2.50	2.29	-0.21	Pass	3732312
2233.91	2233.65	-0.26	Pass	2.50	2.43	-0.07	Pass	4140313

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86159.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 4:02:45 PM
Sample Name	ic1870-0.2	Instrument	Instrument 1
Vial	P1-D2	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

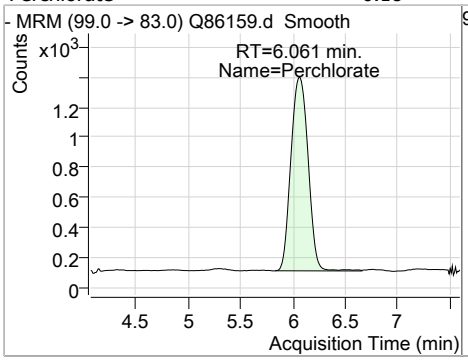


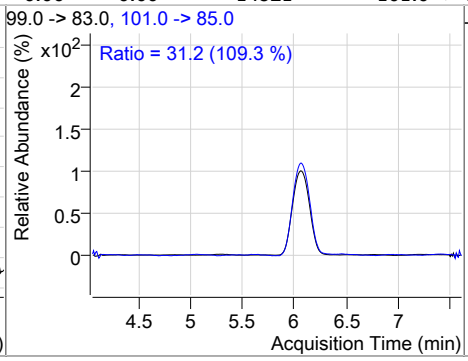
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.064	107.0 -> 89.0	365969	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.061	99.0 -> 83.0	14821	3.2	0.18 µg/L	95

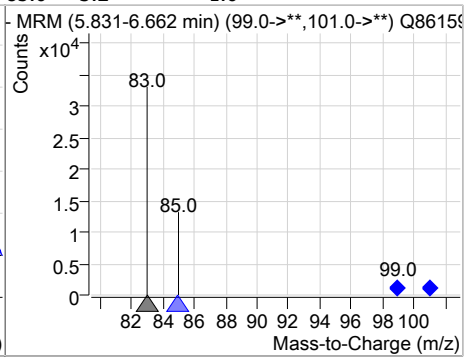
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	6.06	0.00	14821	101.0 -> 85.0	3.2	1.6	

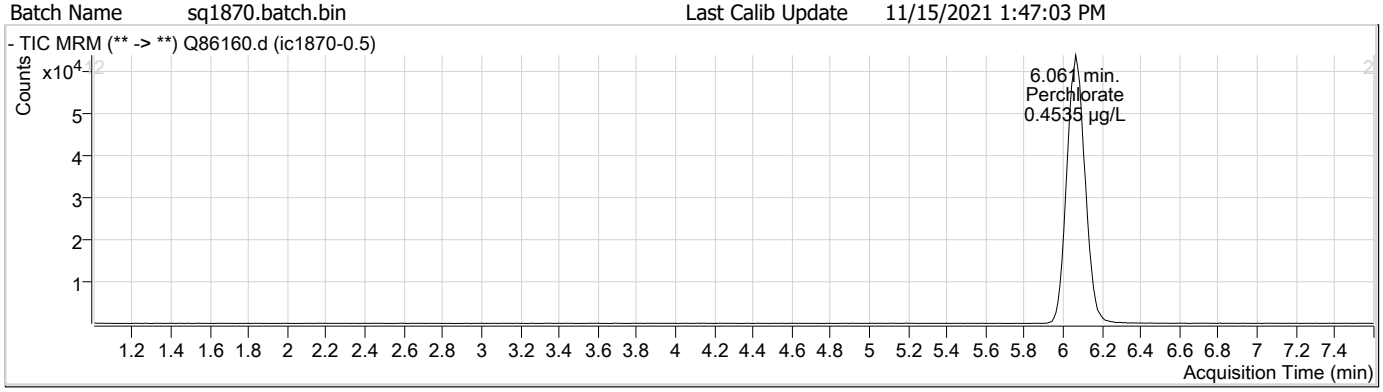






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86160.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 4:11:09 PM
Sample Name	ic1870-0.5	Instrument	Instrument 1
Vial	P1-D3	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

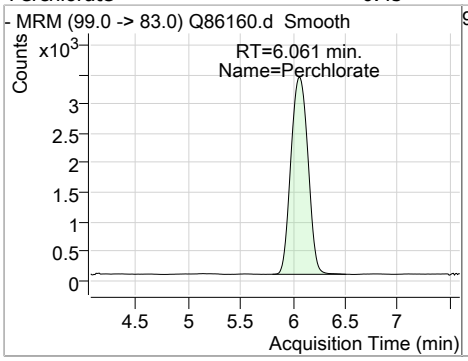


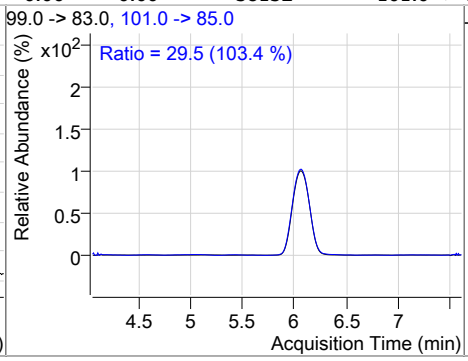
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.064	107.0 -> 89.0	368609	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.061	99.0 -> 83.0	38132	3.4	0.45 µg/L	98

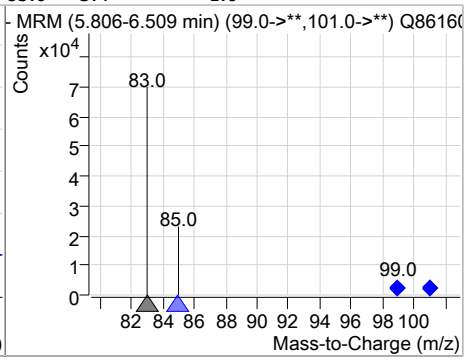
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.45	6.06	0.00	38132	101.0 -> 85.0	3.4	1.6	

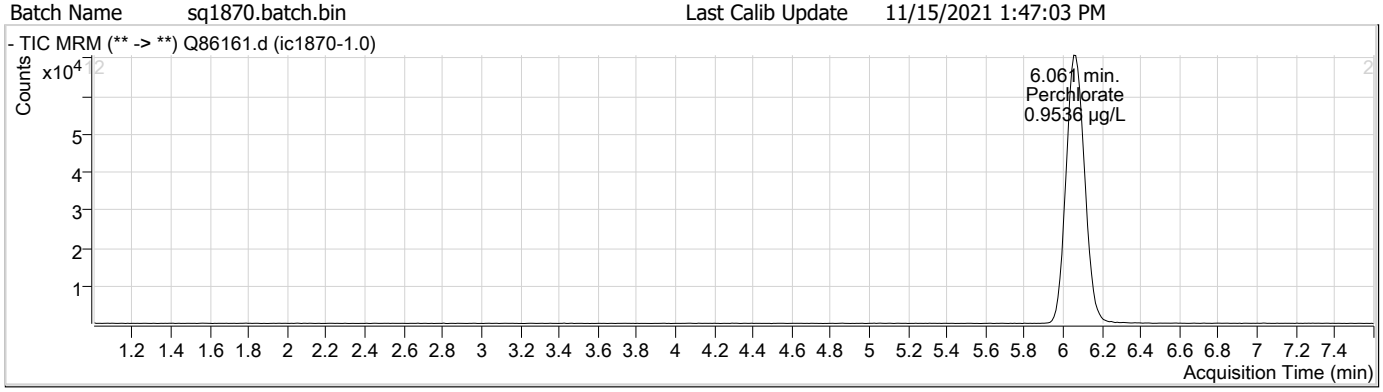






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86161.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 4:19:34 PM
Sample Name	ic1870-1.0	Instrument	Instrument 1
Vial	P1-D4	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

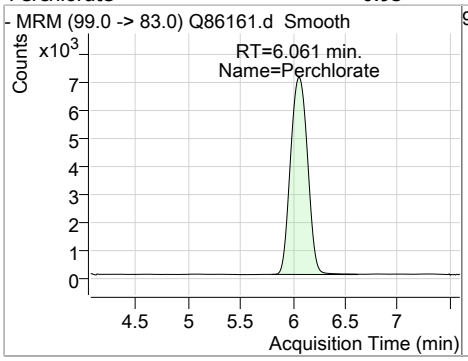


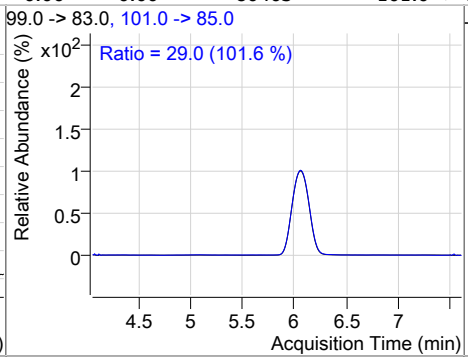
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.064	107.0 -> 89.0	369915	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.061	99.0 -> 83.0	80463	3.4	0.95 µg/L	99

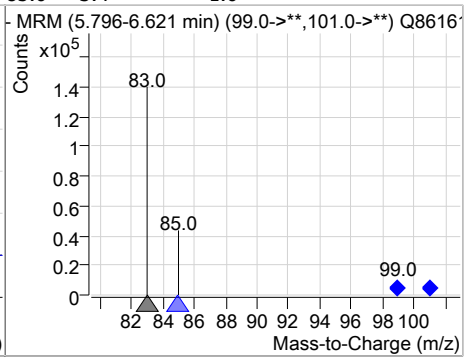
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.95	6.06	0.00	80463	101.0 -> 85.0	3.4	1.6	

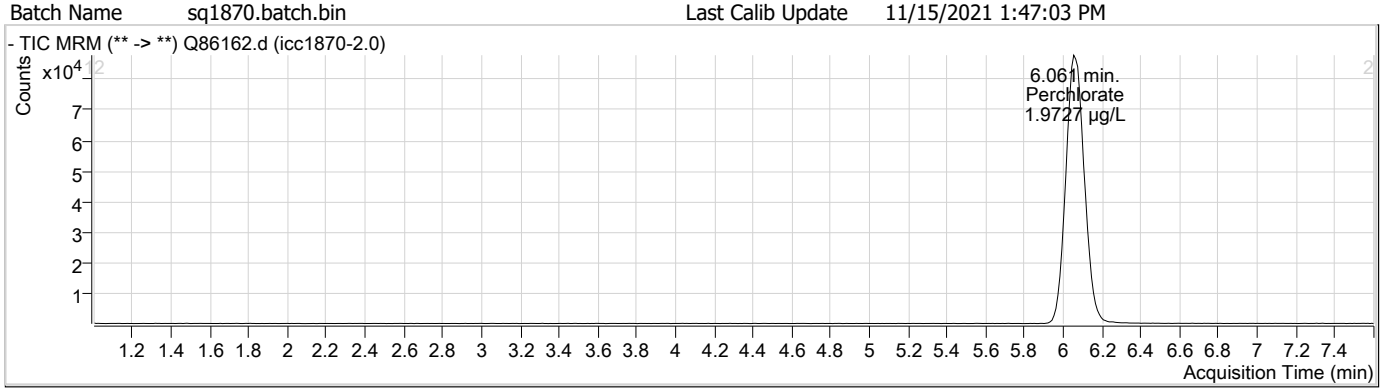






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86162.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 4:27:57 PM
Sample Name	icc1870-2.0	Instrument	Instrument 1
Vial	P1-D5	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

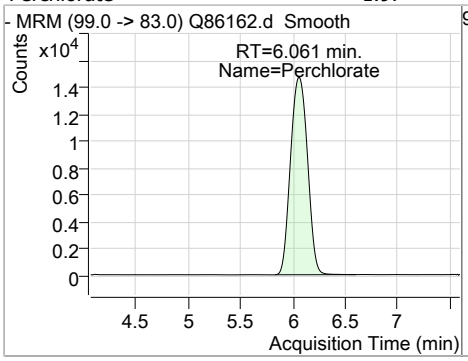


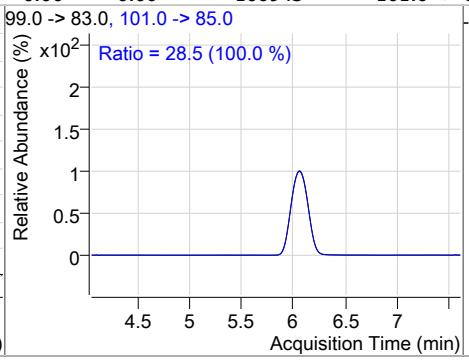
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.064	107.0 -> 89.0	371023	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.061	99.0 -> 83.0	166943	3.5	1.97 µg/L	100

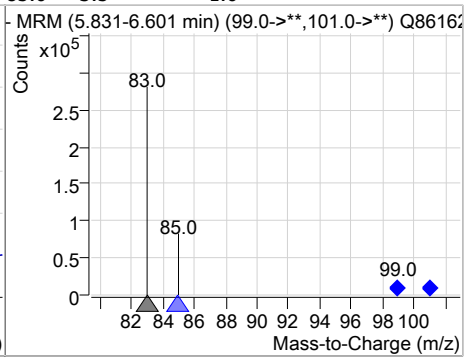
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.97	6.06	0.00	166943	101.0 -> 85.0	3.5	1.6	

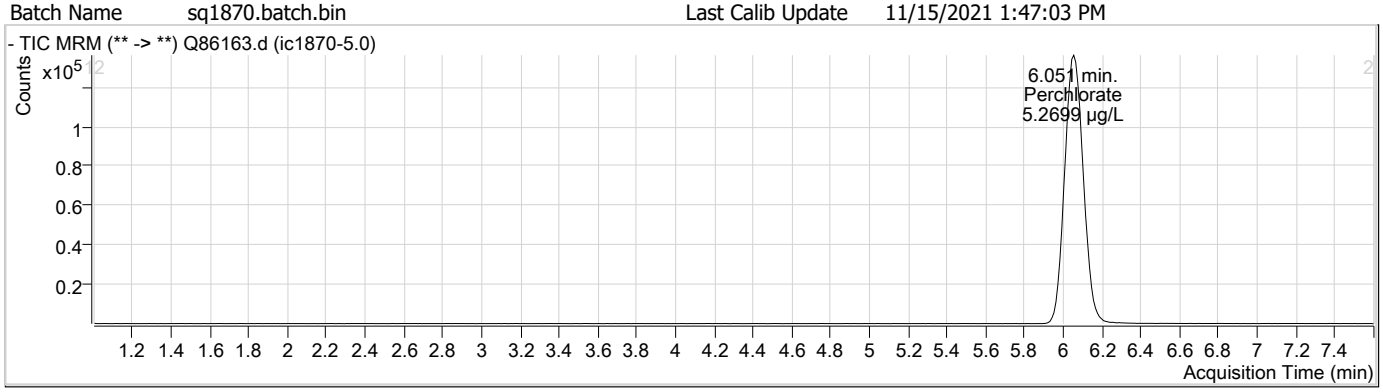






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86163.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 4:36:21 PM
Sample Name	ic1870-5.0	Instrument	Instrument 1
Vial	P1-D6	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

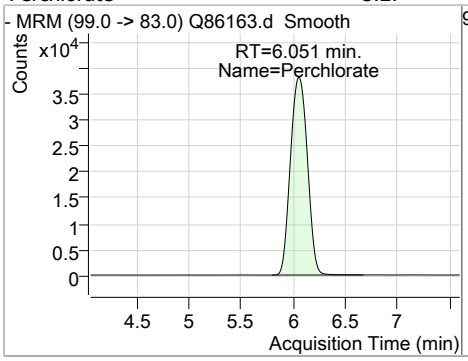


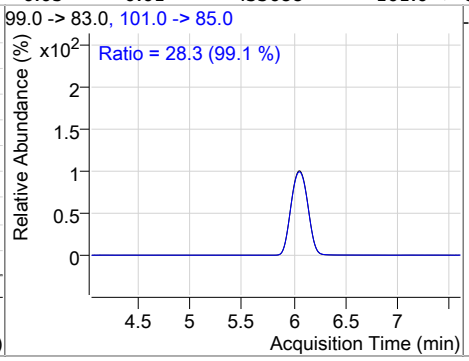
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.054	107.0 -> 89.0	360796	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.051	99.0 -> 83.0	433688	3.5	5.27 µg/L	100

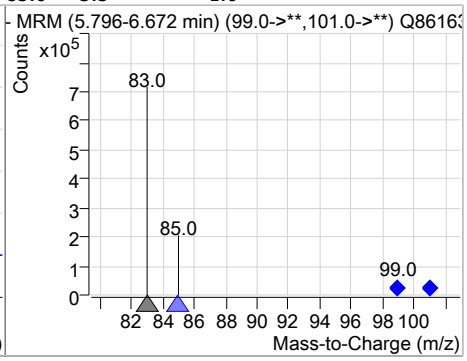
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	5.27	6.05	-0.01	433688	101.0 -> 85.0	3.5	1.6	

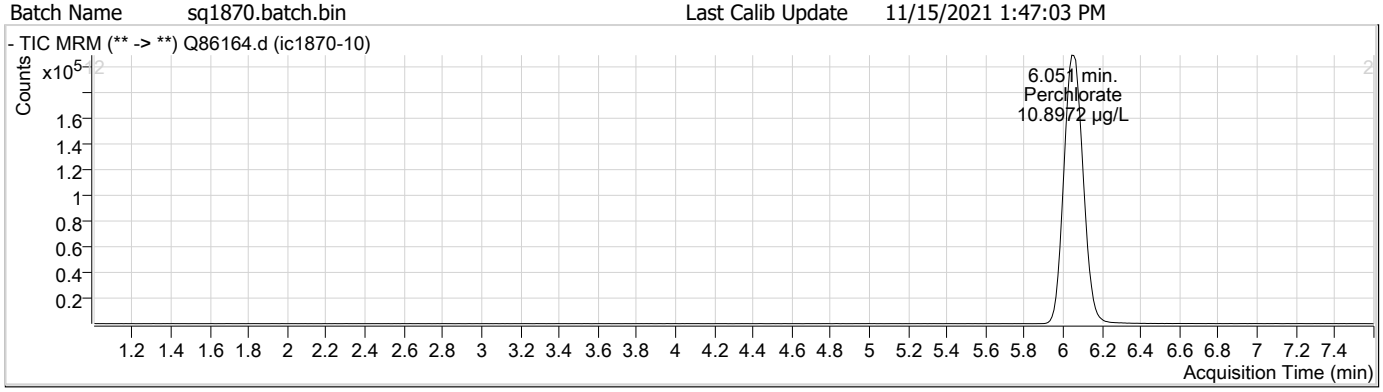






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86164.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 4:44:47 PM
Sample Name	ic1870-10	Instrument	Instrument 1
Vial	P1-D7	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

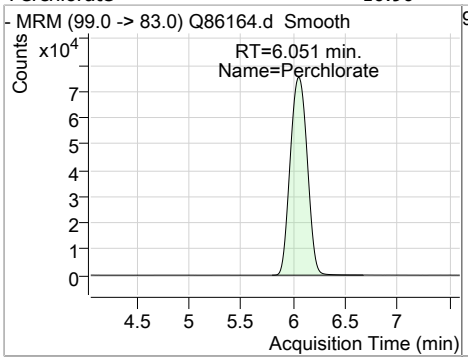


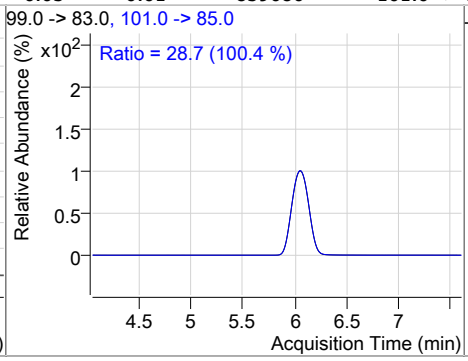
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.054	107.0 -> 89.0	345623	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.051	99.0 -> 83.0	859080	3.5	10.90 µg/L	100

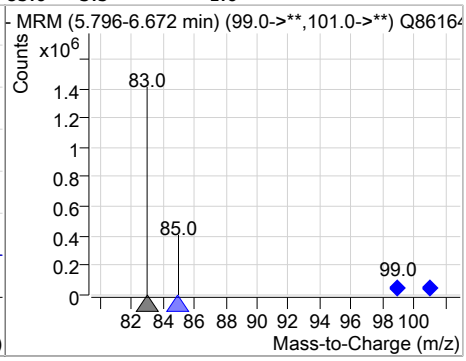
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	10.90	6.05	-0.01	859080	101.0 -> 85.0	3.5	1.6	

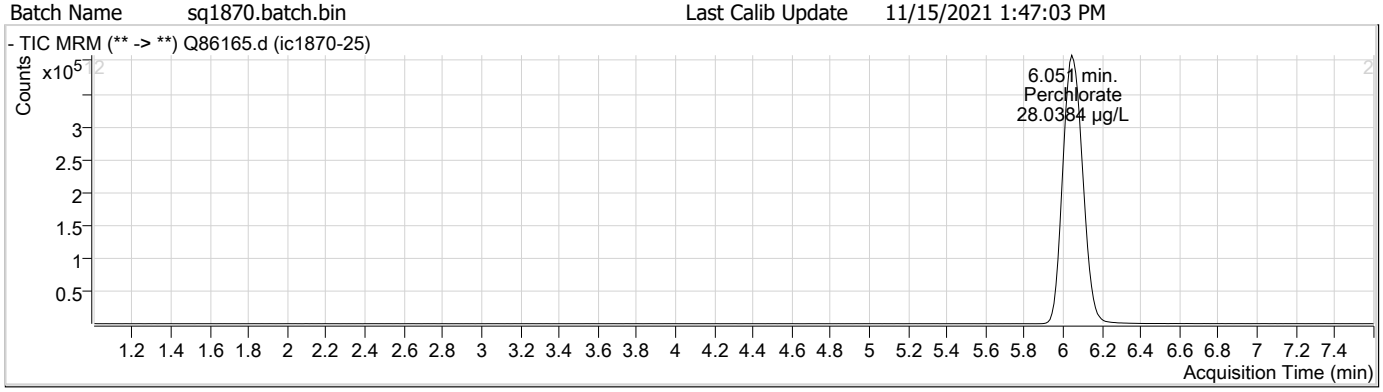






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86165.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 4:53:10 PM
Sample Name	ic1870-25	Instrument	Instrument 1
Vial	P1-D8	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

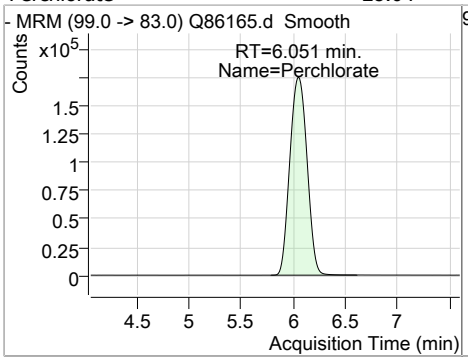


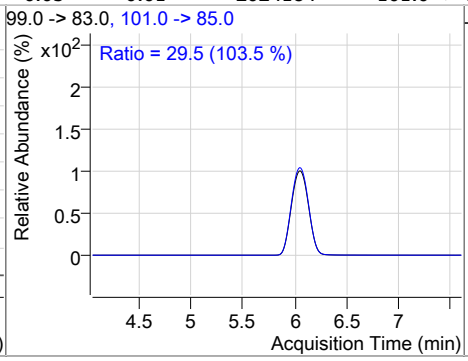
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.054	107.0 -> 89.0	316505	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.051	99.0 -> 83.0	2024184	3.4	28.04 µg/L	98

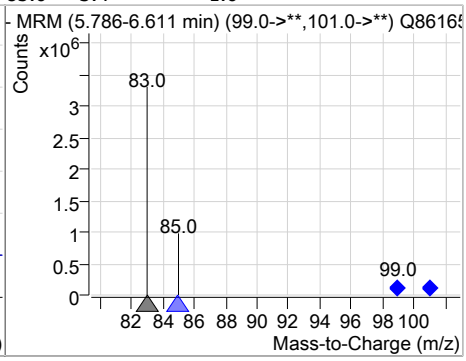
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	28.04	6.05	-0.01	2024184	101.0 -> 85.0	3.4	1.6	

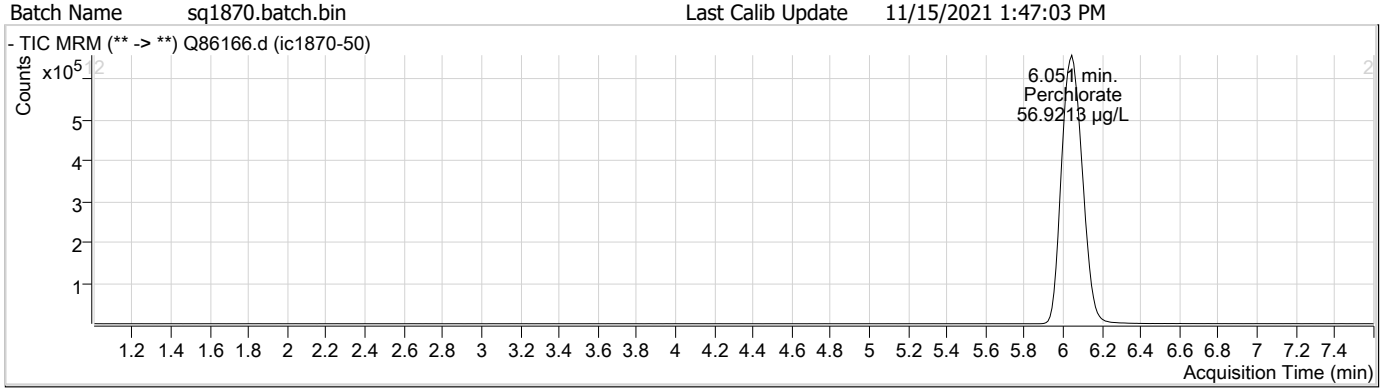






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86166.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 5:01:35 PM
Sample Name	ic1870-50	Instrument	Instrument 1
Vial	P1-D9	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

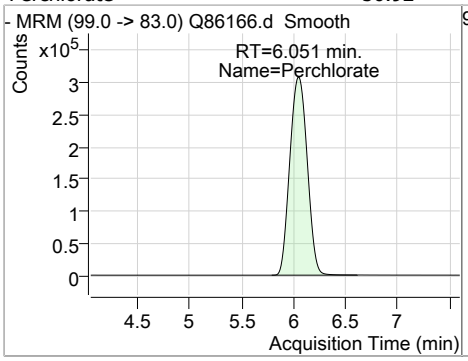


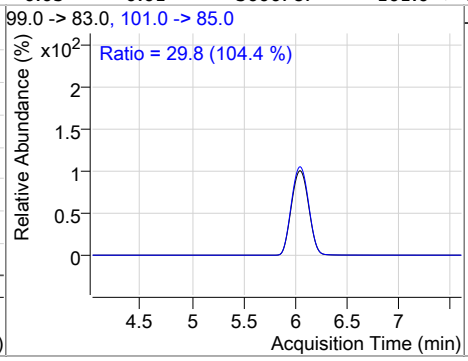
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.044	107.0 -> 89.0	277337	NoQ	5.00 µg/L	-0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.051	99.0 -> 83.0	3600787	3.4	56.92 µg/L	98

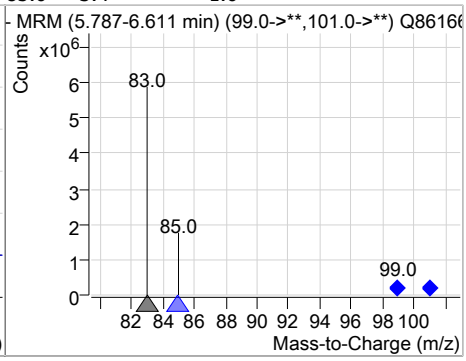
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	56.92	6.05	-0.01	3600787	101.0 -> 85.0	3.4	1.6	

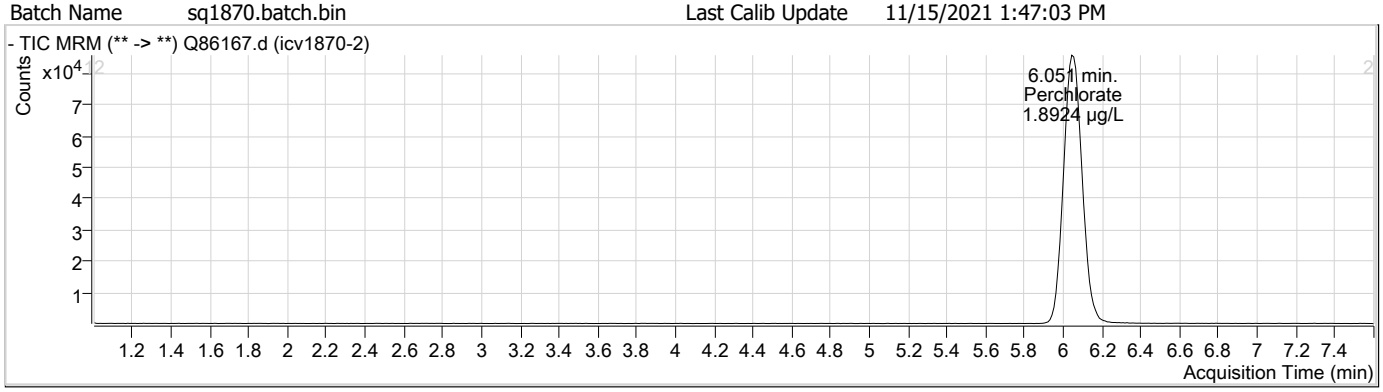






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86167.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 5:09:58 PM
Sample Name	icv1870-2	Instrument	Instrument 1
Vial	P1-E1	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

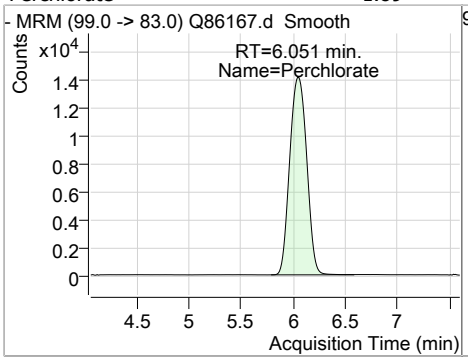


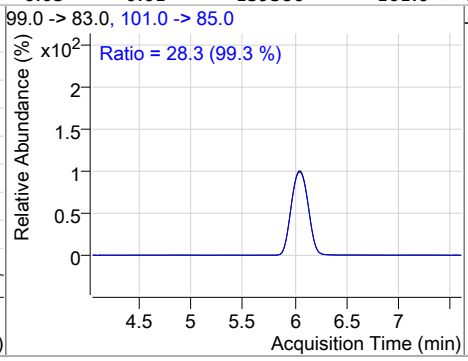
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.054	107.0 -> 89.0	369704	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.051	99.0 -> 83.0	159586	3.5	1.89 µg/L	100

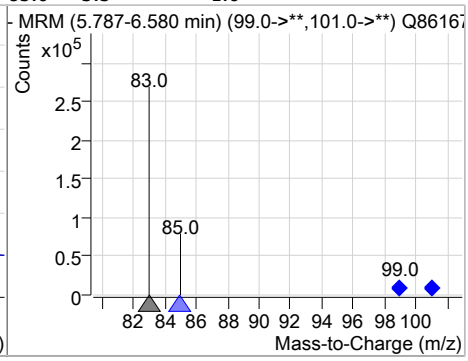
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.89	6.05	-0.01	159586	101.0 -> 85.0	3.5	1.6	

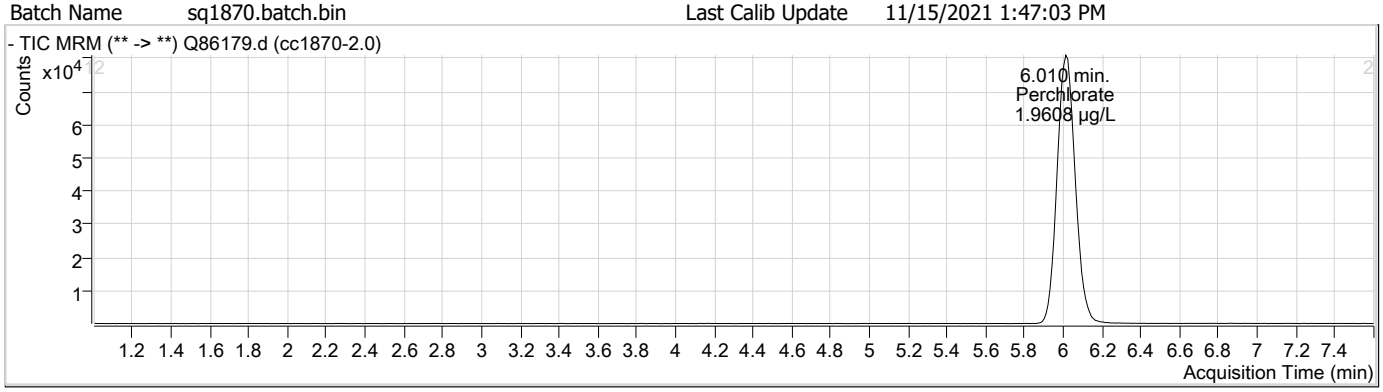






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86179.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 6:50:47 PM
Sample Name	cc1870-2.0	Instrument	Instrument 1
Vial	P1-D5	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

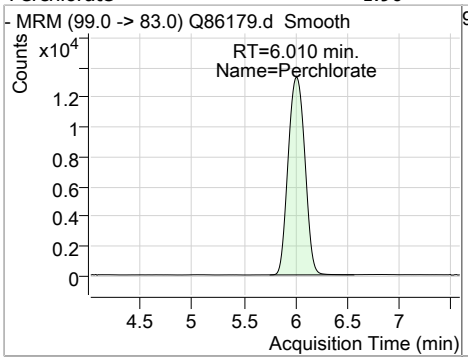


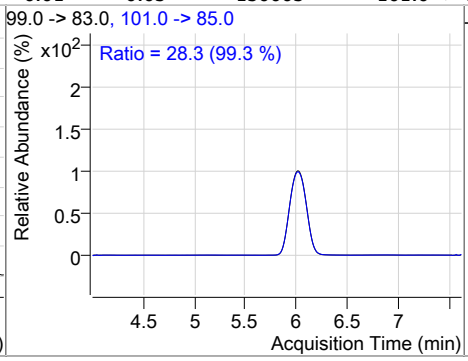
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.013	107.0 -> 89.0	335538	NoQ	5.00 µg/L	-0.051
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.010	99.0 -> 83.0	150065	3.5	1.96 µg/L	100

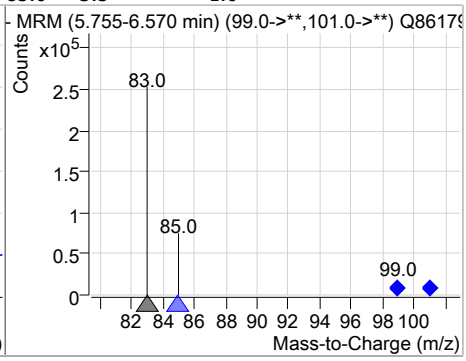
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.96	6.01	-0.05	150065	101.0 -> 85.0	3.5	1.6	

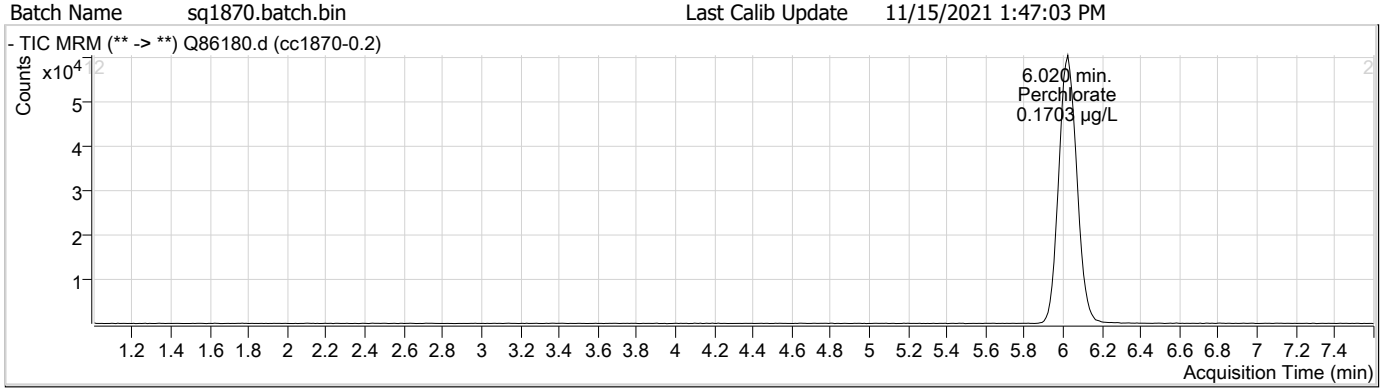






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86180.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/12/2021 6:59:12 PM
Sample Name	cc1870-0.2	Instrument	Instrument 1
Vial	P1-D2	Sample Information	OP88299,SQ1870,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1870.batch.bin	Last Calib Update	11/15/2021 1:47:03 PM

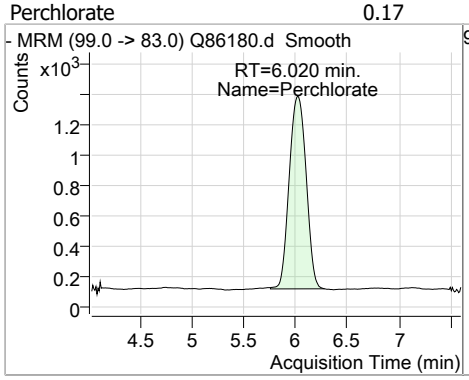


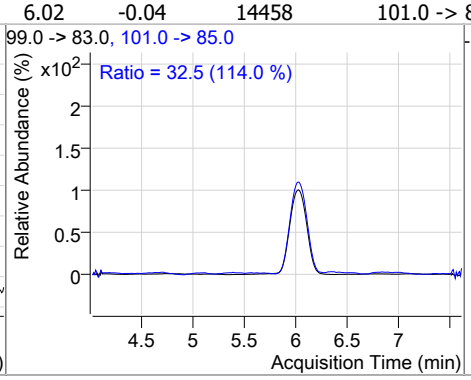
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.023	107.0 -> 89.0	372117	NoQ	5.00 µg/L	-0.041
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.020	99.0 -> 83.0	14458	3.1	0.17 µg/L	92

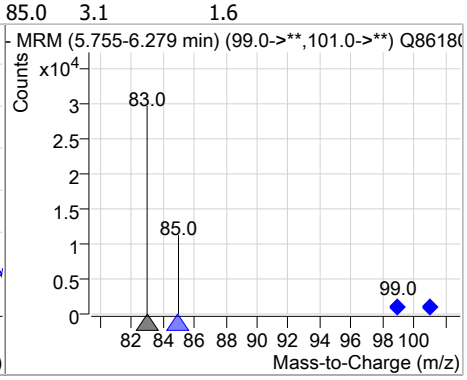
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.17	6.02	-0.04	14458	101.0 -> 85.0	3.1	1.6	

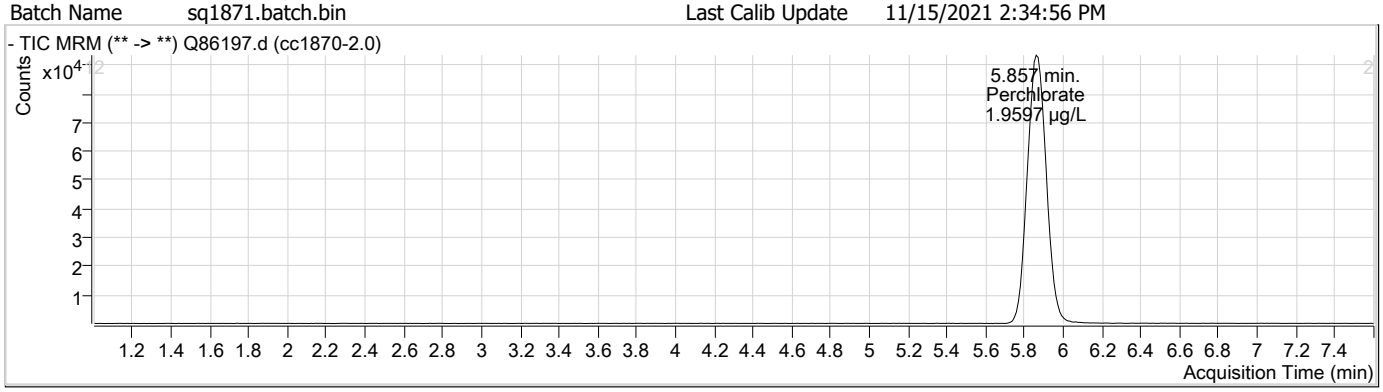






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86197.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/15/2021 2:25:05 PM
Sample Name	cc1870-2.0	Instrument	Instrument 1
Vial	P1-D5	Sample Information	OP88299,SQ1871,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1871.batch.bin	Last Calib Update	11/15/2021 2:34:56 PM

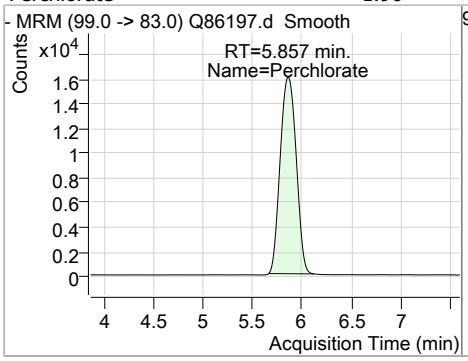


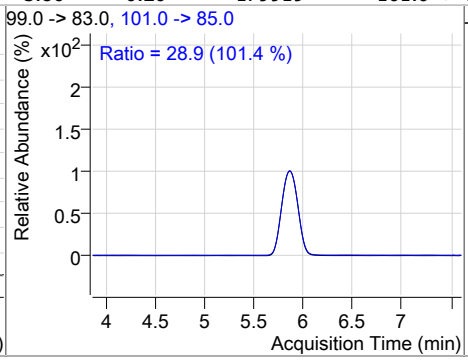
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.860	107.0 -> 89.0	402512	NoQ	5.00	µg/L	-0.204
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	5.857	99.0 -> 83.0	179919	3.5	1.96	µg/L	99

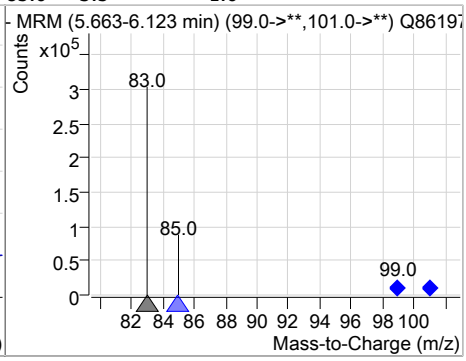
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.96	5.86	-0.20	179919	101.0 -> 85.0	3.5	1.6	

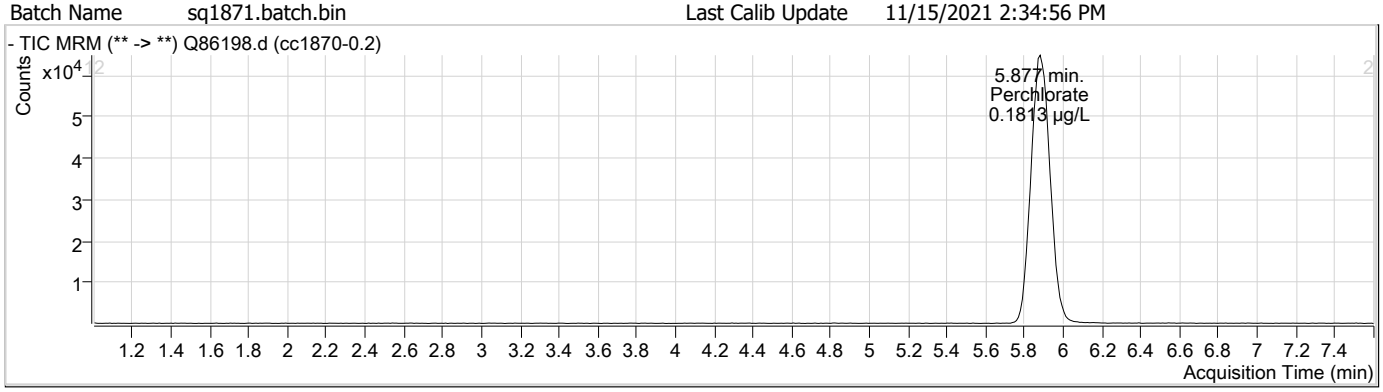






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86198.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/15/2021 2:33:30 PM
Sample Name	cc1870-0.2	Instrument	Instrument 1
Vial	P1-D2	Sample Information	OP88299,SQ1871,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1871.batch.bin	Last Calib Update	11/15/2021 2:34:56 PM

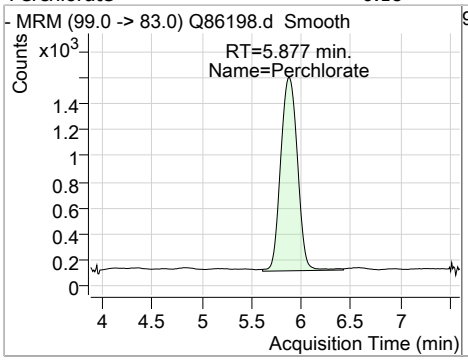


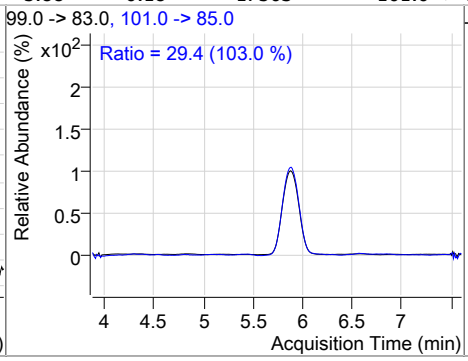
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.881	107.0 -> 89.0	423336	NoQ	5.00	µg/L	-0.183
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	5.877	99.0 -> 83.0	17503	3.4	0.18	µg/L	98

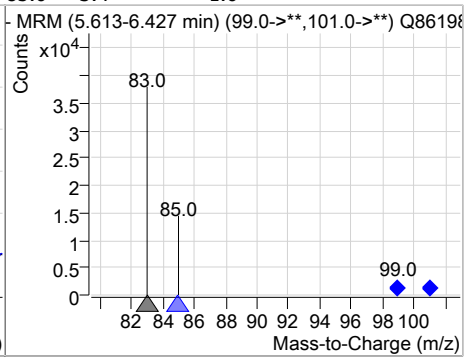
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	5.88	-0.18	17503	101.0 -> 85.0	3.4	1.6	

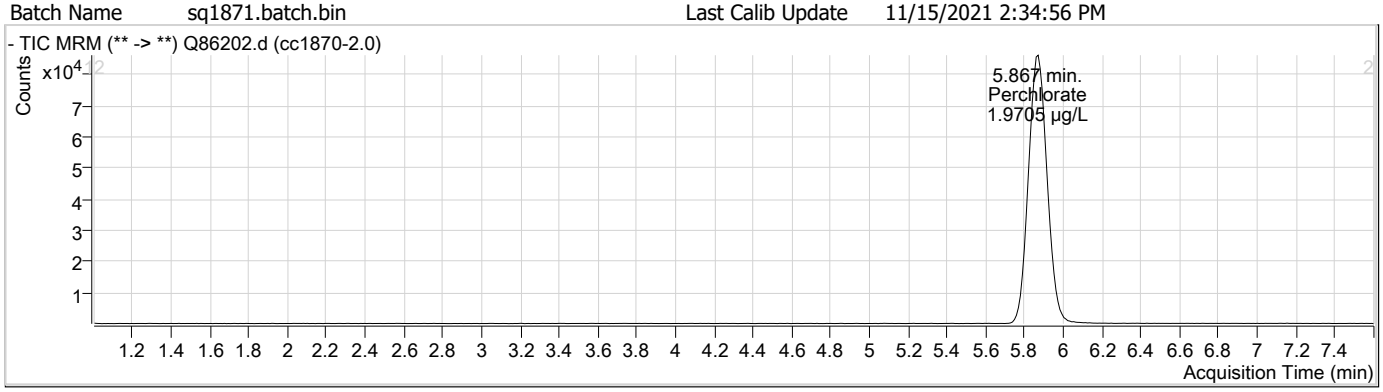






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q86202.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	11/15/2021 3:07:05 PM
Sample Name	cc1870-2.0	Instrument	Instrument 1
Vial	P1-D5	Sample Information	OP88299,SQ1871,10.0,,,10.0,1,water
DA Method File	6850_111221_SQ1870.quantmethod.xml	Comment	
Batch Name	sq1871.batch.bin	Last Calib Update	11/15/2021 2:34:56 PM

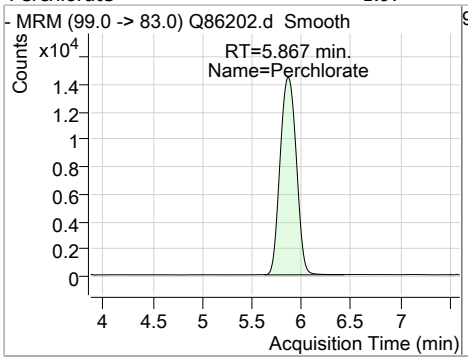


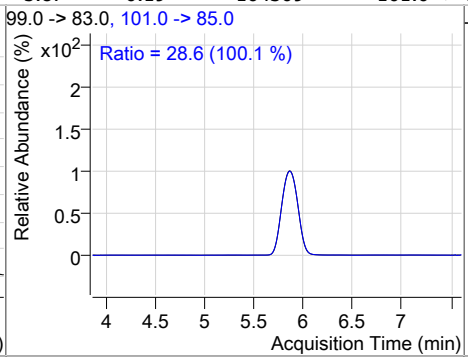
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.871	107.0 -> 89.0	365563	NoQ	5.00	µg/L	-0.194
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.867	99.0 -> 83.0	164309	3.5	1.97	µg/L	100

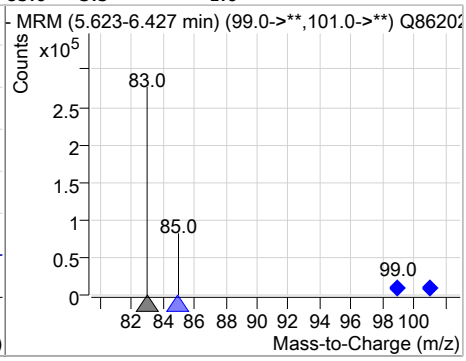
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.97	5.87	-0.19	164309	101.0 -> 85.0	3.5	1.6	







SGS ORLANDO

LCMS1-Q ANALYSIS LOG

DATE:	11/12/21
COLUMN TYPE:	K PRIME
AMOUNT INJ:	7.5 ul
INSTRUMENT:	LCMS1-Q

METHODS:	SW846 6850
PROC. METH:	6850_111221_SQ1870
CAL DATE:	11/12/21
ANALYST:	NG
RUN BATCH:	SQ1870

ELUENT A LOT #:	207355 W/0.1% AA
ELUENT B LOT #:	213553 W/0.1% AA
IC/CC STD LOT #:	LCMS1736
ICV STD LOT #:	LCMS1751
ISTD/ID STD LOT #:	10711A

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q86156.d	P1-D1	ccb	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	BDL
2	Q86157.d	P1-D1	ccb	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	BDL
3	Q86158.d	P1-D1	ic1870-0	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	Check Tune File
4	Q86159.d	P1-D2	ic1870-0.2	Perchlorate2.m	Calibration	500x	OP88299,SQ1870,10.0,,,10.0,1,water	Updated
5	Q86160.d	P1-D3	ic1870-0.5	Perchlorate2.m	Calibration	200x	OP88299,SQ1870,10.0,,,10.0,1,water	Updated
6	Q86161.d	P1-D4	ic1870-1.0	Perchlorate2.m	Calibration	100x	OP88299,SQ1870,10.0,,,10.0,1,water	Updated
7	Q86162.d	P1-D5	icc1870-2.0	Perchlorate2.m	Calibration	50x	OP88299,SQ1870,10.0,,,10.0,1,water	Updated
8	Q86163.d	P1-D6	ic1870-5.0	Perchlorate2.m	Calibration	20x	OP88299,SQ1870,10.0,,,10.0,1,water	Updated
9	Q86164.d	P1-D7	ic1870-10	Perchlorate2.m	Calibration	10x	OP88299,SQ1870,10.0,,,10.0,1,water	Updated
10	Q86165.d	P1-D8	ic1870-25	Perchlorate2.m	Calibration	4x	OP88299,SQ1870,10.0,,,10.0,1,water	Updated
11	Q86166.d	P1-D9	ic1870-50	Perchlorate2.m	Calibration	2x	OP88299,SQ1870,10.0,,,10.0,1,water	point dropped from curve
12	Q86167.d	P1-E1	icv1870-2	Perchlorate2.m	QC	50x	OP88299,SQ1870,10.0,,,10.0,1,water	PASS
13	Q86168.d	P1-E2	ics	Perchlorate2.m	Sample	500x	OP88299,SQ1870,10.0,,,10.0,1,water	PASS
14	Q86169.d	P1-E3	op88299-bs	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	BS PASS
15	Q86170.d	P1-E4	op88299-mb	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	ND
16	Q86171.d	P1-E5	fa90260-1	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
17	Q86172.d	P1-E6	op88299-ms	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
18	Q86173.d	P1-E7	op88299-msd	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
19	Q86174.d	P1-E8	fa90260-2	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
20	Q86175.d	P1-E9	fa90260-3	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
21	Q86176.d	P1-F1	fa90260-4	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
22	Q86177.d	P1-F2	fa90260-5	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
23	Q86178.d	P1-F3	fa90295-3	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
24	Q86179.d	P1-D5	cc1870-2.0	Perchlorate2.m	QC	50x	OP88299,SQ1870,10.0,,,10.0,1,water	PASS
25	Q86180.d	P1-D2	cc1870-0.2	Perchlorate2.m	QC	500x	OP88299,SQ1870,10.0,,,10.0,1,water	PASS
26	Q86181.d	P1-D1	ccb	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	BDL
27	Q86182.d	P1-F4	fa90433-2	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
28	Q86183.d	P1-F5	fa90433-2	Perchlorate2.m	Sample	1ml/10ml	OP88299,SQ1870,10.0,,,10.0,10,water	✓
29	Q86184.d	P1-F6	fa90433-2	Perchlorate2.m	Sample	200ul/10	OP88299,SQ1870,10.0,,,10.0,50,water	✓
30	Q86185.d	P1-F7	fa90155-13	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
31	Q86186.d	P1-F8	fa90155-14	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
32	Q86187.d	P1-F9	da38616-1	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	✓
33	Q86188.d	P1-D5	cc1870-2.0	Perchlorate2.m	QC	50x	OP88299,SQ1870,10.0,,,10.0,1,water	PASS
34	Q86189.d	P1-D2	ecc1870-0.2	Perchlorate2.m	QC	500x	OP88299,SQ1870,10.0,,,10.0,1,water	PASS
35	Q86190.d	P1-D1	iblk	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	ND

SGS ORLANDO

LCMS1-Q ANALYSIS LOG

DATE:	11/15/21
COLUMN TYPE:	K PRIME
AMOUNT INJ:	7.5 ul
INSTRUMENT:	LCMS1-Q

METHODS:	SW846 6850
PROC. METH:	6850_111221_SQ1870
CAL DATE:	11/12/21
ANALYST:	NG
RUN BATCH:	SQ1871

ELUENT A LOT #:	207355 W/0.1% AA
ELUENT B LOT #:	213553 W/0.1% AA
IC/CC STD LOT #:	LCMS1736
ICV STD LOT #:	LCMS1751
ISTD/ID STD LOT #:	10711A

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
36	Q86191.d	P1-D1	ccb	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	BDL
37	Q86192.d	P1-D1	ccb	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	BDL
38	Q86193.d	P1-B7	fa90260-1	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	#1
39	Q86194.d	P1-B8	op88299-ms	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	#2
40	Q86195.d	P1-B9	op88299-msd	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	#3
41	Q86196.d	P1-E5	fa90260-1	Perchlorate2.m	Sample		OP88299,SQ1870,10.0,,,10.0,1,water	rr
42	Q86197.d	P1-D5	cc1870-2.0	Perchlorate2.m	QC	50x	OP88299,SQ1871,10.0,,,10.0,1,water	PASS
43	Q86198.d	P1-D2	cc1870-0.2	Perchlorate2.m	QC	500x	OP88299,SQ1871,10.0,,,10.0,1,water	PASS
44	Q86199.d	P1-B7	fa90260-1	Perchlorate2.m	Sample		OP88299,SQ1871,10.0,,,10.0,1,water	#1
45	Q86200.d	P1-B8	op88299-ms	Perchlorate2.m	Sample		OP88299,SQ1871,10.0,,,10.0,1,water	#2
46	Q86201.d	P1-B9	op88299-msd	Perchlorate2.m	Sample		OP88299,SQ1871,10.0,,,10.0,1,water	#3
47	Q86202.d	P1-D5	cc1870-2.0	Perchlorate2.m	QC	50x	OP88299,SQ1871,10.0,,,10.0,1,water	PASS
48	Q86203.d	P1-D2	ecc1870-0.2	Perchlorate2.m	QC	500x	OP88299,SQ1871,10.0,,,10.0,1,water	PASS
49	Q86204.d	P1-D1	iblk	Perchlorate2.m	Sample		OP88299,SQ1871,10.0,,,10.0,1,water	ND

SGS - ORLANDO

LIQUID SAMPLE PREP REPORT

Date/Time: 11/11/21 13:00 Started {mm/dd/yy 24:00}

Date/Time: 11/11/21 14:00 Finished {mm/dd/yy 24:00}

Prep Method: 3510C 3580A or Method (circle)

Analytical Method: 6850

Batch#: OP88299 Ext. By: NG Conc. By: — Vialed By: NG

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 88299 MB	X	10.0					10.0	
OP 88299 BS	X	↓				20uL	↓	
FA90260-1	1	↓				↓	↓	MS/MSD
-2	↓	↓				↓	↓	
-3	↓	↓				↓	↓	
-4	↓	↓				↓	↓	
-5	↓	↓				↓	↓	
FA90295-3	↓	↓				↓	↓	
FA90433-2	↓	↓				↓	↓	
FA90155-13	X	↓				↓	↓	MDL 0.1 ppb
-14	X	↓				↓	↓	MDL 0.2 ppb
DA38616-1	1	↓	—	—	—	20uL	↓	

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Explosives)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP88132-MB	BB070809.D	1	11/04/21	JB	11/02/21	OP88132	GBB2121

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA90260-1, FA90260-2, FA90260-3, FA90260-4, FA90260-5

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	114%	70-136%

Method Blank Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP88132-MB	GG622716.D	1	11/04/21	JB	11/02/21	OP88132	GGG3062

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA90260-1, FA90260-2, FA90260-3, FA90260-4, FA90260-5

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	124%	70-136%

Blank Spike Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP88132-BS	BB070812.D	1	11/04/21	JB	11/02/21	OP88132	GBB2121

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA90260-1, FA90260-2, FA90260-3, FA90260-4, FA90260-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	5.5	110	77-144
121-82-4	RDX	5	5.5	110	77-125
	DNX	5	5.0	100	66-127
	MNX	5.8	4.7	81	71-137
	TNX	2.35	1.8	77	60-126
618-87-1	3,5-Dinitroaniline	5	5.6	112	77-115
99-65-0	1,3-Dinitrobenzene	5	5.6	112	79-122
606-20-2	2,6-Dinitrotoluene	5	5.7	114	81-131
121-14-2	2,4-Dinitrotoluene	5	5.6	112	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	5.6	112	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	5.5	110	79-119
98-95-3	Nitrobenzene	5	5.5	110	78-130
88-72-2	o-Nitrotoluene	5	5.4	108	76-131
99-08-1	m-Nitrotoluene	5	5.5	110	78-122
99-99-0	p-Nitrotoluene	5	5.6	112	79-124
479-45-8	Tetryl	5	4.7	94	65-124
99-35-4	1,3,5-Trinitrobenzene	5	5.4	108	79-128
118-96-7	2,4,6-Trinitrotoluene	5	5.2	104	72-112
55-63-0	Nitroglycerine	5	5.7	114	69-123
78-11-5	PETN	5	5.9	118	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	124%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP88132-MS	BB070818.D	1	11/04/21	JB	11/02/21	OP88132	GBB2121
OP88132-MSD	BB070821.D	1	11/04/21	JB	11/02/21	OP88132	GBB2121
FA90260-1 [a]	BB070813.D	1	11/04/21	JB	11/02/21	OP88132	GBB2121
FA90260-1 [b]	GG622725.D	1	11/05/21	JB	11/02/21	OP88132	GGG3063

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA90260-1, FA90260-2, FA90260-3, FA90260-4, FA90260-5

CAS No.	Compound	FA90260-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	3.9		9.62	13.9	104	9.96	14.4	105	4	77-144/21
121-82-4	RDX	0.58		9.62	11.7	116	9.96	12.2	117	4	77-125/19
	DNX	0.20	U	9.62	11.2	116	9.96	11.4	114	2	66-127/25
	MNX	0.20	U	11.2	12.0	108	11.6	12.6	109	5	71-137/20
	TNX	0.20	U	4.52	3.6	80	4.68	3.6	77	0	60-126/18
618-87-1	3,5-Dinitroaniline	0.53		9.62	11.4	113	9.96	12.2	117*	7	77-115/19
99-65-0	1,3-Dinitrobenzene	0.20	U	9.62	10.8	112	9.96	11.6	116	7	79-122/17
606-20-2	2,6-Dinitrotoluene	0.20	U	9.62	13.1	115	9.96	14.4	124	9	81-131/17
121-14-2	2,4-Dinitrotoluene	0.20	U	9.62	10.5	109	9.96	11.3	113	7	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	2.3		9.62	11.7	98	9.96	11.8	95	1	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	1.3		9.62	11.7	108	9.96	12.7	114	8	79-119/20
98-95-3	Nitrobenzene	0.20	U	9.62	10.4	108	9.96	11.4	114	9	78-130/19
88-72-2	o-Nitrotoluene	0.20	U	9.62	10.8	112	9.96	11.5	115	6	76-131/20
99-08-1	m-Nitrotoluene	0.20	U	9.62	10.7	111	9.96	11.6	116	8	78-122/18
99-99-0	p-Nitrotoluene	0.20	U	9.62	10.7	111	9.96	11.5	115	7	79-124/18
479-45-8	Tetryl	0.20	U	9.62	8.8	92	9.96	9.6	96	9	65-124/20
99-35-4	1,3,5-Trinitrobenzene	22.3		9.62	34.9	131* [c]	9.96	39.1	169* [c]	11	79-128/16
118-96-7	2,4,6-Trinitrotoluene	11.8		9.62	21.4	100	9.96	23.9	121*	11	72-112/16
55-63-0	Nitroglycerine	2.0	U	9.62	10.6	110	9.96	11.8	118	11	69-123/18
78-11-5	PETN	2.0	U	9.62	11.2	116	9.96	13.0	131	15	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA90260-1	FA90260-1	Limits
610-39-9	3,4-Dinitrotoluene	119%	121%	125%	141%* [d]	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Outside control limits due to high level in sample relative to spike amount.
(d) Outside control limits due to matrix interference.

* = Outside of Control Limits.

GC Identification Summary (Explosives)

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA90260-1	**Method:**	SW846 8330B
Client ID:	54MW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	BB070813.D	1	OP88132	GBB2121	11/04/21 14:18	GCBB
Confirmation	GG622725.D	1	OP88132	GGG3063	11/05/21 15:58	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	BB070813.D	1	1	3.9		ug/l	30.4
HMX	GG622725.D	1	1	5.3		ug/l	
RDX [a]	BB070813.D	1	1	.58		ug/l	53.2
RDX	GG622725.D	1	1	1		ug/l	
3,5-Dinitroaniline [a]	BB070813.D	1	1	.53		ug/l	132.3
3,5-Dinitroaniline	GG622725.D	1	1	2.6		ug/l	
2-amino-4,6-Dinitrotoluene	BB070813.D	1	1	2.3		ug/l	9.1
2-amino-4,6-Dinitrotoluene	GG622725.D	1	1	2.1		ug/l	
4-amino-2,6-Dinitrotoluene	BB070813.D	1	1	1.3		ug/l	26.7
4-amino-2,6-Dinitrotoluene	GG622725.D	1	1	1.7		ug/l	
1,3,5-Trinitrobenzene	BB070813.D	1	1	22.3		ug/l	1.3
1,3,5-Trinitrobenzene	GG622725.D	1	1	22.6		ug/l	
2,4,6-Trinitrotoluene	BB070813.D	1	1	11.8		ug/l	5.2
2,4,6-Trinitrotoluene	GG622725.D	1	1	11.2		ug/l	

(a) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA90260-2	**Method:**	SW846 8330B
Client ID:	54MW10		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	BB070814.D	1	OP88132	GBB2121	11/04/21 14:49	GCBB
Confirmation	GG622726.D	1	OP88132	GGG3063	11/05/21 16:30	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	BB070814.D	1	1	2.6		ug/l	17.5
HMX	GG622726.D	1	1	3.1		ug/l	
RDX	BB070814.D	1	1	1.4		ug/l	7.4
RDX	GG622726.D	1	1	1.3		ug/l	
3,5-Dinitroaniline [a]	BB070814.D	1	1	.4		ug/l	65.5
3,5-Dinitroaniline	GG622726.D	1	1	.79		ug/l	
2-amino-4,6-Dinitrotoluene	BB070814.D	1	1	1.5		ug/l	12.5
2-amino-4,6-Dinitrotoluene	GG622726.D	1	1	1.7		ug/l	
4-amino-2,6-Dinitrotoluene	BB070814.D	1	1	1.6		ug/l	22.2
4-amino-2,6-Dinitrotoluene	GG622726.D	1	1	2		ug/l	
1,3,5-Trinitrobenzene	BB070814.D	1	1	2.2		ug/l	0.0
1,3,5-Trinitrobenzene	GG622726.D	1	1	2.2		ug/l	
2,4,6-Trinitrotoluene	BB070814.D	1	1	5.4		ug/l	3.8
2,4,6-Trinitrotoluene	GG622726.D	1	1	5.2		ug/l	

(a) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID: FA90260-3 **Method:** SW846 8330B
Client ID: 54TW10

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	BB070815.D	1	OP88132	GBB2121	11/04/21 15:20	GCBB
Confirmation	GG622727.D	1	OP88132	GGG3063	11/05/21 17:01	GCGG
Confirmation	PP391676.D	1	OP88250	GPP2493	11/11/21 12:55	GCPP

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	BB070815.D	1	1	2.5		ug/l	11.3
HMX	GG622727.D	1	1	2.8		ug/l	
RDX	BB070815.D	1	1	1		ug/l	0.0
RDX	GG622727.D	1	1	1		ug/l	
3,5-Dinitroaniline	BB070815.D	1	1	.47		ug/l	24.3
3,5-Dinitroaniline	GG622727.D	1	1	.6		ug/l	
2-amino-4,6-Dinitrotoluene	BB070815.D	1	1	1.5		ug/l	6.5
2-amino-4,6-Dinitrotoluene	GG622727.D	1	1	1.6		ug/l	
4-amino-2,6-Dinitrotoluene	BB070815.D	1	1	1.4		ug/l	25.0
4-amino-2,6-Dinitrotoluene	GG622727.D	1	1	1.8		ug/l	
1,3,5-Trinitrobenzene	BB070815.D	1	1	.98		ug/l	20.2
1,3,5-Trinitrobenzene	GG622727.D	1	1	1.2		ug/l	
2,4,6-Trinitrotoluene	BB070815.D	1	1	4		ug/l	7.8
2,4,6-Trinitrotoluene	GG622727.D	1	1	3.7		ug/l	

GC Identification Summary (Explosives)

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA90260-4	**Method:**	SW846 8330B
Client ID:	54MW12		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	BB070816.D	1	OP88132	GBB2121	11/04/21 15:51	GCBB
Confirmation	GG622728.D	1	OP88132	GGG3063	11/05/21 17:33	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	BB070816.D	1	1	10.1		ug/l	13.0
HMX	GG622728.D	1	1	11.5		ug/l	
3,5-Dinitroaniline [a]	BB070816.D	1	1	.63		ug/l	41.5
3,5-Dinitroaniline	GG622728.D	1	1	.96		ug/l	
2-amino-4,6-Dinitrotoluene	BB070816.D	1	1	3.3		ug/l	8.7
2-amino-4,6-Dinitrotoluene	GG622728.D	1	1	3.6		ug/l	
4-amino-2,6-Dinitrotoluene	BB070816.D	1	1	1.9		ug/l	27.3
4-amino-2,6-Dinitrotoluene	GG622728.D	1	1	2.5		ug/l	
1,3,5-Trinitrobenzene	BB070816.D	1	1	12.8		ug/l	0.8
1,3,5-Trinitrobenzene	GG622728.D	1	1	12.7		ug/l	
2,4,6-Trinitrotoluene	BB070816.D	1	1	9.3		ug/l	7.8
2,4,6-Trinitrotoluene	GG622728.D	1	1	8.6		ug/l	

(a) Primary and confirmation results differ by more than 40%.

Surrogate Recovery Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Method: SW846 8330B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA90260-1	GG622725.D	141* [b]
FA90260-1	BB070813.D	125
FA90260-2	GG622726.D	132
FA90260-2	BB070814.D	123
FA90260-3	GG622727.D	151* [b]
FA90260-3	BB070815.D	143* [b]
FA90260-3	PP391676.D	111
FA90260-4	BB070816.D	135
FA90260-4	GG622728.D	144* [b]
FA90260-5	BB070817.D	129
OP88132-BS	BB070812.D	124
OP88132-MB	BB070809.D	114
OP88132-MB	GG622716.D	124
OP88132-MS	BB070818.D	119
OP88132-MSD	BB070821.D	121

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1
(b) Outside control limits due to matrix interference.

GC Surrogate Retention Time Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GBB2121-CC2118	**Injection Date:**	11/04/21
Lab File ID:	BB070807.D	**Injection Time:**	10:52
Instrument ID:	GCBB	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	10.95

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP88132-MB	BB070809.D	11/04/21	12:14	10.95
ZZZZZZ	BB070810.D	11/04/21	12:45	10.95
ZZZZZZ	BB070811.D	11/04/21	13:16	10.97
OP88132-BS	BB070812.D	11/04/21	13:47	10.97
FA90260-1	BB070813.D	11/04/21	14:18	10.95
FA90260-2	BB070814.D	11/04/21	14:49	10.98
FA90260-3	BB070815.D	11/04/21	15:20	10.97
FA90260-4	BB070816.D	11/04/21	15:51	10.95
FA90260-5	BB070817.D	11/04/21	16:22	10.95
OP88132-MS	BB070818.D	11/04/21	16:53	10.94

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GBB2121-CC2118	**Injection Date:**	11/04/21
Lab File ID:	BB070819.D	**Injection Time:**	17:24
Instrument ID:	GCBB	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	10.98

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP88132-MSD	BB070821.D	11/04/21	18:26	10.95
OP88144-MB	BB070822.D	11/04/21	18:57	10.95
OP88144-BS	BB070823.D	11/04/21	19:28	10.94
ZZZZZZ	BB070824.D	11/04/21	19:59	10.94
ZZZZZZ	BB070825.D	11/04/21	20:30	10.91
ZZZZZZ	BB070826.D	11/04/21	21:01	10.91
ZZZZZZ	BB070827.D	11/04/21	21:32	10.93
ZZZZZZ	BB070828.D	11/04/21	22:03	10.94
ZZZZZZ	BB070829.D	11/04/21	22:34	10.93
ZZZZZZ	BB070830.D	11/04/21	23:05	10.92

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG3062-CC3059	**Injection Date:**	11/04/21
Lab File ID:	GG622714.D	**Injection Time:**	14:56
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	13.82	13.82

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP88132-MB	GG622716.D	11/04/21	15:59		13.77
ZZZZZZ	GG622717.D	11/04/21	16:30		13.79
GGG3062-ECC3059	GG622721.D	11/04/21	18:36	13.81	13.81

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.6.3

8

GC Surrogate Retention Time Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG3063-CC3059	**Injection Date:**	11/05/21
Lab File ID:	GG622723.D	**Injection Time:**	14:56
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	13.86

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
FA90260-1	GG622725.D	11/05/21	15:58	13.76
FA90260-2	GG622726.D	11/05/21	16:30	13.79
FA90260-3	GG622727.D	11/05/21	17:01	13.77
FA90260-4	GG622728.D	11/05/21	17:33	13.79
OP88144-MB	GG622729.D	11/05/21	18:04	13.79

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2493-CC2490	**Injection Date:**	11/11/21
Lab File ID:	PP391672.D	**Injection Time:**	10:51
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	11.24

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP88250-MB	PP391674.D	11/11/21	11:53	11.25
OP88250-BS	PP391675.D	11/11/21	12:24	11.26
FA90260-3	PP391676.D	11/11/21	12:55	11.28
ZZZZZZ	PP391677.D	11/11/21	13:26	11.25
ZZZZZZ	PP391678.D	11/11/21	13:57	11.27
ZZZZZZ	PP391679.D	11/11/21	14:28	11.25
ZZZZZZ	PP391680.D	11/11/21	14:59	11.26
ZZZZZZ	PP391681.D	11/11/21	15:30	11.25
FA90552-1	PP391682.D	11/11/21	16:01	11.29
ZZZZZZ	PP391683.D	11/11/21	16:32	11.28

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2118-ICC2118
Lab FileID: BB070759.D

Response Factor Report G1315B

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration

Calibration Files
20 =BB070754.D 50 =BB070755.D 100 =BB070756.D 200 =BB070757.D
500 =BB070758.D 1000=BB070759.D 2500=BB070760.D 5000=BB070761.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	0.844	1.167	1.327	1.441	1.446	1.469	1.459	1.458	1.326 E3	16.63
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 1458.25202 *A										
2) HMX	2.235	1.442	1.652	1.515	1.483	1.458	1.449	1.445	1.585 E3	17.15
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 1446.75210 *A										
3) DNX	1.638	1.545	1.763	1.721	1.683	1.681	1.663	1.664	1.670 E3	3.81
4) MNX	2.218	2.570	2.862	2.816	2.754	2.761	2.738	2.744	2.683 E3	7.68
5) RDX	1.496	1.669	1.840	1.803	1.769	1.767	1.764	1.762	1.734 E3	6.20
6) 1,3,5-Trinit	3.070	3.415	3.865	3.789	3.756	3.780	3.786	3.803	3.658 E3	7.50
7) 1,3-Dinitrob	3.923	4.595	5.118	5.041	4.924	4.948	4.931	4.940	4.803 E3	8.04
8) 3,5-Dinitroa	2.935	3.537	3.947	3.869	3.746	3.778	3.757	3.791	3.670 E3	8.70
9) Nitrobenzene	2.441	2.663	2.970	2.952	2.873	2.883	2.892	2.922	2.825 E3	6.43
10) Nitroglyceri									0.000	-1.00
11) Tetryl	2.381	2.577	2.918	2.845	2.762	2.791	2.767	2.791	2.729 E3	6.25
12) 2,4,6-Trinit	2.806	3.187	3.564	3.471	3.397	3.423	3.401	3.404	3.332 E3	7.12
13) 2-Amino-4,6-	2.981	3.001	3.314	3.293	3.208	3.244	3.231	3.259	3.191 E3	4.01
14) 4-Amino-2,6-	2.031	2.119	2.390	2.368	2.314	2.340	2.324	2.337	2.278 E3	5.70
15) 3,4-Dinitrot	1.672	1.606	1.859	1.866	1.839	1.864	1.859	1.871	1.805 E3	5.77
16) 2,4-Dinitrot	3.499	3.981	4.423	4.393	4.320	4.359	4.343	4.363	4.210 E3	7.57
17) 2,6-Dinitrot	2.280	2.426	2.694	2.660	2.601	2.614	2.596	2.592	2.558 E3	5.35
18) o-Nitrotolue	1.604	1.884	2.119	2.095	2.025	2.036	2.055	2.063	1.985 E3	8.52
19) p-Nitrotolue	2.553	2.924	3.202	3.186	3.123	3.161	3.185	3.186	3.065 E3	7.37
20) m-Nitrotolue	2.518	2.828	3.099	3.046	2.986	3.021	3.042	3.050	2.949 E3	6.50
21) PETN									0.000	-1.00

Signal #2

1) TNX	1.498	2.062	2.273	2.476	2.413	2.428	2.402	2.389	2.243 E3	14.62
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 2393.27505 *A										
2) HMX	9.881	4.705	5.397	4.314	4.230	4.043	4.016	3.973	5.070 E3	39.47
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 3986.46527 *A										
3) DNX	3.581	2.993	3.233	2.870	2.790	2.681	2.642	2.635	2.928 E3	11.35
4) MNX	3.367	3.895	4.395	4.337	4.228	4.238	4.201	4.211	4.109 E3	8.13
5) RDX	2.174	2.546	2.934	2.868	2.804	2.809	2.791	2.791	2.715 E3	9.03
6) 1,3,5-Trinit	4.541	5.229	5.983	5.967	5.843	5.960	5.952	5.985	5.683 E3	9.28
7) 1,3-Dinitrob	3.304	3.362	3.669	3.569	3.405	3.394	3.338	3.416	3.432 E3	3.61
8) 3,5-Dinitroa	5.828	6.291	6.909	6.654	6.494	6.402	6.360	6.345	6.411 E3	4.85
9) Nitrobenzene	2.467	2.789	2.942	2.974	2.841	2.852	2.854	2.847	2.821 E3	5.49
10) Nitroglyceri	0.844	0.982	1.085	1.190	1.174	1.186	1.183	1.205	1.106 E3	11.75
11) Tetryl	3.302	3.845	4.423	4.465	4.414	4.432	4.469	4.522	4.234 E3	10.25

Initial Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2118-ICC2118
Lab FileID: BB070759.D

```
12) 2,4,6-Trinit 2.608 3.440 3.943 3.997 3.998 4.019 4.064 4.083 3.769 E3  13.59
13) 2-Amino-4,6- 3.089 3.611 4.521 4.699 4.694 4.769 4.853 4.936 4.397 E3  15.28
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 4912.80248 *A

14) 4-Amino-2,6- 2.873 3.104 4.111 4.356 4.438 4.527 4.631 4.709 4.094 E3  17.31
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 4685.73321 *A

15) 3,4-Dinitrot 1.946 1.929 2.729 2.915 3.050 3.126 3.281 3.372 2.794 E3  20.22
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 3343.85811 *A

16) 2,4-Dinitrot 2.241 2.164 2.638 2.718 2.703 2.736 2.827 2.896 2.615 E3  10.23
17) 2,6-Dinitrot 2.422 2.620 3.153 3.304 3.310 3.338 3.385 3.424 3.120 E3  12.23
18) o-Nitrotolue 2.519 2.772 2.680 2.801 2.804 2.901 2.947 2.959 2.798 E3   5.26
19) p-Nitrotolue 1.749 1.802 2.255 2.306 2.462 2.584 2.697 2.744 2.325 E3  16.34
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2727.27905 *A

20) m-Nitrotolue 3.125 2.866 3.627 3.525 3.651 3.672 3.670 3.709 3.481 E3   8.96
21) PETN         1.075 1.206 1.346 1.247 1.316 1.329 1.338 1.342 1.275 E3   7.47
-------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          BBB2118_103021.M        Mon Nov 01 11:46:53 2021
```

8.7.1

8

Initial Calibration Verification

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2118-ICV2118
Lab FileID: BB070763.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 11:17:38 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	496.472	-5.2	104	0.00	1.03- 1.63
2		HMX	1000.000	1037.777	-3.8	103	0.00	1.16- 1.76
3		DNX	1000.000	1053.808	-5.4	105	0.00	1.39- 1.99
4		MNX	1166.000	1262.161	-8.2	105	0.00	1.97- 2.57
5		RDX	1000.000	1057.717	-5.8	104	0.00	2.49- 3.29
6		1,3,5-Trinitrobenzene	1000.000	1074.702	-7.5	104	0.00	4.27- 5.07
7		1,3-Dinitrobenzene	1000.000	1064.183	-6.4	103	0.00	5.45- 6.25
8		3,5-Dinitroaniline	1000.000	1091.169	-9.1	106	0.00	5.79- 6.59
9		Nitrobenzene	1000.000	1062.114	-6.2	104	-0.01	6.99- 7.79
10		Nitroglycerin	----------	NA	----------			
11		Tetryl	1000.000	1058.437	-5.8	103	-0.02	8.99- 9.79
12		2,4,6-Trinitrotoluene	1000.000	1056.843	-5.7	103	-0.02	9.40-10.20
13		2-Amino-4,6-Dinitrotol	1000.000	1073.556	-7.4	106	-0.02	9.72-10.52
14		4-Amino-2,6-Dinitrotol	1000.000	1092.592	-9.3	106	-0.03	10.21-11.01
15	S	3,4-Dinitrotoluene	----------	NA	----------			
16		2,4-Dinitrotoluene	1000.000	1066.285	-6.6	103	-0.02	11.33-12.13
17		2,6-Dinitrotoluene	1000.000	1057.283	-5.7	103	-0.03	11.79-12.59
18		o-Nitrotoluene	1000.000	1077.237	-7.7	105	-0.03	14.86-15.73
19		p-Nitrotoluene	1000.000	1095.309	-9.5	106	-0.03	15.30-16.30
20		m-Nitrotoluene	1000.000	1065.446	-6.5	104	-0.02	16.16-17.16
21		PETN	----------	NA	----------			

***** Signal #2 *****

1		TNX	472.000	505.263	-7.0	106	0.00	1.03- 1.63
2		HMX	1000.000	1038.444	-3.8	102	0.00	1.16- 1.76
3		DNX	1000.000	957.650	4.2	105	0.00	1.39- 1.99
4		MNX	1166.000	1264.030	-8.4	105	0.00	1.97- 2.57
5		RDX	1000.000	1071.686	-7.2	104	0.00	2.49- 3.29
6		1,3,5-Trinitrobenzene	1000.000	1066.965	-6.7	102	0.00	4.27- 5.07
7		1,3-Dinitrobenzene	1000.000	1090.268	-9.0	110	0.00	5.45- 6.25
8		3,5-Dinitroaniline	1000.000	1076.928	-7.7	108	0.00	5.79- 6.59
9		Nitrobenzene	1000.000	1045.627	-4.6	103	-0.01	6.99- 7.79

Initial Calibration Verification

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2118-ICV2118
Lab FileID: BB070763.D

			Amount	Calc.	%Drift			
10		Nitroglycerin	1000.000	1146.705	-14.7	107	-0.02	8.40- 9.40
11		Tetryl	1000.000	1111.417	-11.1	106	-0.02	9.00- 9.80
12		2,4,6-Trinitrotoluene	1000.000	1128.765	-12.9	106	-0.02	9.40-10.20
			Amount	Calc.	%Drift			
13		2-Amino-4,6-Dinitrotol	1000.000	1060.416	-6.0	109	-0.02	9.72-10.52
14		4-Amino-2,6-Dinitrotol	1000.000	1073.371	-7.3	111	-0.03	10.21-11.01
15	S	3,4-Dinitrotoluene	----------NA----------					
			Amount	Calc.	%Drift			
16		2,4-Dinitrotoluene	1000.000	1143.685	-14.4	109	-0.02	11.33-12.13
17		2,6-Dinitrotoluene	1000.000	1147.892	-14.8	107	-0.02	11.79-12.59
18		o-Nitrotoluene	1000.000	1057.773	-5.8	102	-0.03	14.74-15.74
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	1015.064	-1.5	107	-0.03	15.30-16.30
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	1063.565	-6.4	101	-0.02	16.16-17.16
21		PETN	1000.000	1109.626	-11.0	106	-0.02	17.87-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB070759.D BBB2118_103021.M Mon Nov 01 11:46:32 2021

8.7.2

8

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GBB2121-CC2118
Lab FileID: BB070807.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1A.ch
Acq On : 04-Nov-2021, 10:52:55 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	448.344	5.0	94	0.00	1.03- 1.63
2	HMX	1000.000	951.821	4.8	94	0.00	1.16- 1.76
3	DNX	1000.000	917.752	8.2	91	0.00	1.39- 1.99
4	MNX	1166.000	1097.850	5.8	91	0.00	1.97- 2.57
5	RDX	1000.000	944.088	5.6	93	-0.01	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	955.694	4.4	92	-0.03	4.27- 5.07
7	1,3-Dinitrobenzene	1000.000	948.883	5.1	92	-0.03	5.45- 6.25
8	3,5-Dinitroaniline	1000.000	955.548	4.4	93	-0.04	5.79- 6.59
9	Nitrobenzene	1000.000	954.216	4.6	93	-0.05	6.99- 7.79
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	912.105	8.8	89	-0.10	8.99- 9.79
12	2,4,6-Trinitrotoluene	1000.000	922.963	7.7	90	-0.09	9.40-10.20
13	2-Amino-4,6-Dinitrotol	1000.000	962.614	3.7	95	-0.13	9.72-10.52
14	4-Amino-2,6-Dinitrotol	1000.000	946.877	5.3	92	-0.13	10.21-11.01
15 S	3,4-Dinitrotoluene	1000.000	953.591	4.6	92	-0.13	10.68-11.48
16	2,4-Dinitrotoluene	1000.000	947.462	5.3	92	-0.12	11.33-12.13
17	2,6-Dinitrotoluene	1000.000	950.949	4.9	93	-0.13	11.79-12.59
18	o-Nitrotoluene	1000.000	948.020	5.2	92	-0.13	14.86-15.73
19	p-Nitrotoluene	1000.000	960.146	4.0	93	-0.13	15.30-16.30
20	m-Nitrotoluene	1000.000	949.966	5.0	93	-0.11	16.16-17.16
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	444.389	5.8	93	0.00	1.03- 1.63
2	HMX	1000.000	946.676	5.3	93	0.00	1.16- 1.76
3	DNX	1000.000	838.134	16.2#	92	0.00	1.39- 1.99
4	MNX	1166.000	1100.208	5.6	91	0.00	1.97- 2.57
5	RDX	1000.000	956.358	4.4	92	-0.01	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	921.441	7.9	88	-0.03	4.27- 5.07
7	1,3-Dinitrobenzene	1000.000	949.473	5.1	96	-0.03	5.45- 6.25
8	3,5-Dinitroaniline	1000.000	939.243	6.1	94	-0.04	5.79- 6.59
9	Nitrobenzene	1000.000	944.421	5.6	93	-0.05	6.99- 7.79

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2121-CC2118
Lab FileID: BB070807.D

10		Nitroglycerin	1000.000	945.125	5.5	88	-0.07	8.40- 9.40
11		Tetryl	1000.000	943.199	5.7	90	-0.10	9.00- 9.80
12		2,4,6-Trinitrotoluene	1000.000	952.551	4.7	89	-0.09	9.40-10.20
			Amount	Calc.	%Drift			
13		2-Amino-4,6-Dinitrotol	1000.000	925.918	7.4	95	-0.12	9.72-10.52
14		4-Amino-2,6-Dinitrotol	1000.000	894.355	10.6	93	-0.13	10.21-11.01
15	S	3,4-Dinitrotoluene	1000.000	860.020	14.0	92	-0.13	10.68-11.48
			Amount	Calc.	%Drift			
16		2,4-Dinitrotoluene	1000.000	934.370	6.6	89	-0.12	11.33-12.13
17		2,6-Dinitrotoluene	1000.000	994.395	0.6	93	-0.13	11.79-12.59
18		o-Nitrotoluene	1000.000	961.173	3.9	93	-0.13	14.74-15.74
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	908.331	9.2	96	-0.13	15.30-16.30
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	942.106	5.8	89	-0.11	16.16-17.16
21		PETN	1000.000	973.741	2.6	93	-0.06	17.87-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB070759.D BBB2118_103021.M Fri Nov 05 10:14:58 2021

8.7.3

8

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2121-CC2118
Lab FileID: BB070819.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1A.ch
Acq On : 04-Nov-2021, 17:24:28 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	431.728	8.5	91	0.00	1.03- 1.63
2	HMX	1000.000	951.969	4.8	94	0.00	1.16- 1.76
3	DNX	1000.000	920.154	8.0	91	0.00	1.39- 1.99
4	MNX	1166.000	1100.502	5.6	92	-0.01	1.97- 2.57
5	RDX	1000.000	943.420	5.7	93	-0.02	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	953.607	4.6	92	-0.02	4.27- 5.07
7	1,3-Dinitrobenzene	1000.000	948.208	5.2	92	-0.03	5.45- 6.25
8	3,5-Dinitroaniline	1000.000	954.192	4.6	93	-0.04	5.79- 6.59
9	Nitrobenzene	1000.000	955.521	4.4	94	-0.04	6.99- 7.79
10	Nitroglycerin		----------	NA	----------		
11	Tetryl	1000.000	918.543	8.1	90	-0.08	8.99- 9.79
12	2,4,6-Trinitrotoluene	1000.000	922.120	7.8	90	-0.07	9.40-10.20
13	2-Amino-4,6-Dinitrotol	1000.000	971.280	2.9	96	-0.11	9.72-10.52
14	4-Amino-2,6-Dinitrotol	1000.000	959.549	4.0	93	-0.11	10.21-11.01
15 S	3,4-Dinitrotoluene	1000.000	964.225	3.6	93	-0.10	10.68-11.48
16	2,4-Dinitrotoluene	1000.000	954.183	4.6	92	-0.09	11.33-12.13
17	2,6-Dinitrotoluene	1000.000	963.656	3.6	94	-0.10	11.79-12.59
18	o-Nitrotoluene	1000.000	953.981	4.6	93	-0.09	14.86-15.73
19	p-Nitrotoluene	1000.000	958.411	4.2	93	-0.09	15.30-16.30
20	m-Nitrotoluene	1000.000	951.023	4.9	93	-0.07	16.16-17.16
21	PETN		----------	NA	----------		

***** Signal #2 *****

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	440.455	6.7	92	0.00	1.03- 1.63
2	HMX	1000.000	943.159	5.7	93	0.00	1.16- 1.76
3	DNX	1000.000	838.039	16.2#	92	0.00	1.39- 1.99
4	MNX	1166.000	1100.684	5.6	92	-0.01	1.97- 2.57
5	RDX	1000.000	956.926	4.3	92	-0.02	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	928.354	7.2	89	-0.02	4.27- 5.07
7	1,3-Dinitrobenzene	1000.000	956.936	4.3	97	-0.03	5.45- 6.25
8	3,5-Dinitroaniline	1000.000	943.166	5.7	94	-0.04	5.79- 6.59
9	Nitrobenzene	1000.000	947.070	5.3	94	-0.04	6.99- 7.79

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2121-CC2118
Lab FileID: BB070819.D

10		Nitroglycerin	1000.000	947.794	5.2	88	-0.04	8.40- 9.40
11		Tetryl	1000.000	943.657	5.6	90	-0.08	9.00- 9.80
12		2,4,6-Trinitrotoluene	1000.000	946.820	5.3	89	-0.07	9.40-10.20
			Amount	Calc.	%Drift			
13		2-Amino-4,6-Dinitrotol	1000.000	930.001	7.0	96	-0.11	9.72-10.52
14		4-Amino-2,6-Dinitrotol	1000.000	896.162	10.4	93	-0.11	10.21-11.01
15	S	3,4-Dinitrotoluene	1000.000	855.188	14.5	91	-0.10	10.68-11.48
			Amount	Calc.	%Drift			
16		2,4-Dinitrotoluene	1000.000	936.694	6.3	90	-0.09	11.33-12.13
17		2,6-Dinitrotoluene	1000.000	992.913	0.7	93	-0.10	11.79-12.59
18		o-Nitrotoluene	1000.000	955.420	4.5	92	-0.09	14.74-15.74
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	897.264	10.3	95	-0.09	15.30-16.30
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	938.579	6.1	89	-0.07	16.16-17.16
21		PETN	1000.000	959.003	4.1	92	-0.03	17.87-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB070759.D BBB2118_103021.M Fri Nov 05 10:14:59 2021

8.7.4

8

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2121-CC2118
Lab FileID: BB070831.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1A.ch
Acq On : 04-Nov-2021, 23:36:36 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	427.514	9.4	90	0.00	1.03- 1.63
2	HMX	1000.000	948.330	5.2	94	0.00	1.16- 1.76
3	DNX	1000.000	912.249	8.8	91	0.00	1.39- 1.99
4	MNX	1166.000	1095.371	6.1	91	-0.02	1.97- 2.57
5	RDX	1000.000	942.792	5.7	93	-0.03	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	952.228	4.8	92	-0.04	4.27- 5.07
7	1,3-Dinitrobenzene	1000.000	945.788	5.4	92	-0.04	5.45- 6.25
8	3,5-Dinitroaniline	1000.000	952.420	4.8	93	-0.06	5.79- 6.59
9	Nitrobenzene	1000.000	950.866	4.9	93	-0.06	6.99- 7.79
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	911.844	8.8	89	-0.10	8.99- 9.79
12	2,4,6-Trinitrotoluene	1000.000	916.198	8.4	89	-0.09	9.40-10.20
13	2-Amino-4,6-Dinitrotol	1000.000	967.829	3.2	95	-0.14	9.72-10.52
14	4-Amino-2,6-Dinitrotol	1000.000	952.160	4.8	93	-0.14	10.21-11.01
15 S	3,4-Dinitrotoluene	1000.000	950.458	5.0	92	-0.13	10.68-11.48
16	2,4-Dinitrotoluene	1000.000	948.075	5.2	92	-0.12	11.33-12.13
17	2,6-Dinitrotoluene	1000.000	952.574	4.7	93	-0.12	11.79-12.59
18	o-Nitrotoluene	1000.000	946.122	5.4	92	-0.12	14.86-15.73
19	p-Nitrotoluene	1000.000	952.503	4.7	92	-0.12	15.30-16.30
20	m-Nitrotoluene	1000.000	941.237	5.9	92	-0.10	16.16-17.16
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	421.143	10.8	88	0.00	1.03- 1.63
2	HMX	1000.000	938.791	6.1	93	0.00	1.16- 1.76
3	DNX	1000.000	830.189	17.0#	91	0.00	1.39- 1.99
4	MNX	1166.000	1098.265	5.8	91	-0.02	1.97- 2.57
5	RDX	1000.000	957.256	4.3	93	-0.03	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	941.077	5.9	90	-0.04	4.27- 5.07
7	1,3-Dinitrobenzene	1000.000	978.809	2.1	99	-0.04	5.45- 6.25
8	3,5-Dinitroaniline	1000.000	965.048	3.5	97	-0.06	5.79- 6.59
9	Nitrobenzene	1000.000	941.825	5.8	93	-0.06	6.99- 7.79

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2121-CC2118
Lab FileID: BB070831.D

			Amount	Calc.	%Drift			
10		Nitroglycerin	1000.000	966.315	3.4	90	-0.06	8.40- 9.40
11		Tetryl	1000.000	944.732	5.5	90	-0.10	9.00- 9.80
12		2,4,6-Trinitrotoluene	1000.000	945.135	5.5	89	-0.09	9.40-10.20
			Amount	Calc.	%Drift			
13		2-Amino-4,6-Dinitrotol	1000.000	933.199	6.7	96	-0.14	9.72-10.52
14		4-Amino-2,6-Dinitrotol	1000.000	897.458	10.3	93	-0.14	10.21-11.01
15	S	3,4-Dinitrotoluene	1000.000	853.996	14.6	91	-0.13	10.68-11.48
			Amount	Calc.	%Drift			
16		2,4-Dinitrotoluene	1000.000	936.834	6.3	90	-0.12	11.33-12.13
17		2,6-Dinitrotoluene	1000.000	991.214	0.9	93	-0.12	11.79-12.59
18		o-Nitrotoluene	1000.000	954.579	4.5	92	-0.12	14.74-15.74
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	896.834	10.3	95	-0.12	15.30-16.30
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	929.139	7.1	88	-0.10	16.16-17.16
21		PETN	1000.000	962.957	3.7	92	-0.05	17.87-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB070759.D BBB2118_103021.M Fri Nov 05 10:15:00 2021

8.7.5

8

Initial Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3059-ICC3059
Lab FileID: GG622649.D

Response Factor Report G1315B

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration

Calibration Files
20 =GG622644.D 50 =GG622645.D 100 =GG622646.D 200 =GG622647.D
500 =GG622648.D 1000=GG622649.D 2500=GG622650.D 5000=GG622651.D

Compound	20	50	100	200	500	1000	2500	5000	Avg		%RSD
1) TNX	3.377	3.674	4.049	3.840	3.737	3.779	3.685	3.684	3.728	E3	5.05
2) HMX	2.529	2.803	3.136	3.072	2.976	3.008	2.930	2.919	2.922	E3	6.43
3) DNX	2.755	3.620	4.039	4.104	4.018	4.059	3.998	3.997	3.824	E3	11.95
4) MNX	4.795	5.932	6.566	6.482	6.330	6.429	6.286	6.242	6.133	E3	9.35
5) 1,3,5-Trinit	6.904	7.999	8.857	8.748	8.535	8.673	8.471	8.462	8.331	E3	7.58
6) RDX	3.278	3.727	4.203	4.166	4.052	4.136	4.036	4.029	3.953	E3	7.83
7) 1,3-Dinitrob	0.929	1.115	1.216	1.198	1.163	1.188	1.157	1.154	1.140	E4	7.95
8) Nitrobenzene	5.511	6.923	7.627	7.592	7.440	7.631	7.451	7.427	7.200	E3	9.99
9) 2,4,6-Trinit	6.709	7.745	8.438	8.354	8.158	8.485	8.157	8.093	8.017	E3	7.21
10) Nitroglyceri									0.000		-1.00
11) Tetryl	4.981	6.273	6.673	6.546	6.528	6.810	6.597	6.506	6.364	E3	9.10
12) 3,4-Dinitrot	3.458	3.961	4.434	4.225	4.188	4.277	4.180	4.153	4.110	E3	7.16
13) 2,6-Dinitrot	4.357	5.655	5.972	5.900	5.695	5.879	5.719	5.748	5.616	E3	9.27
14) 2,4-Dinitrot	0.812	1.006	1.094	1.080	1.050	1.080	1.051	1.051	1.028	E4	8.88
15) 3,5-Dinitroa	6.971	8.596	9.215	9.116	8.847	9.168	8.871	8.853	8.705	E3	8.39
16) o-Nitrotolue	3.406	4.465	4.753	4.688	4.599	4.836	4.686	4.701	4.517	E3	10.22
17) p-Nitrotolue	3.798	4.560	5.015	4.943	4.817	4.936	4.849	4.860	4.722	E3	8.41
18) 4-Amino-2,6-	3.798	4.560	5.015	4.943	4.817	4.936	4.849	4.860	4.722	E3	8.41
19) m-Nitrotolue	4.333	4.959	5.293	5.242	5.110	5.196	5.128	5.154	5.052	E3	6.08
20) 2-Amino-4,6-	6.241	7.554	8.193	8.068	7.814	7.966	7.781	7.794	7.676	E3	7.97
21) PETN									0.000		-1.00

Signal #2

1) TNX	3.288	3.808	4.049	3.840	3.737	3.779	3.685	3.684	3.734	E3	5.74
2) HMX	2.529	2.803	3.136	3.072	2.976	3.008	2.930	2.919	2.922	E3	6.43
3) DNX	2.786	3.684	4.034	4.015	3.943	4.059	3.998	3.997	3.815	E3	11.33
4) MNX	4.795	5.932	6.566	6.482	6.330	6.429	6.286	6.242	6.133	E3	9.35
5) 1,3,5-Trinit	6.904	7.999	8.857	8.748	8.535	8.673	8.471	8.462	8.331	E3	7.58
6) RDX	3.278	3.727	4.203	4.166	4.052	4.136	4.036	4.029	3.953	E3	7.83
7) 1,3-Dinitrob	0.628	1.039	0.859	0.929	0.895	0.928	0.883	0.875	0.879	E4	13.17
8) Nitrobenzene	5.358	6.316	6.909	7.627	6.949	7.625	7.185	6.980	6.869	E3	10.80
9) 2,4,6-Trinit	0.950	1.209	1.226	1.172	1.064	1.159	1.097	1.072	1.119	E4	8.16
10) Nitroglyceri	1.389	2.696	2.351	4.153	2.716	3.188	2.907	2.869	2.784	E3	27.84
---- Linear regr., Force(0,0) ---- Coefficient = 0.9991											
Response Ratio = 0.00000 + 2886.20696 *A											
11) Tetryl	0.747	1.118	1.196	1.189	1.137	1.169	1.135	1.116	1.101	E4	13.28
12) 3,4-Dinitrot	7.348	7.561	9.320	8.584	8.424	8.575	8.451	8.445	8.339	E3	7.44
13) 2,6-Dinitrot	7.325	9.339	9.362	8.492	7.964	8.272	8.183	8.116	8.382	E3	8.19
14) 2,4-Dinitrot	3.938	7.850	7.012	7.922	7.398	7.647	7.515	7.489	7.096	E3	18.42
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000											
Response Ratio = 0.00000 + 7498.14247 *A											
15) 3,5-Dinitroa	1.109	1.336	1.402	1.507	1.460	1.507	1.471	1.467	1.407	E4	9.47
16) o-Nitrotolue	4.274	7.803	7.649	6.893	6.871	7.247	7.056	7.010	6.850	E3	16.00
---- Linear regr., Force(0,0) ---- Coefficient = 0.9999											

Initial Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3059-ICC3059
Lab FileID: GG622649.D

```
               Response Ratio = 0.00000 + 7025.42189 *A

17) p-Nitrotolue 5.951 6.932 8.920 8.965 8.761 8.898 8.899 8.908 8.279 E3  14.08
18) 4-Amino-2,6- 5.951 6.932 8.920 8.965 8.761 8.898 8.899 8.908 8.279 E3  14.08
19) m-Nitrotolue 7.848 7.940 8.313 9.040 8.786 8.824 8.888 8.928 8.571 E3   5.48
20) 2-Amino-4,6- 0.896 0.947 1.032 1.135 1.124 1.137 1.115 1.132 1.065 E4   9.01
21) PETN         2.144 1.665 2.962 2.968 2.909 2.999 3.075 3.024 2.718 E3  19.16
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 3031.80498 *A

--------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          GGG3059_103121.M        Mon Nov 01 15:27:19 2021
```

8.7.6

8

Initial Calibration Verification

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GGG3059-ICV3059
Lab FileID: GG622653.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1A.ch
Acq On : 01-Nov-2021, 15:10:05 Operator: jamesb
Sample : icv3059-1000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	499.085	-5.7	104	0.02	4.34- 5.34
2	HMX	1000.000	1038.062	-3.8	101	0.03	4.74- 5.74
3	DNX	1000.000	1103.125	-10.3	105	0.03	4.91- 5.91
4	MNX	1166.000	1262.442	-8.3	103	0.06	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	1061.944	-6.2	102	0.04	6.93- 7.93
6	RDX	1000.000	1061.765	-6.2	101	0.06	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	1058.007	-5.8	102	0.05	9.15-10.15
8	Nitrobenzene	1000.000	1068.697	-6.9	101	0.05	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	1046.934	-4.7	99	0.04	10.99-11.99
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	1061.007	-6.1	99	0.05	12.25-13.25
12 S	3,4-Dinitrotoluene	----------	----------	NA	----------		
13	2,6-Dinitrotoluene	1000.000	1021.400	-2.1	98	0.05	13.63-14.63
14	2,4-Dinitrotoluene	1000.000	1060.775	-6.1	101	0.04	14.25-15.25
15	3,5-Dinitroaniline	1000.000	1076.781	-7.7	102	0.07	14.91-15.91
16	o-Nitrotoluene	1000.000	1075.703	-7.6	100	0.04	15.74-16.74
17	p-Nitrotoluene	2000.000	2144.461	-7.2	103	0.06	16.73-17.73
18	4-Amino-2,6-Dinitrotol	2000.000	2144.461	-7.2	103	0.06	16.73-17.73
19	m-Nitrotoluene	1000.000	1053.850	-5.4	102	0.03	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	1074.624	-7.5	104	0.07	18.52-19.52
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

1	TNX	472.000	498.335	-5.6	104	0.02	4.34- 5.34
2	HMX	1000.000	1038.062	-3.8	101	0.03	4.74- 5.74
3	DNX	1000.000	1105.791	-10.6	106	0.03	4.91- 5.91
4	MNX	1166.000	1262.442	-8.3	103	0.06	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	1061.944	-6.2	102	0.04	6.93- 7.93
6	RDX	1000.000	1061.765	-6.2	101	0.06	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	1097.686	-9.8	107	0.05	9.15-10.15
8	Nitrobenzene	1000.000	1033.197	-3.3	100	0.04	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	1043.895	-4.4	108	0.04	10.99-11.99

	----------	Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	996.145	0.4	106	0.03	11.76-12.76
11	Tetryl	1000.000	1084.434	-8.4	102	0.05	12.25-13.25

	----------	Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	----------	----------	NA	----------		
13	2,6-Dinitrotoluene	1000.000	1055.572	-5.6	107	0.06	13.63-14.63

Initial Calibration Verification

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3059-ICV3059
Lab FileID: GG622653.D

		Amount	Calc.	%Drift			
14	2,4-Dinitrotoluene	1000.000	1057.198	-5.7	104	0.04	14.25-15.25
15	3,5-Dinitroaniline	1000.000	1094.229	-9.4	102	0.07	14.91-15.91
16	o-Nitrotoluene	1000.000	1033.940	-3.4	100	0.04	15.74-16.74
17	p-Nitrotoluene	2000.000	2232.330	-11.6	104	0.06	16.72-17.72
18	4-Amino-2,6-Dinitrotol	2000.000	2232.330	-11.6	104	0.06	16.72-17.72
19	m-Nitrotoluene	1000.000	1069.725	-7.0	104	0.03	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	1110.984	-11.1	104	0.07	18.52-19.52
21	PETN	1000.000	1060.655	-6.1	107	0.00	20.69-21.69

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622649.D GGG3059_103121.M Mon Nov 01 15:27:07 2021

8.7.7

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3062-CC3059
Lab FileID: GG622714.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1A.ch
Acq On : 04-Nov-2021, 14:56:28 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : op88132,GGG3062,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	466.064	1.3	95	0.00	4.34- 5.34
2	HMX	1000.000	964.778	3.5	94	0.01	4.74- 5.74
3	DNX	1000.000	1011.223	-1.1	95	0.01	4.91- 5.91
4	MNX	1166.000	1131.200	3.0	93	0.02	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	972.493	2.8	93	0.00	6.93- 7.93
6	RDX	1000.000	971.069	2.9	93	0.02	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	965.813	3.4	93	0.00	9.15-10.15
8	Nitrobenzene	1000.000	986.410	1.4	93	0.00	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	961.010	3.9	91	-0.01	10.99-11.99
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	955.538	4.4	89	-0.02	12.25-13.25
12 S	3,4-Dinitrotoluene	1000.000	973.570	2.6	94	-0.02	13.34-14.34
13	2,6-Dinitrotoluene	1000.000	967.165	3.3	92	-0.02	13.63-14.63
14	2,4-Dinitrotoluene	1000.000	972.918	2.7	93	-0.02	14.25-15.25
15	3,5-Dinitroaniline	1000.000	968.398	3.2	92	-0.03	14.91-15.91
16	o-Nitrotoluene	1000.000	990.644	0.9	92	-0.02	15.74-16.74
17	p-Nitrotoluene	2000.000	1952.665	2.4	93	-0.04	16.73-17.73
18	4-Amino-2,6-Dinitrotol	2000.000	1952.665	2.4	93	-0.04	16.73-17.73
19	m-Nitrotoluene	1000.000	972.184	2.8	95	-0.04	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	966.919	3.3	93	-0.05	18.52-19.52
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

1	TNX	472.000	465.005	1.5	95	0.00	4.34- 5.34
2	HMX	1000.000	964.778	3.5	94	0.01	4.74- 5.74
3	DNX	1000.000	1004.148	-0.4	96	0.01	4.91- 5.91
4	MNX	1166.000	1131.200	3.0	93	0.02	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	972.493	2.8	93	0.00	6.93- 7.93
6	RDX	1000.000	971.069	2.9	93	0.02	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	985.987	1.4	95	0.00	9.15-10.15
8	Nitrobenzene	1000.000	1065.082	-6.5	102	0.00	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	958.529	4.1	97	-0.01	10.99-11.99
	----------	Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	1001.981	-0.2	104	-0.02	11.76-12.76
11	Tetryl	1000.000	944.934	5.5	91	-0.02	12.25-13.25
	----------	Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	965.924	3.4	94	-0.02	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	918.130	8.2	93	-0.02	13.63-14.63

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3062-CC3059
Lab FileID: GG622714.D

		Amount	Calc.	%Drift			
14	2,4-Dinitrotoluene	1000.000	939.923	6.0	92	-0.02	14.25-15.25
15	3,5-Dinitroaniline	1000.000	989.412	1.1	92	-0.03	14.91-15.91
16	o-Nitrotoluene	1000.000	948.495	5.2	92	-0.02	15.74-16.74
17	p-Nitrotoluene	2000.000	2065.665	-3.3	96	-0.04	16.72-17.72
18	4-Amino-2,6-Dinitrotol	2000.000	2065.665	-3.3	96	-0.04	16.72-17.72
19	m-Nitrotoluene	1000.000	1004.389	-0.4	96	-0.04	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	973.454	2.7	93	-0.05	18.52-19.52
21	PETN	1000.000	962.798	3.7	97	-0.08	20.69-21.69

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622649.D GGG3059_103121.M Mon Nov 08 09:33:47 2021

8.7.8

8

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3062-ECC3059
Lab FileID: GG622721.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1A.ch
Acq On : 04-Nov-2021, 18:36:25 Operator: jamesb
Sample : ecc3059-1000 Inst : G1315B
Misc : op88132,GGG3062,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	471.527	0.1	96	0.00	4.34- 5.34
2	HMX	1000.000	970.192	3.0	94	0.01	4.74- 5.74
3	DNX	1000.000	1011.487	-1.1	96	0.00	4.91- 5.91
4	MNX	1166.000	1128.641	3.2	92	0.01	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	970.480	3.0	93	0.00	6.93- 7.93
6	RDX	1000.000	961.549	3.8	92	0.00	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	963.851	3.6	93	0.00	9.15-10.15
8	Nitrobenzene	1000.000	985.414	1.5	93	0.00	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	961.477	3.9	91	-0.02	10.99-11.99
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	957.569	4.2	89	-0.04	12.25-13.25
12 S	3,4-Dinitrotoluene	1000.000	966.362	3.4	93	-0.02	13.34-14.34
13	2,6-Dinitrotoluene	1000.000	968.677	3.1	93	-0.03	13.63-14.63
14	2,4-Dinitrotoluene	1000.000	972.651	2.7	93	-0.03	14.25-15.25
15	3,5-Dinitroaniline	1000.000	968.642	3.1	92	-0.05	14.91-15.91
16	o-Nitrotoluene	1000.000	993.672	0.6	93	-0.03	15.74-16.74
17	p-Nitrotoluene	2000.000	1961.391	1.9	94	-0.05	16.73-17.73
18	4-Amino-2,6-Dinitrotol	2000.000	1961.391	1.9	94	-0.05	16.73-17.73
19	m-Nitrotoluene	1000.000	975.669	2.4	95	-0.04	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	964.659	3.5	93	-0.07	18.52-19.52
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

1	TNX	472.000	470.456	0.3	96	0.00	4.34- 5.34
2	HMX	1000.000	970.192	3.0	94	0.01	4.74- 5.74
3	DNX	1000.000	1004.409	-0.4	96	0.00	4.91- 5.91
4	MNX	1166.000	1128.641	3.2	92	0.01	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	970.480	3.0	93	0.00	6.93- 7.93
6	RDX	1000.000	961.549	3.8	92	0.00	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	1013.076	-1.3	98	0.00	9.15-10.15
8	Nitrobenzene	1000.000	1082.505	-8.3	103	0.00	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	999.224	0.1	101	-0.02	10.99-11.99
	----------	Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	1072.283	-7.2	112	-0.02	11.76-12.76
11	Tetryl	1000.000	963.688	3.6	92	-0.04	12.25-13.25
	----------	Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	962.035	3.8	94	-0.03	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	930.550	6.9	94	-0.03	13.63-14.63

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3062-ECC3059
Lab FileID: GG622721.D

		Amount	Calc.	%Drift			
14	2,4-Dinitrotoluene	1000.000	960.993	3.9	94	-0.03	14.25-15.25
15	3,5-Dinitroaniline	1000.000	994.250	0.6	93	-0.05	14.91-15.91
16	o-Nitrotoluene	1000.000	961.785	3.8	93	-0.02	15.74-16.74
17	p-Nitrotoluene	2000.000	2064.838	-3.2	96	-0.06	16.72-17.72
18	4-Amino-2,6-Dinitrotol	2000.000	2064.838	-3.2	96	-0.06	16.72-17.72
19	m-Nitrotoluene	1000.000	1017.222	-1.7	97	-0.04	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	987.152	1.3	94	-0.07	18.52-19.52
21	PETN	1000.000	927.253	7.3	94	-0.08	20.69-21.69

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622649.D GGG3059_103121.M Mon Nov 08 09:33:48 2021

8.7.9

8

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3063-CC3059
Lab FileID: GG622723.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1A.ch
Acq On : 05-Nov-2021, 14:56:02 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : op88132,GGG3063,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	429.909	8.9	88	0.00	4.34- 5.34
2	HMX	1000.000	895.105	10.5	87	0.02	4.74- 5.74
3	DNX	1000.000	942.095	5.8	89	0.02	4.91- 5.91
4	MNX	1166.000	1055.927	9.4	86	0.03	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	905.638	9.4	87	0.02	6.93- 7.93
6	RDX	1000.000	908.441	9.2	87	0.04	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	899.742	10.0	86	0.02	9.15-10.15
8	Nitrobenzene	1000.000	912.951	8.7	86	0.03	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	896.705	10.3	85	0.00	10.99-11.99
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	891.570	10.8	83	0.00	12.25-13.25
12 S	3,4-Dinitrotoluene	1000.000	896.544	10.3	86	0.02	13.34-14.34
13	2,6-Dinitrotoluene	1000.000	903.180	9.7	86	0.02	13.63-14.63
14	2,4-Dinitrotoluene	1000.000	905.868	9.4	86	0.02	14.25-15.25
15	3,5-Dinitroaniline	1000.000	901.446	9.9	86	0.03	14.91-15.91
16	o-Nitrotoluene	1000.000	916.957	8.3	85	0.03	15.74-16.74
17	p-Nitrotoluene	2000.000	1814.655	9.3	87	0.03	16.73-17.73
18	4-Amino-2,6-Dinitrotol	2000.000	1814.655	9.3	87	0.03	16.73-17.73
19	m-Nitrotoluene	1000.000	898.748	10.1	87	0.02	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	897.543	10.2	86	0.04	18.52-19.52
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

1	TNX	472.000	428.932	9.1	88	0.00	4.34- 5.34
2	HMX	1000.000	895.105	10.5	87	0.02	4.74- 5.74
3	DNX	1000.000	935.503	6.4	90	0.02	4.91- 5.91
4	MNX	1166.000	1055.927	9.4	86	0.03	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	905.638	9.4	87	0.02	6.93- 7.93
6	RDX	1000.000	908.441	9.2	87	0.04	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	913.072	8.7	88	0.02	9.15-10.15
8	Nitrobenzene	1000.000	950.052	5.0	91	0.03	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	927.318	7.3	94	0.00	10.99-11.99

		---------- Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	952.865	4.7	99	0.00	11.76-12.76
11	Tetryl	1000.000	881.231	11.9	85	0.00	12.25-13.25

		---------- Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	880.829	11.9	86	0.02	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	847.837	15.2#	86	0.02	13.63-14.63

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3063-CC3059
Lab FileID: GG622723.D

		Amount	Calc.	%Drift			
14	2,4-Dinitrotoluene	1000.000	878.761	12.1	86	0.02	14.25-15.25
15	3,5-Dinitroaniline	1000.000	930.941	6.9	87	0.03	14.91-15.91
16	o-Nitrotoluene	1000.000	904.538	9.5	88	0.03	15.74-16.74
17	p-Nitrotoluene	2000.000	1891.016	5.4	88	0.03	16.72-17.72
18	4-Amino-2,6-Dinitrotol	2000.000	1891.016	5.4	88	0.03	16.72-17.72
19	m-Nitrotoluene	1000.000	920.731	7.9	88	0.02	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	921.386	7.9	88	0.04	18.52-19.52
21	PETN	1000.000	924.825	7.5	94	-0.04	20.69-21.69

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622649.D GGG3059_103121.M Mon Nov 08 14:48:12 2021

8.7.10

8

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3063-CC3059
Lab FileID: GG622735.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622735.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622735.D\dad1A.ch
Acq On    : 05-Nov-2021, 21:13:09                    Operator: jamesb
Sample    : cc3059-1000                              Inst    : G1315B
Misc      : op88132,GGG3063,1000,,,10,1,water        Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: events2.e

Method       : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title        : Explosives by 8330A,8330B,8332
Last Update  : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 200%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	430.918	8.7	88	0.02	4.34- 5.34
2	HMX	1000.000	891.070	10.9	87	0.03	4.74- 5.74
3	DNX	1000.000	916.303	8.4	87	0.02	4.91- 5.91
4	MNX	1166.000	1051.059	9.9	86	0.03	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	904.381	9.6	87	0.02	6.93- 7.93
6	RDX	1000.000	906.122	9.4	87	0.03	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	895.847	10.4	86	0.00	9.15-10.15
8	Nitrobenzene	1000.000	904.567	9.5	85	0.01	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	884.904	11.5	84	0.00	10.99-11.99
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	876.580	12.3	82	-0.01	12.25-13.25
12 S	3,4-Dinitrotoluene	1000.000	896.011	10.4	86	0.00	13.34-14.34
13	2,6-Dinitrotoluene	1000.000	892.708	10.7	85	-0.01	13.63-14.63
14	2,4-Dinitrotoluene	1000.000	899.468	10.1	86	-0.01	14.25-15.25
15	3,5-Dinitroaniline	1000.000	896.675	10.3	85	-0.02	14.91-15.91
16	o-Nitrotoluene	1000.000	905.494	9.5	84	0.00	15.74-16.74
17	p-Nitrotoluene	2000.000	1804.732	9.8	86	-0.02	16.73-17.73
18	4-Amino-2,6-Dinitrotol	2000.000	1804.732	9.8	86	-0.02	16.73-17.73
19	m-Nitrotoluene	1000.000	900.423	10.0	88	-0.01	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	893.980	10.6	86	-0.03	18.52-19.52
21	PETN	----------	NA	----------			

***** Signal #2 *****

1	TNX	472.000	429.939	8.9	88	0.02	4.34- 5.34
2	HMX	1000.000	891.070	10.9	87	0.03	4.74- 5.74
3	DNX	1000.000	909.891	9.0	87	0.02	4.91- 5.91
4	MNX	1166.000	1051.059	9.9	86	0.03	5.99- 6.99
5	1,3,5-Trinitrobenzene	1000.000	904.381	9.6	87	0.02	6.93- 7.93
6	RDX	1000.000	906.122	9.4	87	0.03	7.24- 8.24
7	1,3-Dinitrobenzene	1000.000	901.210	9.9	87	0.00	9.15-10.15
8	Nitrobenzene	1000.000	926.856	7.3	88	0.01	10.06-11.06
9	2,4,6-Trinitrotoluene	1000.000	880.173	12.0	89	0.00	10.99-11.99

		---------- Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	883.284	11.7	92	0.00	11.76-12.76
11	Tetryl	1000.000	865.709	13.4	83	-0.01	12.25-13.25

		---------- Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	892.403	10.8	87	0.00	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	828.820	17.1#	84	-0.01	13.63-14.63

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3063-CC3059
Lab FileID: GG622735.D

		Amount	Calc.	%Drift			
14	2,4-Dinitrotoluene	1000.000	830.578	16.9#	81	-0.01	14.25-15.25
15	3,5-Dinitroaniline	1000.000	915.221	8.5	85	-0.02	14.91-15.91
16	o-Nitrotoluene	1000.000	815.387	18.5#	79	0.00	15.74-16.74
17	p-Nitrotoluene	2000.000	1865.116	6.7	87	-0.02	16.72-17.72
18	4-Amino-2,6-Dinitrotol	2000.000	1865.116	6.7	87	-0.02	16.72-17.72
19	m-Nitrotoluene	1000.000	931.315	6.9	89	-0.02	17.95-18.95
20	2-Amino-4,6-Dinitrotol	1000.000	890.005	11.0	85	-0.03	18.52-19.52
21	PETN	1000.000	851.043	14.9	86	-0.05	20.69-21.69

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622649.D GGG3059_103121.M Mon Nov 08 14:48:13 2021

8.7.11

8

Initial Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2490-ICC2490
Lab FileID: PP391635.D

Response Factor Report G1315B

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Initial Calibration

Calibration Files
20 =PP391630.D 50 =PP391631.D 100 =PP391632.D 200 =PP391633.D
500 =PP391634.D 1000=PP391635.D 2500=PP391636.D 5000=PP391637.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	1.088	1.237	1.452	1.384	1.485	1.463	1.442	1.470	1.378 E3	10.29
2) HMX	2.060	1.693	1.676	1.575	1.574	1.531	1.494	1.511	1.639 E3	11.27
3) DNX	2.098	1.898	2.024	1.930	1.979	1.931	1.892	1.917	1.959 E3	3.64
4) MNX	2.801	2.770	2.787	2.695	2.792	2.721	2.666	2.698	2.741 E3	1.91
5) RDX	1.658	1.847	1.889	1.823	1.908	1.862	1.832	1.857	1.835 E3	4.18
6) 1,3,5-Trinit	3.694	3.848	4.051	3.944	4.095	4.033	3.950	4.015	3.954 E3	3.29
7) 1,3-Dinitrob	4.738	4.980	5.369	5.158	5.374	5.274	5.166	5.244	5.163 E3	4.14
8) 3,5-Dinitroa	3.836	4.392	4.124	3.927	4.109	4.005	3.929	4.006	4.041 E3	4.23
9) Nitrobenzene	3.108	2.954	3.201	3.070	3.179	3.138	3.093	3.043	3.098 E3	2.54
10) Nitroglyceri									0.000	-1.00
11) Tetryl	2.372	2.652	2.910	2.777	2.847	2.771	2.722	2.767	2.727 E3	5.97
12) 2,4,6-Trinit	4.114	3.762	4.010	3.827	3.943	3.859	3.765	3.801	3.885 E3	3.26
13) 2-Amino-4,6-	4.131	3.644	3.795	3.427	3.526	3.438	3.365	3.422	3.593 E3	7.21
14) 4-Amino-2,6-	3.221	2.765	2.734	2.413	2.470	2.417	2.363	2.394	2.597 E3	11.41
15) 3,4-Dinitrot	2.408	2.301	2.416	2.206	2.271	2.225	2.184	2.213	2.278 E3	3.98
16) 2,4-Dinitrot	4.112	4.548	4.828	4.523	4.729	4.634	4.551	4.620	4.568 E3	4.61
17) 2,6-Dinitrot	2.728	2.854	2.954	2.795	2.906	2.838	2.793	2.823	2.836 E3	2.47
18) o-Nitrotolue	2.668	2.315	2.284	2.195	2.234	2.206	2.164	2.120	2.273 E3	7.53
19) p-Nitrotolue	3.191	3.278	3.471	3.358	3.546	3.518	3.475	3.431	3.408 E3	3.62
20) m-Nitrotolue	2.711	3.187	3.313	3.178	3.335	3.303	3.262	3.208	3.187 E3	6.31
21) PETN									0.000	-1.00

Signal #2

1) TNX	2.043	2.067	2.372	2.282	2.452	2.434	2.358	2.415	2.303 E3	7.03
2) HMX	6.798	5.317	4.961	4.498	4.485	4.314	4.205	4.241	4.852 E3	18.03

---- Linear regr., Force(0,0) ---- Coefficient = 1.0000
Response Ratio = 0.00000 + 4238.63381 *A

3) DNX	3.694	3.301	3.397	3.113	3.163	3.061	2.982	3.019	3.216 E3	7.43
4) MNX	4.158	4.066	4.394	4.214	4.346	4.239	4.138	4.190	4.218 E3	2.56
5) RDX	2.757	2.996	3.069	2.969	3.078	3.004	2.948	2.986	2.976 E3	3.34
6) 1,3,5-Trinit	7.154	7.605	8.020	7.705	8.000	7.841	7.687	7.799	7.726 E3	3.54
7) 1,3-Dinitrob	4.356	4.027	3.863	3.738	3.803	3.744	3.605	3.641	3.847 E3	6.35
8) 3,5-Dinitroa	7.792	7.872	7.270	6.897	7.145	6.936	6.778	6.887	7.197 E3	5.87
9) Nitrobenzene	2.760	3.013	3.079	3.027	3.111	3.066	3.011	3.010	3.010 E3	3.57
10) Nitroglyceri	1.752	1.423	1.225	1.195	1.214	1.237	1.212	1.248	1.313 E3	14.57
11) Tetryl	3.817	4.291	4.466	4.325	4.554	4.488	4.484	4.584	4.376 E3	5.67
12) 2,4,6-Trinit	4.025	4.190	4.233	4.260	4.614	4.623	4.621	4.699	4.408 E3	5.85
13) 2-Amino-4,6-	3.756	4.014	4.203	4.321	4.871	4.988	5.069	5.220	4.555 E3	12.03
14) 4-Amino-2,6-	2.718	3.113	3.614	3.887	4.484	4.679	4.784	4.925	4.026 E3	20.47

---- Linear regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 4885.04434 *A

15) 3,4-Dinitrot	2.354	2.708	3.117	3.205	3.622	3.823	3.951	4.081	3.358 E3	18.41

---- Linear regr., Force(0,0) ---- Coefficient = 0.9997
Response Ratio = 0.00000 + 4043.36639 *A

Initial Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2490-ICC2490
Lab FileID: PP391635.D

```
16) 2,4-Dinitrot 1.836 2.272 2.579 2.543 2.775 2.911 2.999 3.102 2.627 E3  15.95
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 3073.24269 *A

17) 2,6-Dinitrot 2.729 2.769 3.254 3.353 3.548 3.591 3.596 3.689 3.316 E3  11.38
18) o-Nitrotolue 2.645 2.388 2.651 2.541 2.716 2.859 2.950 2.957 2.713 E3   7.38
19) p-Nitrotolue 1.205 1.671 1.938 2.294 2.556 2.775 2.881 2.839 2.270 E3  27.04
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2841.90461 *A

20) m-Nitrotolue 2.950 3.356 3.427 3.694 3.974 3.913 3.890 3.854 3.632 E3   9.87
21) PETN         1.313 1.259 1.385 1.247 1.431 1.426 1.355 1.403 1.352 E3   5.34
------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          GPP2490_110421.M        Mon Nov 08 10:13:44 2021
```

8.7.12

8

Initial Calibration Verification

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GPP2490-ICV2490
Lab FileID: PP391638.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391638.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391638.D\dad1A.ch
Acq On : 04-Nov-2021, 18:41:38 Operator: jamesb
Sample : icv2490-1000 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	541.618	-14.7	106	0.00	1.01- 1.61
2	HMX	1000.000	911.518	8.8	103	0.01	1.14- 1.74
3	DNX	1000.000	859.956	14.0	102	0.01	1.38- 1.98
4	MNX	1166.000	1196.268	-2.6	102	0.02	1.96- 2.56
5	RDX	1000.000	974.231	2.6	102	0.03	2.47- 3.27
6	1,3,5-Trinitrobenzene	1000.000	965.540	3.4	101	0.04	4.26- 5.06
7	1,3-Dinitrobenzene	1000.000	968.564	3.1	102	0.05	5.44- 6.24
8	3,5-Dinitroaniline	1000.000	972.962	2.7	104	0.05	5.79- 6.59
9	Nitrobenzene	1000.000	952.643	4.7	102	0.06	7.01- 7.81
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	987.304	1.3	99	0.10	9.08- 9.88
12	2,4,6-Trinitrotoluene	1000.000	895.576	10.4	101	0.10	9.47-10.27
13	2-Amino-4,6-Dinitrotol	1000.000	950.014	5.0	104	0.11	9.80-10.60
14	4-Amino-2,6-Dinitrotol	1000.000	942.044	5.8	105	0.12	10.31-11.11
15 S	3,4-Dinitrotoluene	----------	NA	----------			
16	2,4-Dinitrotoluene	1000.000	968.512	3.1	101	0.12	11.43-12.23
17	2,6-Dinitrotoluene	1000.000	943.140	5.7	102	0.12	11.80-12.70
18	o-Nitrotoluene	1000.000	919.099	8.1	102	0.13	14.87-15.87
19	p-Nitrotoluene	1000.000	986.352	1.4	104	0.13	15.44-16.44
20	m-Nitrotoluene	1000.000	972.720	2.7	102	0.11	16.28-17.28
21	PETN	----------	NA	----------			

***** Signal #2 *****

1	TNX	472.000	530.888	-12.5	103	0.00	1.01- 1.61
2	HMX	1000.000	992.633	0.7	101	0.01	1.14- 1.74
3	DNX	1000.000	834.765	16.5#	101	0.01	1.38- 1.98
4	MNX	1166.000	1207.784	-3.6	102	0.02	1.96- 2.56
5	RDX	1000.000	966.278	3.4	102	0.03	2.47- 3.27
6	1,3,5-Trinitrobenzene	1000.000	965.892	3.4	101	0.04	4.26- 5.06
7	1,3-Dinitrobenzene	1000.000	905.624	9.4	101	0.05	5.44- 6.24
8	3,5-Dinitroaniline	1000.000	945.270	5.5	105	0.05	5.79- 6.59
9	Nitrobenzene	1000.000	959.896	4.0	102	0.06	7.01- 7.81

Initial Calibration Verification

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2490-ICV2490
Lab FileID: PP391638.D

10	Nitroglycerin	1000.000	942.310	5.8	110	0.09	8.47- 9.47
11	Tetryl	1000.000	1018.746	-1.9	102	0.10	9.08- 9.88
12	2,4,6-Trinitrotoluene	1000.000	960.741	3.9	104	0.10	9.46-10.26
13	2-Amino-4,6-Dinitrotol	1000.000	1148.418	-14.8	107	0.11	9.80-10.60
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1015.771	-1.6	110	0.12	10.31-11.11
15 S	3,4-Dinitrotoluene	----------NA----------					
		Amount	Calc.	%Drift			
16	2,4-Dinitrotoluene	1000.000	951.365	4.9	108	0.12	10.63-12.23
17	2,6-Dinitrotoluene	1000.000	1059.412	-5.9	106	0.12	10.97-12.70
18	o-Nitrotoluene	1000.000	1035.424	-3.5	102	0.12	13.06-15.87
		Amount	Calc.	%Drift			
19	p-Nitrotoluene	1000.000	935.600	6.4	105	0.12	13.40-16.45
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	990.229	1.0	100	0.11	16.28-17.28
21	PETN	1000.000	1008.332	-0.8	104	0.07	14.94-19.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391635.D GPP2490_110421.M Mon Nov 08 10:13:34 2021

8.7.13

8

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GPP2493-CC2490
Lab FileID: PP391672.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1A.ch
Acq On : 11-Nov-2021, 10:51:07 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : op88250,GPP2493,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	498.636	-5.6	100	0.00	1.01- 1.61
2	HMX	1000.000	1028.181	-2.8	97	0.00	1.14- 1.74
3	DNX	1000.000	902.015	9.8	91	0.00	1.38- 1.98
4	MNX	1166.000	1133.919	2.8	94	0.00	1.96- 2.56
5	RDX	1000.000	958.812	4.1	94	0.00	2.47- 3.27
6	1,3,5-Trinitrobenzene	1000.000	980.477	2.0	94	0.02	4.26- 5.06
7	1,3-Dinitrobenzene	1000.000	985.439	1.5	95	0.02	5.44- 6.24
8	3,5-Dinitroaniline	1000.000	955.635	4.4	94	0.01	5.79- 6.59
9	Nitrobenzene	1000.000	1016.303	-1.6	97	0.02	7.01- 7.81
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	948.383	5.2	91	0.04	9.08- 9.88
12	2,4,6-Trinitrotoluene	1000.000	962.554	3.7	93	0.04	9.47-10.27
13	2-Amino-4,6-Dinitrotol	1000.000	940.238	6.0	94	0.03	9.80-10.60
14	4-Amino-2,6-Dinitrotol	1000.000	909.547	9.0	94	0.03	10.31-11.11
15 S	3,4-Dinitrotoluene	1000.000	1087.968	-8.8	111	0.05	10.79-11.59
16	2,4-Dinitrotoluene	1000.000	973.007	2.7	94	0.04	11.43-12.23
17	2,6-Dinitrotoluene	1000.000	958.340	4.2	95	0.04	11.80-12.70
18	o-Nitrotoluene	1000.000	969.817	3.0	97	0.05	14.87-15.87
19	p-Nitrotoluene	1000.000	988.058	1.2	96	0.05	15.44-16.44
20	m-Nitrotoluene	1000.000	1013.968	-1.4	96	0.04	16.28-17.28
21	PETN	----------	NA	----------			

***** Signal #2 *****

1	TNX	472.000	501.514	-6.3	97	0.00	1.01- 1.61
2	HMX	1000.000	1027.042	-2.7	95	0.00	1.14- 1.74
3	DNX	1000.000	1011.213	-1.1	92	0.00	1.38- 1.98
4	MNX	1166.000	1135.353	2.6	94	0.00	1.96- 2.56
5	RDX	1000.000	972.209	2.8	94	0.00	2.47- 3.27
6	1,3,5-Trinitrobenzene	1000.000	987.845	1.2	94	0.02	4.26- 5.06
7	1,3-Dinitrobenzene	1000.000	985.687	1.4	94	0.02	5.44- 6.24
8	3,5-Dinitroaniline	1000.000	956.221	4.4	95	0.01	5.79- 6.59
9	Nitrobenzene	1000.000	962.593	3.7	97	0.02	7.01- 7.81

8.7.14

8

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2493-CC2490
Lab FileID: PP391672.D

			Amount	Calc.	%Drift			
10		Nitroglycerin	1000.000	928.097	7.2	92	0.04	8.47- 9.47
11		Tetryl	1000.000	973.036	2.7	92	0.04	9.08- 9.88
12		2,4,6-Trinitrotoluene	1000.000	1002.282	-0.2	93	0.04	9.46-10.26
13		2-Amino-4,6-Dinitrotol	1000.000	1036.543	-3.7	95	0.03	9.80-10.60
			Amount	Calc.	%Drift			
14		4-Amino-2,6-Dinitrotol	1000.000	948.461	5.2	94	0.03	10.31-11.11
15	S	3,4-Dinitrotoluene	1000.000	1095.515	-9.6	112	0.05	10.79-11.59
			Amount	Calc.	%Drift			
16		2,4-Dinitrotoluene	1000.000	988.891	1.1	95	0.04	10.63-12.23
17		2,6-Dinitrotoluene	1000.000	1020.012	-2.0	95	0.04	10.97-12.70
18		o-Nitrotoluene	1000.000	1005.616	-0.6	97	0.04	13.06-15.87
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	954.692	4.5	96	0.04	13.40-16.45
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	1075.975	-7.6	97	0.04	16.28-17.28
21		PETN	1000.000	974.524	2.5	93	0.03	14.94-19.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391635.D GPP2490_110421.M Fri Nov 12 11:31:13 2021

8.7.14

8

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GPP2493-CC2490
Lab FileID: PP391684.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : op88250,GPP2493,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	501.742	-6.3	100	0.01	1.01- 1.61
2	HMX	1000.000	1024.957	-2.5	97	0.01	1.14- 1.74
3	DNX	1000.000	898.488	10.2	90	0.01	1.38- 1.98
4	MNX	1166.000	1135.169	2.6	94	0.02	1.96- 2.56
5	RDX	1000.000	966.433	3.4	95	0.02	2.47- 3.27
6	1,3,5-Trinitrobenzene	1000.000	984.681	1.5	94	0.04	4.26- 5.06
7	1,3-Dinitrobenzene	1000.000	985.199	1.5	95	0.04	5.44- 6.24
8	3,5-Dinitroaniline	1000.000	952.800	4.7	94	0.03	5.79- 6.59
9	Nitrobenzene	1000.000	1012.348	-1.2	96	0.05	7.01- 7.81
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	965.047	3.5	93	0.08	9.08- 9.88
12	2,4,6-Trinitrotoluene	1000.000	972.912	2.7	94	0.09	9.47-10.27
13	2-Amino-4,6-Dinitrotol	1000.000	940.209	6.0	94	0.07	9.80-10.60
14	4-Amino-2,6-Dinitrotol	1000.000	916.367	8.4	95	0.08	10.31-11.11
15 S	3,4-Dinitrotoluene	1000.000	1092.830	-9.3	111	0.10	10.79-11.59
16	2,4-Dinitrotoluene	1000.000	976.951	2.3	95	0.10	11.43-12.23
17	2,6-Dinitrotoluene	1000.000	955.572	4.4	94	0.10	11.80-12.70
18	o-Nitrotoluene	1000.000	968.039	3.2	96	0.10	14.87-15.87
19	p-Nitrotoluene	1000.000	984.560	1.5	96	0.11	15.44-16.44
20	m-Nitrotoluene	1000.000	1009.477	-0.9	96	0.09	16.28-17.28
21	PETN	----------	NA	----------			

***** Signal #2 *****

1	TNX	472.000	514.244	-9.0	100	0.01	1.01- 1.61
2	HMX	1000.000	1018.853	-1.9	94	0.01	1.14- 1.74
3	DNX	1000.000	995.050	0.5	91	0.01	1.38- 1.98
4	MNX	1166.000	1131.441	3.0	94	0.02	1.96- 2.56
5	RDX	1000.000	970.513	2.9	94	0.02	2.47- 3.27
6	1,3,5-Trinitrobenzene	1000.000	991.014	0.9	94	0.04	4.26- 5.06
7	1,3-Dinitrobenzene	1000.000	988.153	1.2	94	0.04	5.44- 6.24
8	3,5-Dinitroaniline	1000.000	960.958	3.9	96	0.03	5.79- 6.59
9	Nitrobenzene	1000.000	959.169	4.1	97	0.05	7.01- 7.81

Continuing Calibration Summary

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2493-CC2490
Lab FileID: PP391684.D

			Amount	Calc.	%Drift			
10		Nitroglycerin	1000.000	911.981	8.8	90	0.07	8.47- 9.47
11		Tetryl	1000.000	972.436	2.8	92	0.08	9.08- 9.88
12		2,4,6-Trinitrotoluene	1000.000	1006.261	-0.6	94	0.09	9.46-10.26
13		2-Amino-4,6-Dinitrotol	1000.000	1025.885	-2.6	94	0.07	9.80-10.60
			Amount	Calc.	%Drift			
14		4-Amino-2,6-Dinitrotol	1000.000	943.681	5.6	94	0.08	10.31-11.11
15	S	3,4-Dinitrotoluene	1000.000	1086.624	-8.7	111	0.10	10.79-11.59
			Amount	Calc.	%Drift			
16		2,4-Dinitrotoluene	1000.000	990.816	0.9	95	0.10	10.63-12.23
17		2,6-Dinitrotoluene	1000.000	1015.433	-1.5	94	0.10	10.97-12.70
18		o-Nitrotoluene	1000.000	1005.102	-0.5	97	0.10	13.06-15.87
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	995.616	0.4	101	0.10	13.40-16.45
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	1069.872	-7.0	97	0.08	16.28-17.28
21		PETN	1000.000	968.811	3.1	92	0.06	14.94-19.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391635.D GPP2490_110421.M Fri Nov 12 11:31:14 2021

8.7.15

8

Run Sequence Report

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GBB2118	**Method:** SW846 8330A	**Instrument ID:** GCBB

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GBB2118-IC2118	BB070754.D	10/30/21 13:28	n/a	Initial cal 20
GBB2118-IC2118	BB070755.D	10/30/21 13:59	n/a	Initial cal 50
GBB2118-IC2118	BB070756.D	10/30/21 14:30	n/a	Initial cal 100
GBB2118-IC2118	BB070757.D	10/30/21 15:01	n/a	Initial cal 200
GBB2118-IC2118	BB070758.D	10/30/21 15:32	n/a	Initial cal 500
GBB2118-ICC2118	BB070759.D	10/30/21 16:04	n/a	Initial cal 1000
GBB2118-IC2118	BB070760.D	10/30/21 16:35	n/a	Initial cal 2500
GBB2118-IC2118	BB070761.D	10/30/21 17:06	n/a	Initial cal 5000
GBB2118-ICV2118	BB070763.D	11/01/21 11:17	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GBB2121 **Method:** SW846 8330A **Instrument ID:** GCBB

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GBB2121-CC2118	BB070807.D	11/04/21 10:52	n/a	Continuing cal 1000
OP88132-MB	BB070809.D	11/04/21 12:14	OP88132	Method Blank
ZZZZZZ	BB070810.D	11/04/21 12:45	OP88132	(unrelated sample)
ZZZZZZ	BB070811.D	11/04/21 13:16	OP88132	(unrelated sample)
OP88132-BS	BB070812.D	11/04/21 13:47	OP88132	Blank Spike
FA90260-1	BB070813.D	11/04/21 14:18	OP88132	54MW13
FA90260-2	BB070814.D	11/04/21 14:49	OP88132	54MW10
FA90260-3	BB070815.D	11/04/21 15:20	OP88132	54TW10
FA90260-4	BB070816.D	11/04/21 15:51	OP88132	54MW12
FA90260-5	BB070817.D	11/04/21 16:22	OP88132	54MW1
OP88132-MS	BB070818.D	11/04/21 16:53	OP88132	Matrix Spike
GBB2121-CC2118	BB070819.D	11/04/21 17:24	n/a	Continuing cal 1000
OP88132-MSD	BB070821.D	11/04/21 18:26	OP88132	Matrix Spike Duplicate
OP88144-MB	BB070822.D	11/04/21 18:57	OP88144	Method Blank
OP88144-BS	BB070823.D	11/04/21 19:28	OP88144	Blank Spike
ZZZZZZ	BB070824.D	11/04/21 19:59	OP88144	(unrelated sample)
ZZZZZZ	BB070825.D	11/04/21 20:30	OP88144	(unrelated sample)
ZZZZZZ	BB070826.D	11/04/21 21:01	OP88144	(unrelated sample)
ZZZZZZ	BB070827.D	11/04/21 21:32	OP88144	(unrelated sample)
ZZZZZZ	BB070828.D	11/04/21 22:03	OP88144	(unrelated sample)
ZZZZZZ	BB070829.D	11/04/21 22:34	OP88144	(unrelated sample)
ZZZZZZ	BB070830.D	11/04/21 23:05	OP88144	(unrelated sample)
GBB2121-CC2118	BB070831.D	11/04/21 23:36	n/a	Continuing cal 1000
ZZZZZZ	BB070833.D	11/05/21 00:38	OP88144	(unrelated sample)
FA90328-9	BB070834.D	11/05/21 01:09	OP88144	(used for QC only; not part of job FA90260)
ZZZZZZ	BB070835.D	11/05/21 01:40	OP88144	(unrelated sample)
ZZZZZZ	BB070836.D	11/05/21 02:11	OP88144	(unrelated sample)
ZZZZZZ	BB070837.D	11/05/21 02:42	OP88144	(unrelated sample)
ZZZZZZ	BB070838.D	11/05/21 03:13	OP88144	(unrelated sample)
ZZZZZZ	BB070839.D	11/05/21 03:44	OP88144	(unrelated sample)
ZZZZZZ	BB070840.D	11/05/21 04:15	OP88144	(unrelated sample)
ZZZZZZ	BB070841.D	11/05/21 04:46	OP88144	(unrelated sample)
ZZZZZZ	BB070842.D	11/05/21 05:17	OP88144	(unrelated sample)
ZZZZZZ	BB070843.D	11/05/21 05:48	OP88144	(unrelated sample)
GBB2121-CC2118	BB070844.D	11/05/21 06:19	n/a	Continuing cal 1000
OP88144-MS	BB070846.D	11/05/21 07:21	OP88144	Matrix Spike
OP88144-MSD	BB070847.D	11/05/21 07:52	OP88144	Matrix Spike Duplicate
GBB2121-ECC2118	BB070848.D	11/05/21 08:23	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG3059 **Method:** SW846 8330A **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG3059-IC3059	GG622644.D	10/31/21 11:04	n/a	Initial cal 20
GGG3059-IC3059	GG622645.D	10/31/21 11:36	n/a	Initial cal 50
GGG3059-IC3059	GG622646.D	10/31/21 12:07	n/a	Initial cal 100
GGG3059-IC3059	GG622647.D	10/31/21 12:38	n/a	Initial cal 200
GGG3059-IC3059	GG622648.D	10/31/21 13:10	n/a	Initial cal 500
GGG3059-ICC3059	GG622649.D	10/31/21 13:41	n/a	Initial cal 1000
GGG3059-IC3059	GG622650.D	10/31/21 14:13	n/a	Initial cal 2500
GGG3059-IC3059	GG622651.D	10/31/21 14:44	n/a	Initial cal 5000
GGG3059-ICV3059	GG622653.D	11/01/21 15:10	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG3062	**Method:** SW846 8330B	**Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG3062-CC3059	GG622714.D	11/04/21 14:56	n/a	Continuing cal 1000
OP88132-MB	GG622716.D	11/04/21 15:59	OP88132	Method Blank
ZZZZZZ	GG622717.D	11/04/21 16:30	OP88132	(unrelated sample)
GGG3062-ECC3059	GG622721.D	11/04/21 18:36	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG3063 **Method:** SW846 8330A **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG3063-CC3059	GG622723.D	11/05/21 14:56	n/a	Continuing cal 1000
FA90260-1	GG622725.D	11/05/21 15:58	OP88132	54MW13
FA90260-2	GG622726.D	11/05/21 16:30	OP88132	54MW10
FA90260-3	GG622727.D	11/05/21 17:01	OP88132	54TW10
FA90260-4	GG622728.D	11/05/21 17:33	OP88132	54MW12
OP88144-MB	GG622729.D	11/05/21 18:04	OP88144	Method Blank
GGG3063-CC3059	GG622735.D	11/05/21 21:13	n/a	Continuing cal 1000
ZZZZZZ	GG622737.D	11/05/21 22:15	OP88144	(unrelated sample)
ZZZZZZ	GG622738.D	11/05/21 22:47	OP88144	(unrelated sample)
ZZZZZZ	GG622741.D	11/06/21 00:21	OP88144	(unrelated sample)
ZZZZZZ	GG622742.D	11/06/21 00:53	OP88144	(unrelated sample)
ZZZZZZ	GG622743.D	11/06/21 01:24	OP88144	(unrelated sample)
ZZZZZZ	GG622744.D	11/06/21 01:55	OP88144	(unrelated sample)
ZZZZZZ	GG622745.D	11/06/21 02:27	OP88144	(unrelated sample)
ZZZZZZ	GG622746.D	11/06/21 02:58	OP88144	(unrelated sample)
GGG3063-ECC3059	GG622747.D	11/06/21 03:30	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2490 **Method:** SW846 8330B **Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2490-IC2490	PP391630.D	11/04/21 14:33	n/a	Initial cal 20
GPP2490-IC2490	PP391631.D	11/04/21 15:04	n/a	Initial cal 50
GPP2490-IC2490	PP391632.D	11/04/21 15:35	n/a	Initial cal 100
GPP2490-IC2490	PP391633.D	11/04/21 16:06	n/a	Initial cal 200
GPP2490-IC2490	PP391634.D	11/04/21 16:37	n/a	Initial cal 500
GPP2490-ICC2490	PP391635.D	11/04/21 17:08	n/a	Initial cal 1000
GPP2490-IC2490	PP391636.D	11/04/21 17:39	n/a	Initial cal 2500
GPP2490-IC2490	PP391637.D	11/04/21 18:10	n/a	Initial cal 5000
GPP2490-ICV2490	PP391638.D	11/04/21 18:41	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA90260
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2493 **Method:** SW846 8330A **Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2493-CC2490	PP391672.D	11/11/21 10:51	n/a	Continuing cal 1000
OP88250-MB	PP391674.D	11/11/21 11:53	OP88250	Method Blank
OP88250-BS	PP391675.D	11/11/21 12:24	OP88250	Blank Spike
FA90260-3	PP391676.D	11/11/21 12:55	OP88250	54TW10
ZZZZZZ	PP391677.D	11/11/21 13:26	OP88250	(unrelated sample)
ZZZZZZ	PP391678.D	11/11/21 13:57	OP88250	(unrelated sample)
ZZZZZZ	PP391679.D	11/11/21 14:28	OP88250	(unrelated sample)
ZZZZZZ	PP391680.D	11/11/21 14:59	OP88250	(unrelated sample)
ZZZZZZ	PP391681.D	11/11/21 15:30	OP88250	(unrelated sample)
FA90552-1	PP391682.D	11/11/21 16:01	OP88250	(used for QC only; not part of job FA90260)
ZZZZZZ	PP391683.D	11/11/21 16:32	OP88250	(unrelated sample)
GPP2493-CC2490	PP391684.D	11/11/21 17:03	n/a	Continuing cal 1000
ZZZZZZ	PP391686.D	11/11/21 18:05	OP88250	(unrelated sample)
ZZZZZZ	PP391687.D	11/11/21 18:36	OP88250	(unrelated sample)
ZZZZZZ	PP391688.D	11/11/21 19:07	OP88250	(unrelated sample)
ZZZZZZ	PP391689.D	11/11/21 19:38	OP88250	(unrelated sample)
OP88250-MS	PP391694.D	11/11/21 22:13	OP88250	Matrix Spike
OP88250-MSD	PP391695.D	11/11/21 22:44	OP88250	Matrix Spike Duplicate
GPP2493-CC2490	PP391696.D	11/11/21 23:15	n/a	Continuing cal 1000
GPP2493-ECC2490	PP391708.D	11/12/21 05:27	n/a	Ending cal 1000

GC/LC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 16:39

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : op88132,GBB2121,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 05 09:30:21 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.95	10.95	1129990	1931028	626.175	577.485
	Spiked Amount 500.000	Range 70 - 136		Recovery =		125.23%	115.50%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.45	1.45	579592	1736278	400.616m	435.543m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.86	2.85	102465	135386	59.105	49.871
6)	1,3,5-Trinitrobe	4.63	4.63	8337691	13298336	2279.321m	2340.223m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	6.12	6.12	199824	382105	54.446m	59.605m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.70	9.70	4006221	4750884	1202.449m	1260.516m
13)	2-Amino-4,6-Dini	9.91f	9.94	747454	929109	234.205m	189.120m
14)	4-Amino-2,6-Dini	10.46	10.46	304939	562724	133.871	120.093
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D.

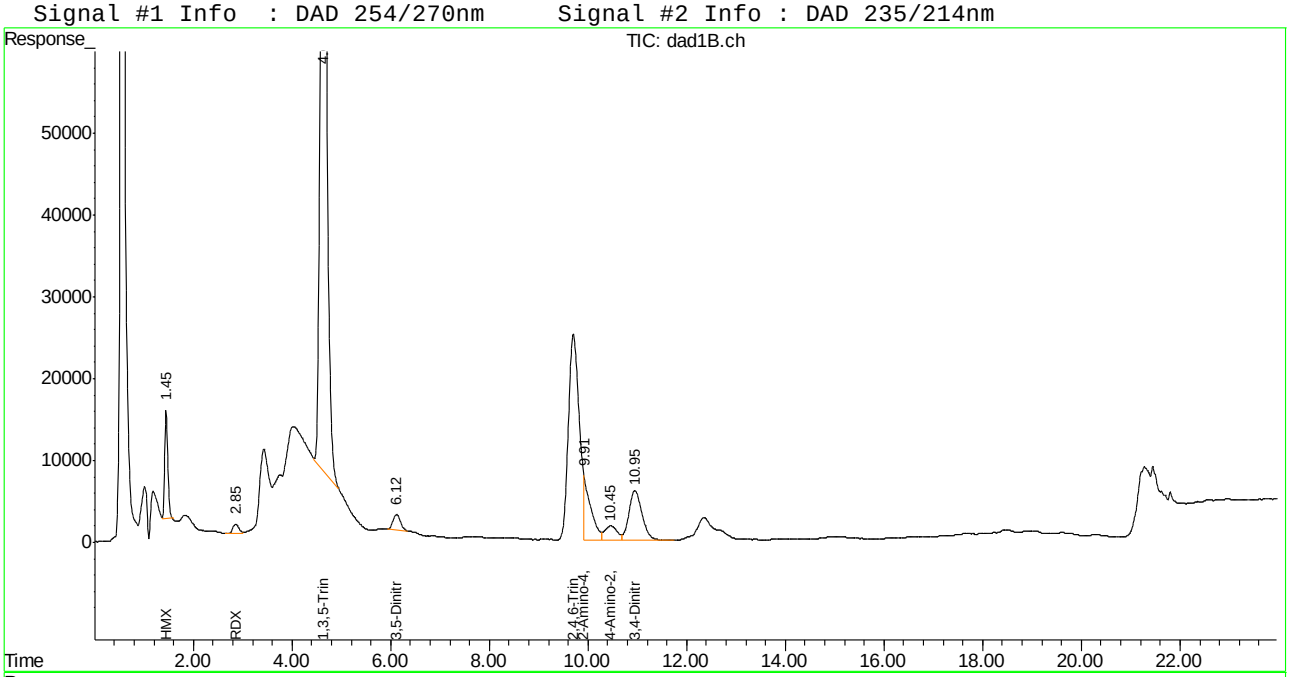
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070813.D BBB2118_103021.M Sun Nov 07 10:07:59 2021 Page 1

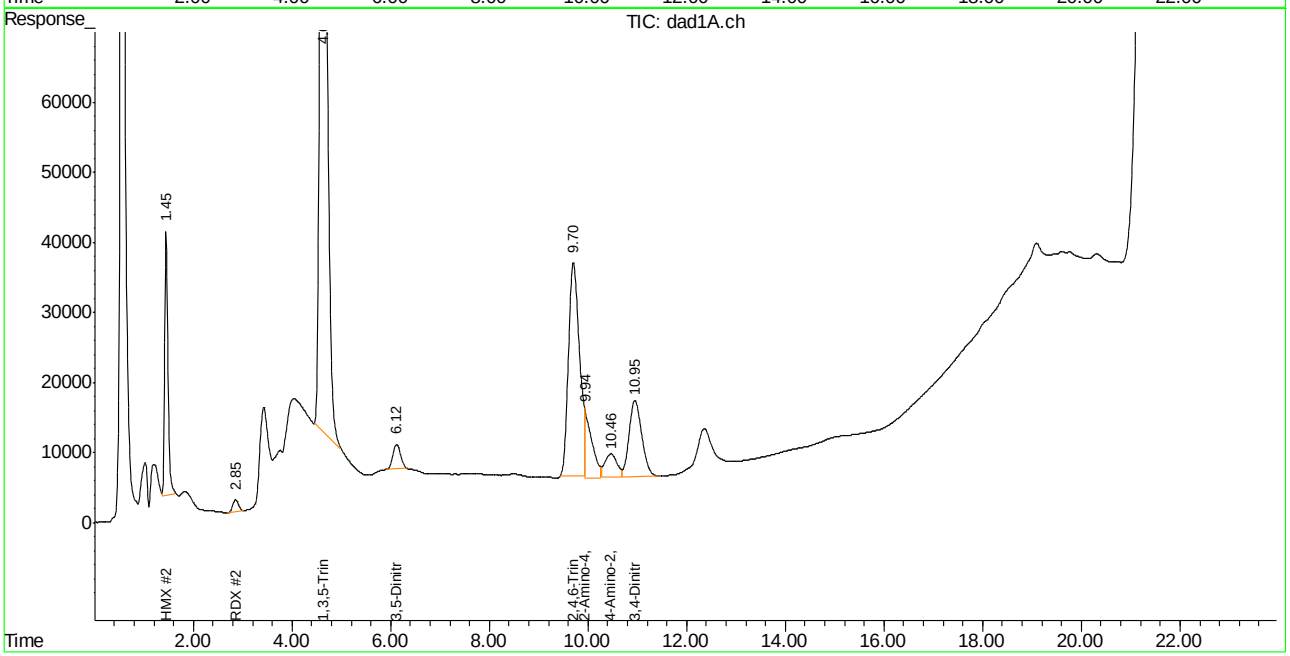
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : op88132,GBB2121,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 7 10:07 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





BB070813.D BBB2118_103021.M Sun Nov 07 10:07:59 2021 Page 2

Manual Integration Approval Summary

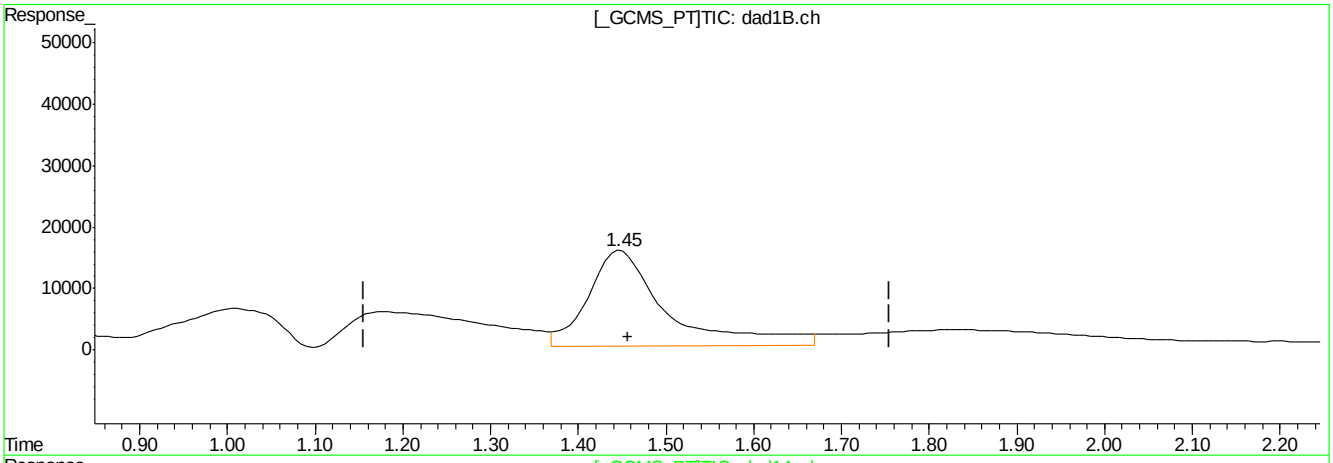
Sample Number: FA90260-1
Lab FileID: BB070813.D
Injection Time: 11/04/21 14:18
Method: SW846 8330B
Analyst approved: 11/05/21 15:02 James Boone
Supervisor approved: 11/08/21 16:39 Naresh Jiawan

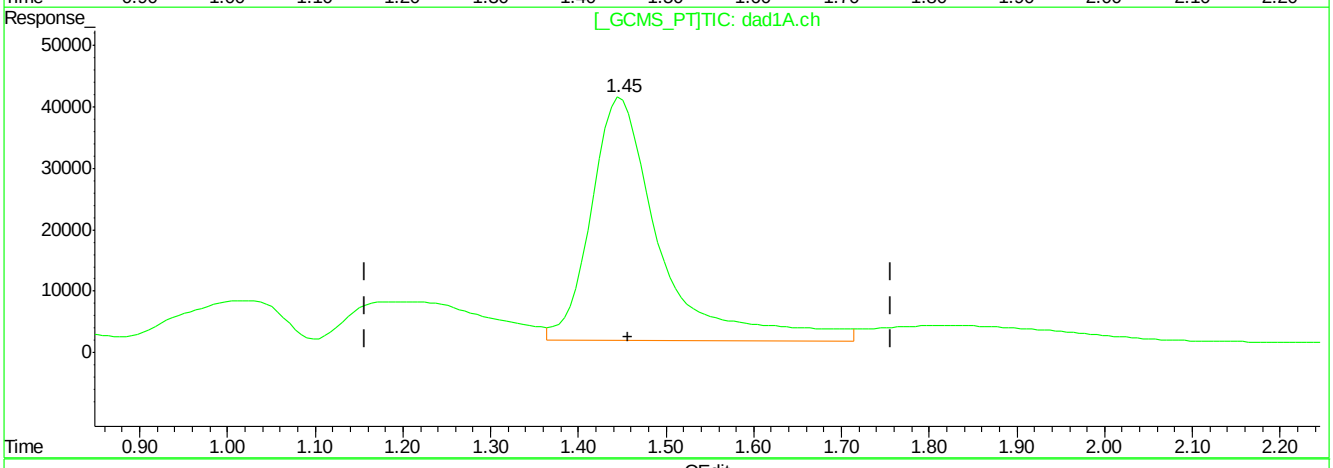
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.45	Poor instrument integration
HMX	2691-41-0	2	1.45	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.63	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.63	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.12	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.12	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.70	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	9.70	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.91	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	9.94	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.35	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.35	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.45min 659.036ppb

response 953462

(2) HMX #2

1.45min 539.173ppb

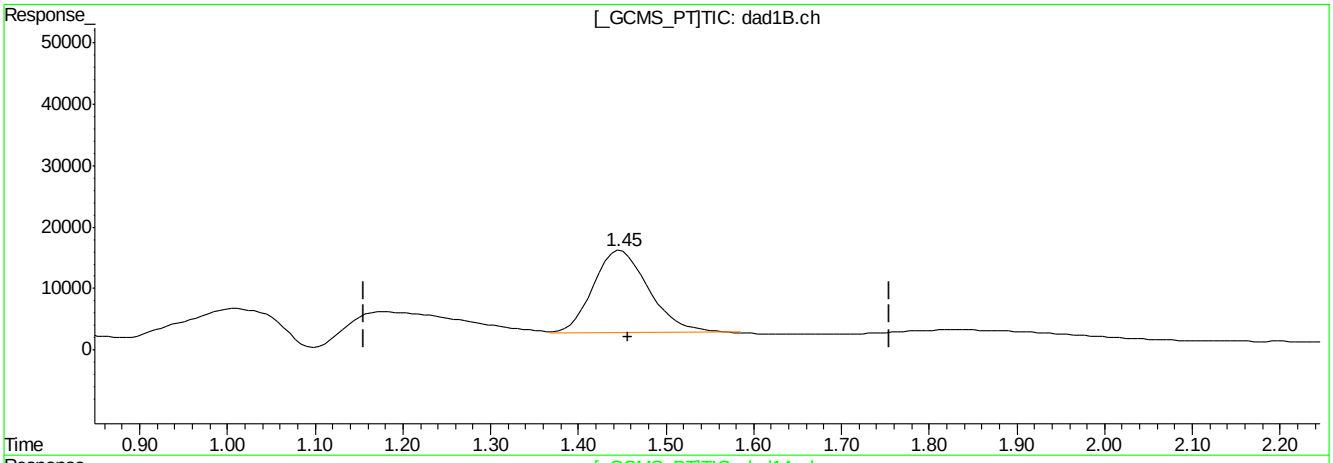
response 2149396

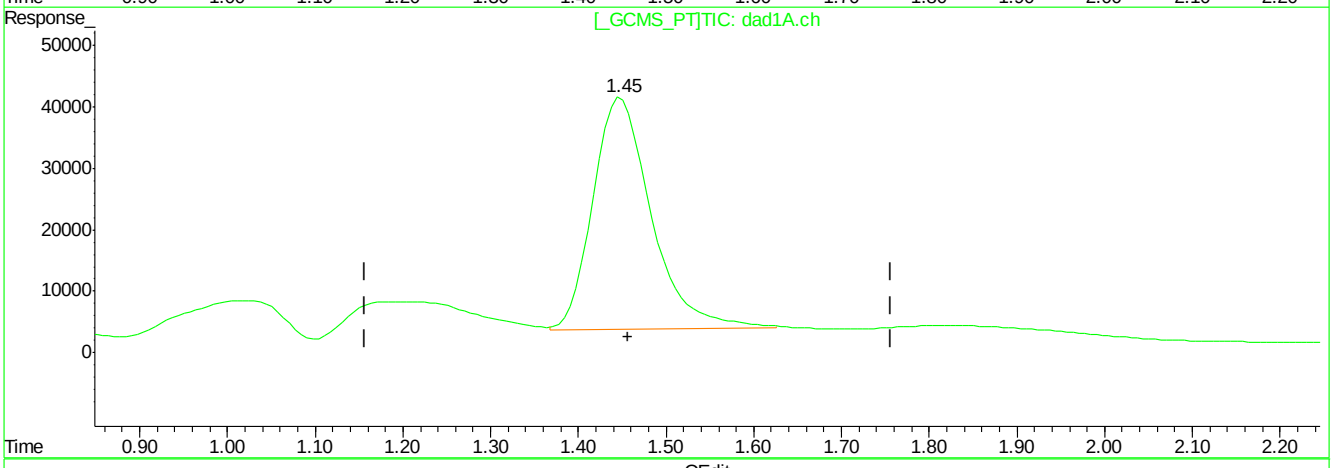
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:45:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.45min 400.616ppb m

response 579592

(2) HMX #2

1.45min 435.543ppb m

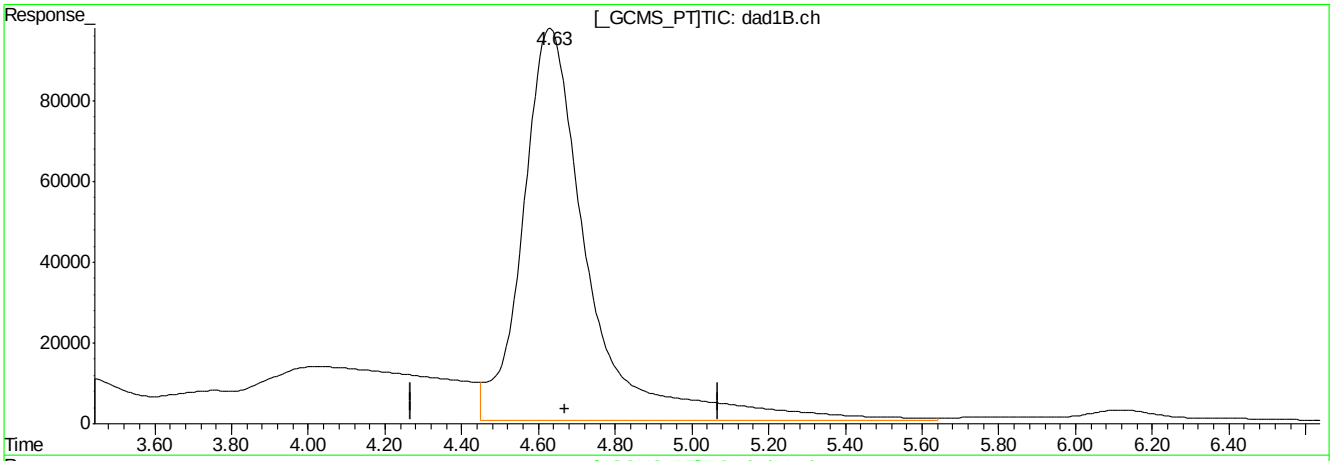
response 1736278

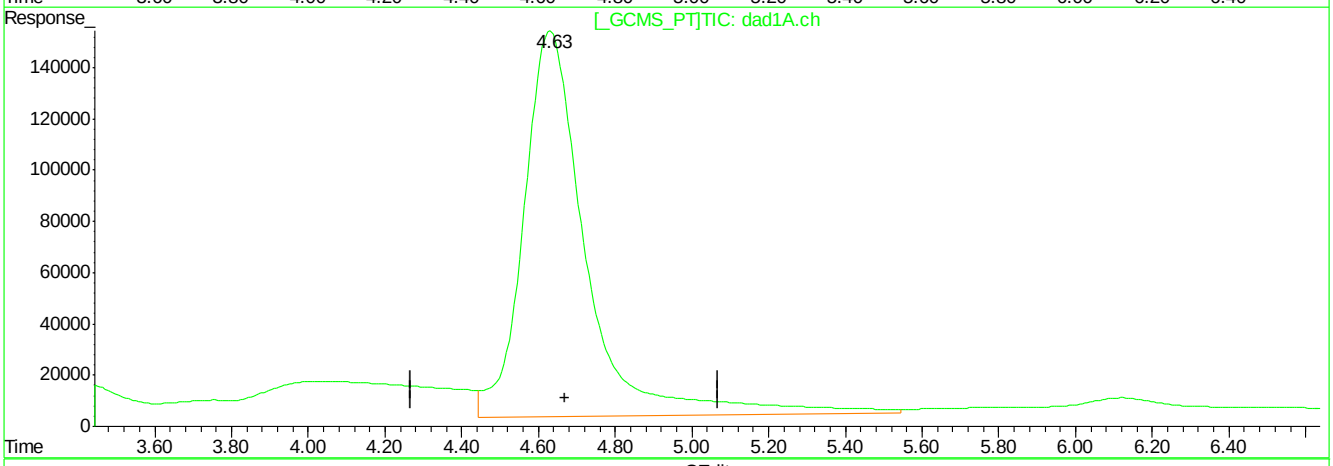
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:45:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.63min 3155.461ppb

response 11542583

(6) 1,3,5-Trinitrobenzene #2

4.63min 3022.698ppb

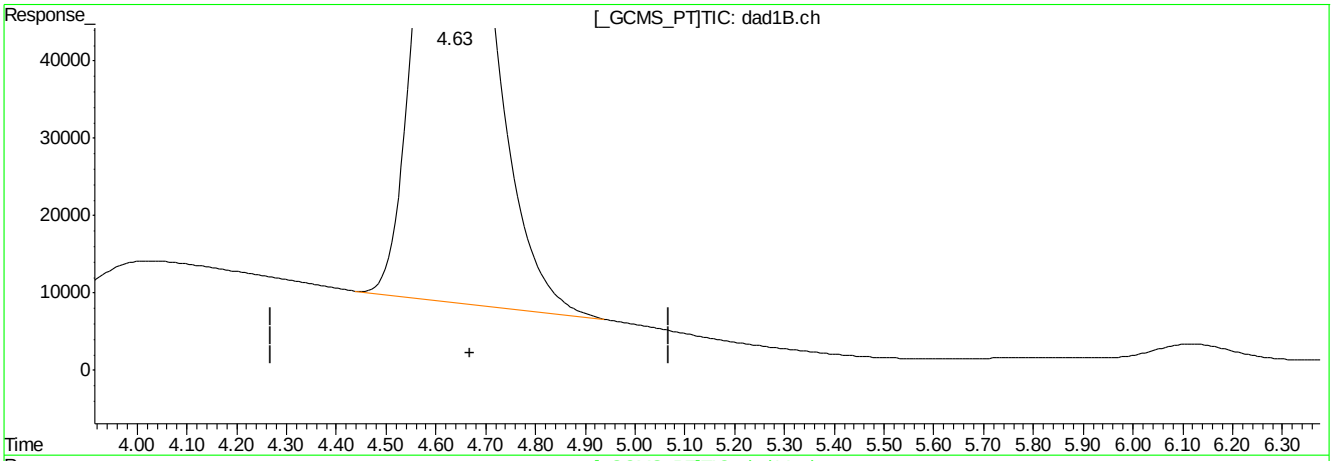
response 17176504

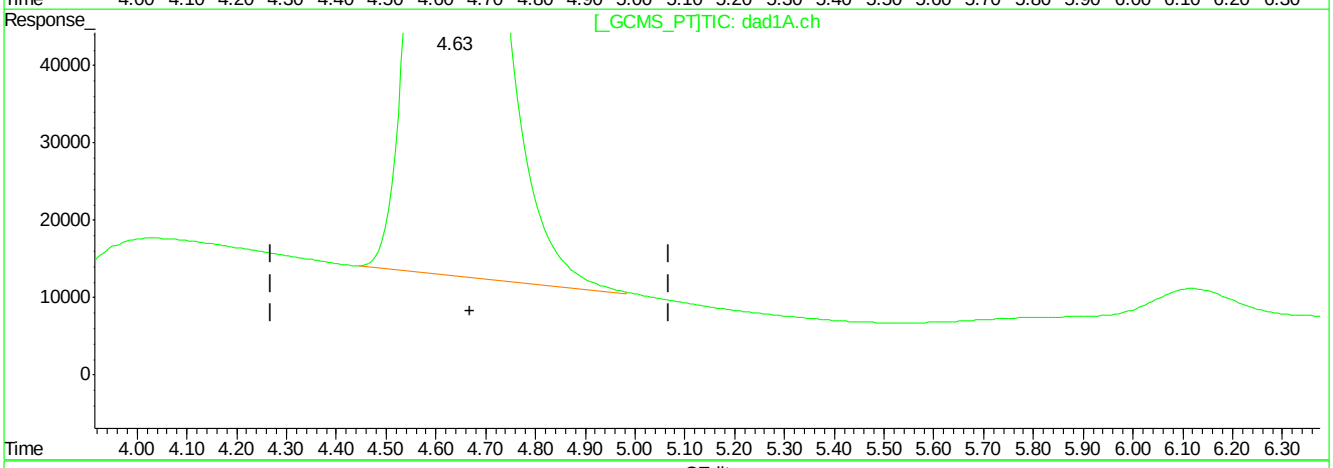
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:45:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.63min 2279.321ppb m

response 8337691

(6) 1,3,5-Trinitrobenzene #2

4.63min 2340.223ppb m

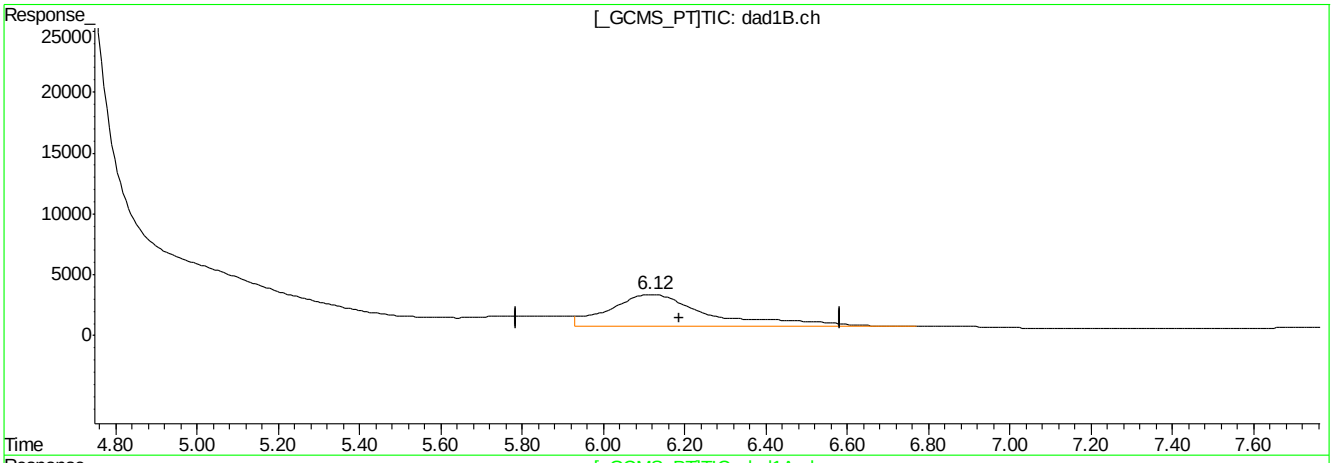
response 13298336

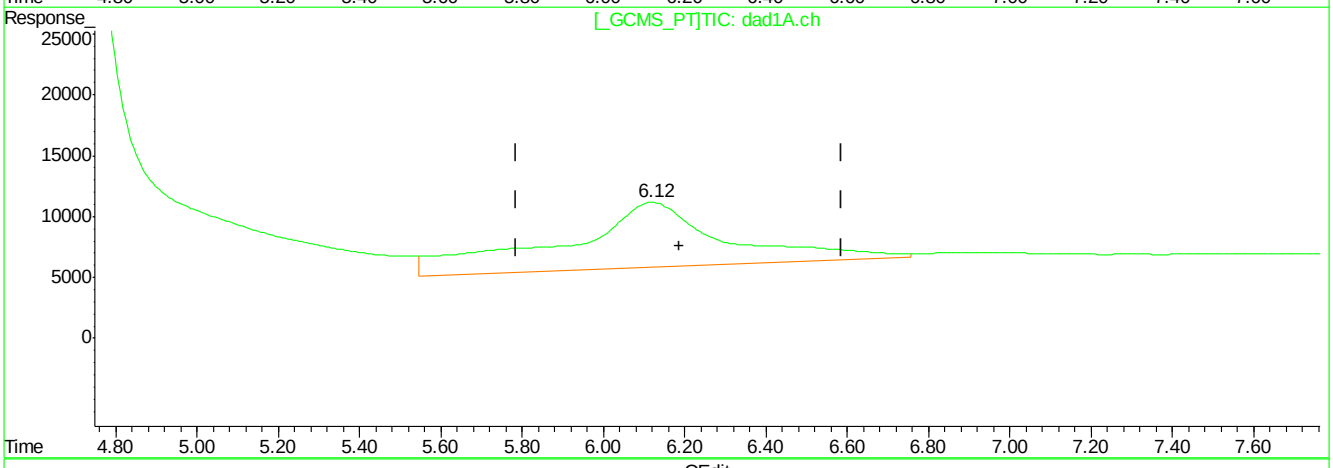
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:45:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.12min 121.801ppb

response 447030

(8) 3,5-Dinitroaniline #2

6.12min 234.105ppb

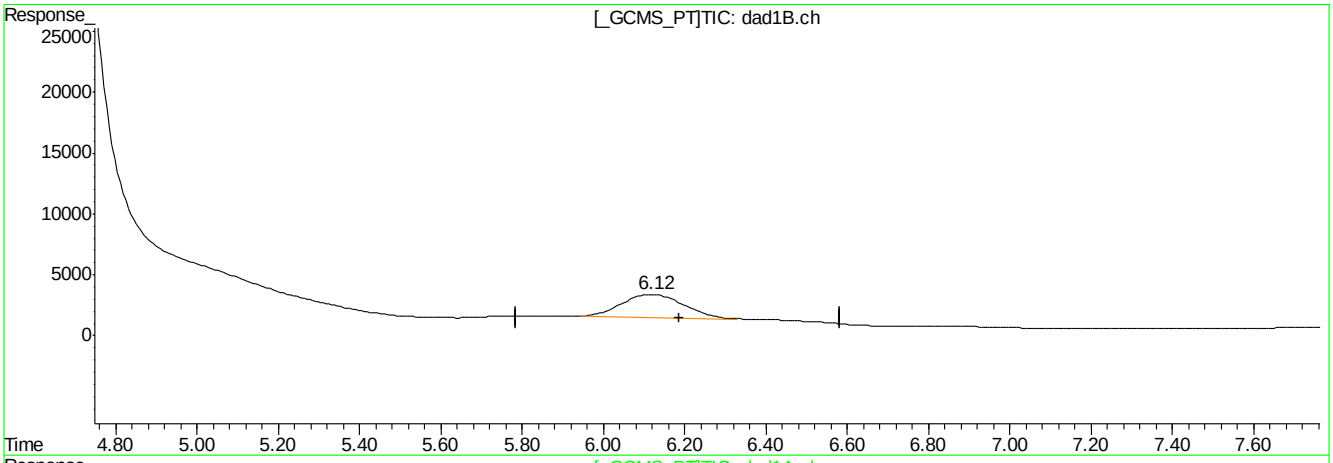
response 1500748

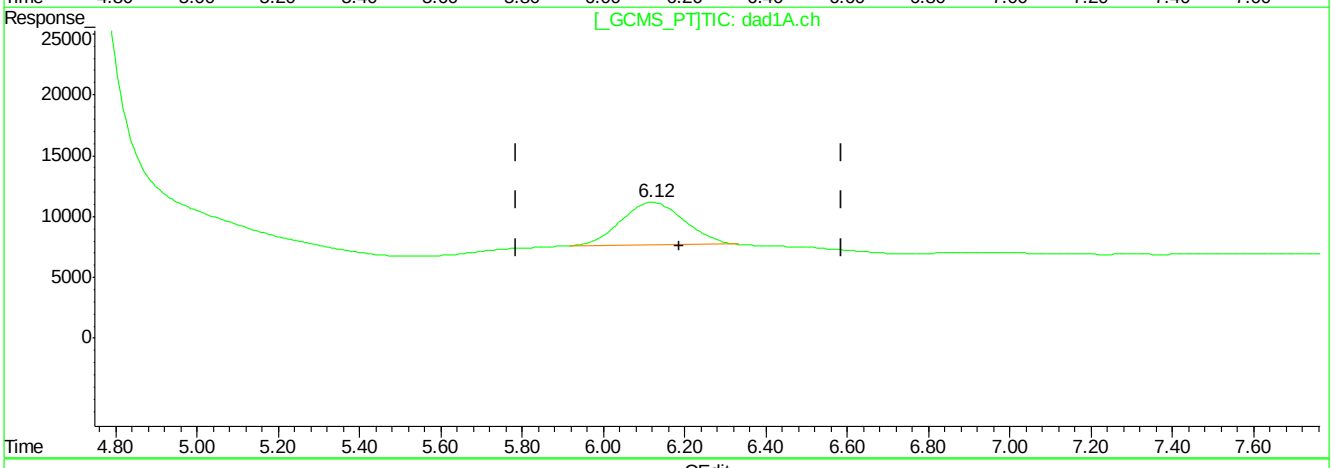
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:45:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.12min 54.446ppb m

response 199824

(8) 3,5-Dinitroaniline #2

6.12min 59.605ppb m

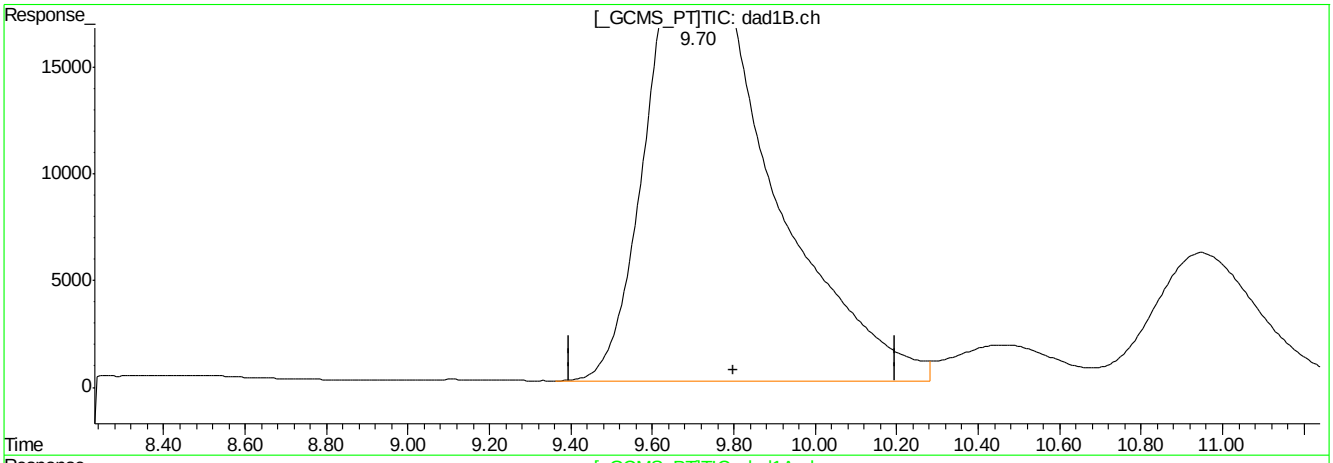
response 382105

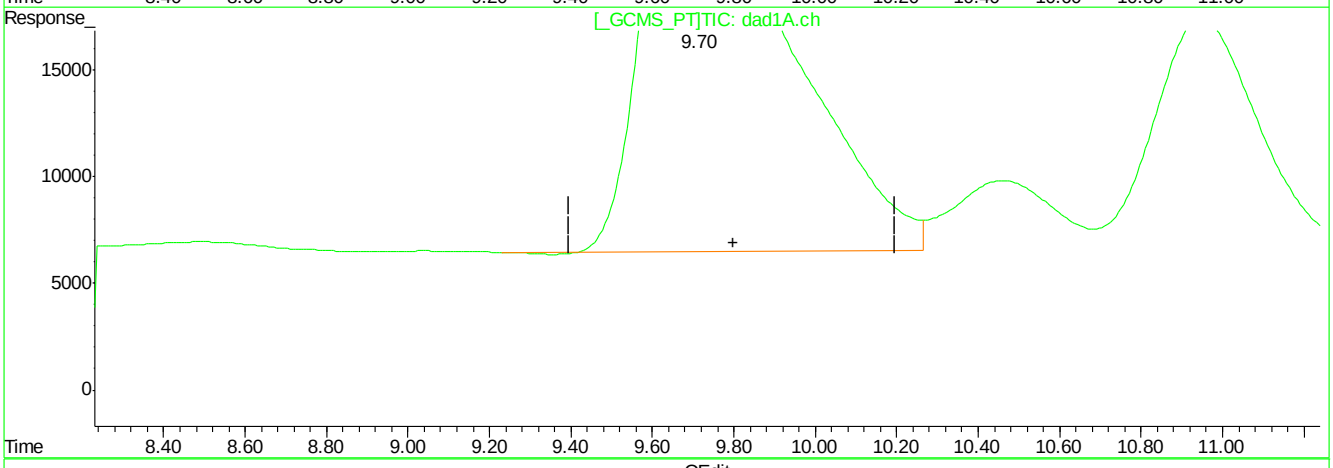
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:46:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.70min 1386.004ppb

response 4617775

(12) 2,4,6-Trinitrotoluene #2

9.70min 1533.226ppb

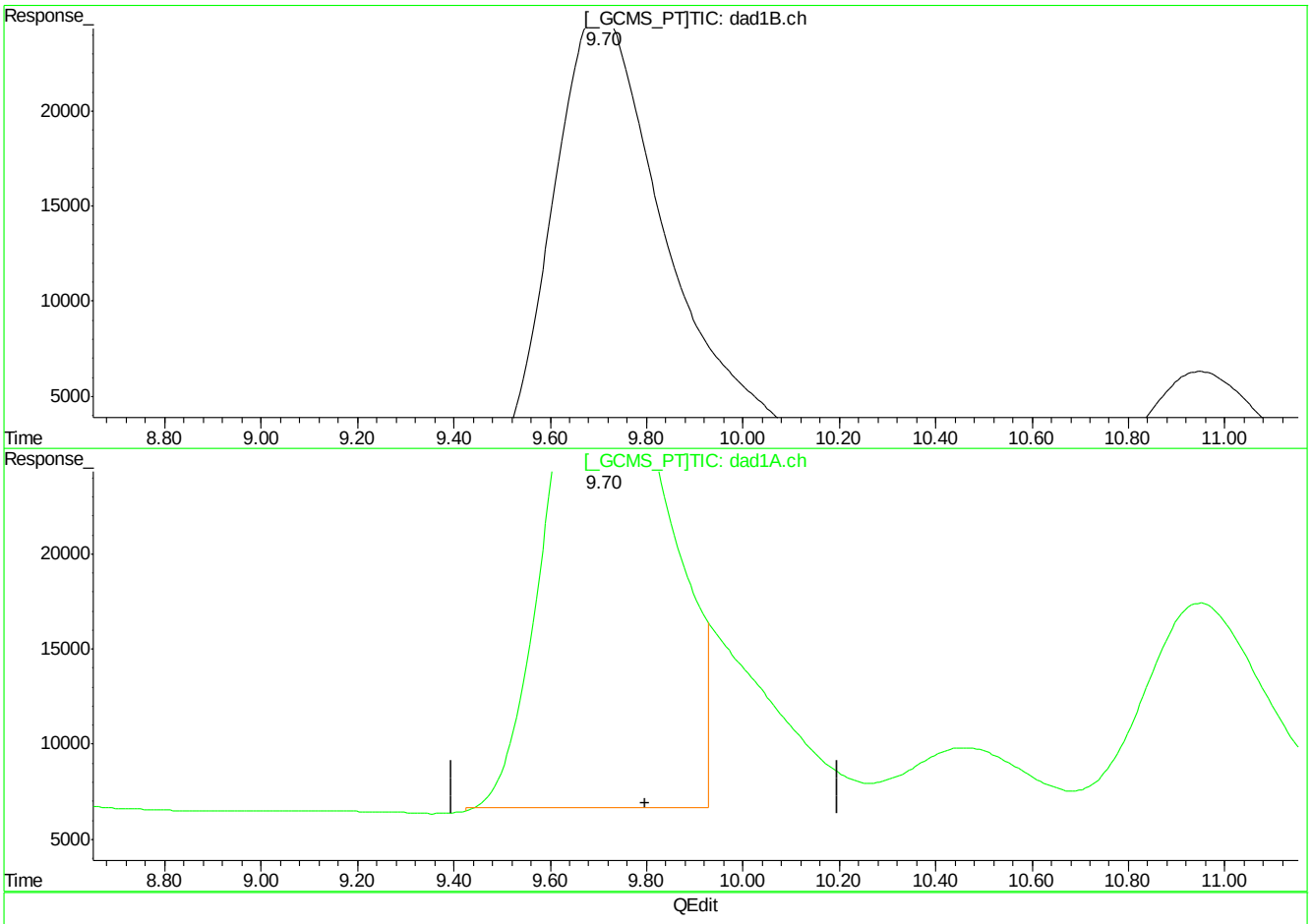
response 5778728

(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:46:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

9.70min 1202.449ppb m

response 4006221

(12) 2,4,6-Trinitrotoluene #2

9.70min 1260.516ppb m

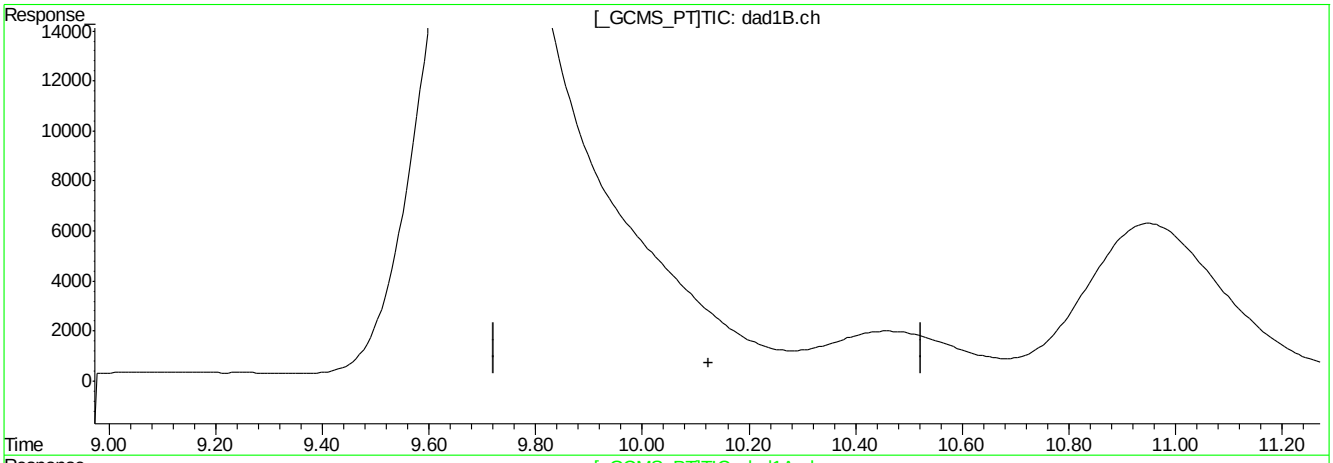
response 4750884

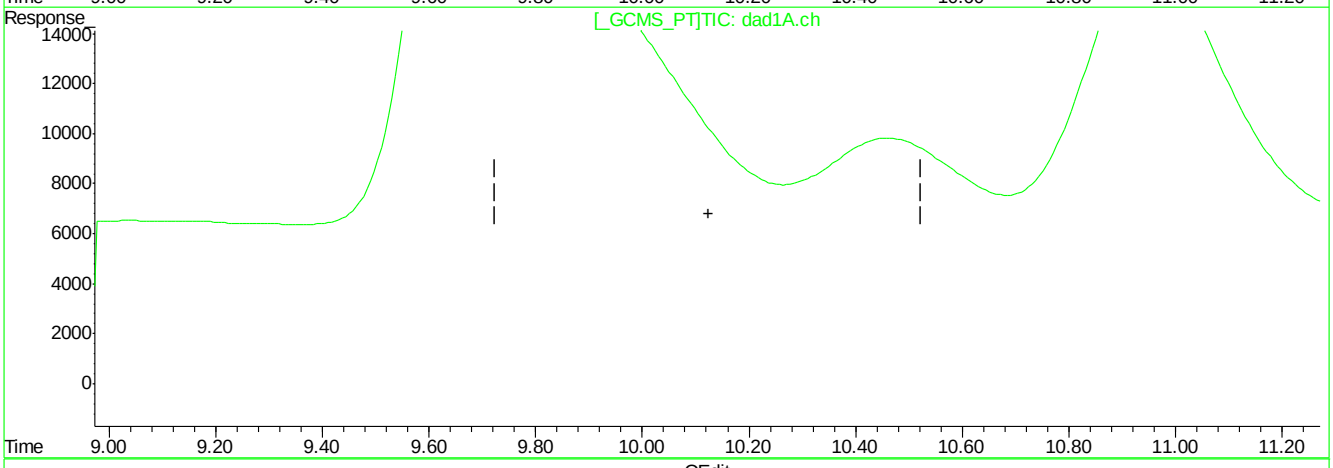
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:46:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

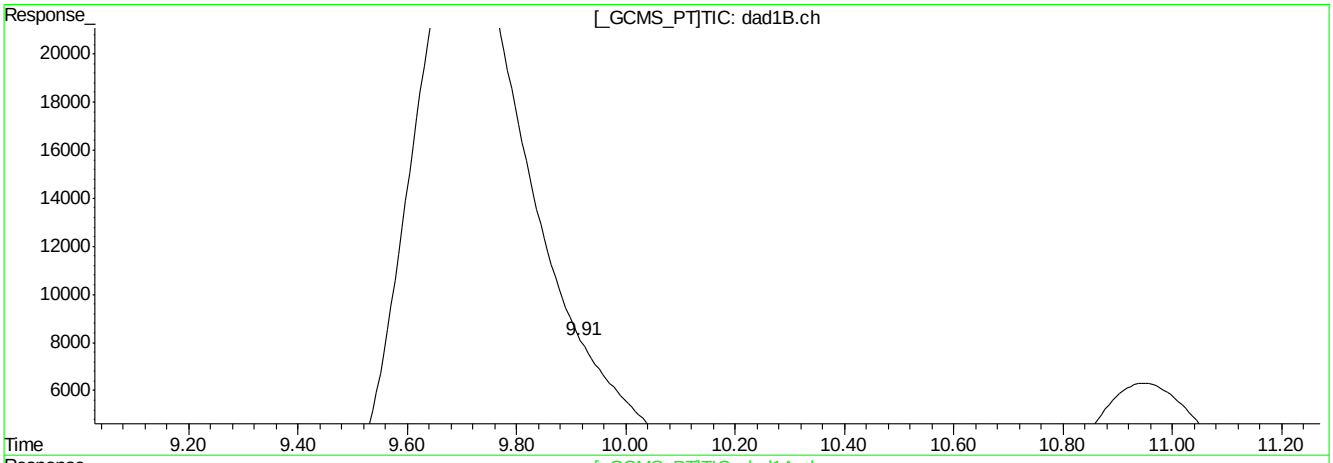
response 0

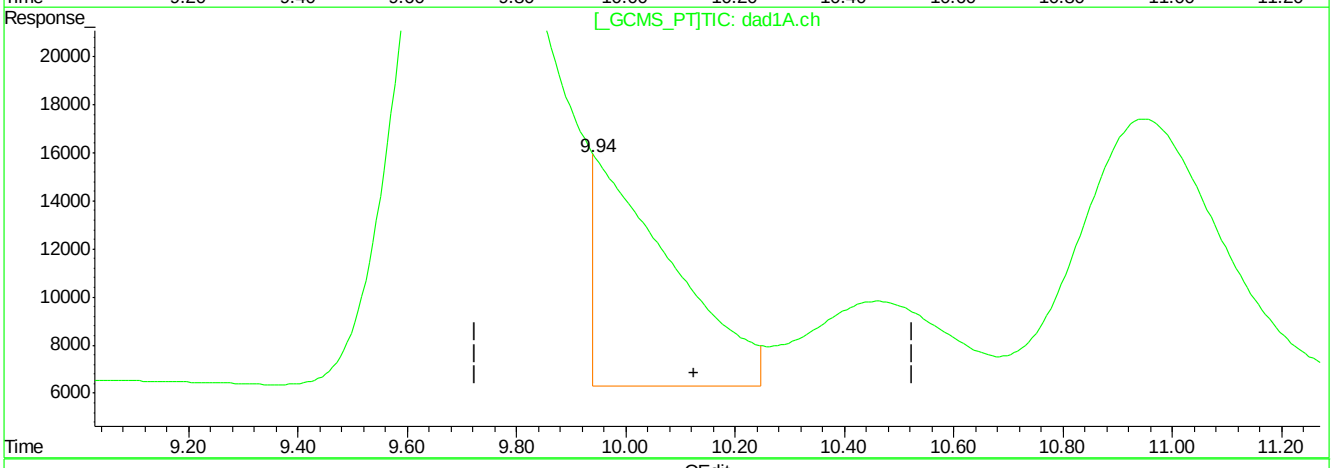
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:46:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

9.91min 234.205ppb m

response 747454

(13) 2-Amino-4,6-Dinitrotoluene #2

9.94min 189.120ppb m

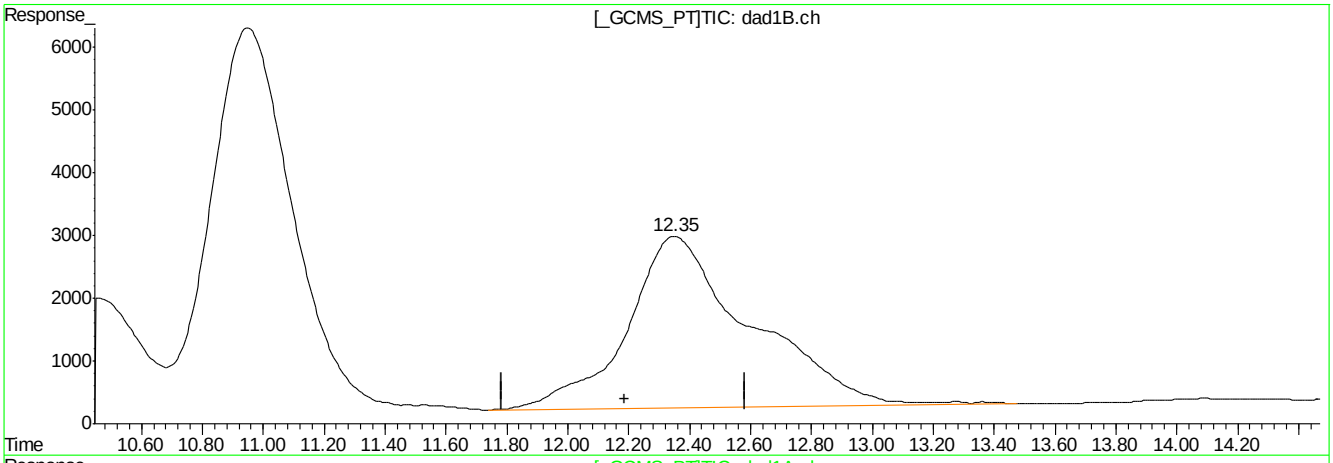
response 929109

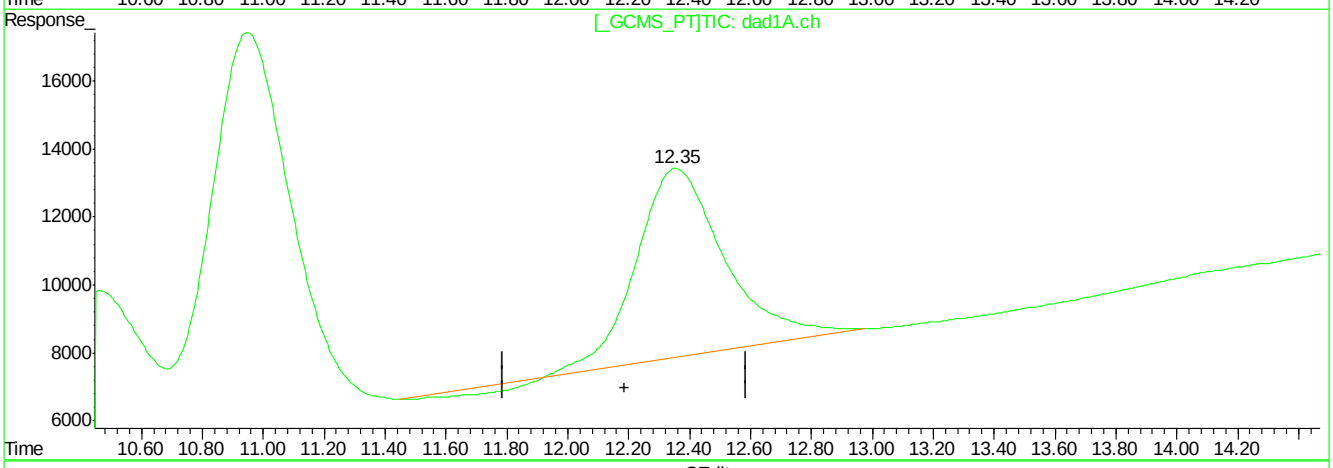
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:46:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.35min 303.339ppb

response 775884

(17) 2,6-Dinitrotoluene #2

12.36min 348.517ppb

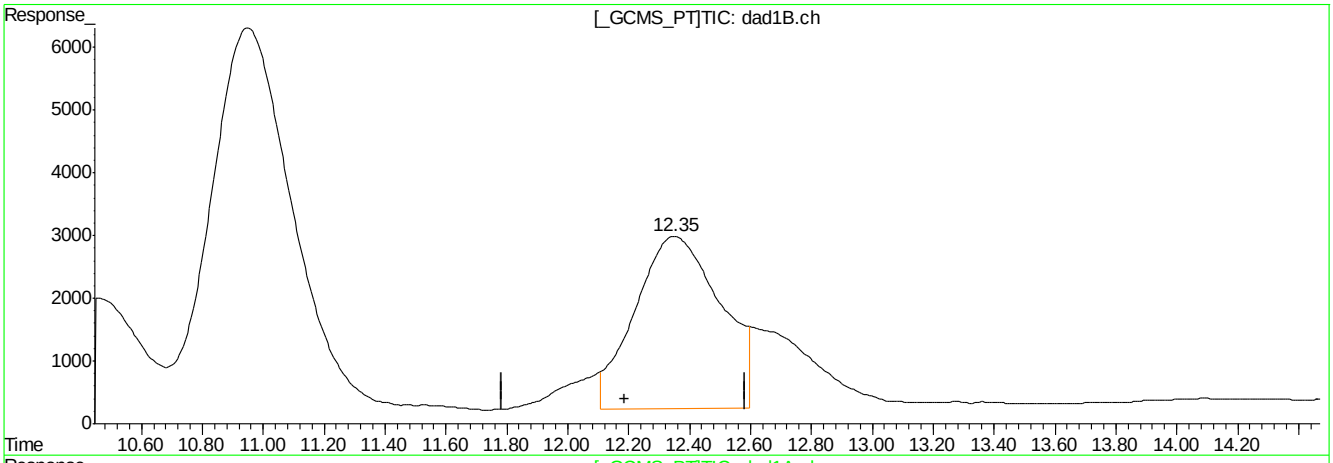
response 1087228

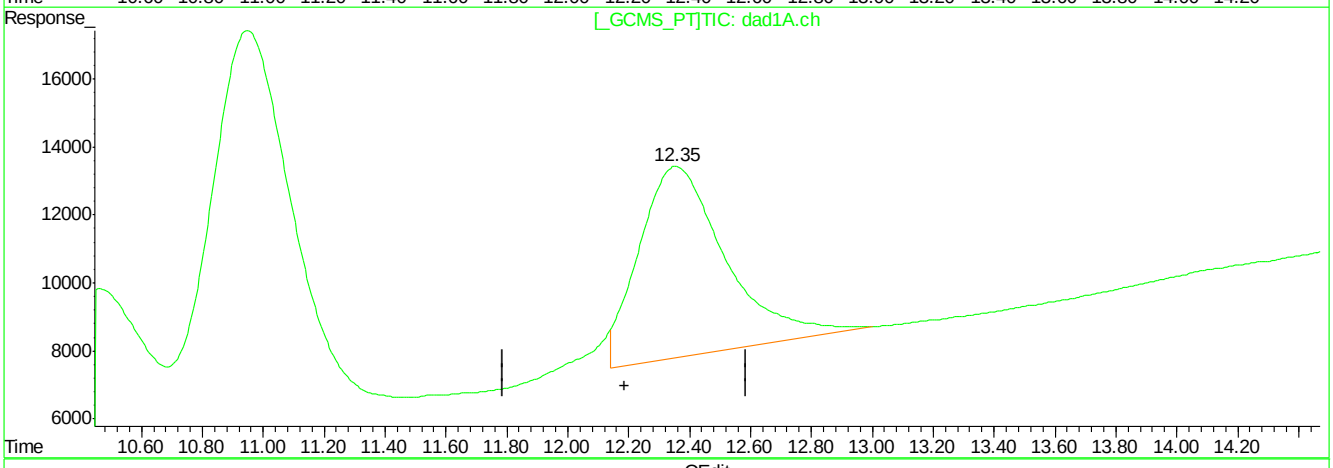
(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:46:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070813.D\dad1A.ch
Acq On : 04-Nov-2021, 14:18:08 Operator: jamesb
Sample : FA90260-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.35min 208.599ppb m

response 533558

(17) 2,6-Dinitrotoluene #2

12.35min 356.309ppb m

response 1111538

(+) = Expected Retention Time
BB070813.D BBB2118_103021.M Fri Nov 05 12:47:11 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 16:39

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : op88132,GGG3063,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 07 09:58:26 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.76	13.76	2890519	5375695	703.360	644.675m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		140.67%#	128.94%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.24	5.24	1570189	1570189	537.419	537.419
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.42	7.42	19184431	19325541	2302.758m	2319.696m
6)	RDX	7.67	7.68	418128	369263	105.765m	93.405m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.45	11.45	9176668	12158711	1144.599m	1115.274m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.43	15.43	2271425	3920229	260.942	278.555
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.12	17.13	830203	1495631	175.802	180.648
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	18.94	18.94	1683274	2758455	219.276	254.475m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

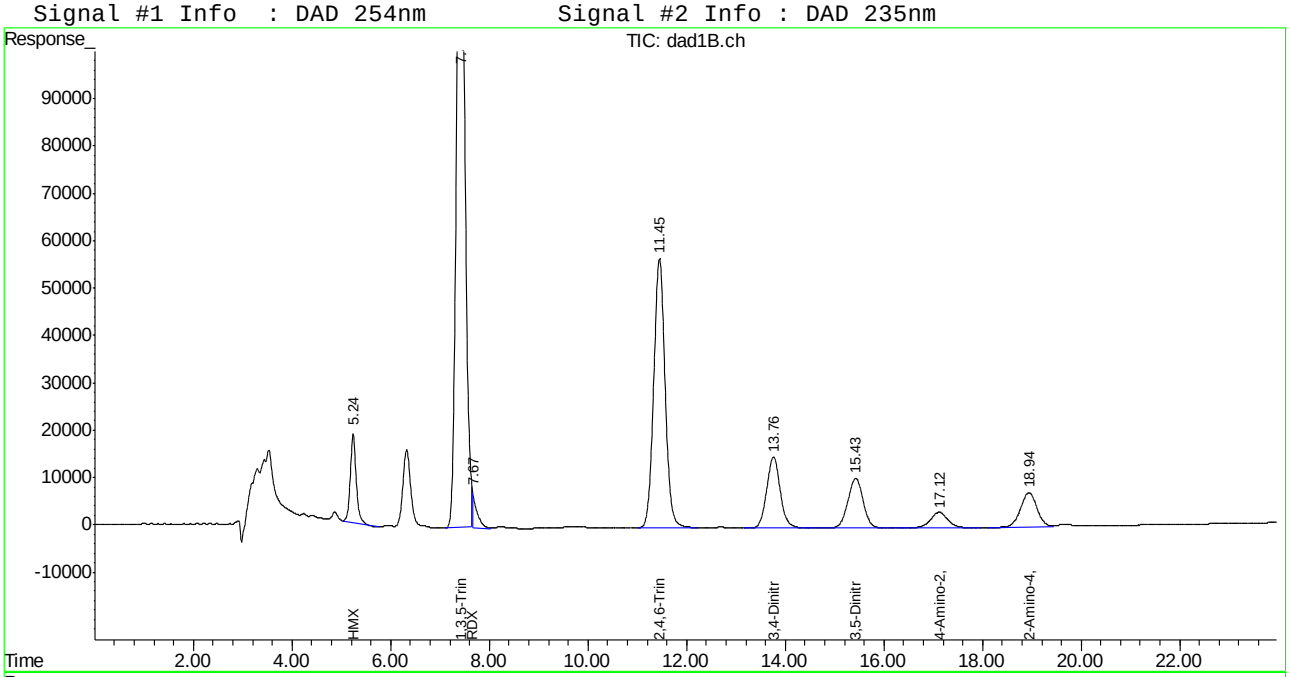
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622725.D GGG3059_103121.M Mon Nov 08 14:51:31 2021 Page 1

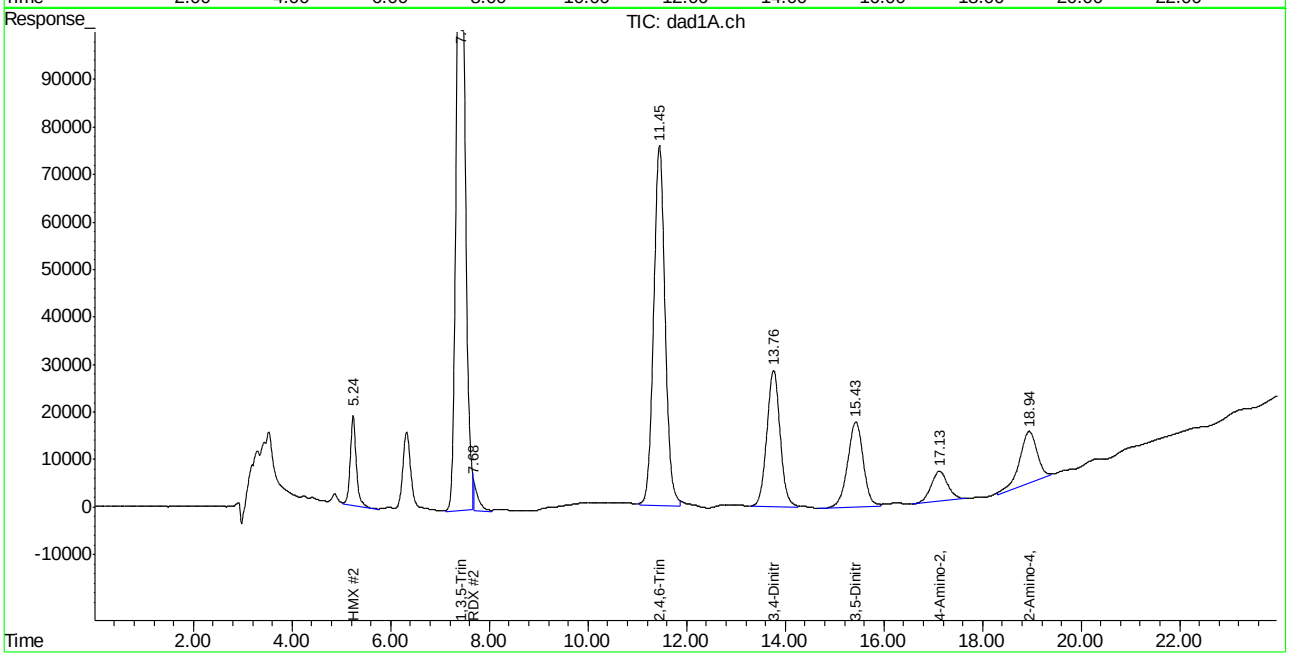
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : op88132,GGG3063,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 8 14:51 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

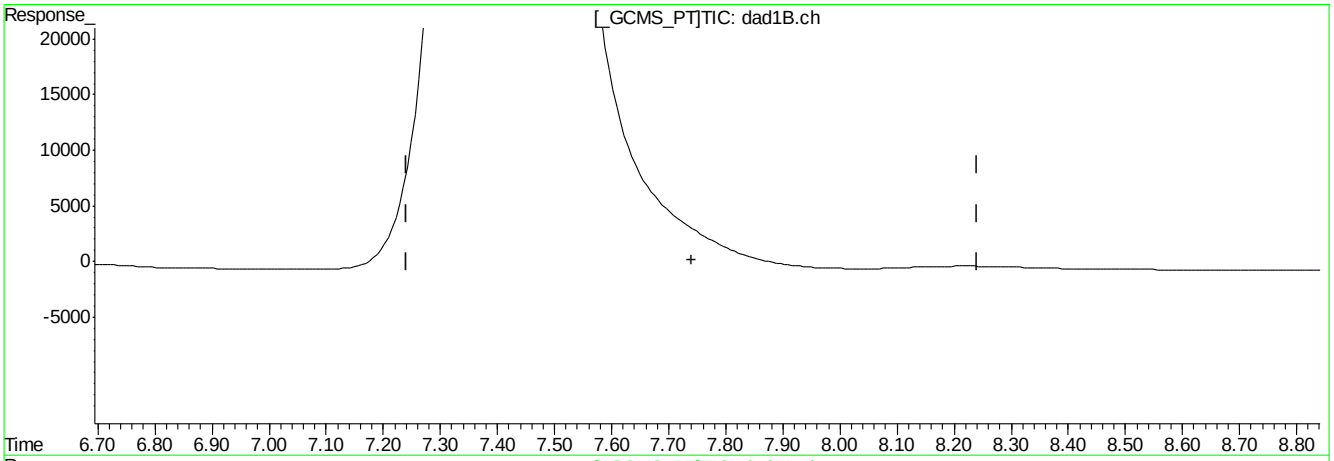
Sample Number: FA90260-1
Lab FileID: GG622725.D
Injection Time: 11/05/21 15:58
Method: SW846 8330B
Analyst approved: 11/08/21 14:53 James Boone
Supervisor approved: 11/08/21 16:39 Naresh Jiawan

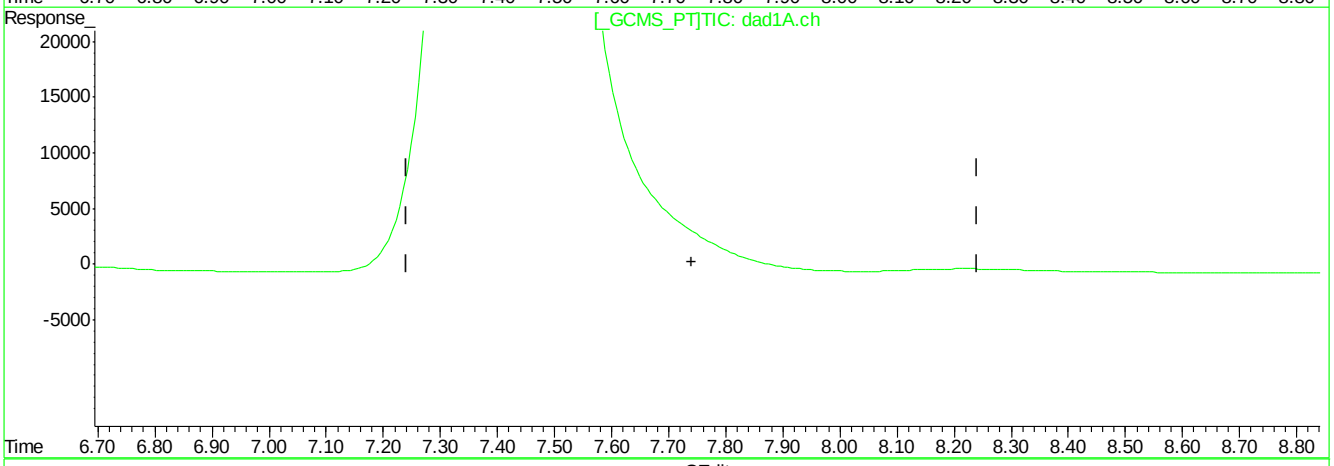
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	7.42	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.42	Poor instrument integration
RDX	121-82-4	1	7.67	Poor instrument integration
RDX	121-82-4	2	7.68	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	11.45	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.45	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	13.76	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	18.94	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb

response 0

(6) RDX #2

0.00min 0.000ppb

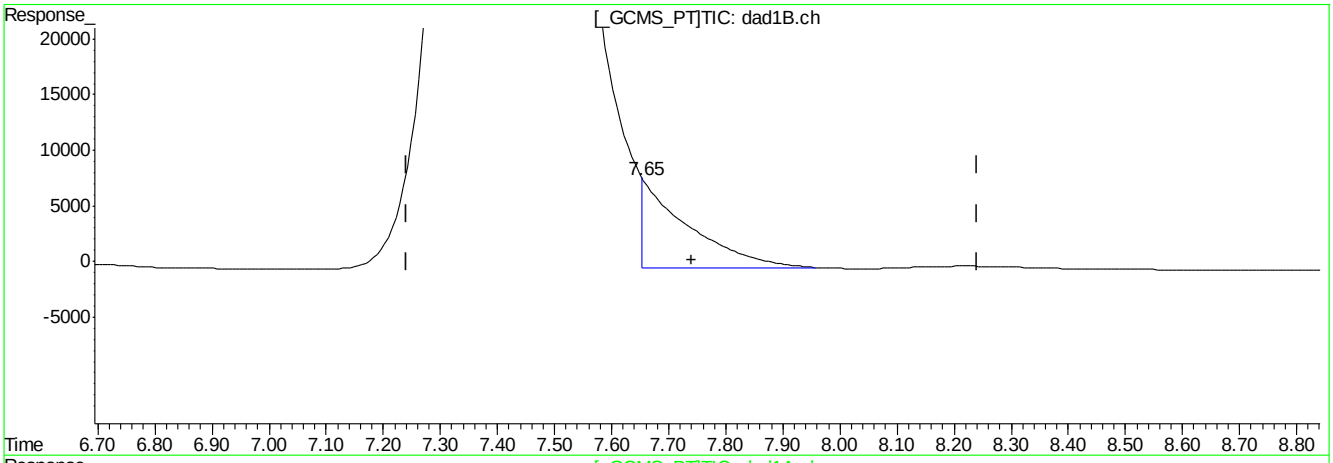
response 0

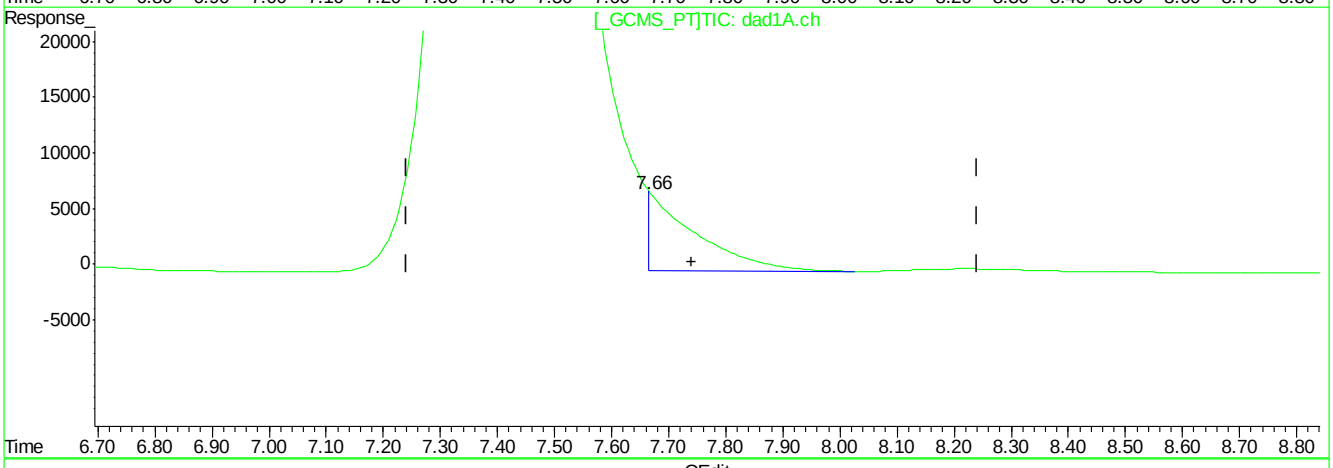
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:07:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.65min 113.371ppb m

response 448197

(6) RDX #2

7.66min 103.214ppb m

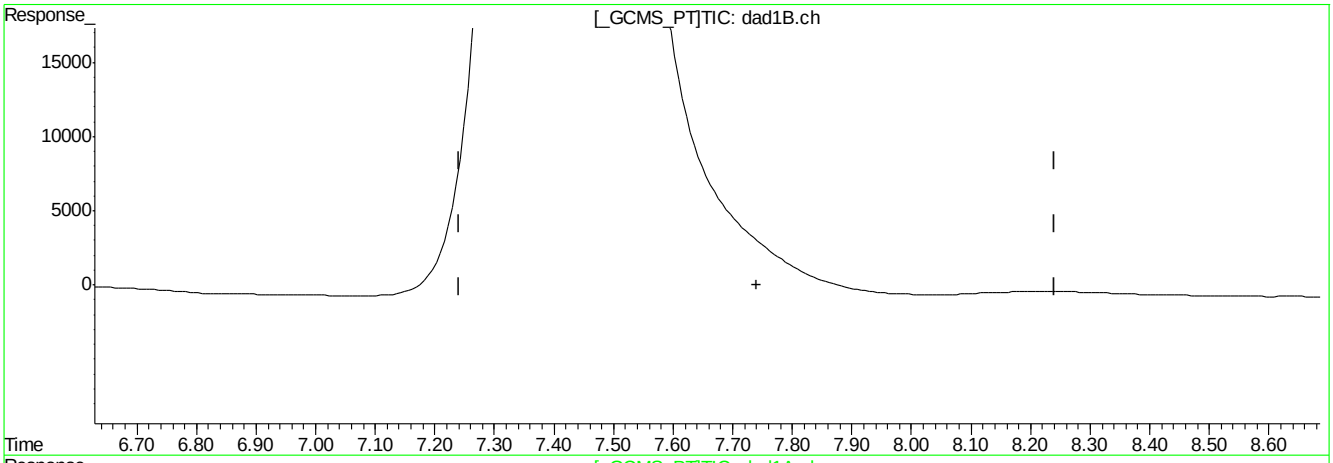
response 408042

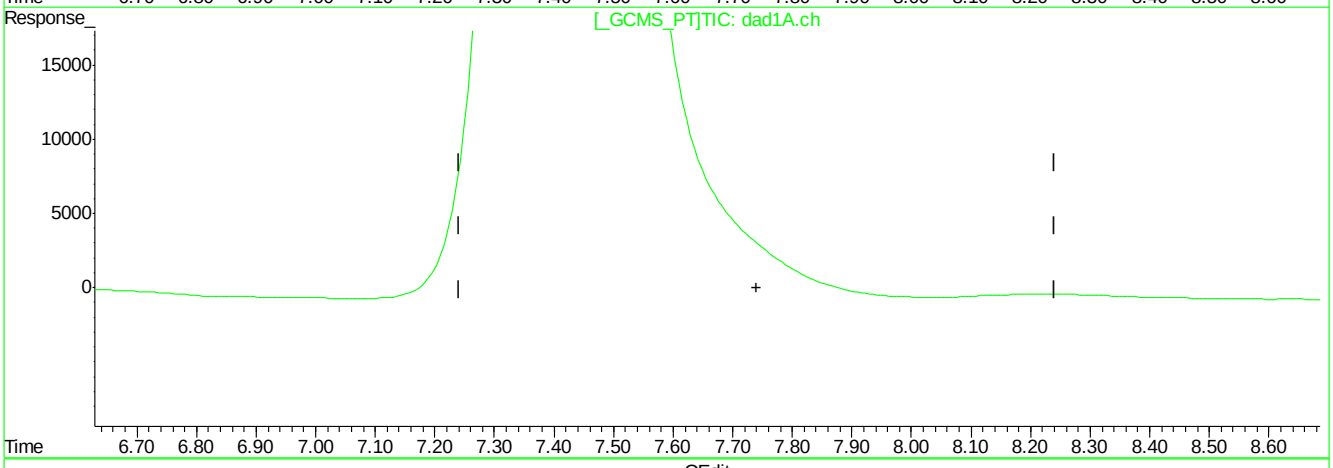
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:07:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb d

response 0

(6) RDX #2

0.00min 0.000ppb d

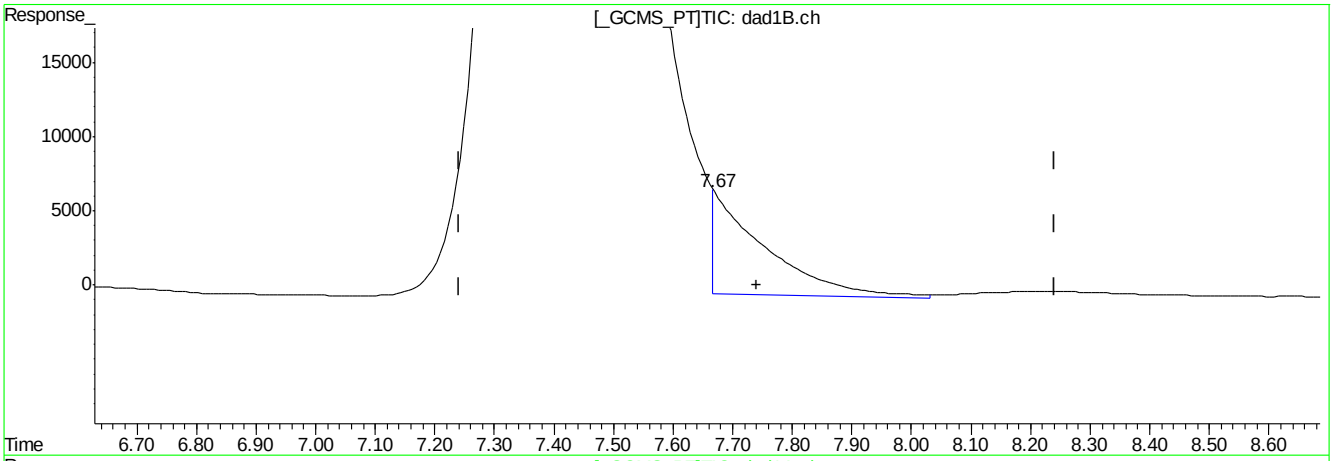
response 0

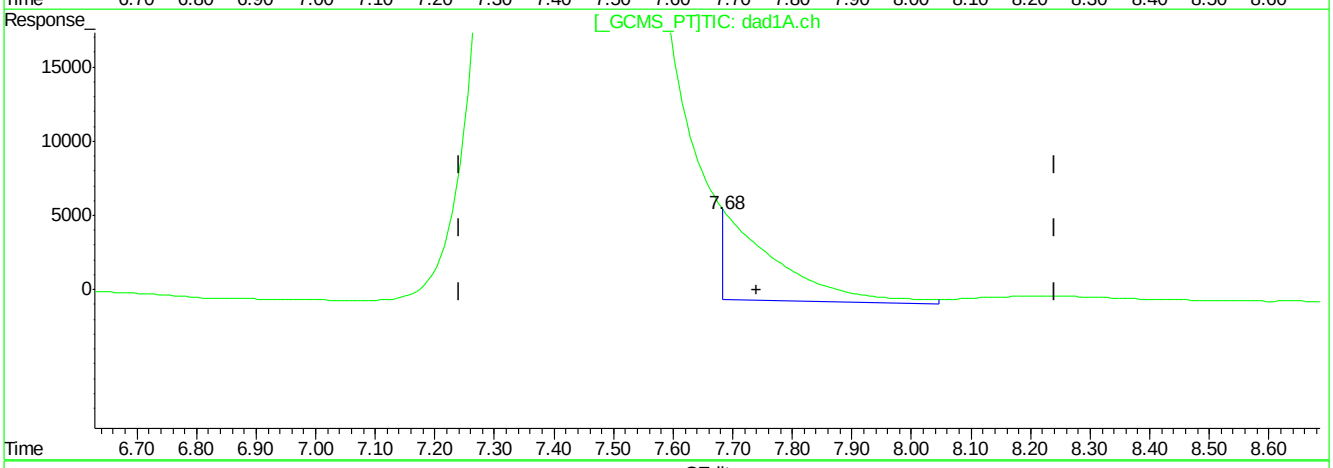
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:08:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.67min 105.765ppb m

response 418128

(6) RDX #2

7.68min 93.405ppb m

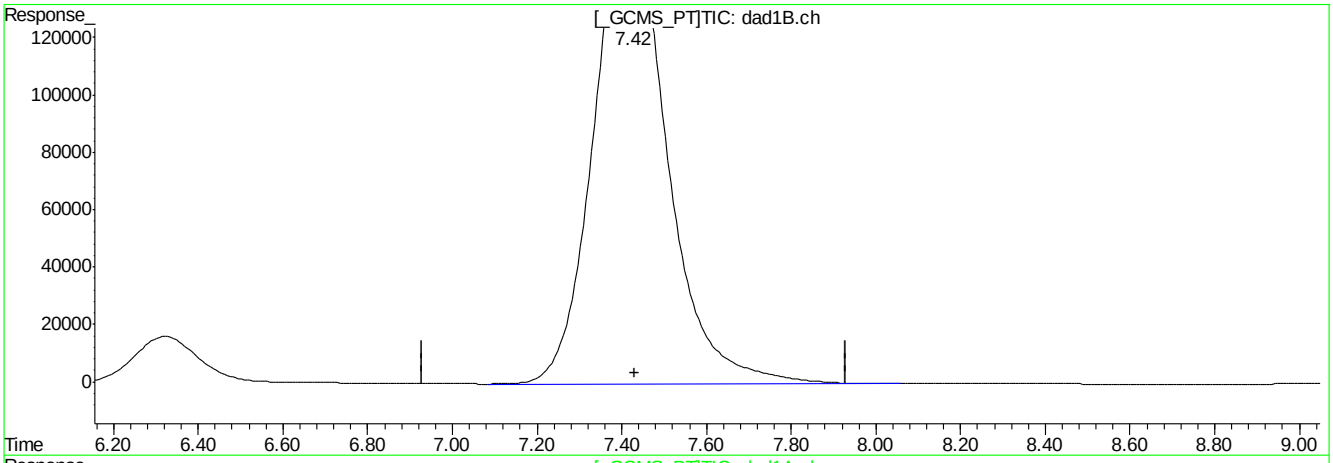
response 369263

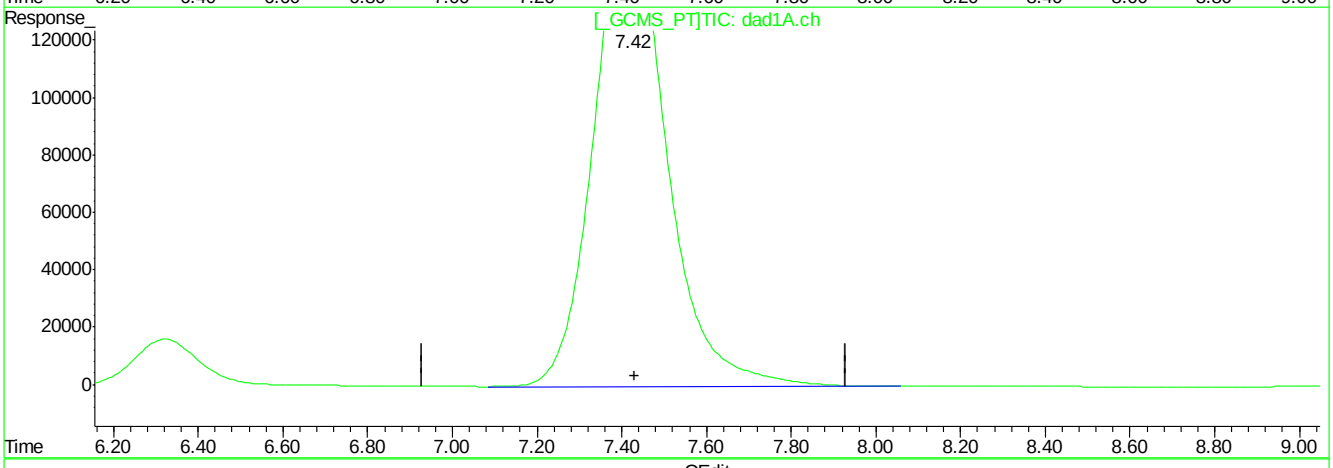
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:09:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.42min 2371.059ppb

response 19753450

(5) 1,3,5-Trinitrobenzene #2

7.42min 2371.059ppb

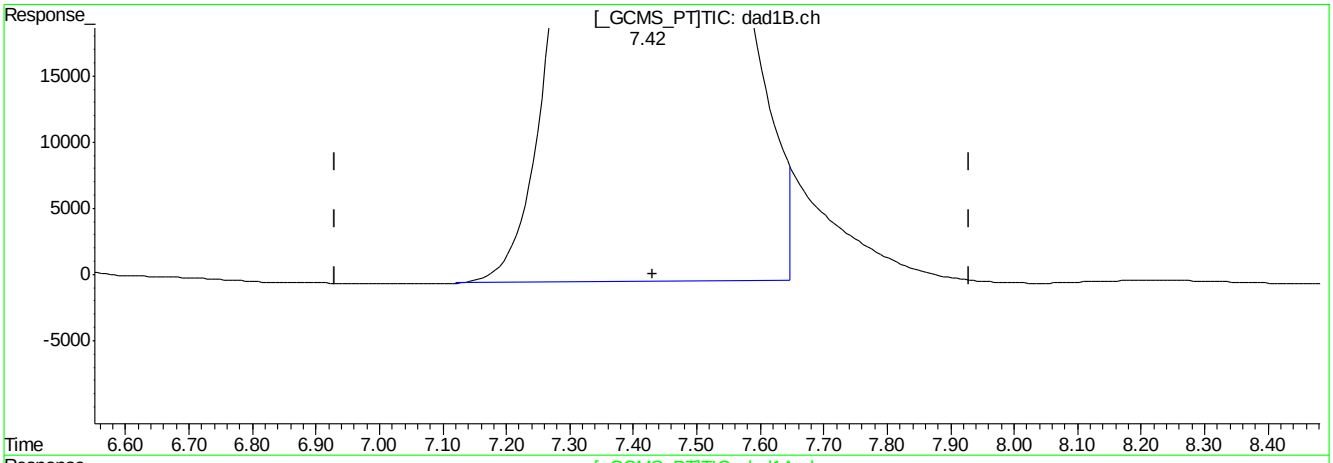
response 19753450

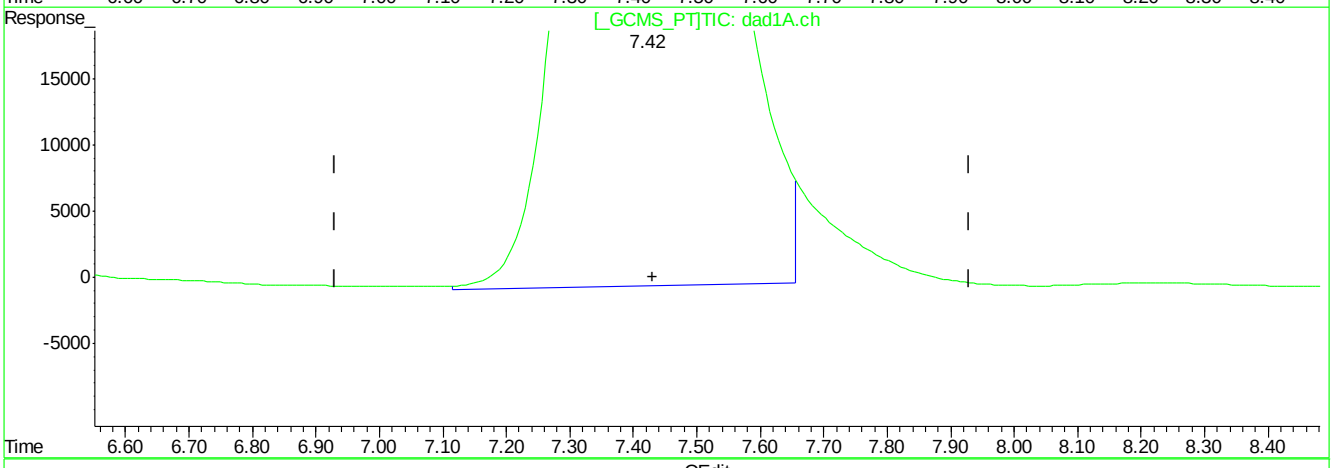
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:09:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.42min 2302.758ppb m

response 19184431

(5) 1,3,5-Trinitrobenzene #2

7.42min 2319.696ppb m

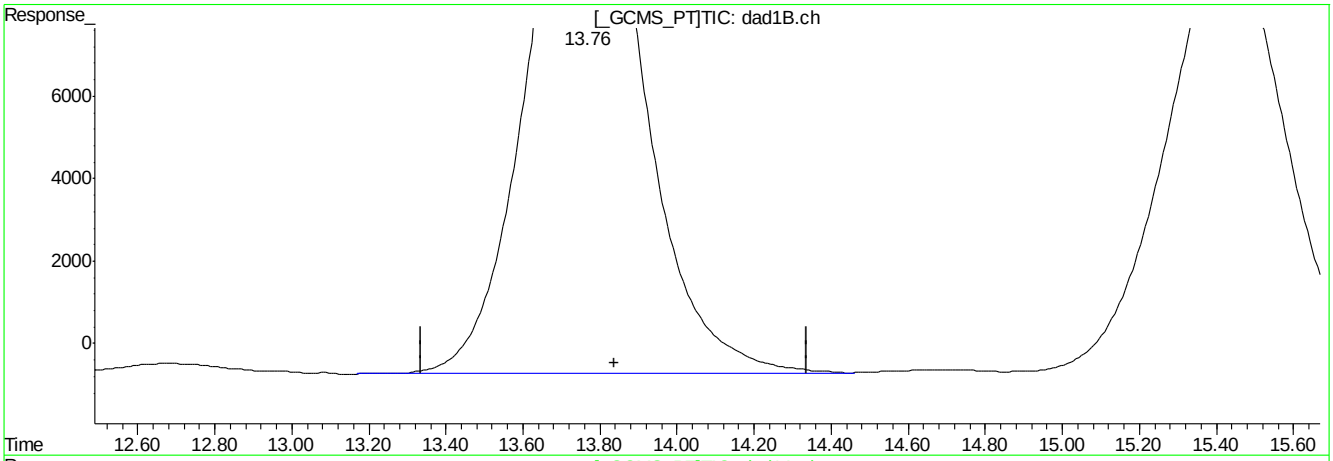
response 19325541

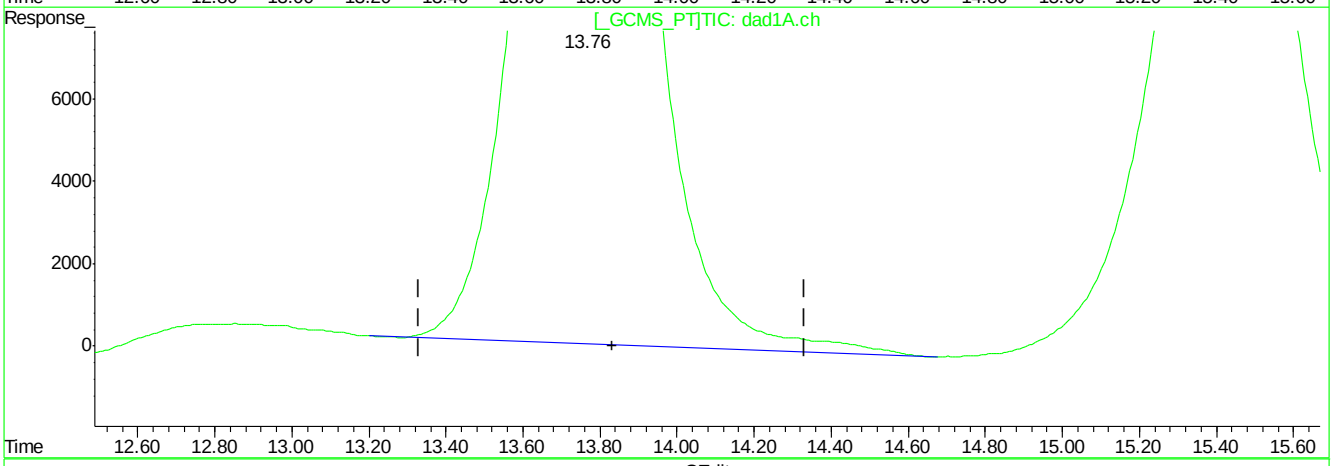
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:09:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.76min 703.360ppb

response 2890519

(12) 3,4-Dinitrotoluene #2 (S)

13.76min 654.183ppb

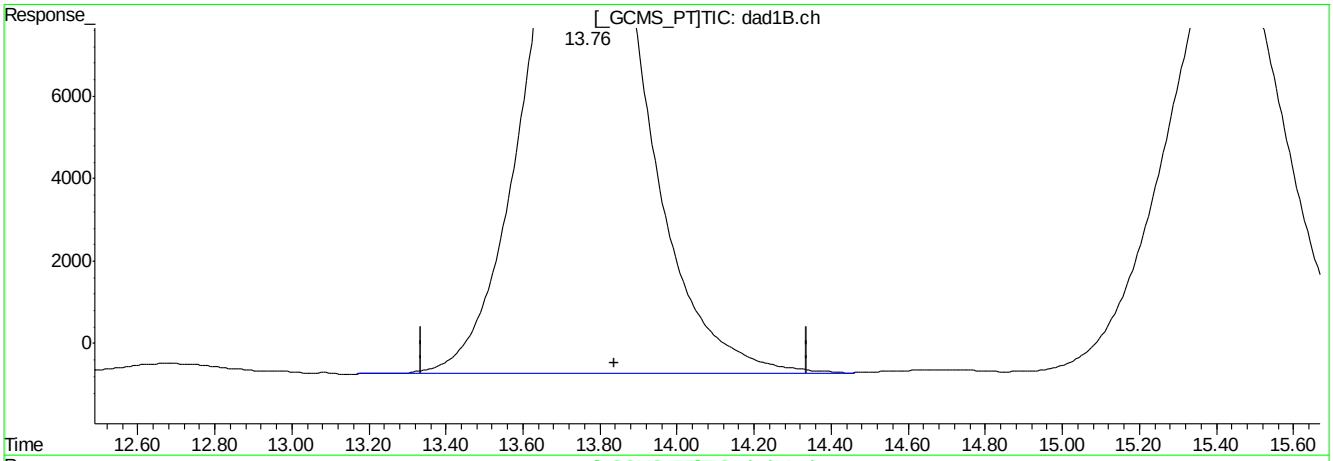
response 5454982

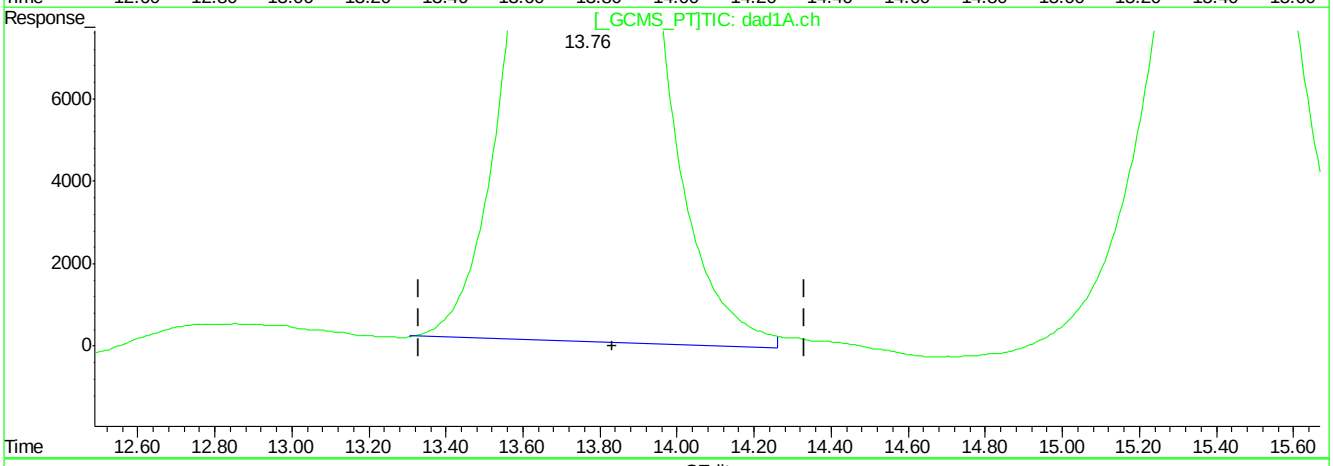
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:09:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.76min 703.360ppb

response 2890519

(12) 3,4-Dinitrotoluene #2 (S)

13.76min 644.675ppb m

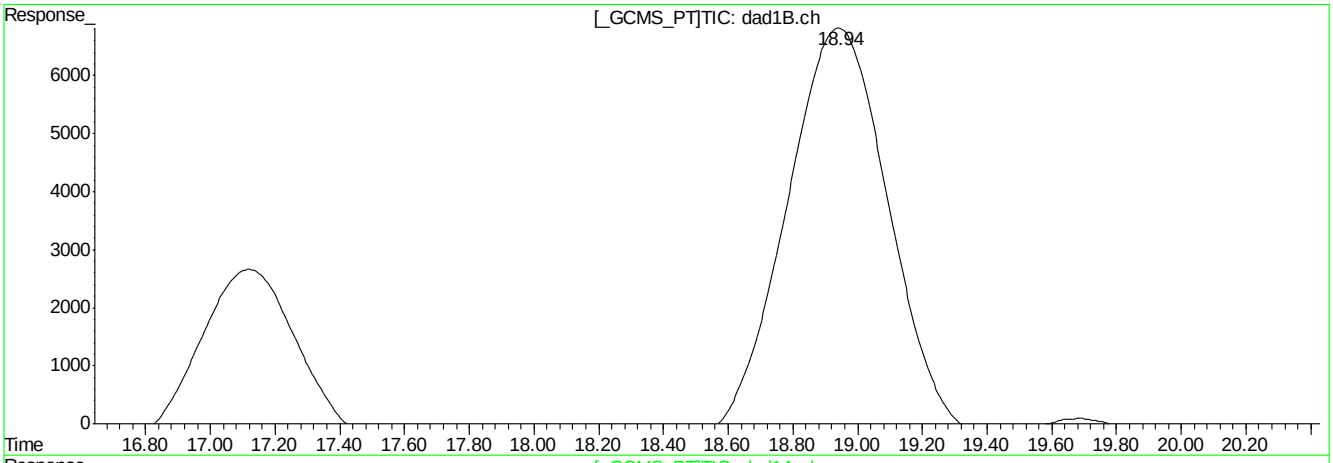
response 5375695

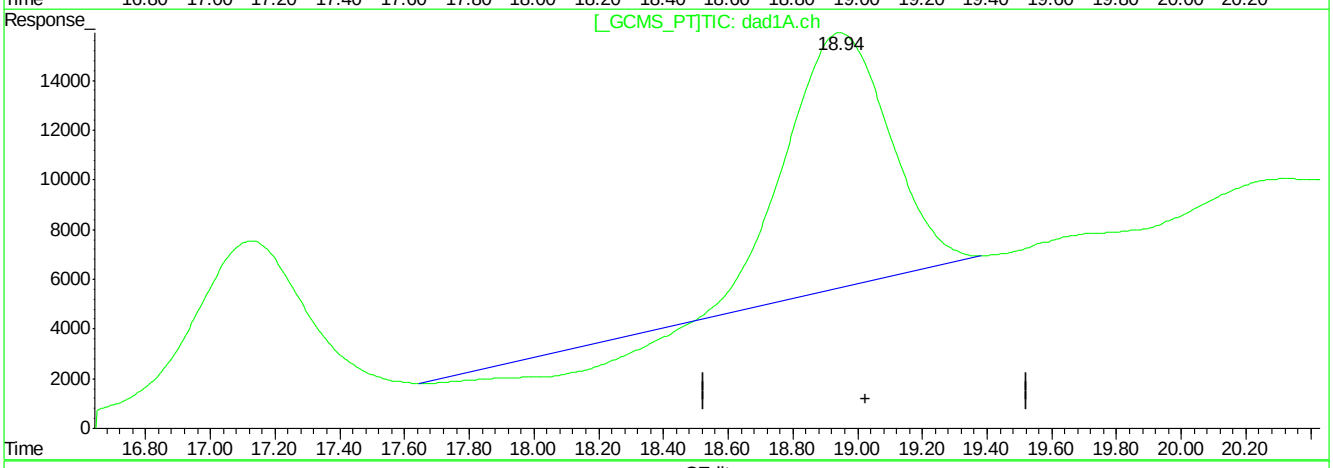
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:09:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.94min 219.276ppb

response 1683274

(20) 2-Amino-4,6-Dinitrotoluene #2

18.95min 184.992ppb

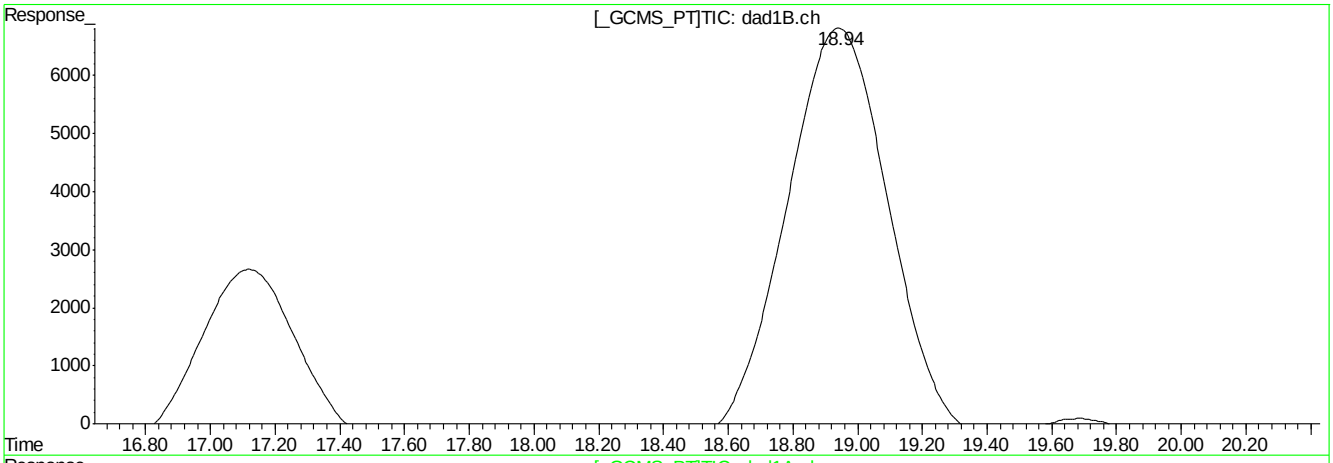
response 2005274

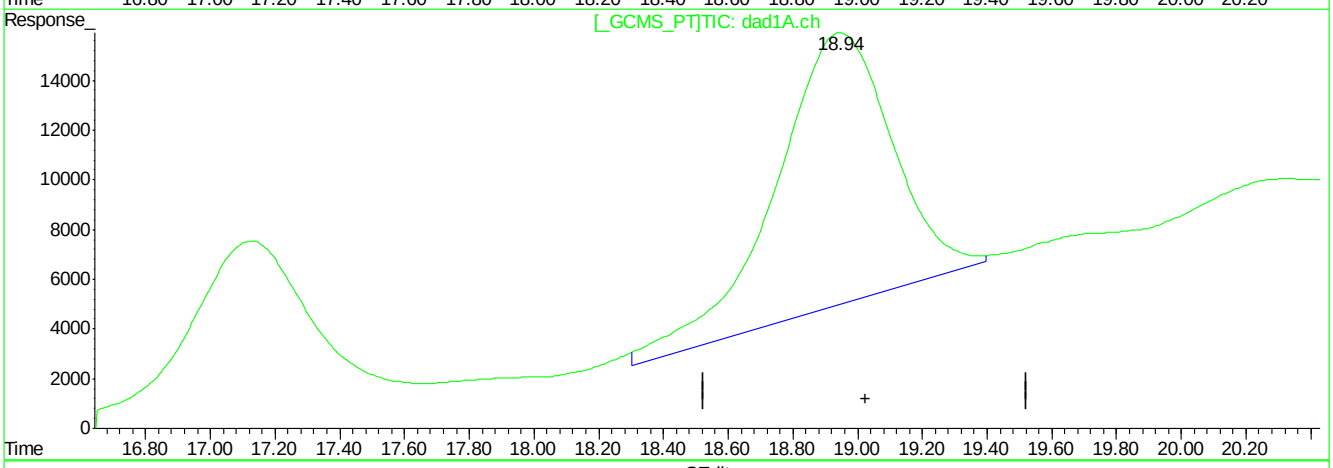
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:09:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.94min 219.276ppb

response 1683274

(20) 2-Amino-4,6-Dinitrotoluene #2

18.94min 254.475ppb m

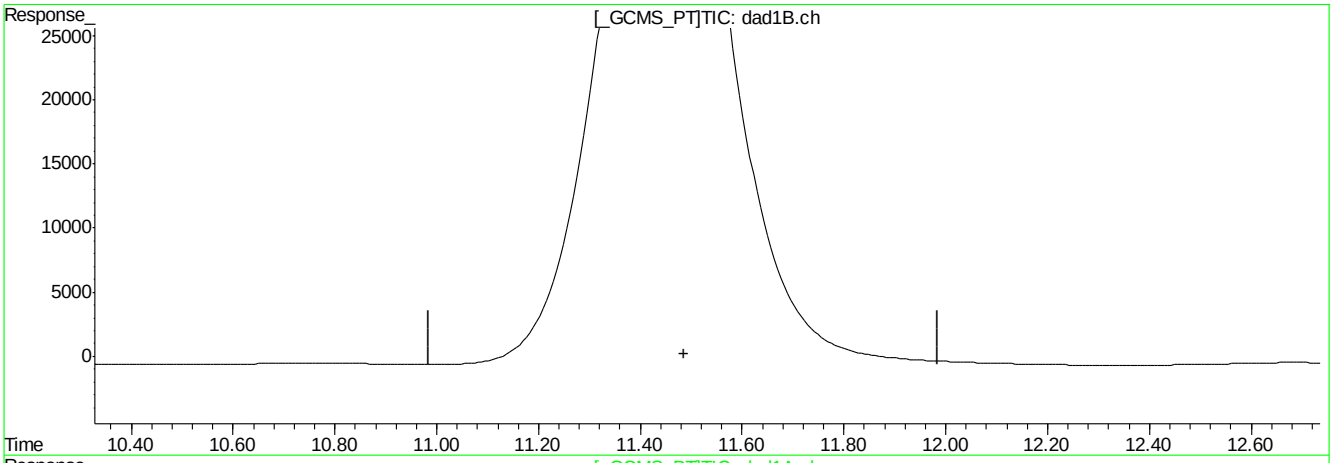
response 2758455

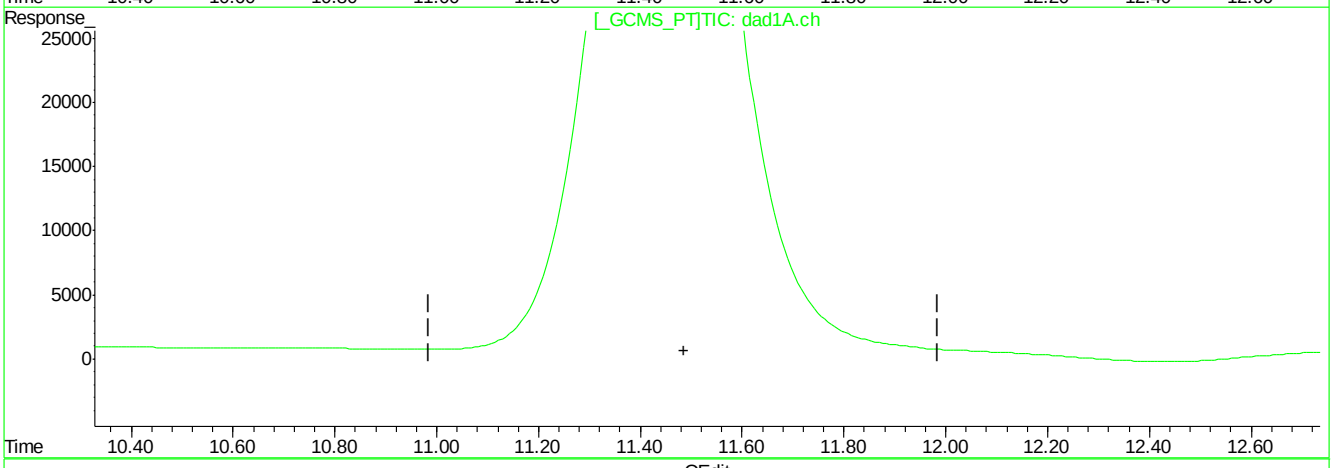
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Sun Nov 07 10:09:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : op88132,GGG3063,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 10:09 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

0.00min 0.000ppb d

response 0

(9) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb d

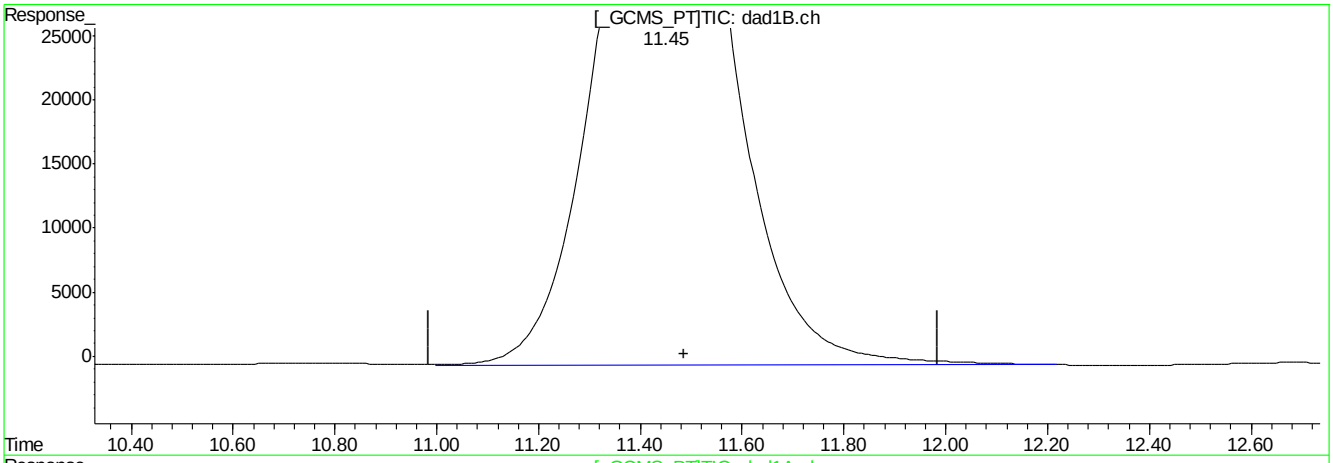
response 0

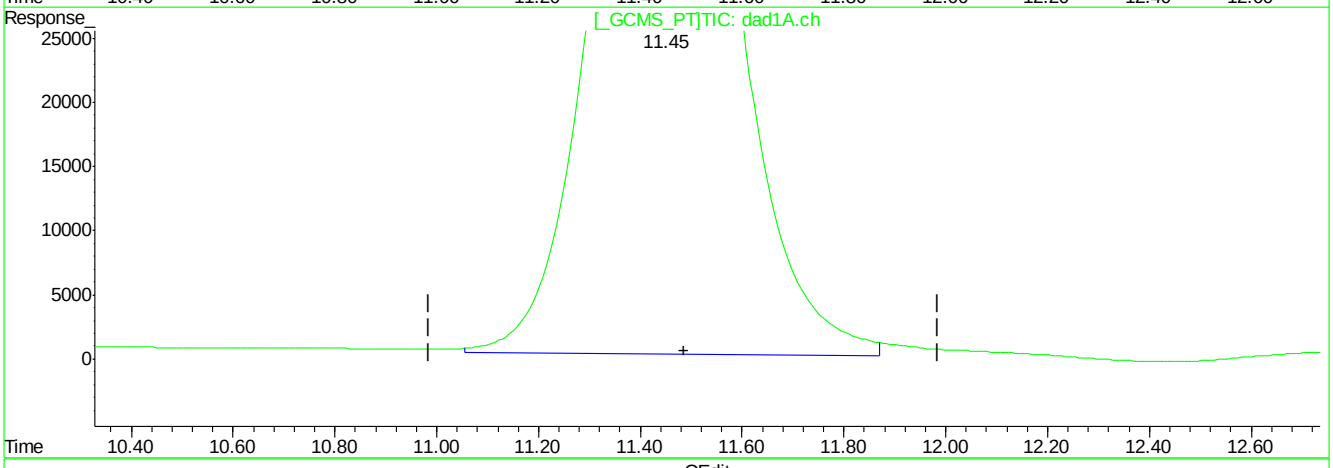
(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Mon Nov 08 14:51:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622725.D\dad1A.ch
Acq On : 05-Nov-2021, 15:58:52 Operator: jamesb
Sample : FA90260-1cf Inst : G1315B
Misc : op88132,GGG3063,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 10:09 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.45min 1144.599ppb m

response 9176668

(9) 2,4,6-Trinitrotoluene #2

11.45min 1115.274ppb m

response 12158711

(+) = Expected Retention Time
GG622725.D GGG3059_103121.M Mon Nov 08 14:51:11 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 16:39

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : op88132,GBB2121,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 05 09:30:22 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.98	10.98	1114092	1940402	617.366	580.288
Spiked Amount	500.000	Range	70 - 136	Recovery	=	123.47%	116.06%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.45	1.45	380943	1205074	263.309m	302.291m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.88	2.88	239478	358404	138.139	132.024
6)	1,3,5-Trinitrobe	4.65	4.65	827871	1268263	226.320	223.187
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.14	6.14	149103	269142	40.626	41.984m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.72	9.72	1818925	2189043	545.942m	580.802m
13)	2-Amino-4,6-Dini	9.95	9.92f	497848	826301	155.994m	168.193m
14)	4-Amino-2,6-Dini	10.50	10.50	366351	691093	160.832	147.489
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D.

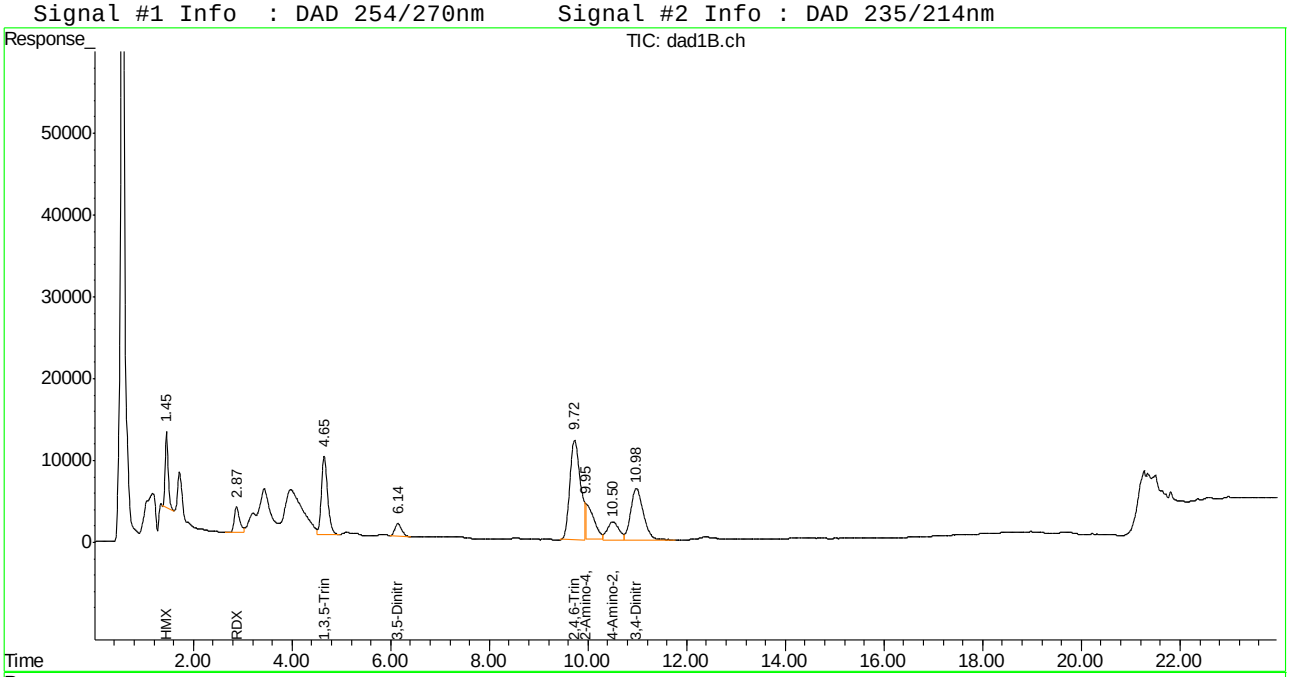
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070814.D BBB2118_103021.M Mon Nov 08 09:36:55 2021 Page 1

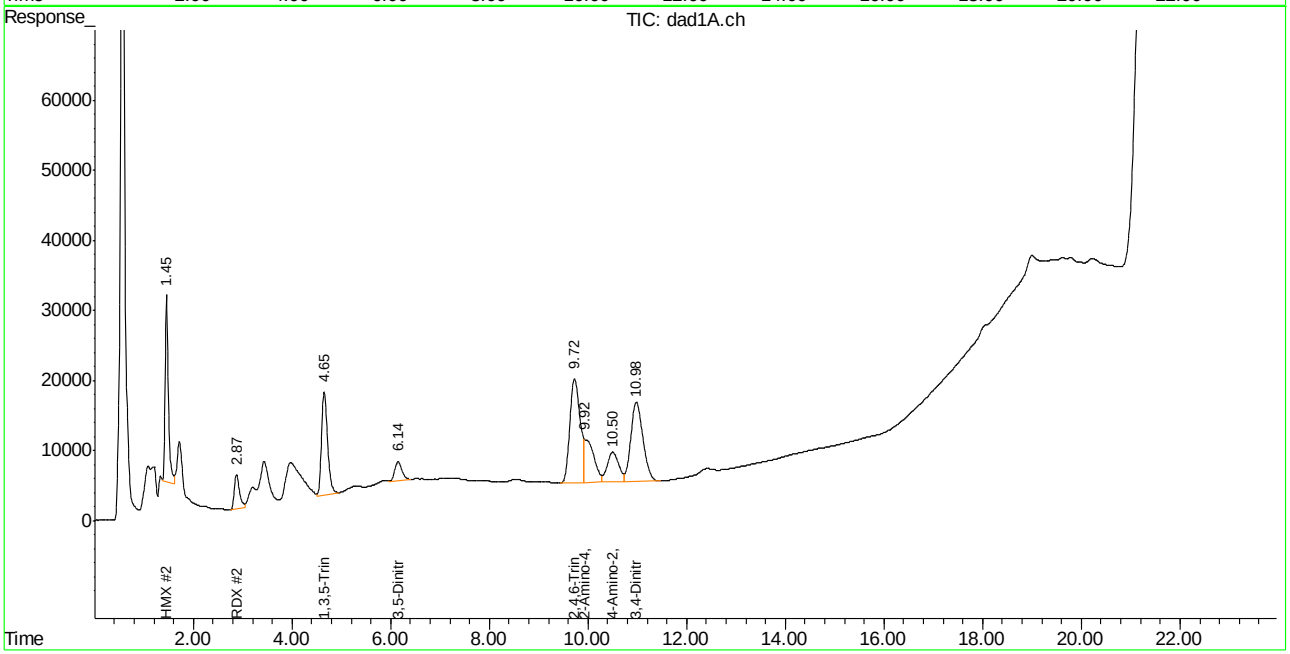
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : op88132,GBB2121,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 8 9:36 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

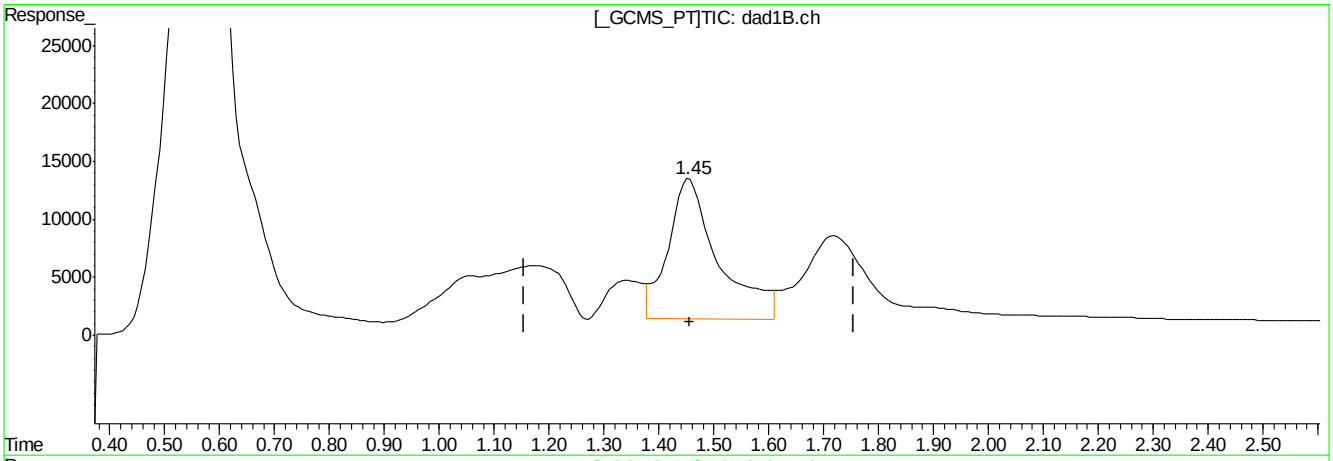
Sample Number: FA90260-2
Lab FileID: BB070814.D
Injection Time: 11/04/21 14:49
Method: SW846 8330B
Analyst approved: 11/05/21 15:02 James Boone
Supervisor approved: 11/08/21 16:39 Naresh Jiawan

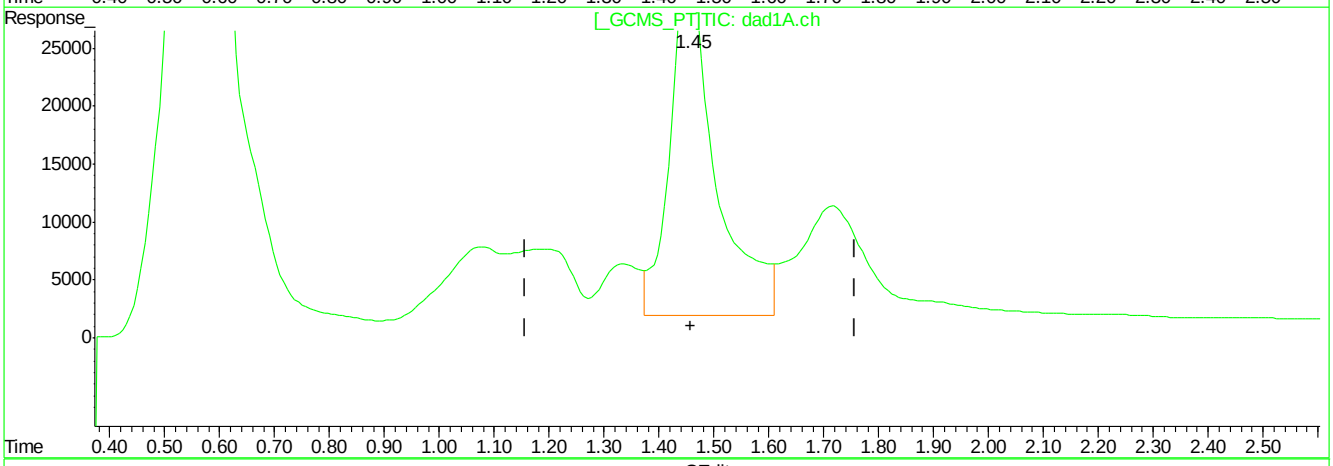
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.45	Poor instrument integration
HMX	2691-41-0	2	1.45	Poor instrument integration
DNX		2	1.71	Poor instrument integration
DNX		1	1.72	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	5.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.87	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.14	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.72	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	9.72	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	9.92	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.95	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.46min 531.304ppb

response 768665

(2) HMX #2

1.46min 426.890ppb

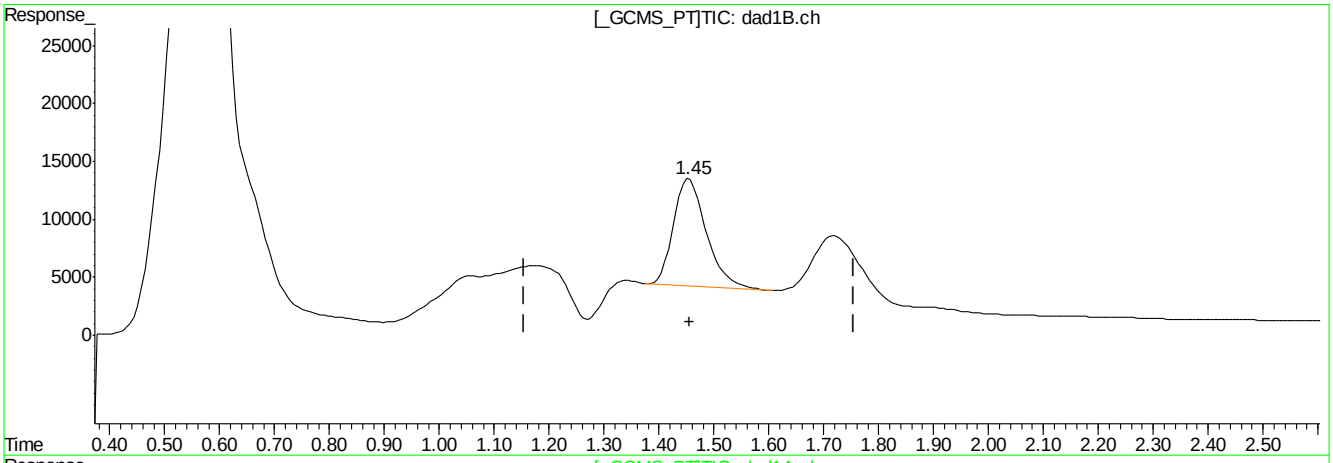
response 1701784

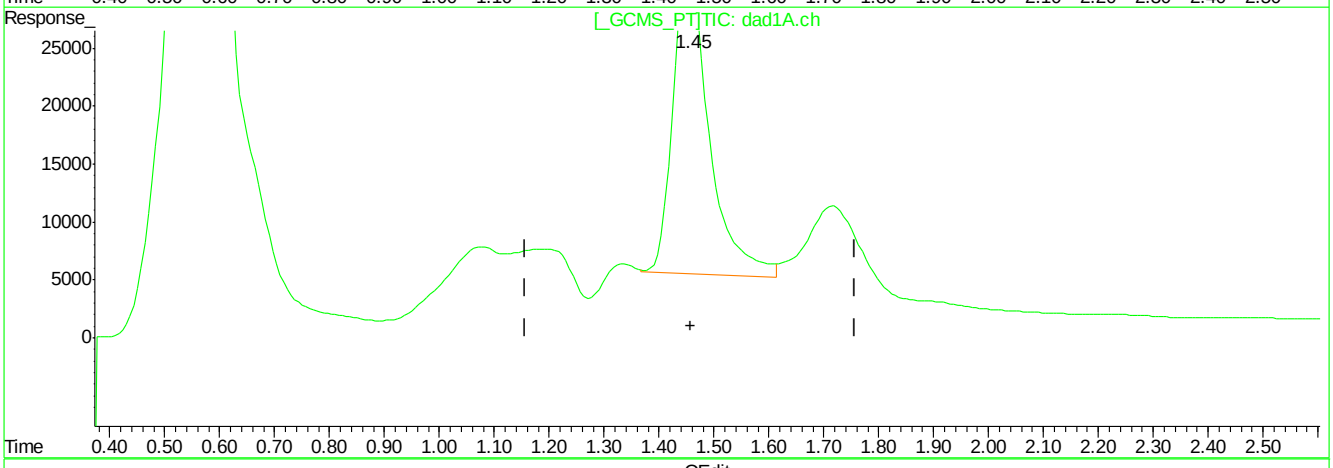
(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:48:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.45min 263.309ppb m

response 380943

(2) HMX #2

1.45min 302.291ppb m

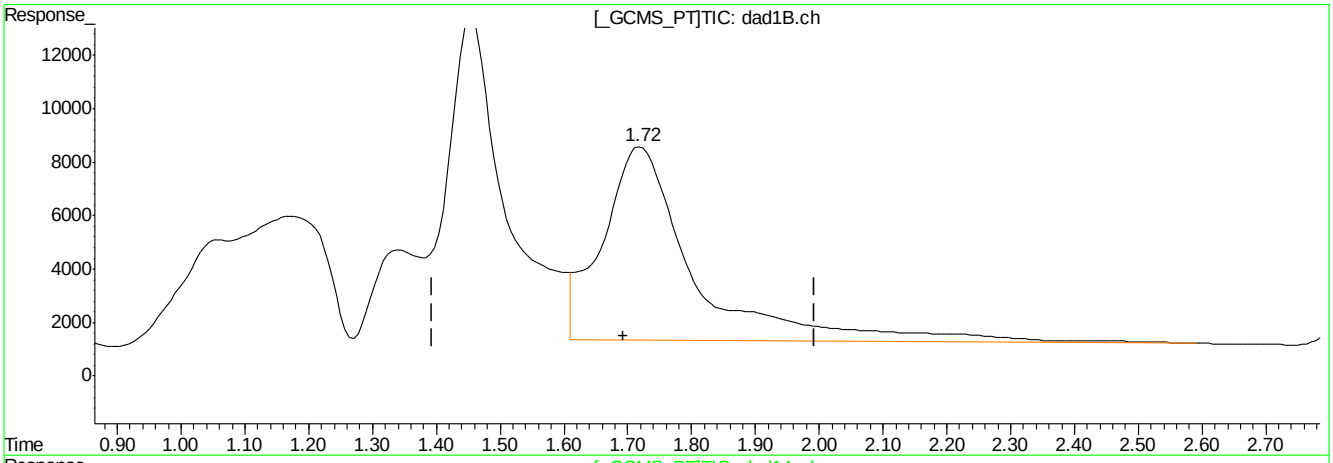
response 1205074

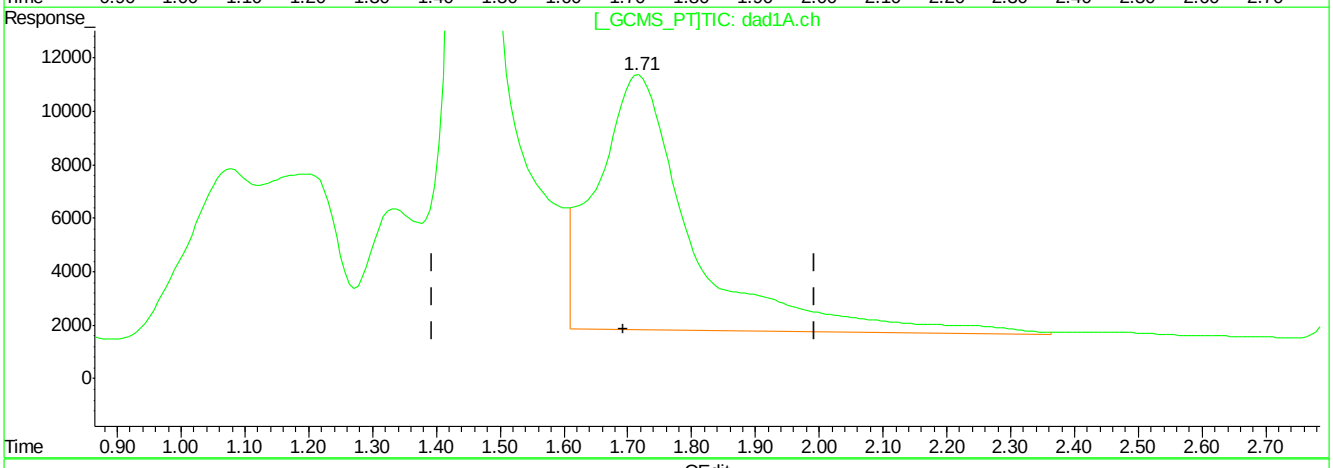
(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:48:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.72min 436.977ppb

response 729673

(3) DNX #2

1.72min 342.008ppb

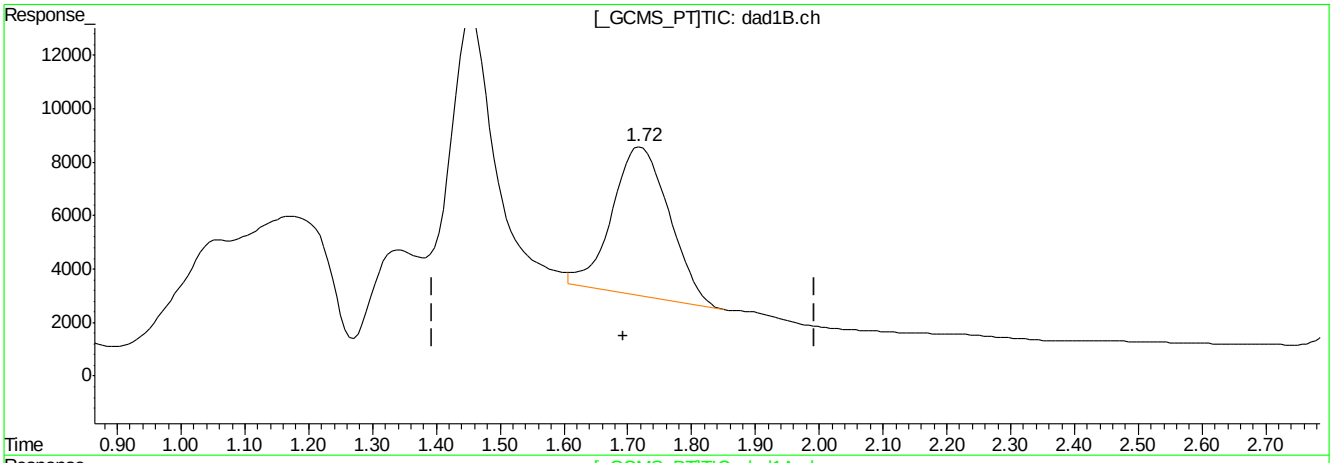
response 1001459

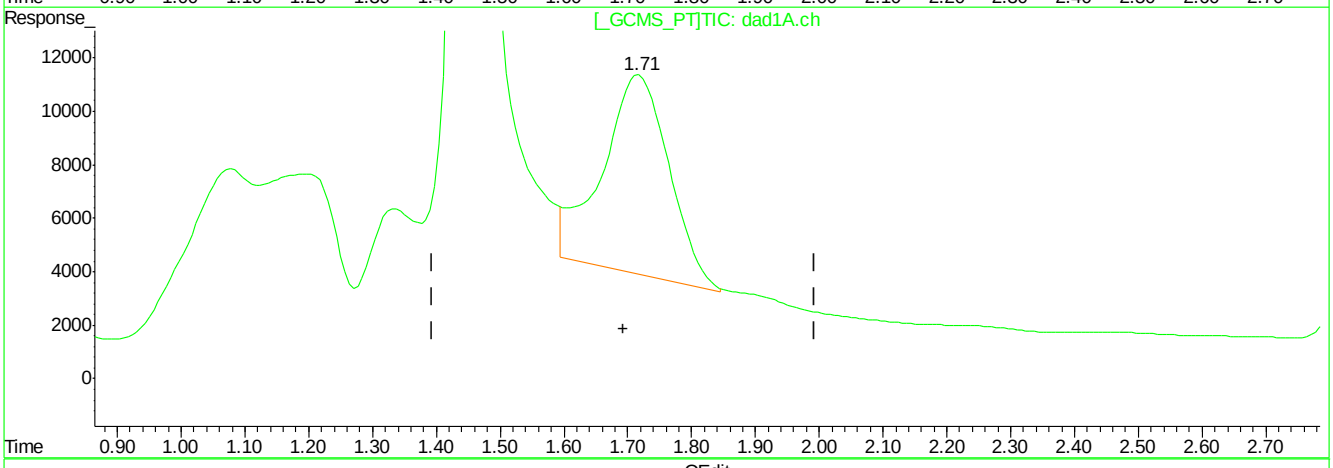
(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:48:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.72min 209.622ppb m

response 350031

(3) DNX #2

1.71min 185.640ppb m

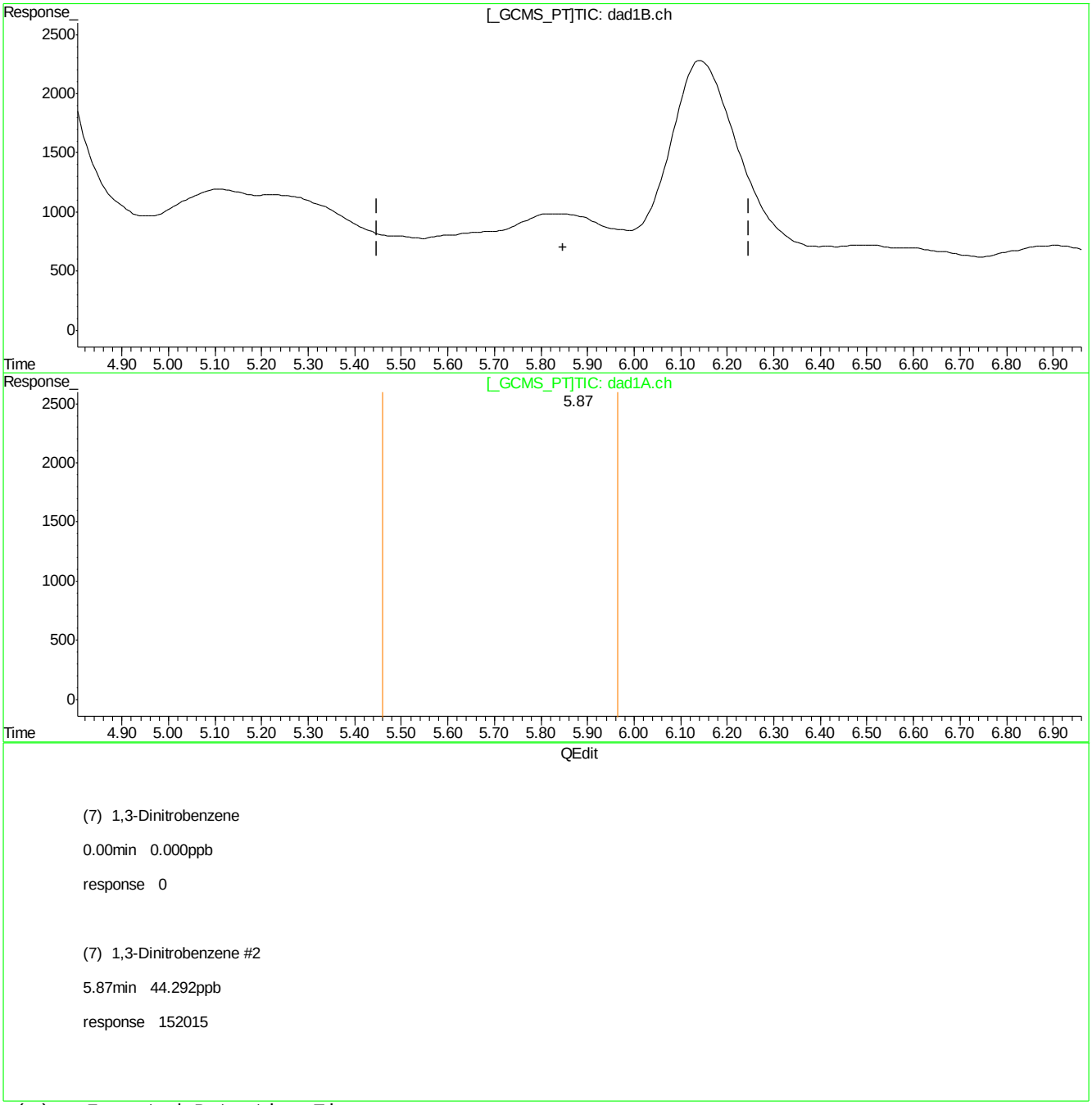
response 543588

(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:48:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

0.00min 0.000ppb

response 0

(7) 1,3-Dinitrobenzene #2

5.87min 44.292ppb

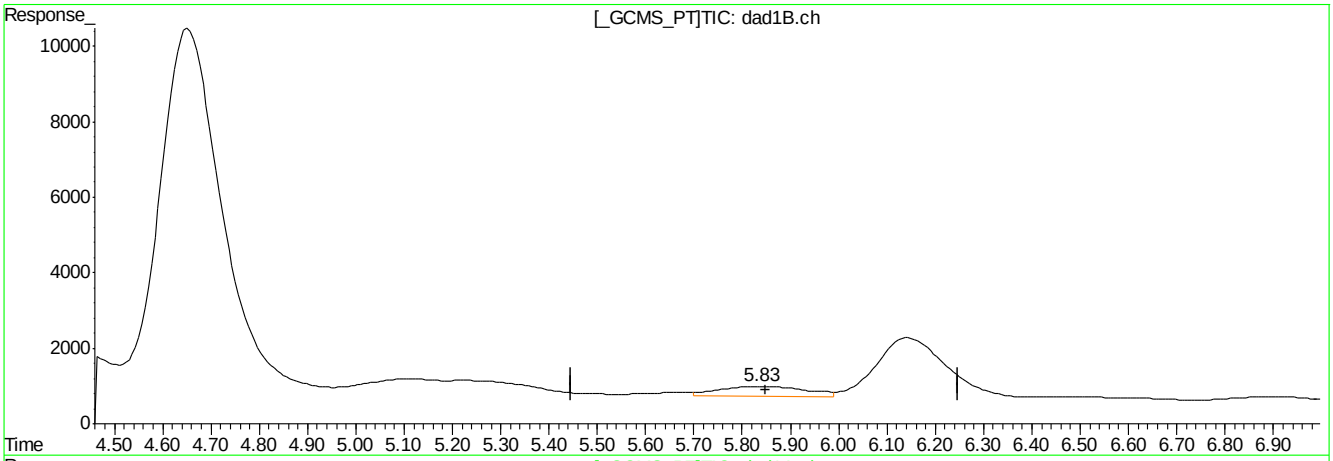
response 152015

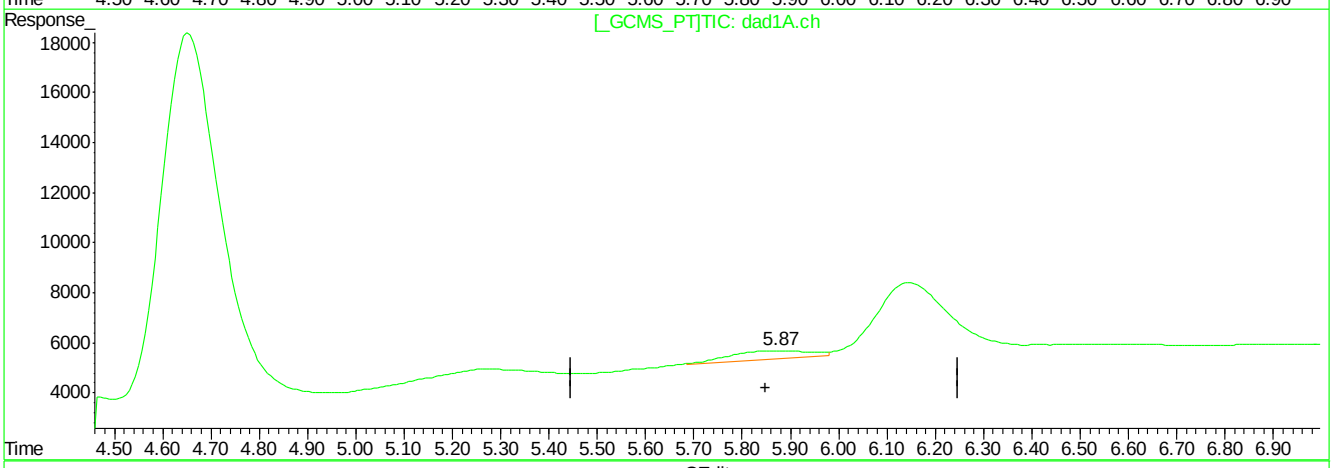
(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:48:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.83min 6.765ppb m

response 32488

(7) 1,3-Dinitrobenzene #2

5.87min 11.755ppb m

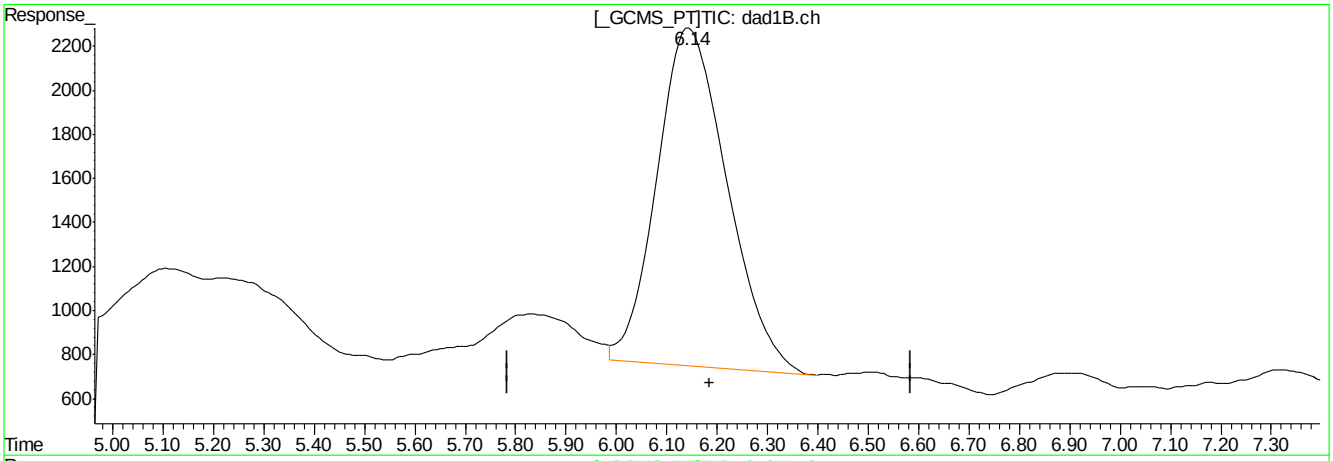
response 40343

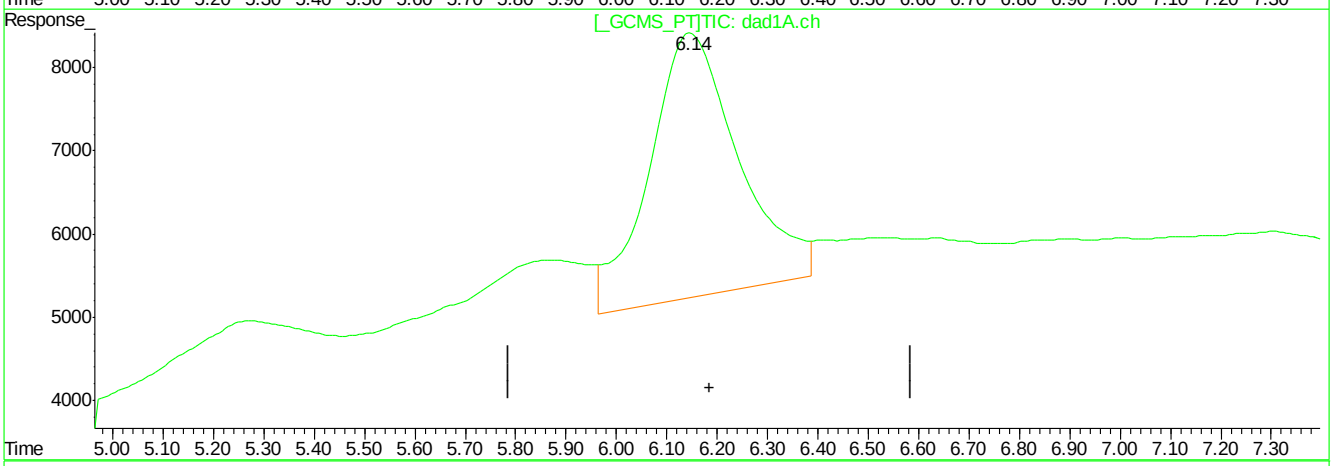
(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:48:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.14min 40.626ppb

response 149103

(8) 3,5-Dinitroaniline #2

6.15min 60.754ppb

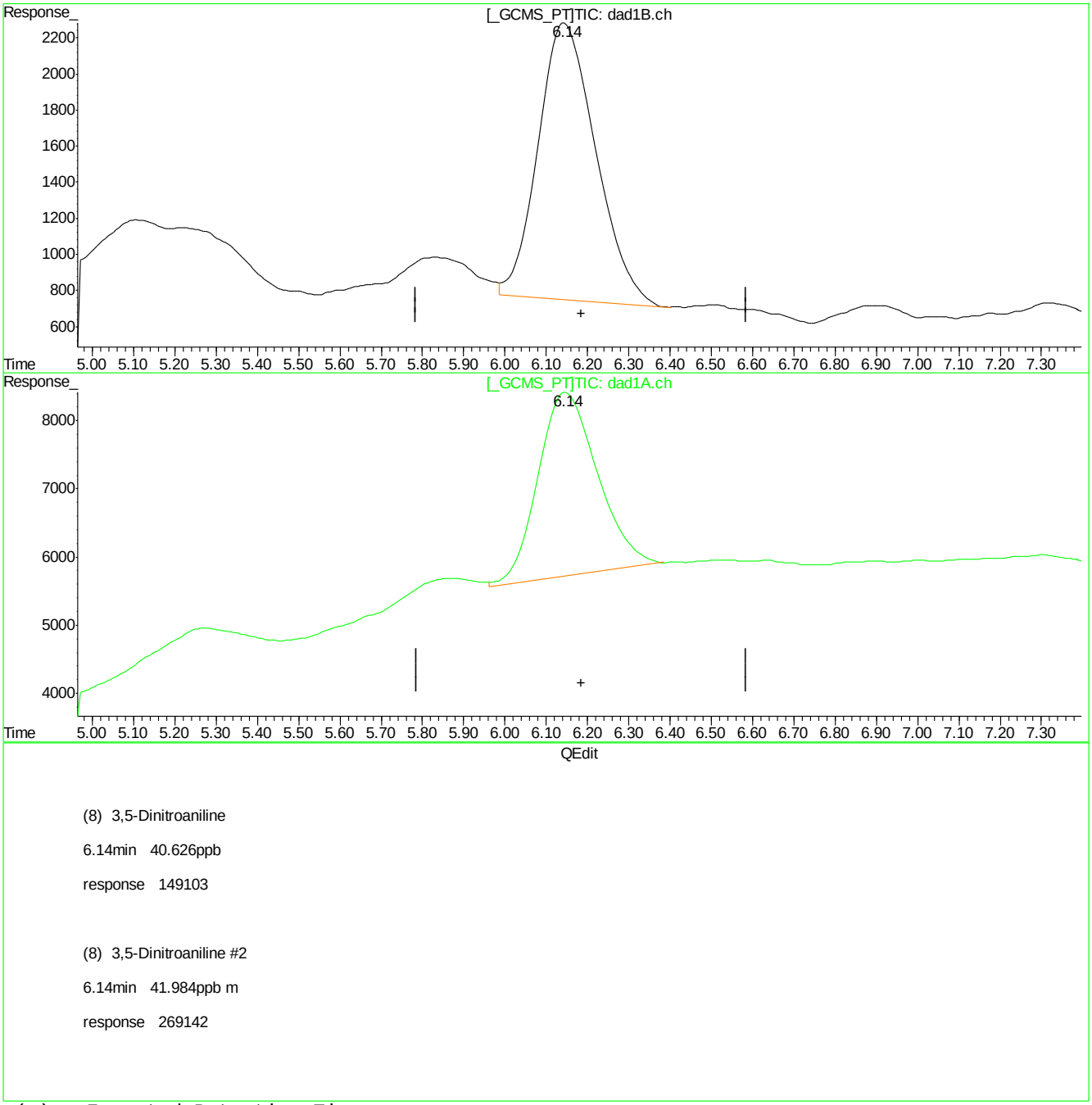
response 389471

(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:48:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.14min 40.626ppb

response 149103

(8) 3,5-Dinitroaniline #2

6.14min 41.984ppb m

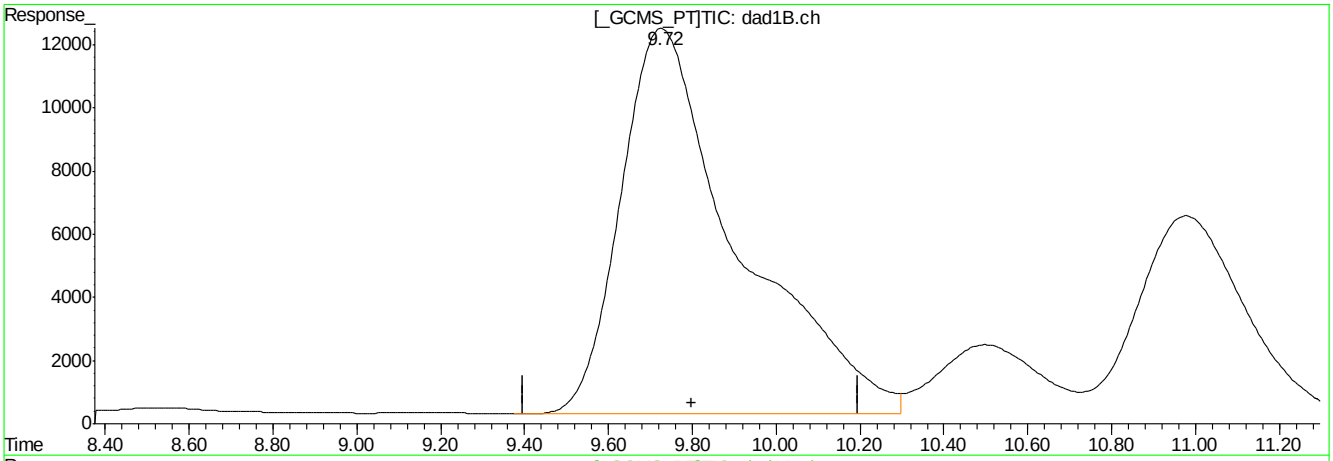
response 269142

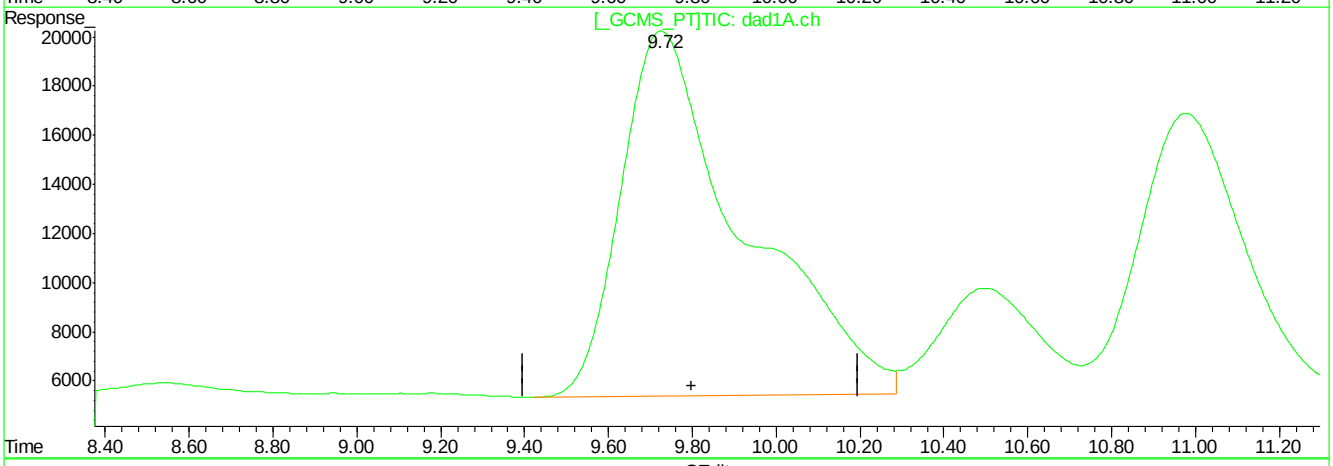
(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:48:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.73min 715.242ppb

response 2382986

(12) 2,4,6-Trinitrotoluene #2

9.73min 801.884ppb

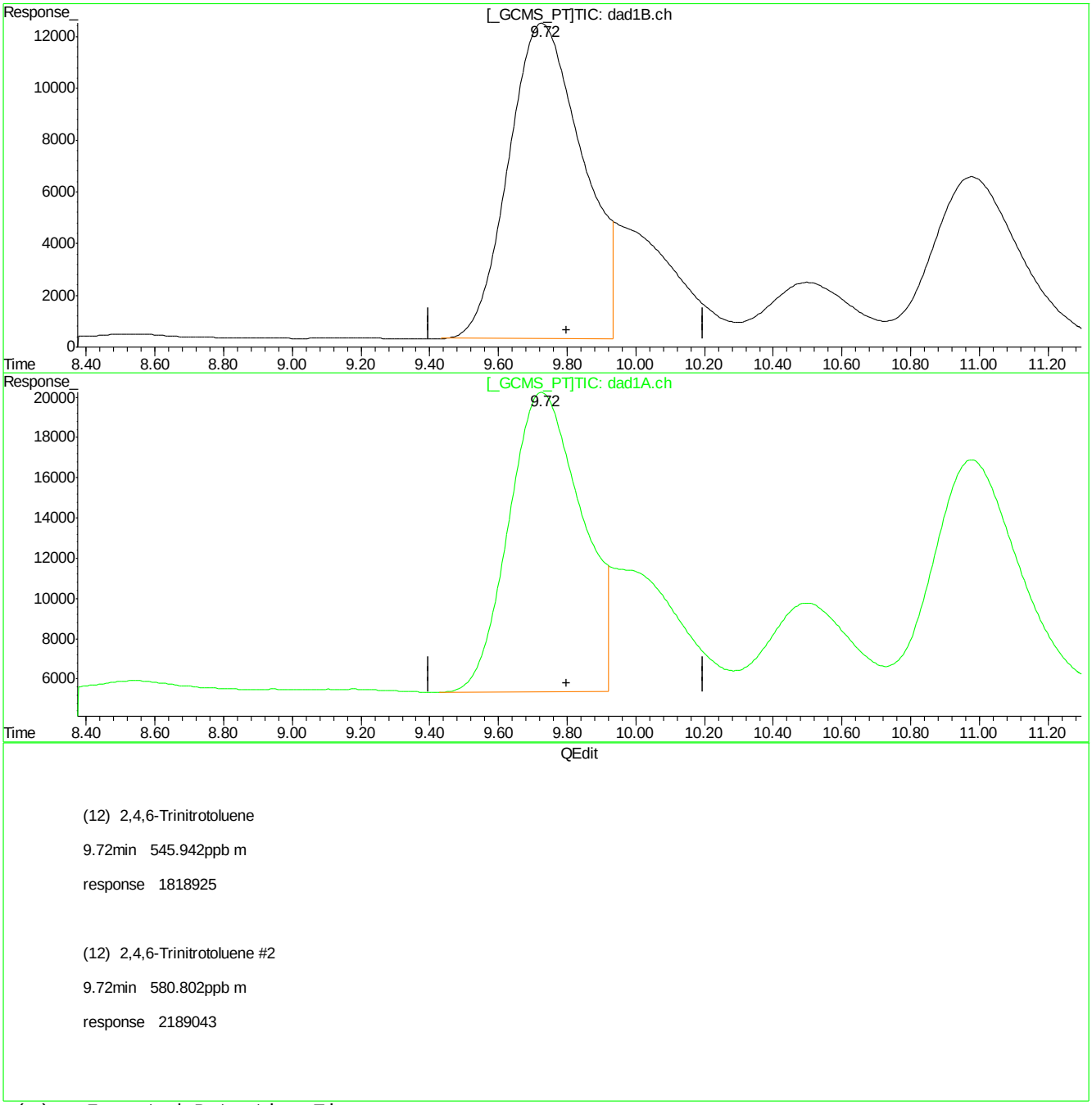
response 3022300

(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:48:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

9.72min 545.942ppb m

response 1818925

(12) 2,4,6-Trinitrotoluene #2

9.72min 580.802ppb m

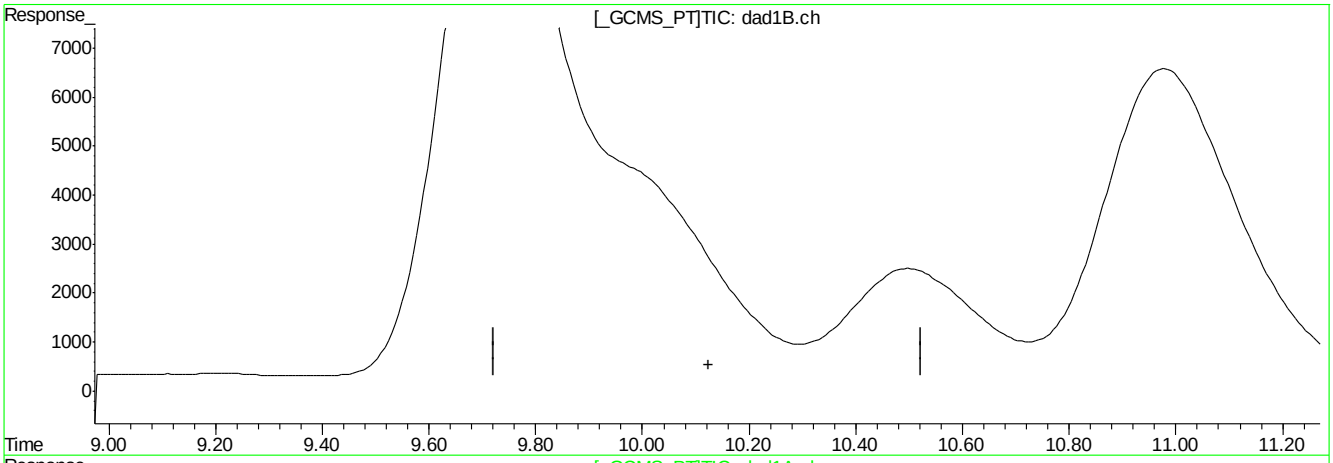
response 2189043

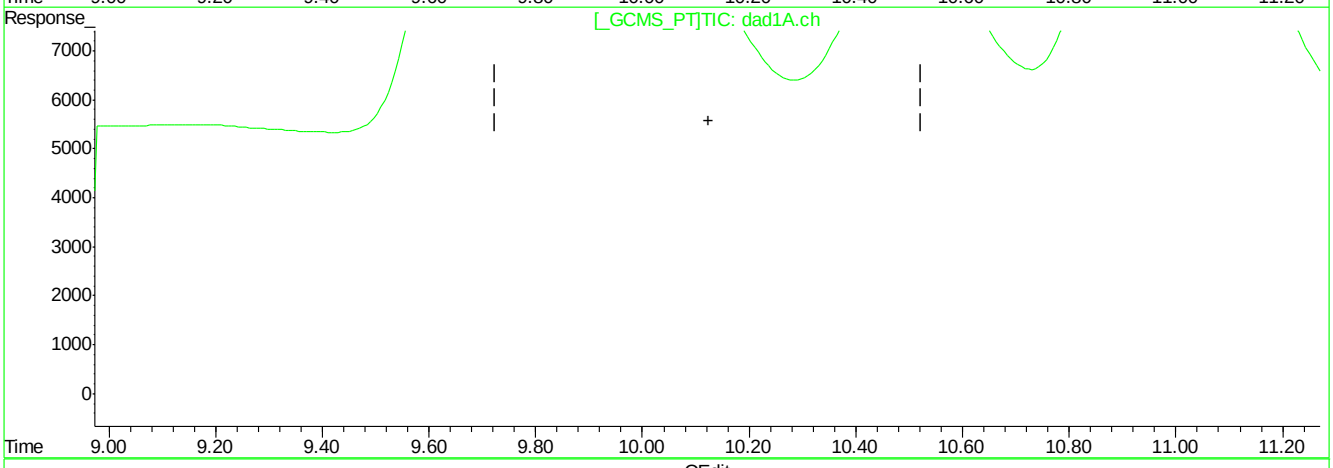
(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:49:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

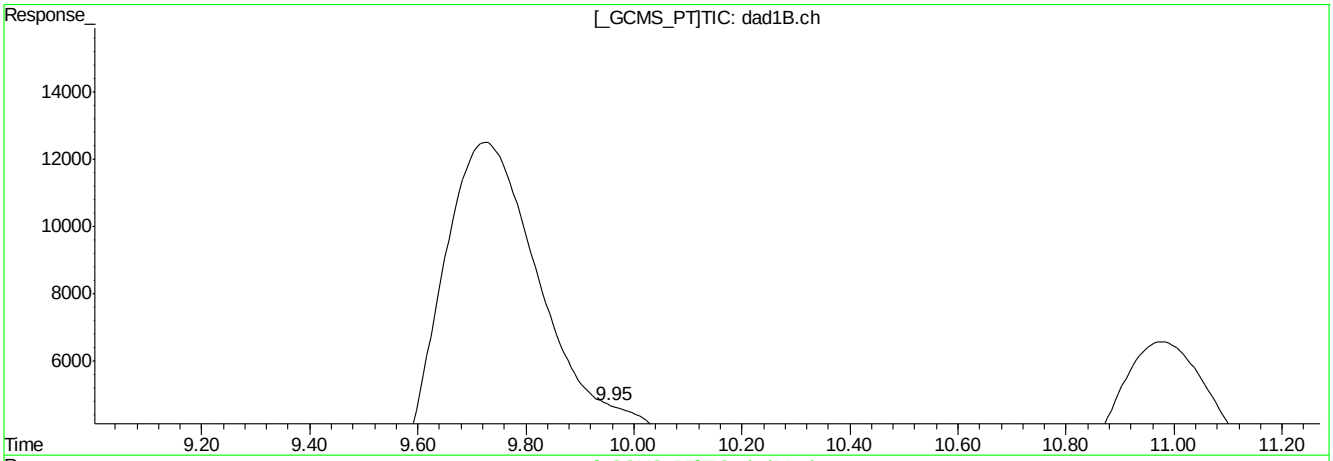
response 0

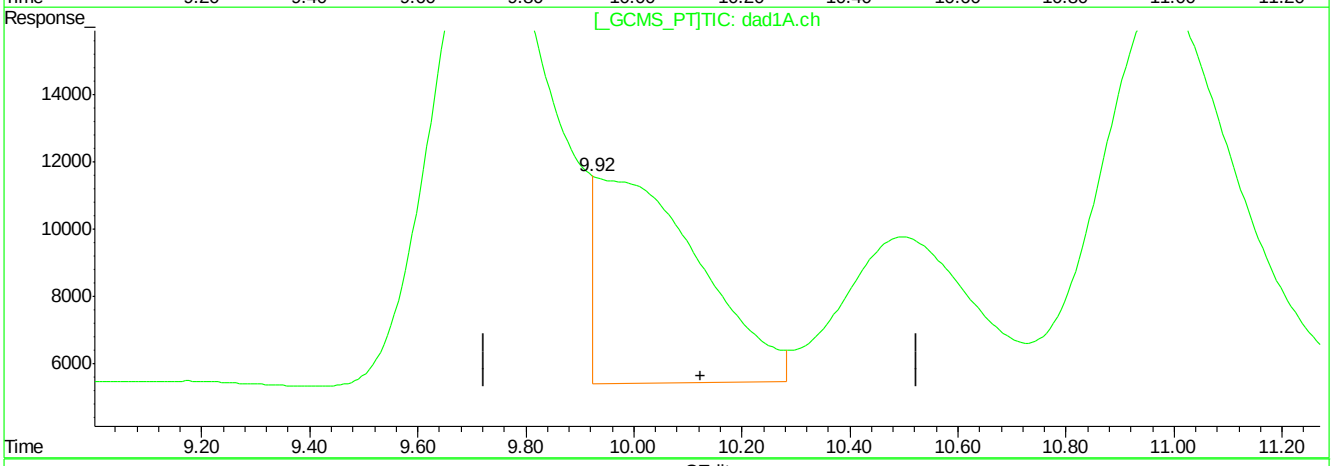
(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:49:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070814.D\dad1A.ch
Acq On : 04-Nov-2021, 14:49:10 Operator: jamesb
Sample : FA90260-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

9.95min 155.994ppb m

response 497848

(13) 2-Amino-4,6-Dinitrotoluene #2

9.92min 168.193ppb m

response 826301

(+) = Expected Retention Time
BB070814.D BBB2118_103021.M Fri Nov 05 12:49:36 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 16:39

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1A.ch
Acq On : 05-Nov-2021, 16:30:16 Operator: jamesb
Sample : FA90260-2cf Inst : G1315B
Misc : op88132,GGG3063,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 07 09:58:27 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.79	13.79	2704521	5520617	658.100	662.055
	Spiked Amount 500.000	Range 70 - 136		Recovery =		131.62%	132.41%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.25	5.25	921839	930113	315.512m	318.344m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.43	7.43	1868851	1868851	224.323	224.323
6)	RDX	7.74	7.74	540683	540683	136.765	136.765
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.46	11.46	4255208	6036399	530.749	553.697
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.41	15.39	700470	1521182	80.470	108.089
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.14	17.14	945948	1765346	200.311	213.225
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	18.97	18.97	1333360	2189236	173.694m	201.963m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

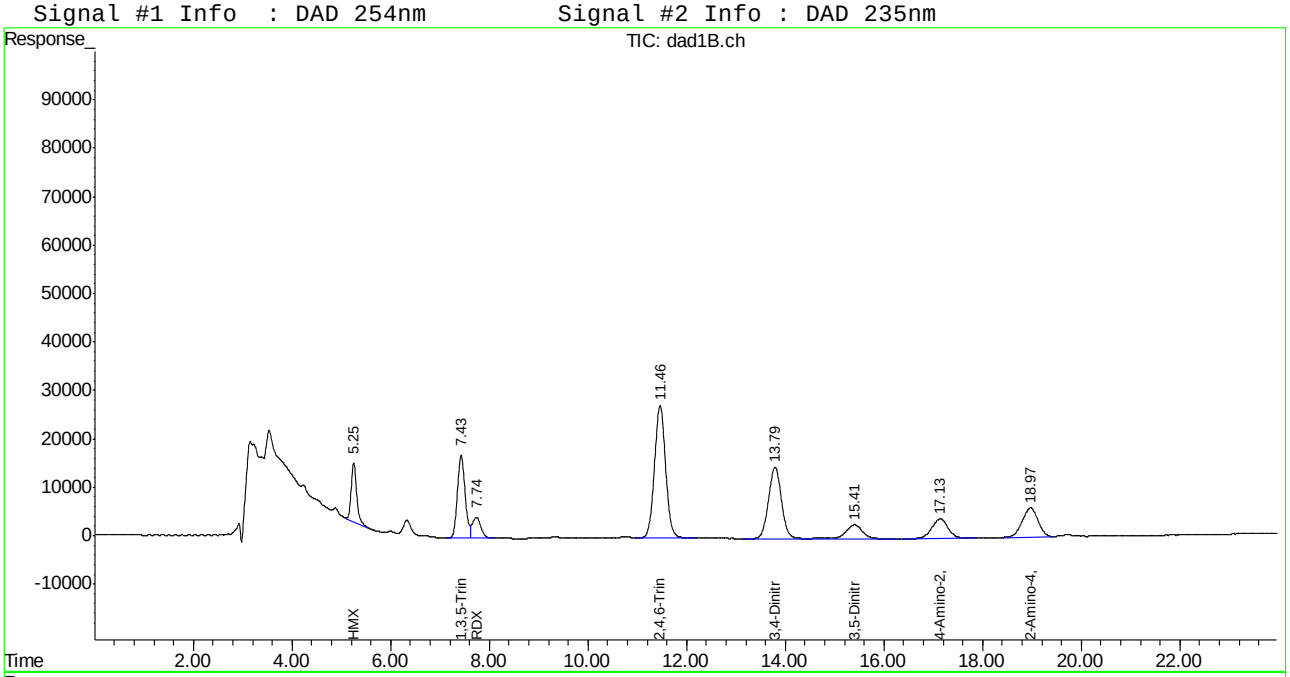
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622726.D GGG3059_103121.M Mon Nov 08 10:48:53 2021 Page 1

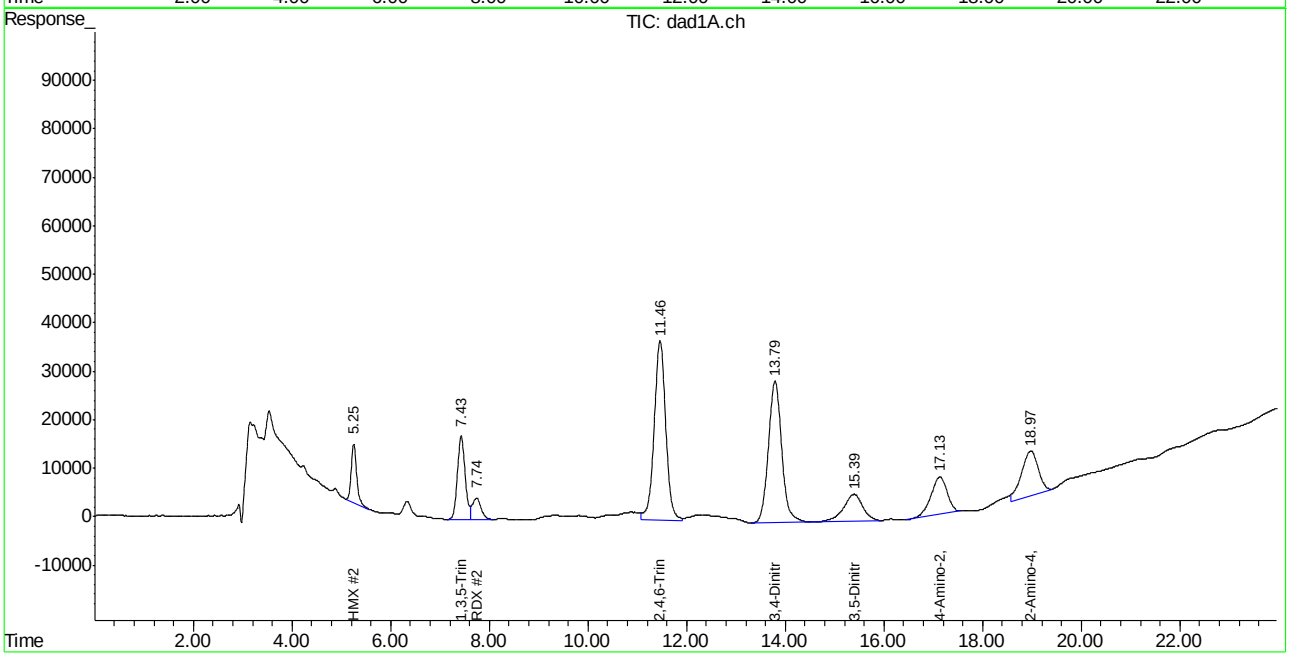
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1A.ch
Acq On : 05-Nov-2021, 16:30:16 Operator: jamesb
Sample : FA90260-2cf Inst : G1315B
Misc : op88132,GGG3063,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 8 9:38 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

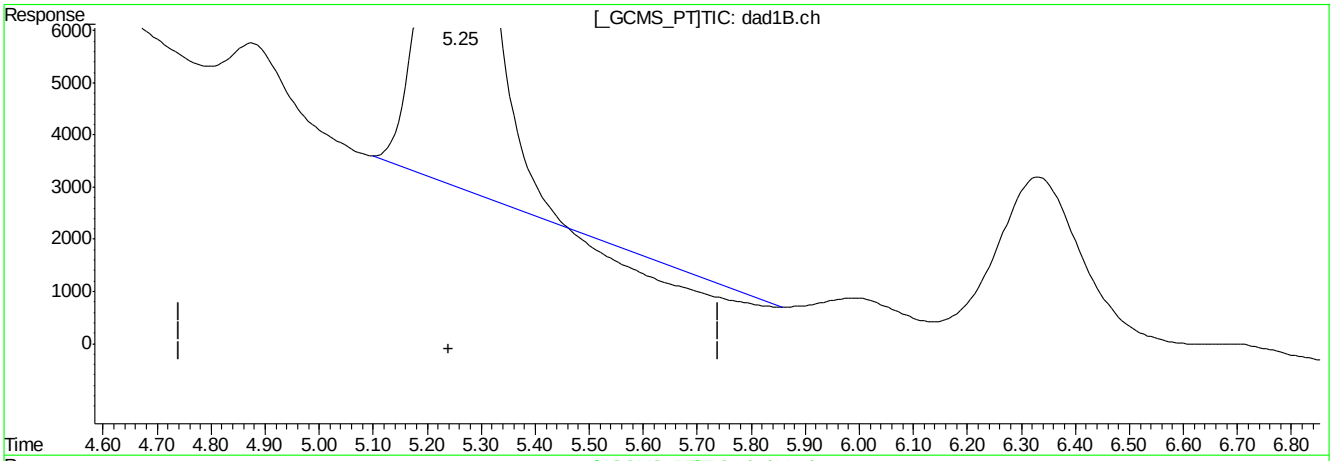
Sample Number: FA90260-2
Lab FileID: GG622726.D
Injection Time: 11/05/21 16:30
Method: SW846 8330B
Analyst approved: 11/08/21 14:44 James Boone
Supervisor approved: 11/08/21 16:39 Naresh Jiawan

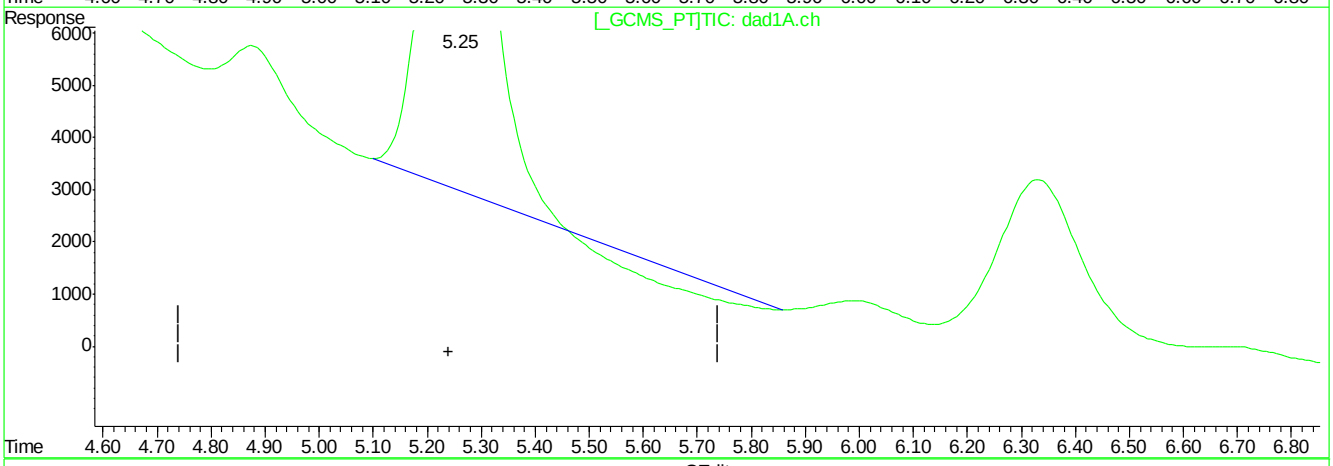
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	5.25	Poor instrument integration
HMX	2691-41-0	2	5.25	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	18.97	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	18.97	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1A.ch
Acq On : 05-Nov-2021, 16:30:16 Operator: jamesb
Sample : FA90260-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.25min 286.833ppb

response 838046

(2) HMX #2

5.25min 286.833ppb

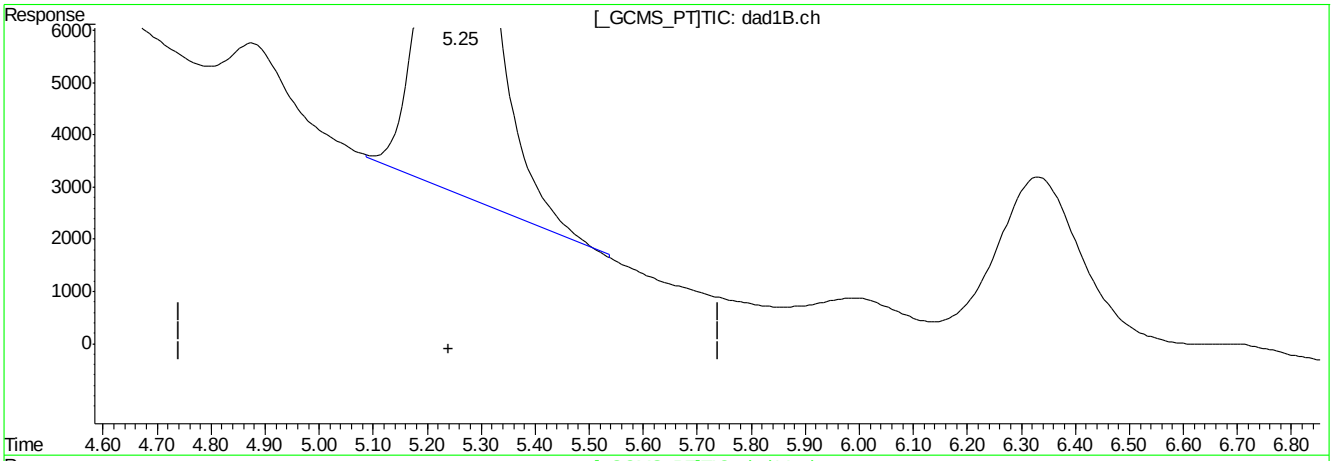
response 838046

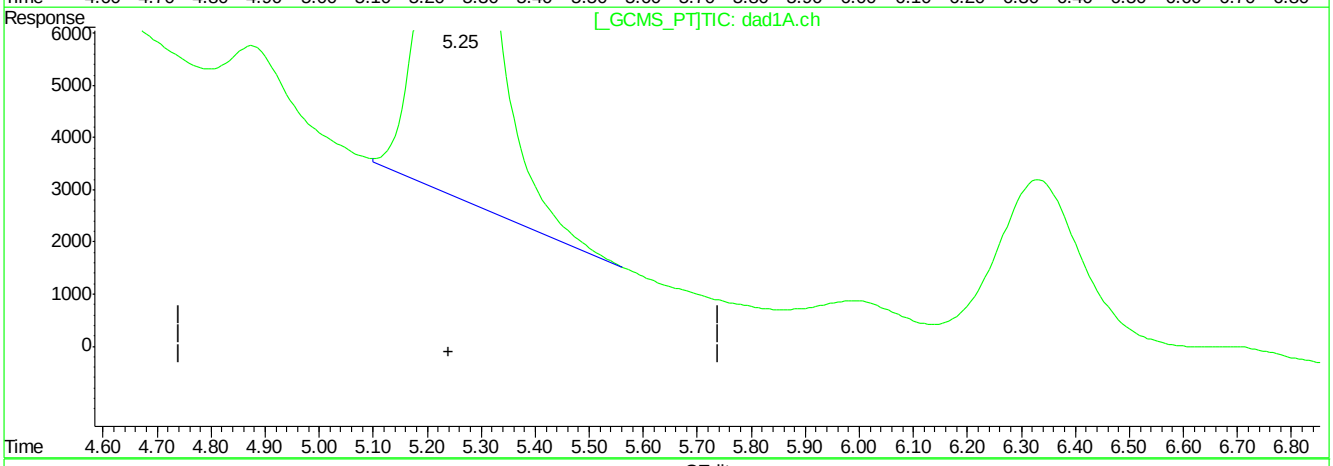
(+) = Expected Retention Time
GG622726.D GGG3059_103121.M Mon Nov 08 09:36:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1A.ch
Acq On : 05-Nov-2021, 16:30:16 Operator: jamesb
Sample : FA90260-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.25min 315.512ppb m

response 921839

(2) HMX #2

5.25min 318.344ppb m

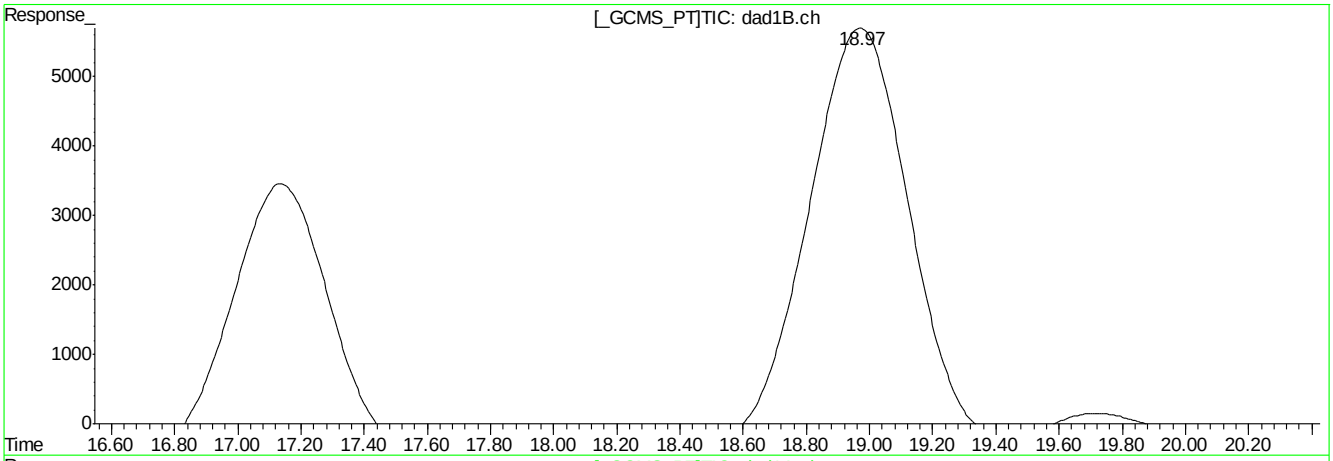
response 930113

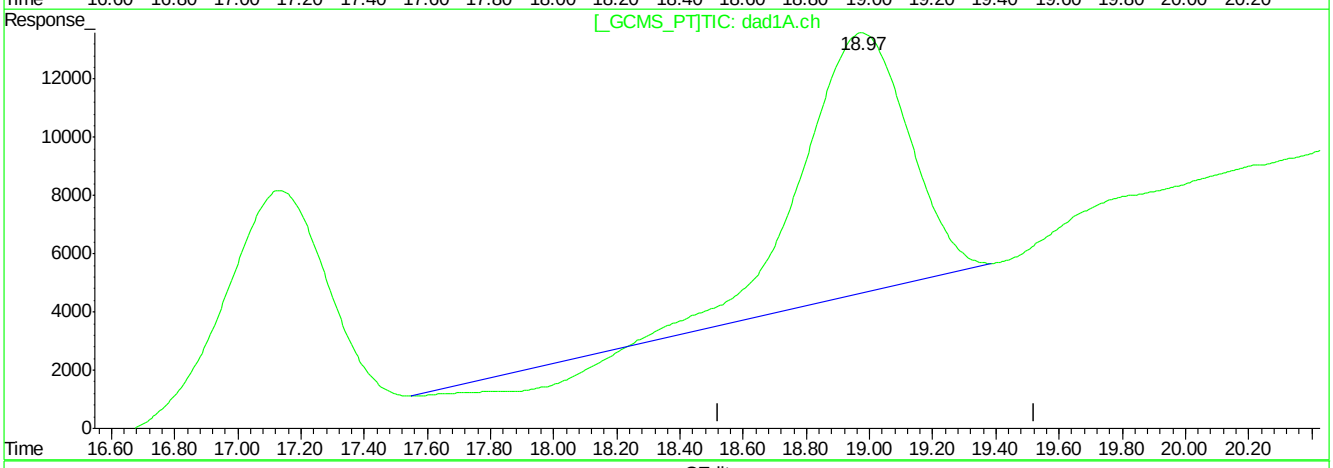
(+) = Expected Retention Time
GG622726.D GGG3059_103121.M Mon Nov 08 09:36:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1A.ch
Acq On : 05-Nov-2021, 16:30:16 Operator: jamesb
Sample : FA90260-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.97min 181.741ppb

response 1395134

(20) 2-Amino-4,6-Dinitrotoluene #2

18.98min 179.621ppb

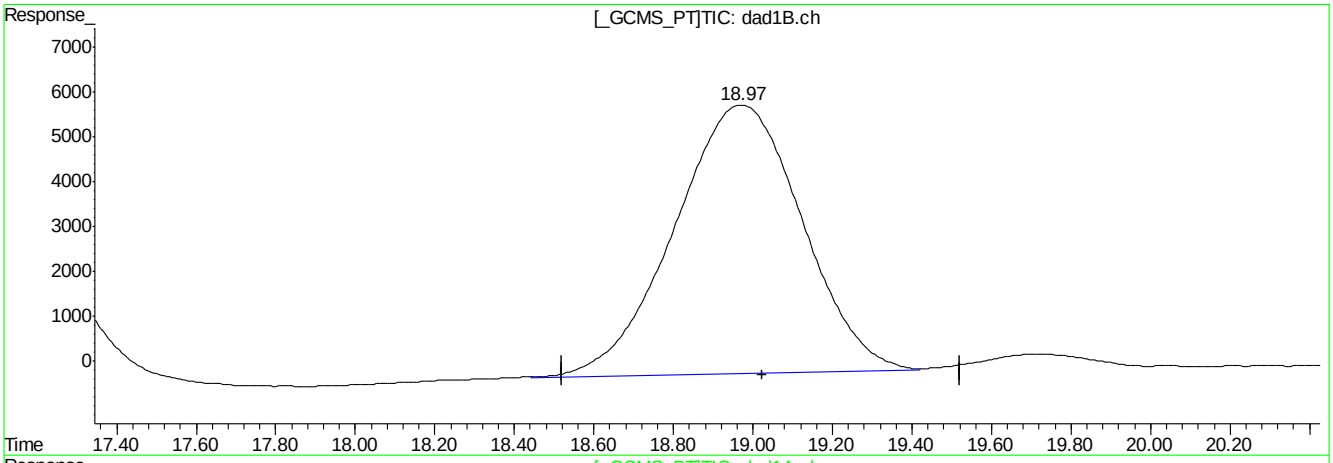
response 1947048

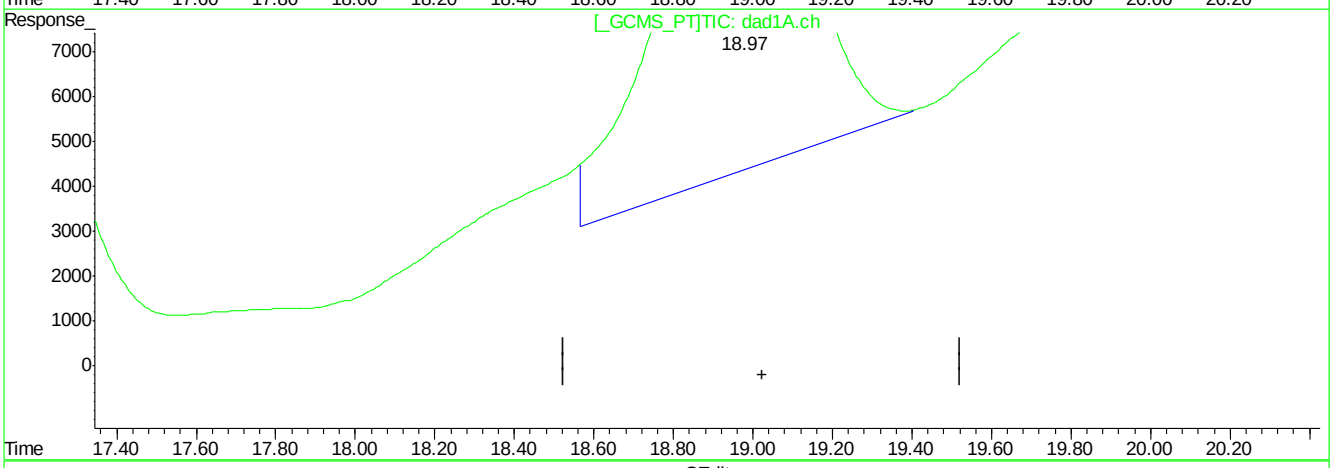
(+) = Expected Retention Time
GG622726.D GGG3059_103121.M Mon Nov 08 09:38:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622726.D\dad1A.ch
Acq On : 05-Nov-2021, 16:30:16 Operator: jamesb
Sample : FA90260-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.97min 173.694ppb m

response 1333360

(20) 2-Amino-4,6-Dinitrotoluene #2

18.97min 201.963ppb m

response 2189236

(+) = Expected Retention Time
GG622726.D GGG3059_103121.M Mon Nov 08 09:38:20 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/21 15:19

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : op88132,GBB2121,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 05 09:30:23 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.97	10.97	1294248	2284190	717.198	683.100
	Spiked Amount 500.000	Range 70 - 136		Recovery =		143.44%#	136.62%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.45	1.45	368897	1086231	254.983	272.480
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.87	2.87	181575	285424	104.739	105.140
6)	1,3,5-Trinitrobe	4.64	4.64	365984	691468	100.051m	121.684m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	6.14	6.14	175557	334264	47.834	52.142m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.72	9.72	1370243	1533527	411.272m	406.879m
13)	2-Amino-4,6-Dini	9.92f	9.89f	472613	815337	148.087m	165.962m
14)	4-Amino-2,6-Dini	10.49	10.49	323717	612999	142.115	130.822
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	18.52	0.00	85219	0	NoCal	N.D.

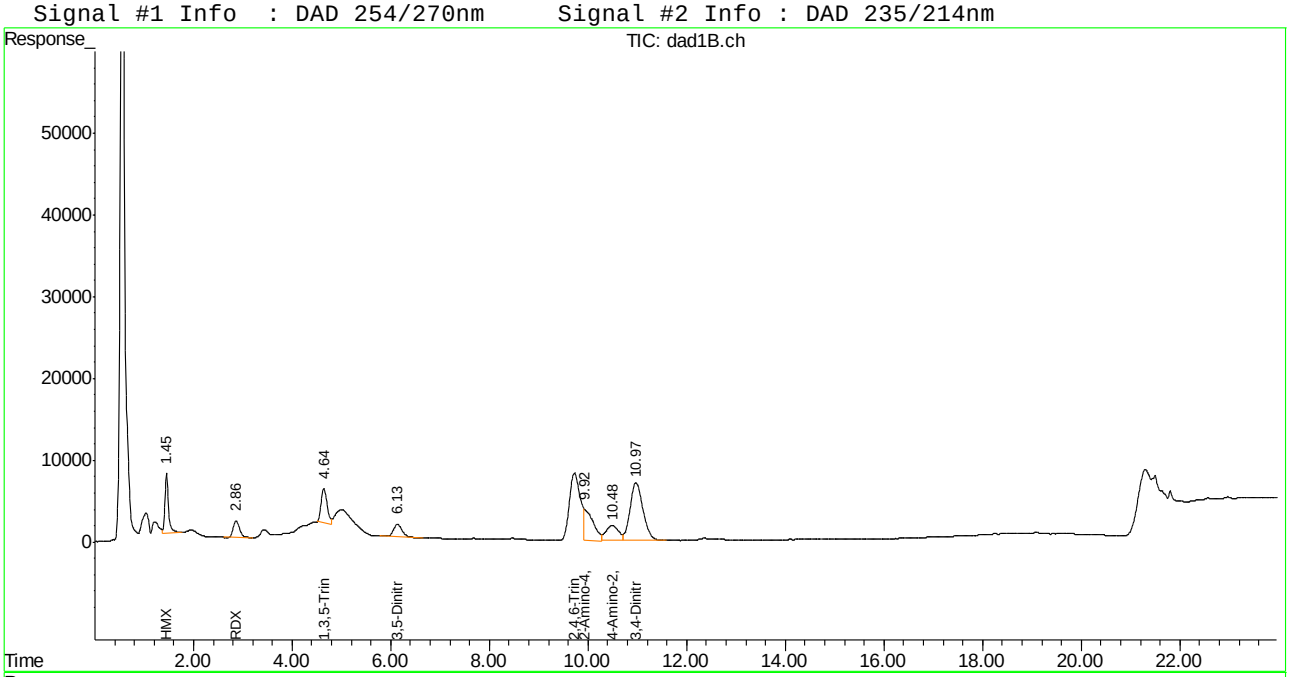
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070815.D BBB2118_103021.M Fri Nov 05 13:54:29 2021 Page 1

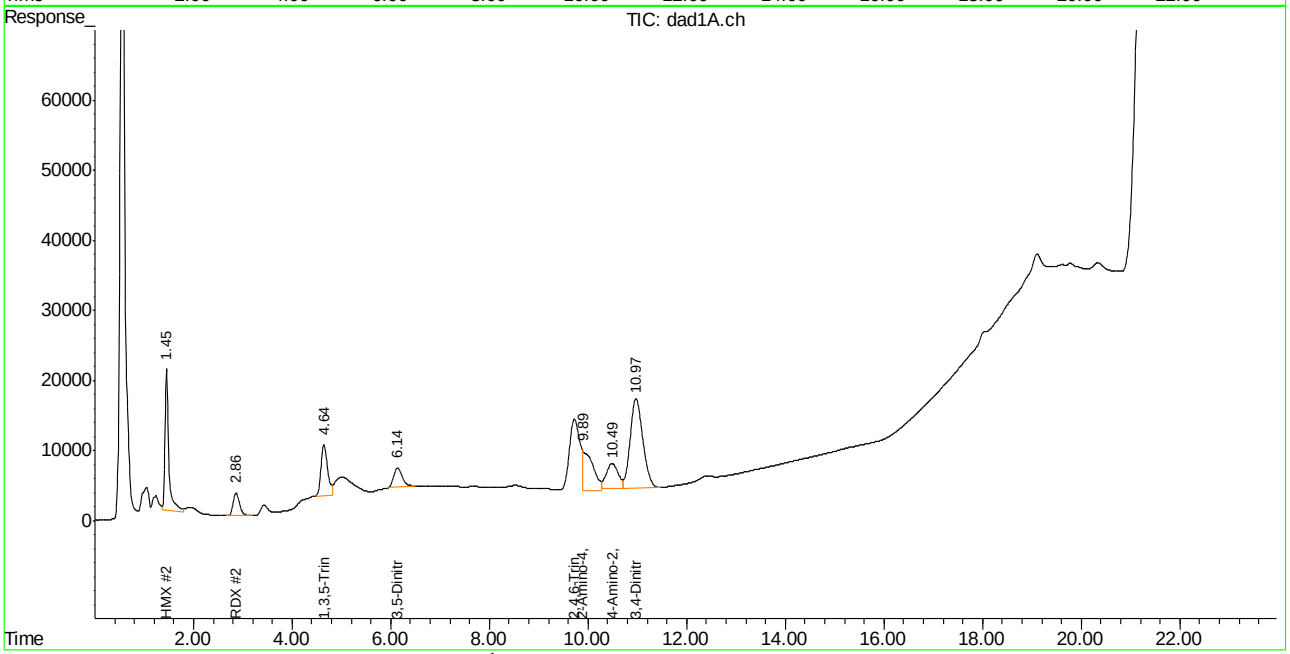
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : op88132,GBB2121,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 12:52 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

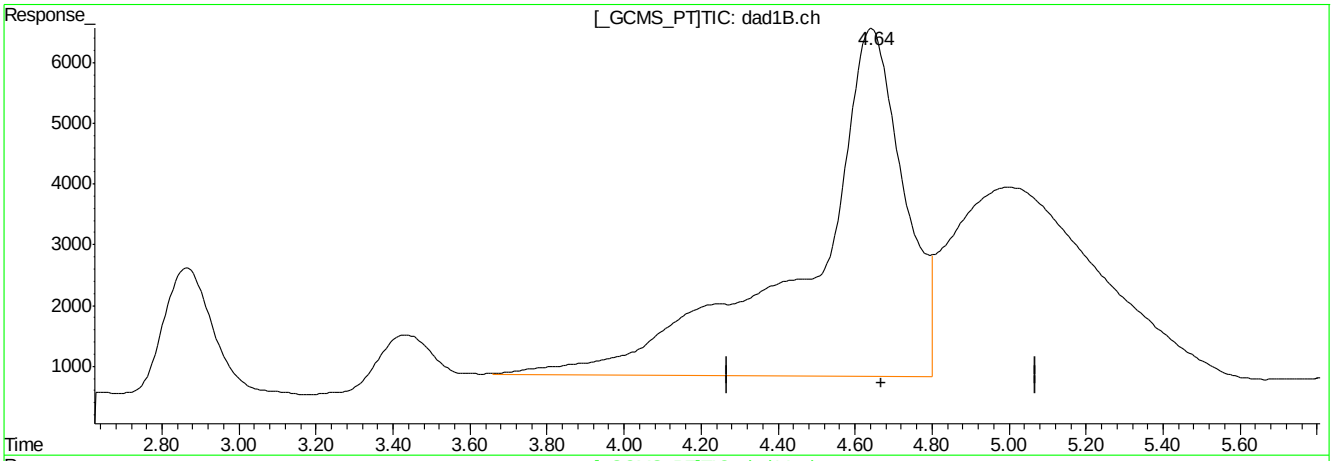
Sample Number: FA90260-3
Lab FileID: BB070815.D
Injection Time: 11/04/21 15:20
Method: SW846 8330B
Analyst approved: 11/05/21 15:02 James Boone
Supervisor approved: 11/12/21 15:19 Naresh Jiawan

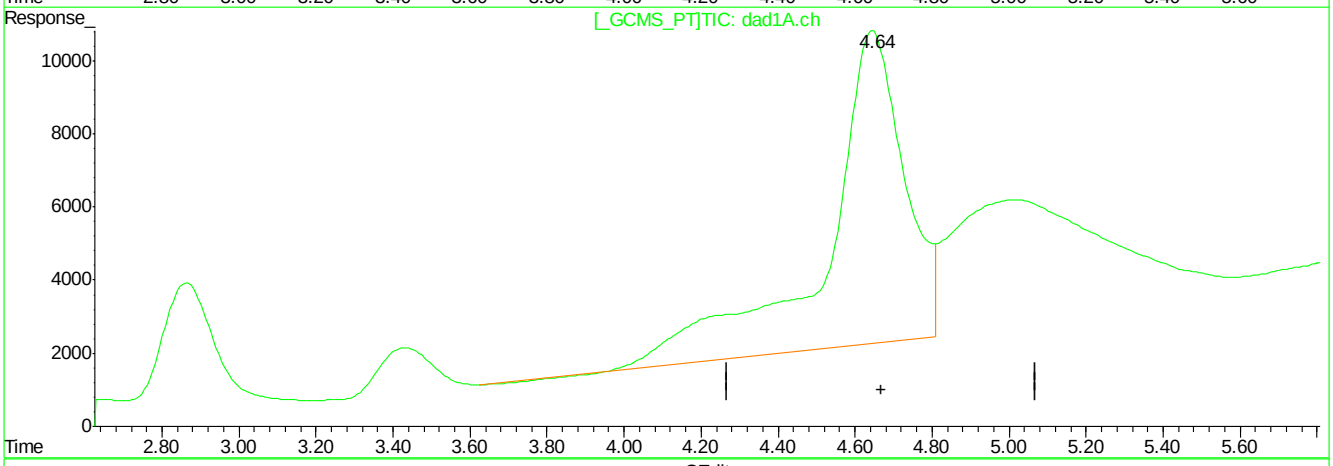
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	4.64	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.64	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.14	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.72	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	9.72	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	9.89	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.92	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.64min 271.065ppb

response 991549

(6) 1,3,5-Trinitrobenzene #2

4.65min 213.061ppb

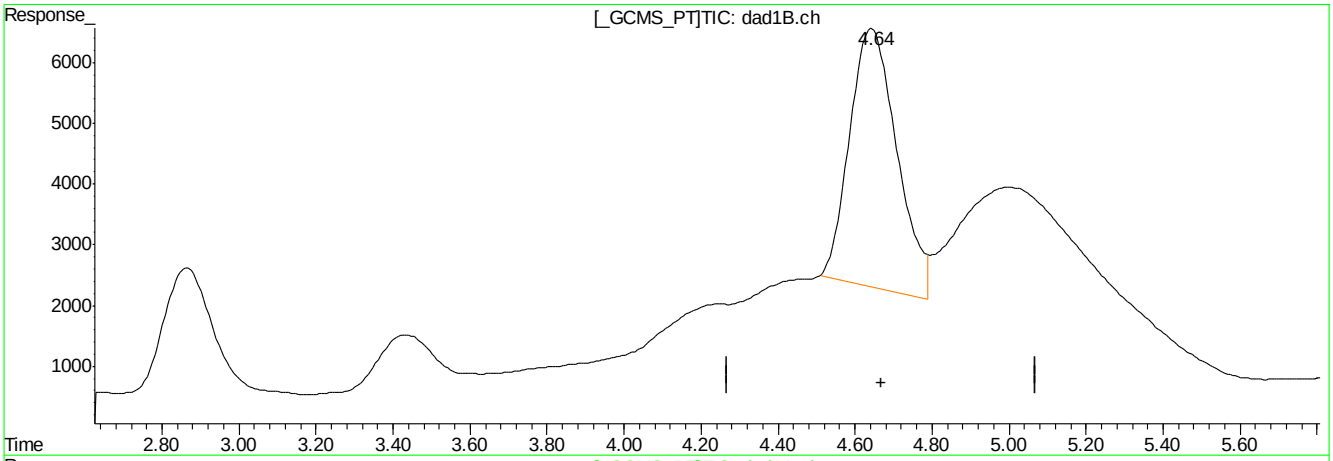
response 1210719

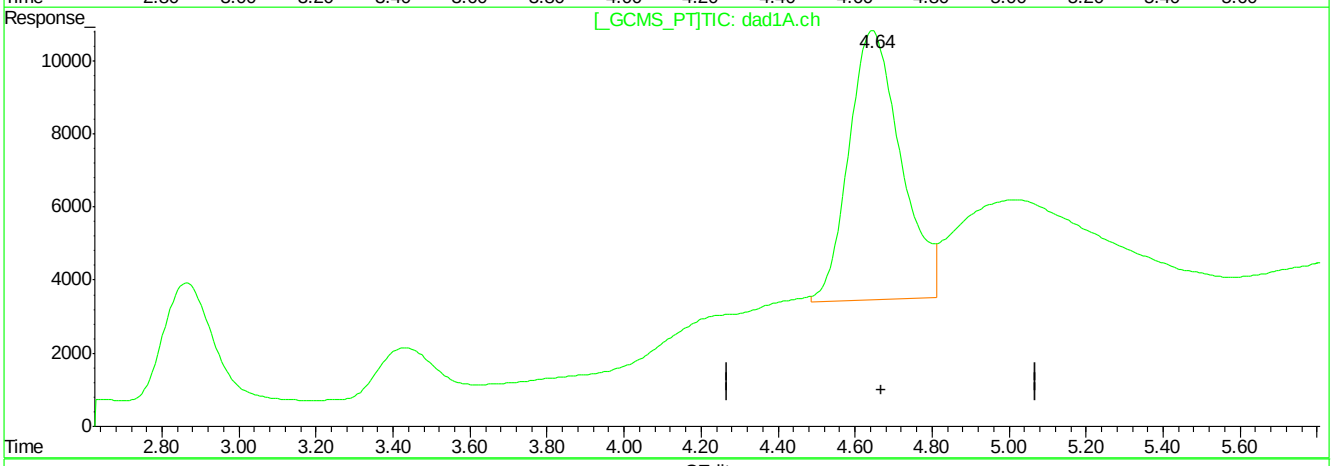
(+) = Expected Retention Time
BB070815.D BBB2118_103021.M Fri Nov 05 12:51:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.64min 100.051ppb m

response 365984

(6) 1,3,5-Trinitrobenzene #2

4.64min 121.684ppb m

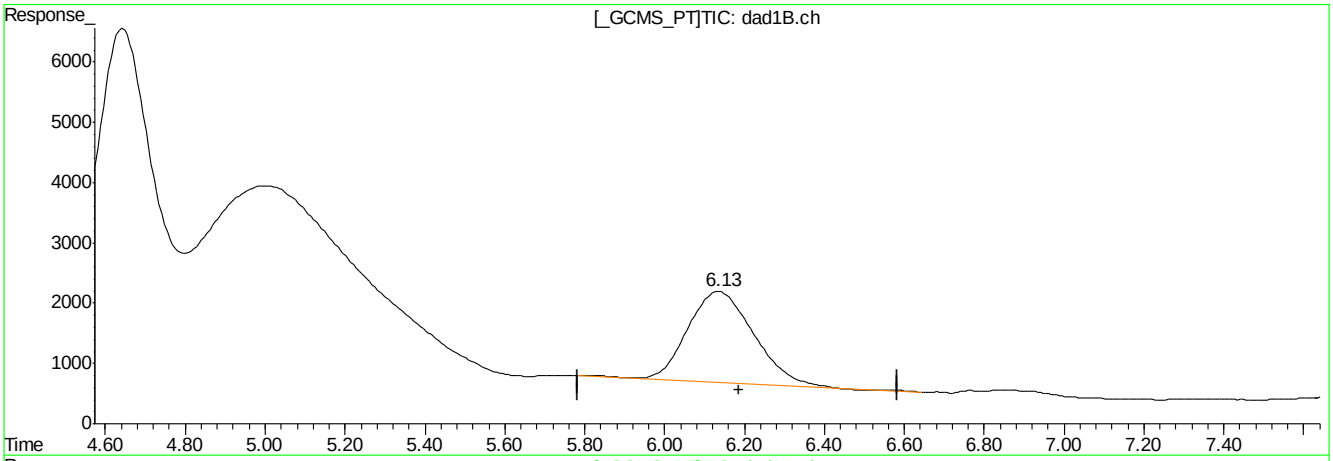
response 691468

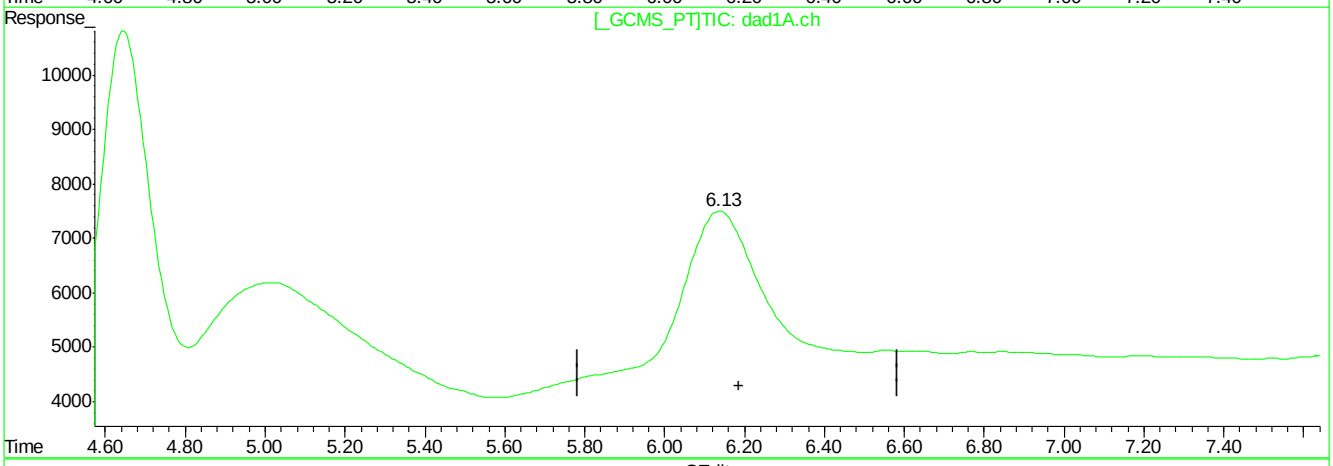
(+) = Expected Retention Time
BB070815.D BBB2118_103021.M Fri Nov 05 12:51:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.14min 47.834ppb

response 175557

(8) 3,5-Dinitroaniline #2

6.14min 123.780ppb

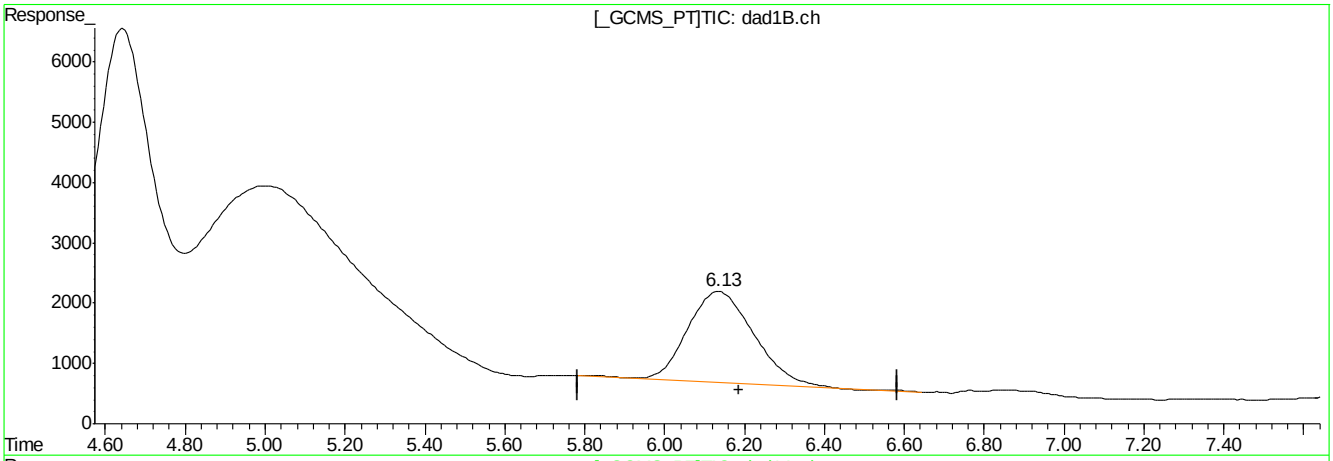
response 793501

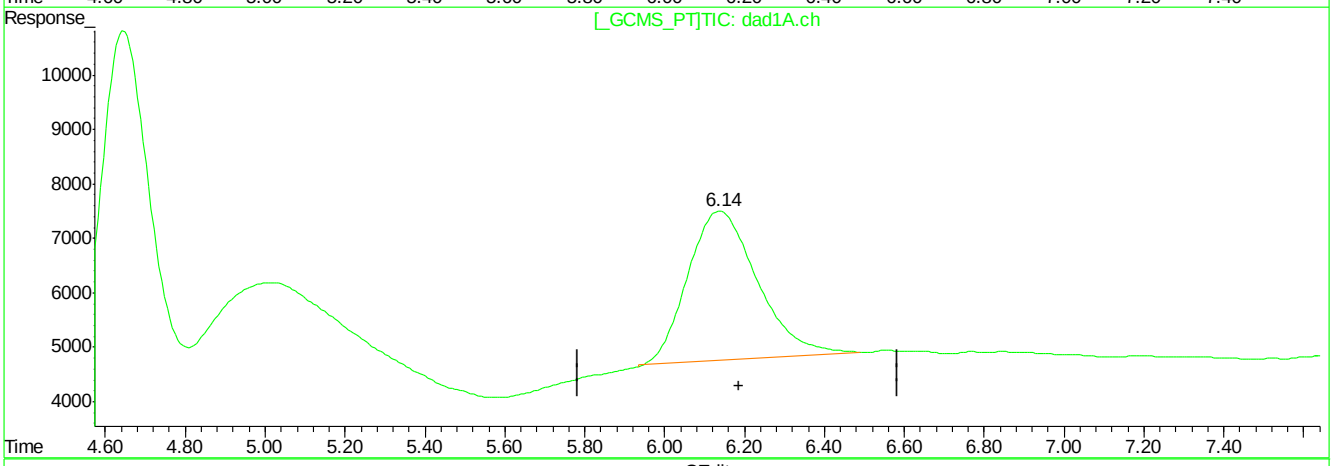
(+) = Expected Retention Time
BB070815.D BBB2118_103021.M Fri Nov 05 12:51:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.14min 47.834ppb

response 175557

(8) 3,5-Dinitroaniline #2

6.14min 52.142ppb m

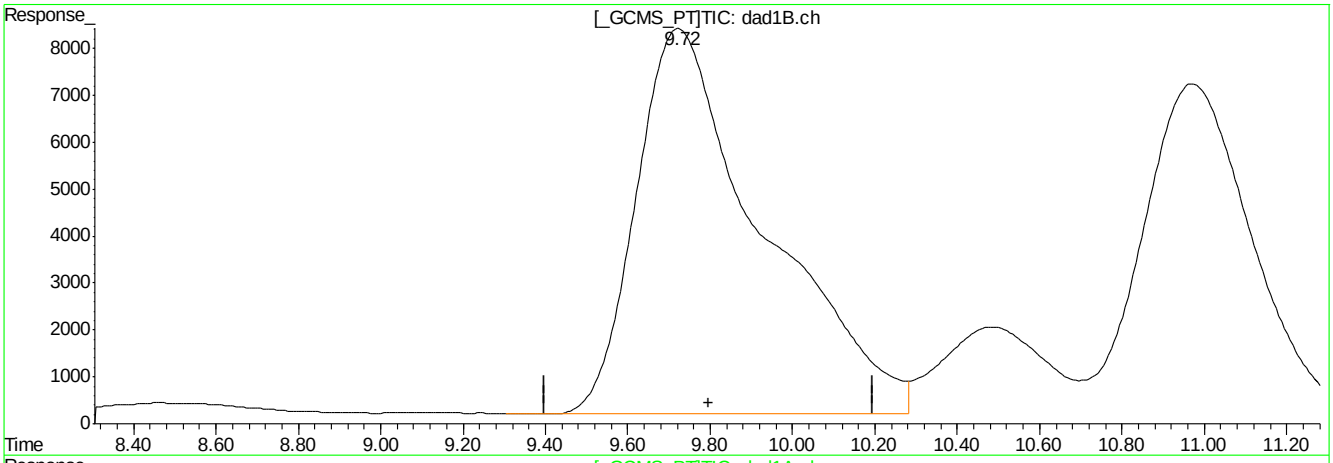
response 334264

(+) = Expected Retention Time
BB070815.D BBB2118_103021.M Fri Nov 05 12:51:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

9.72min 527.619ppb

response 1757878

(12) 2,4,6-Trinitrotoluene #2

9.72min 598.685ppb

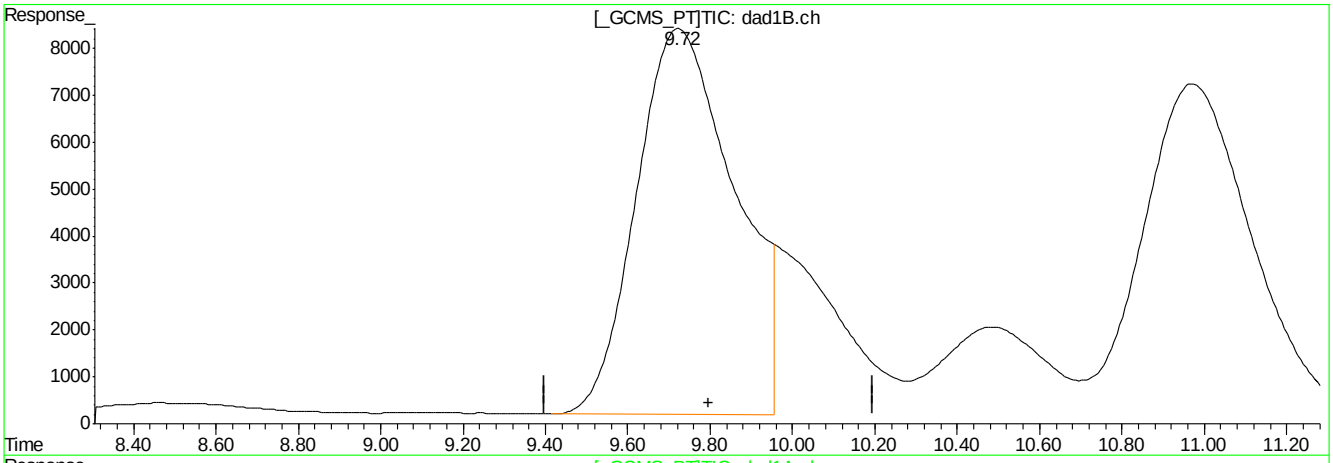
response 2256442

(+) = Expected Retention Time
BB070815.D BBB2118_103021.M Fri Nov 05 12:51:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

9.72min 411.272ppb m

response 1370243

(12) 2,4,6-Trinitrotoluene #2

9.72min 406.879ppb m

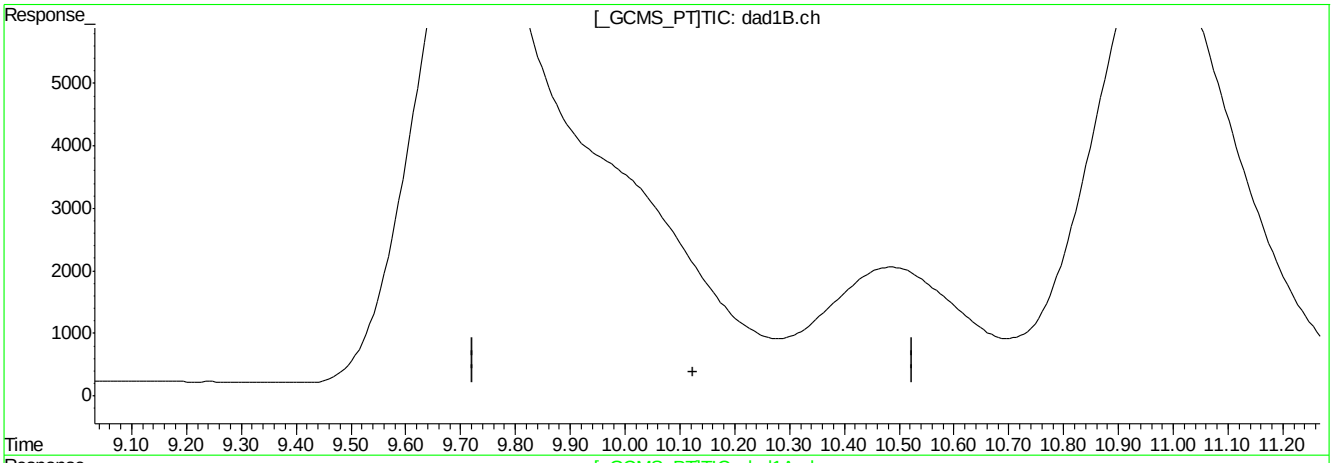
response 1533527

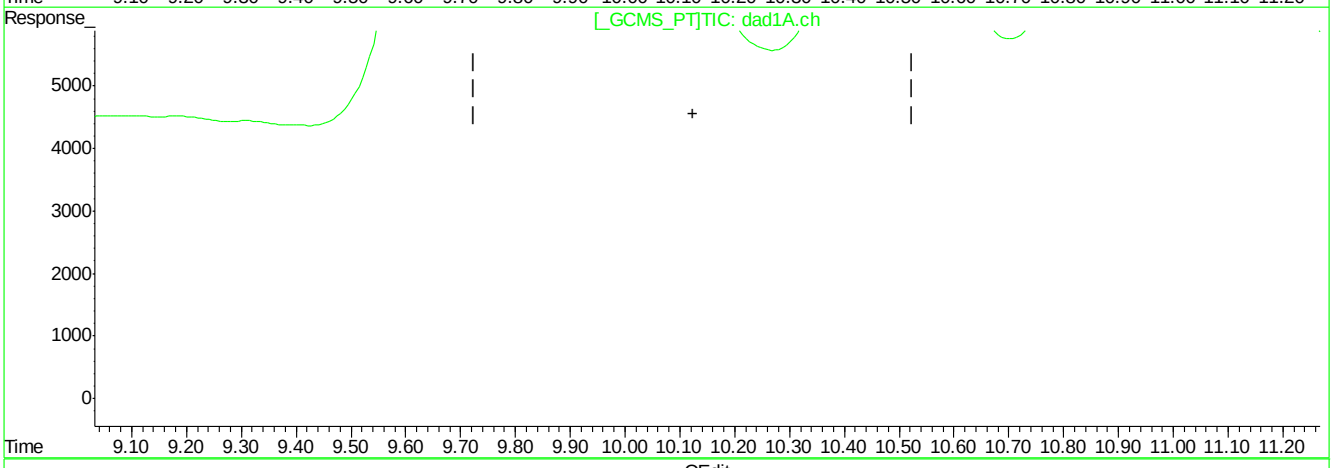
(+) = Expected Retention Time
BB070815.D BBB2118_103021.M Fri Nov 05 12:51:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

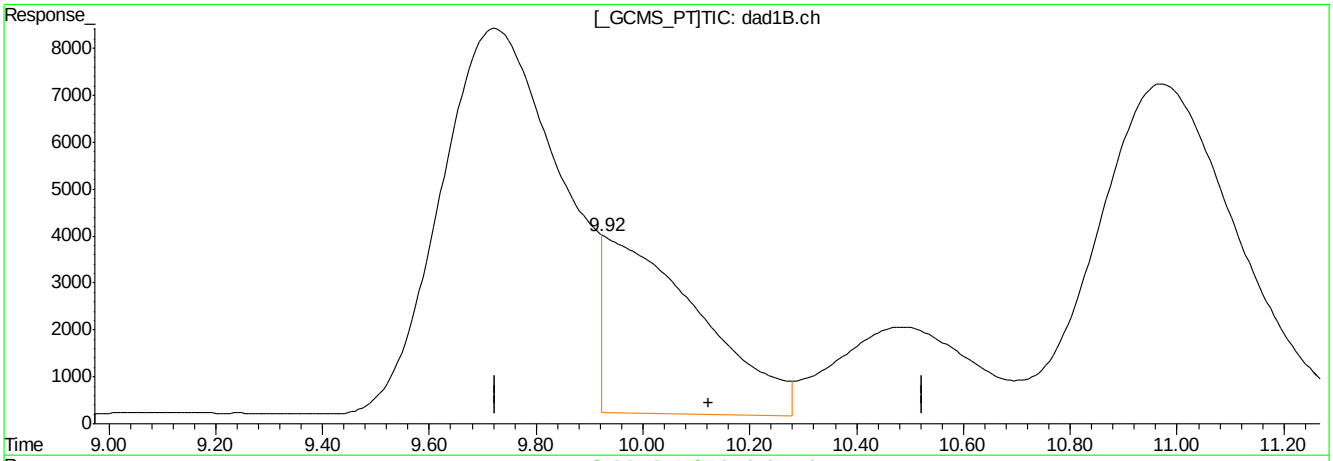
response 0

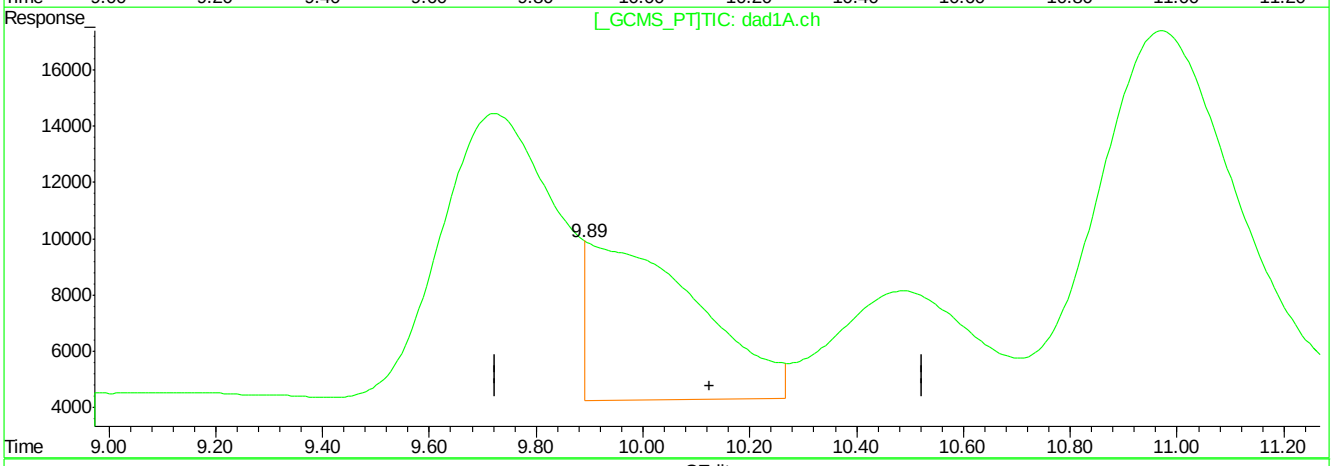
(+) = Expected Retention Time
BB070815.D BBB2118_103021.M Fri Nov 05 12:51:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070815.D\dad1A.ch
Acq On : 04-Nov-2021, 15:20:13 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

9.92min 148.087ppb m

response 472613

(13) 2-Amino-4,6-Dinitrotoluene #2

9.89min 165.962ppb m

response 815337

(+) = Expected Retention Time
BB070815.D BBB2118_103021.M Fri Nov 05 12:52:02 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/21 15:19

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1A.ch
Acq On : 05-Nov-2021, 17:01:41 Operator: jamesb
Sample : FA90260-3cf Inst : G1315B
Misc : op88132,GGG3063,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 07 09:58:28 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.77	13.77	3108583	6098828	756.422	731.396
	Spiked Amount 500.000	Range 70 - 136		Recovery =		151.28%#	146.28%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.24	5.24	827914	827914	283.365	283.365
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.42	7.42	1029762	1029762	123.605	123.605
6)	RDX	7.72	7.72	402307	402307	101.763	101.763
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.45	11.45	2985564	3966208	372.387	363.806
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.37	15.36	535284	1106225	61.494m	78.604m
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.11	17.11	877249	1856875	185.764	224.280
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	18.94	18.94	1238388	1668599	161.322	153.933m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

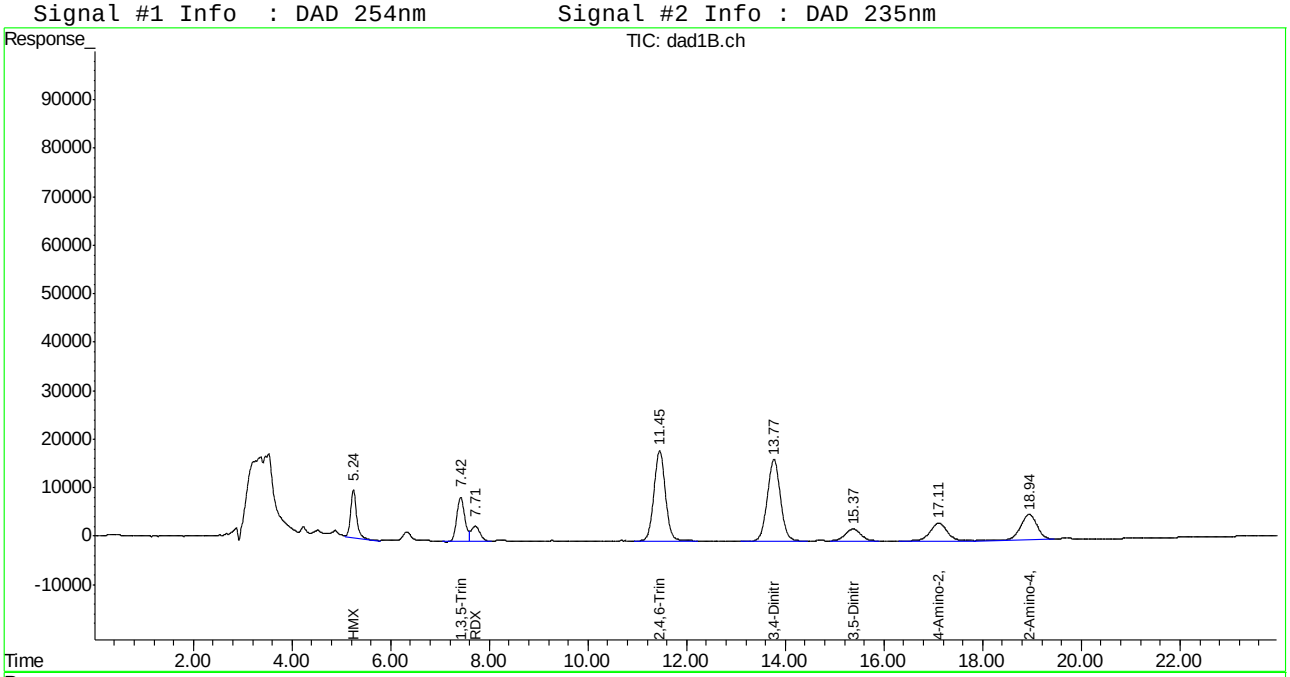
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622727.D GGG3059_103121.M Mon Nov 08 10:48:54 2021 Page 1

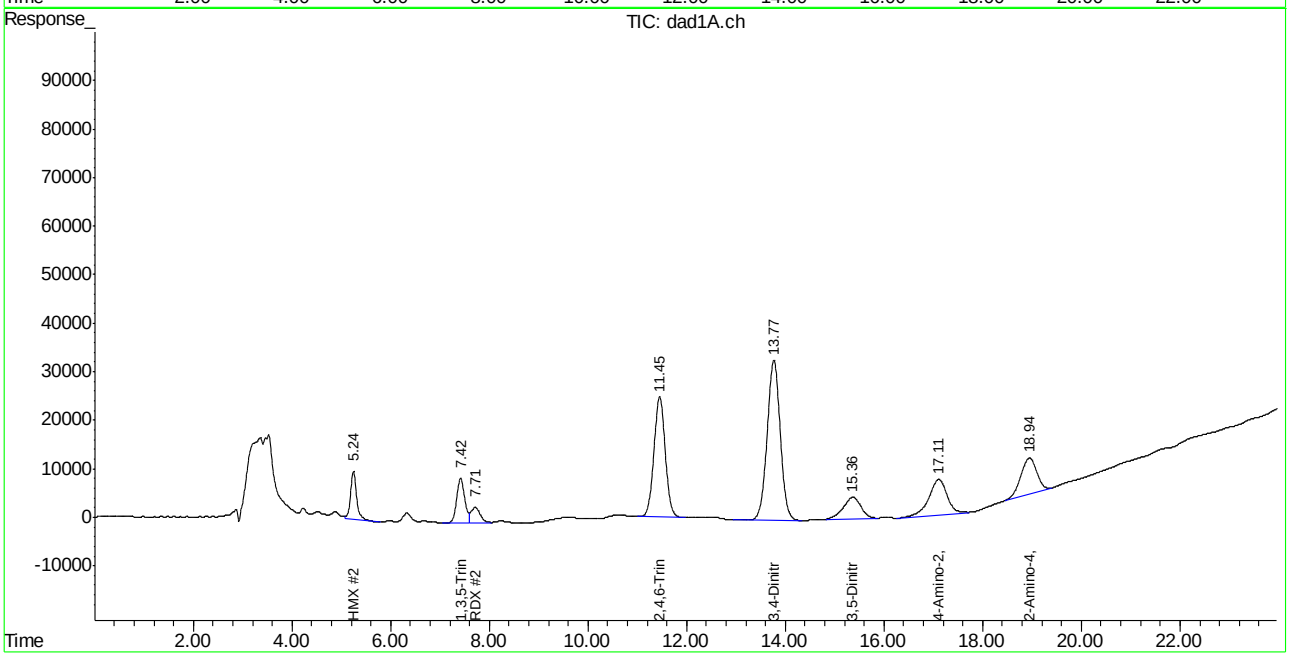
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1A.ch
Acq On : 05-Nov-2021, 17:01:41 Operator: jamesb
Sample : FA90260-3cf Inst : G1315B
Misc : op88132,GGG3063,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 8 9:40 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

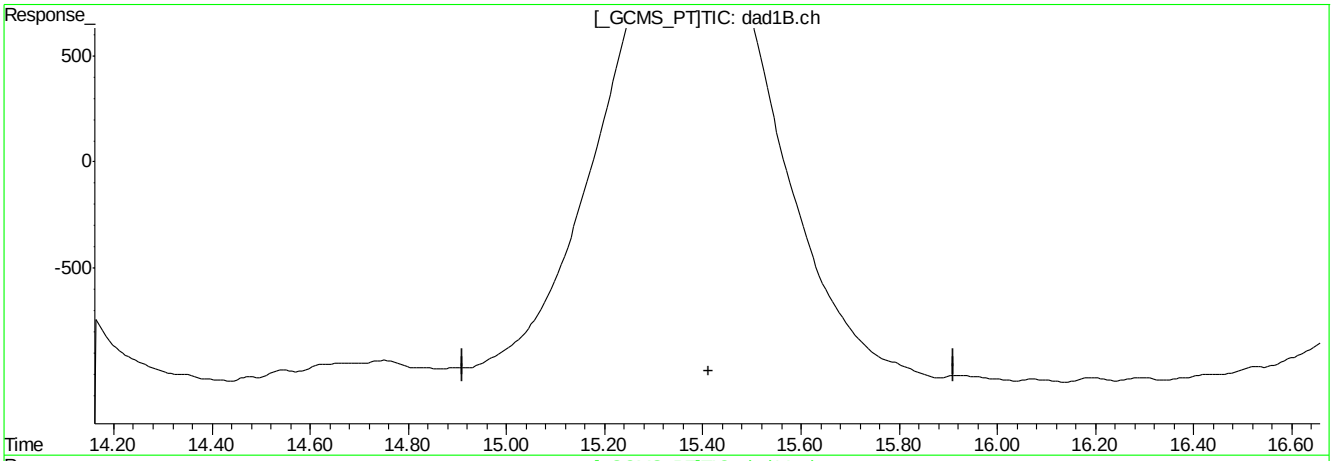
Sample Number: FA90260-3
Lab FileID: GG622727.D
Injection Time: 11/05/21 17:01
Method: SW846 8330B
Analyst approved: 11/08/21 14:44 James Boone
Supervisor approved: 11/12/21 15:19 Naresh Jiawan

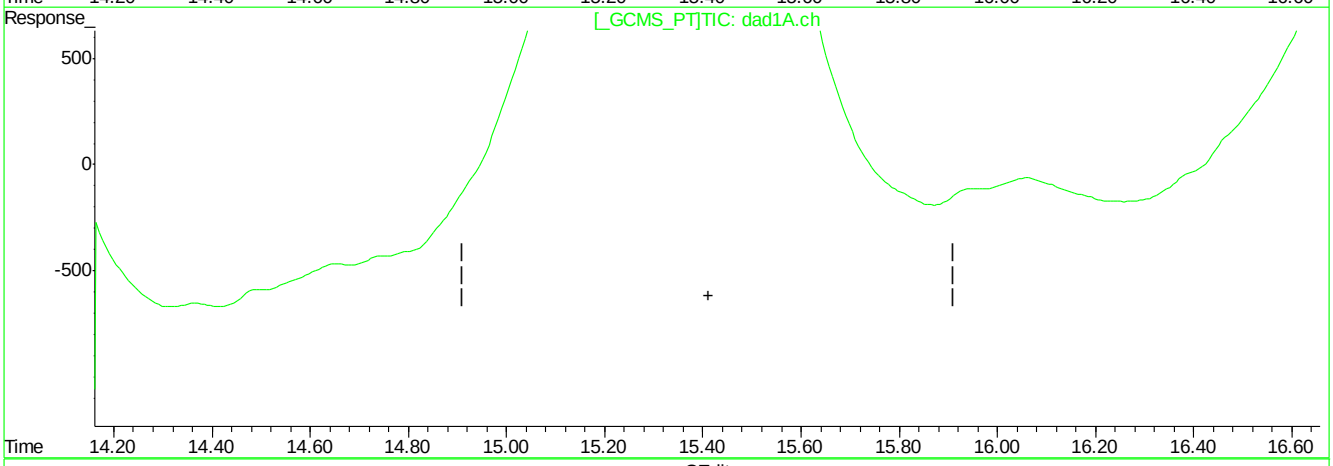
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	2	15.36	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	15.37	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	18.94	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1A.ch
Acq On : 05-Nov-2021, 17:01:41 Operator: jamesb
Sample : FA90260-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,5-Dinitroaniline

0.00min 0.000ppb d

response 0

(15) 3,5-Dinitroaniline #2

0.00min 0.000ppb d

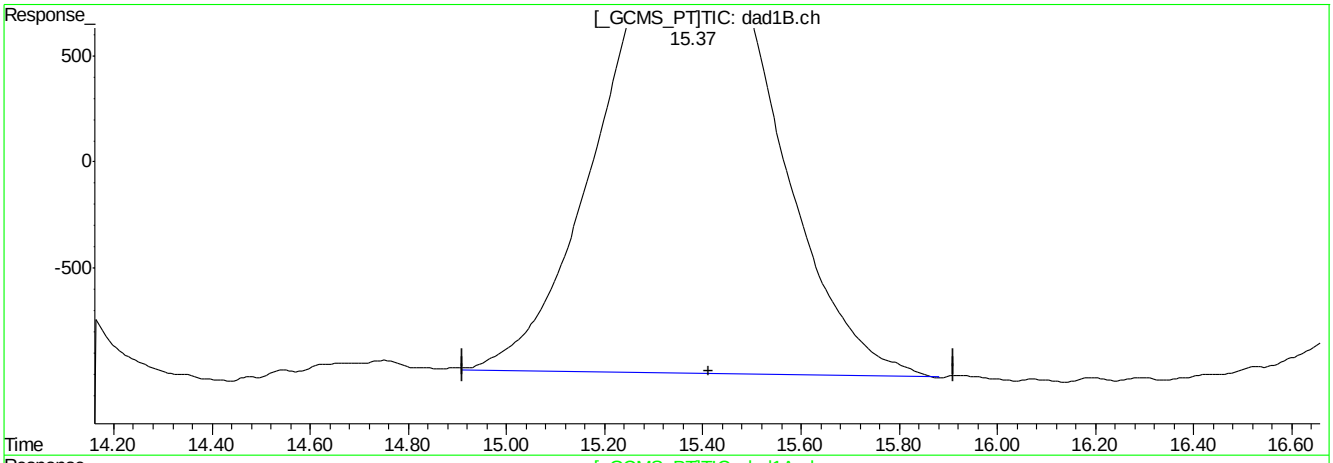
response 0

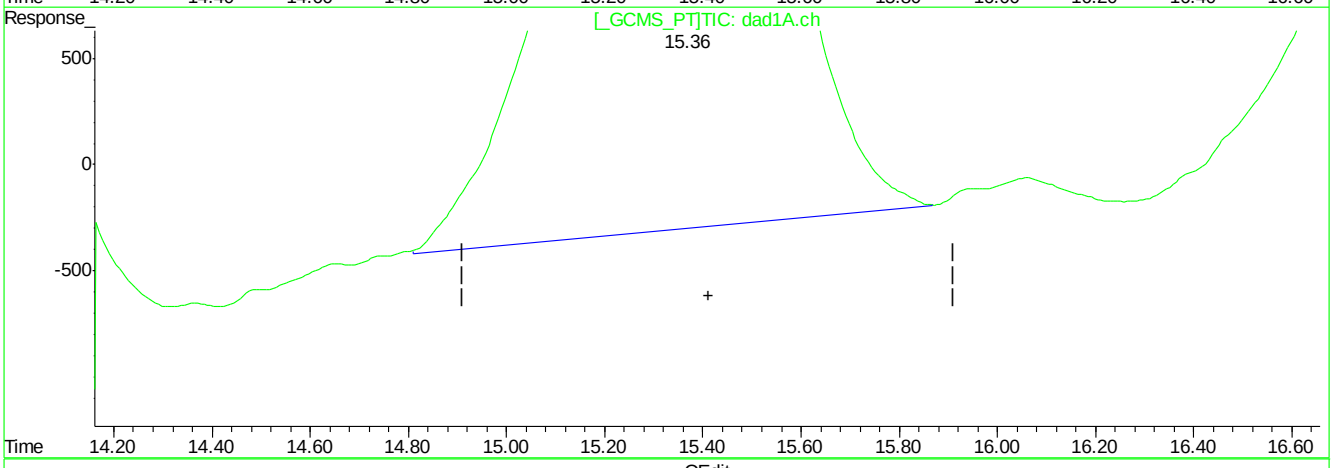
(+) = Expected Retention Time
GG622727.D GGG3059_103121.M Mon Nov 08 09:39:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1A.ch
Acq On : 05-Nov-2021, 17:01:41 Operator: jamesb
Sample : FA90260-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,5-Dinitroaniline

15.37min 61.494ppb m

response 535284

(15) 3,5-Dinitroaniline #2

15.36min 78.604ppb m

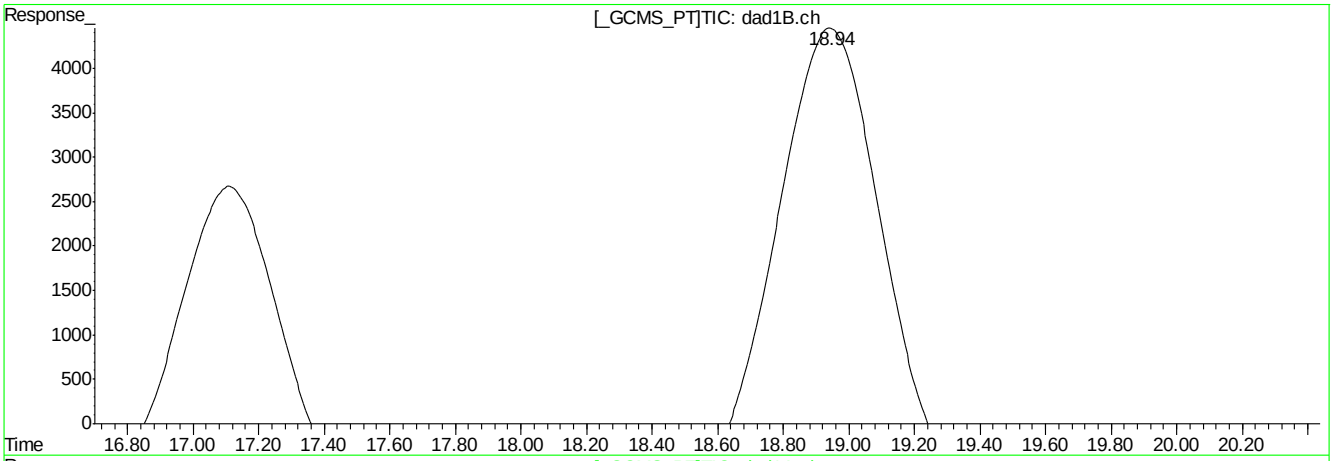
response 1106225

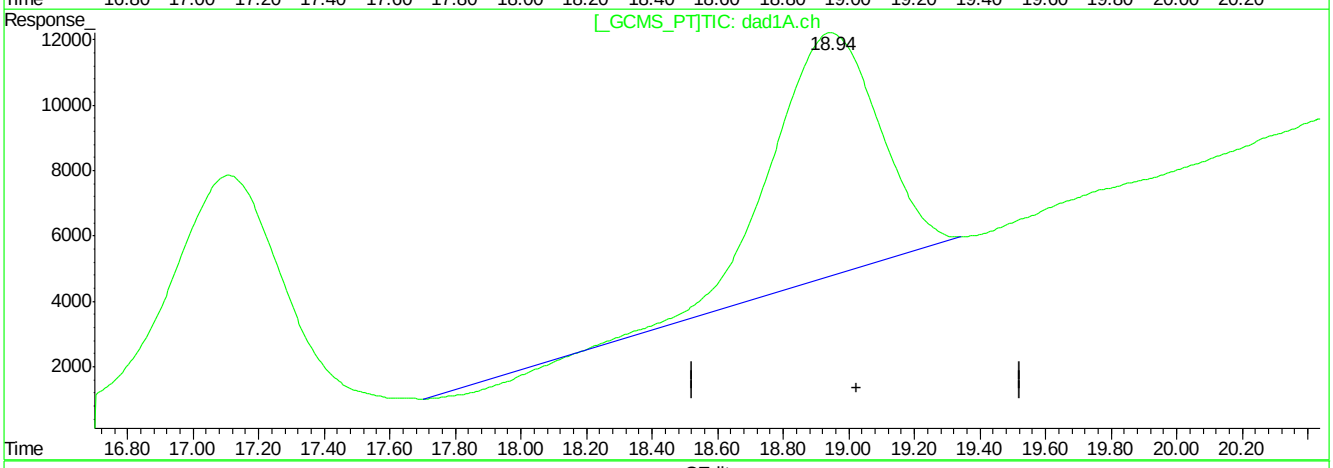
(+) = Expected Retention Time
GG622727.D GGG3059_103121.M Mon Nov 08 09:39:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1A.ch
Acq On : 05-Nov-2021, 17:01:41 Operator: jamesb
Sample : FA90260-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.94min 161.322ppb

response 1238388

(20) 2-Amino-4,6-Dinitrotoluene #2

18.95min 151.813ppb

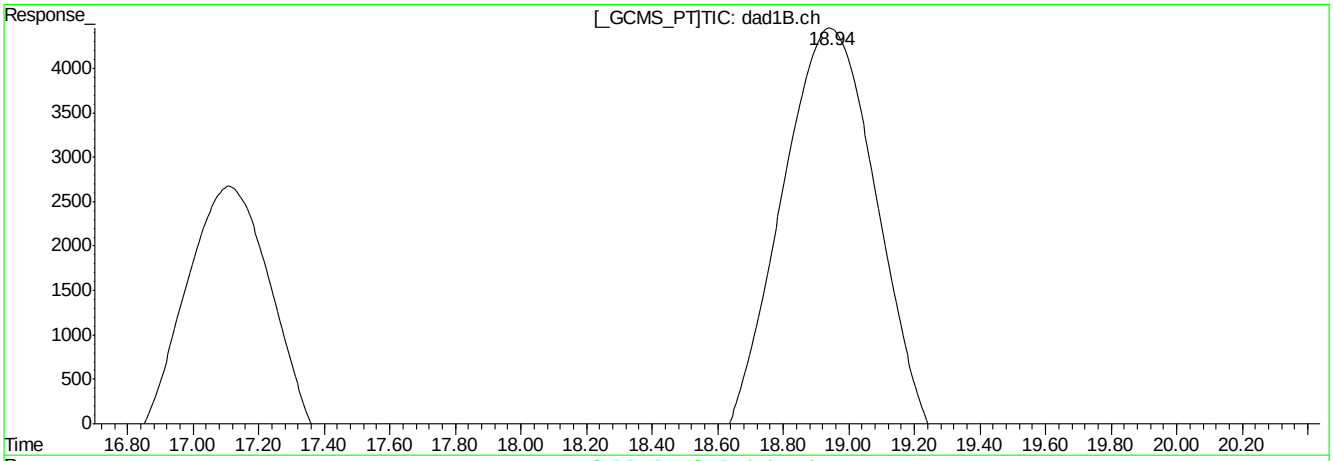
response 1645619

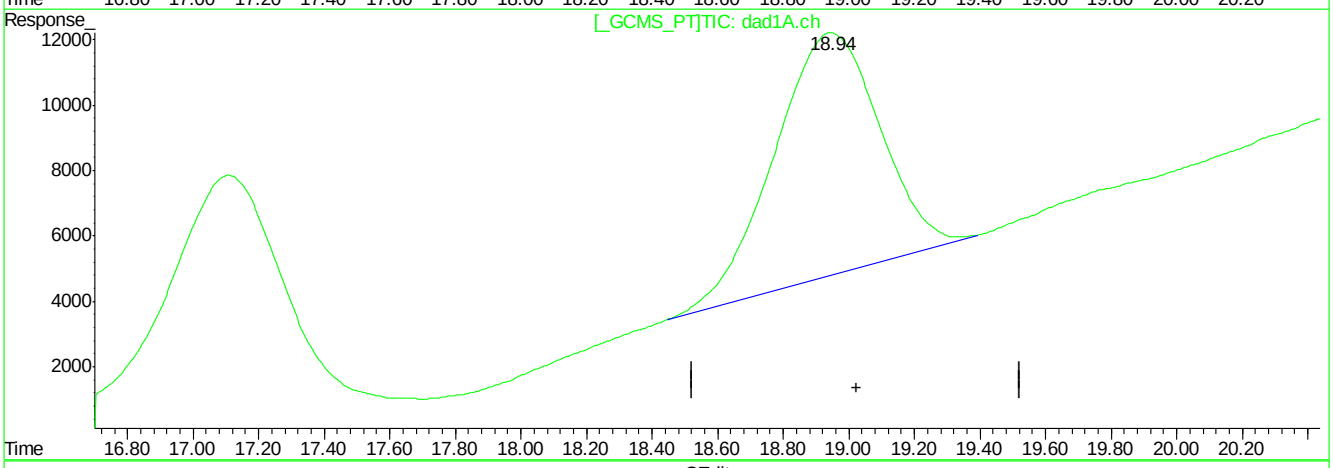
(+) = Expected Retention Time
GG622727.D GGG3059_103121.M Mon Nov 08 09:40:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622727.D\dad1A.ch
Acq On : 05-Nov-2021, 17:01:41 Operator: jamesb
Sample : FA90260-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.94min 161.322ppb

response 1238388

(20) 2-Amino-4,6-Dinitrotoluene #2

18.94min 153.933ppb m

response 1668599

(+) = Expected Retention Time
GG622727.D GGG3059_103121.M Mon Nov 08 09:40:13 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/21 15:19

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1A.ch
Acq On : 11-Nov-2021, 12:55:03 Operator: jamesb
Sample : FA90260-3cf Inst : G1315B
Misc : op88250,GPP2493,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55:41 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.28	11.28	1052788	1789599	553.343	556.901
	Spiked Amount 500.000	Range 70 - 136		Recovery =		110.67%	111.38%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.44	1.44	174129	561885	126.799m	145.677m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	2.88	2.88	88188	145130	51.151	52.814
6)	1,3,5-Trinitrobe	4.69	4.69	289059	526193	79.994m	74.993m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.20	6.21	151137	274461	40.474	42.635
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	9.94	9.94	587319	652055	175.971	171.807
13)	2-Amino-4,6-Dini	10.25	10.26	279613	372340	84.565	83.101
14)	4-Amino-2,6-Dini	10.78	10.78	201169	282448	83.822	62.921
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

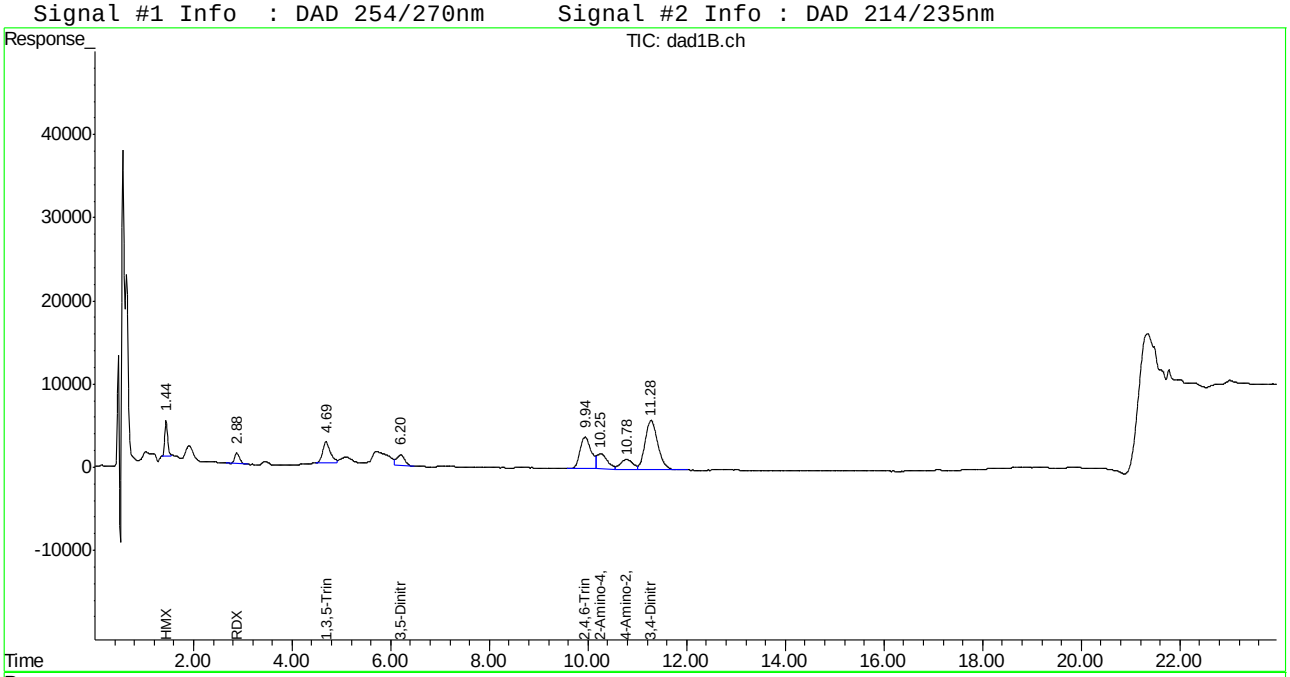
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391676.D GPP2490_110421.M Fri Nov 12 11:13:11 2021 Page 1

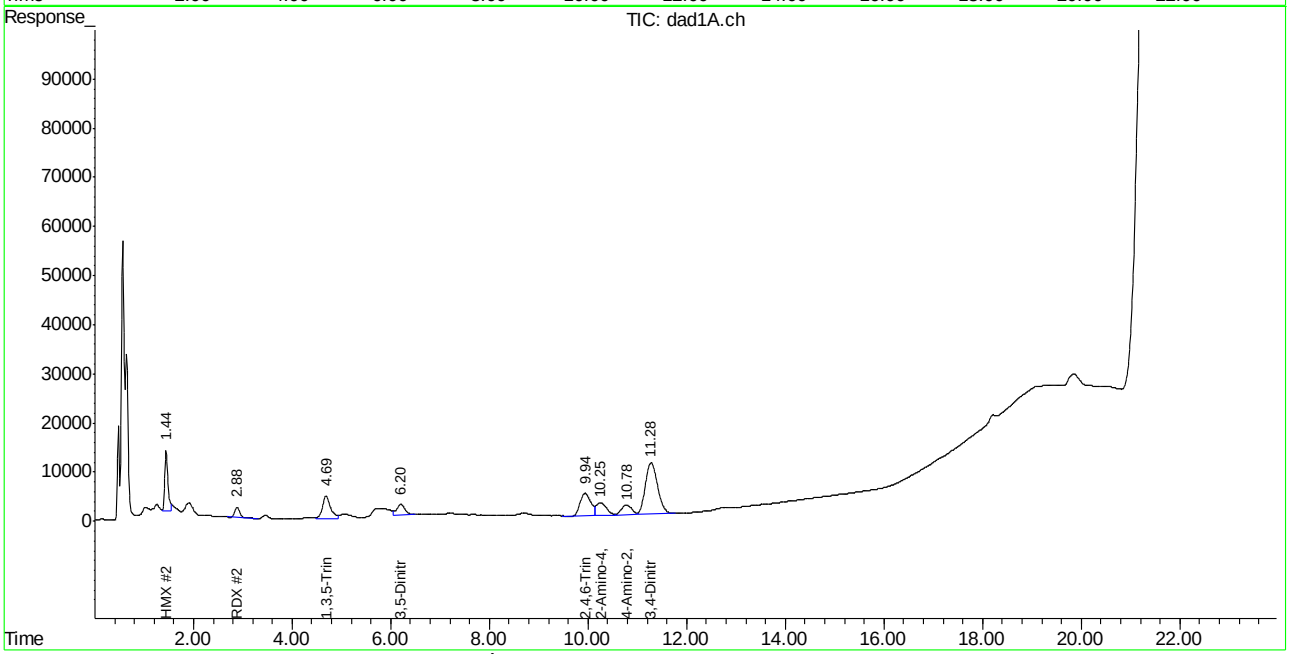
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1A.ch
Acq On : 11-Nov-2021, 12:55:03 Operator: jamesb
Sample : FA90260-3cf Inst : G1315B
Misc : op88250,GPP2493,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 11:05 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

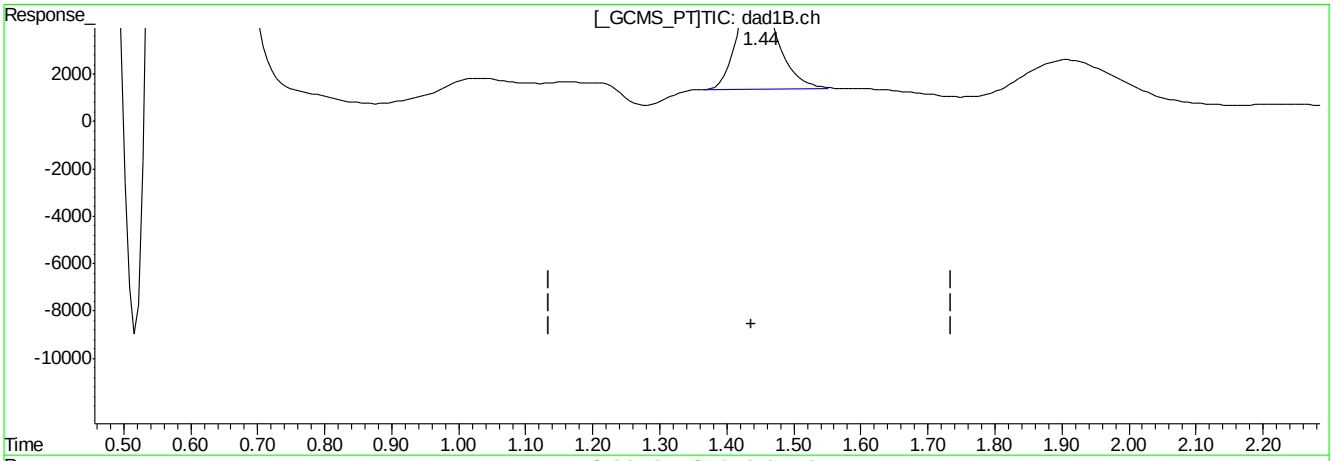
Sample Number: FA90260-3
Lab FileID: PP391676.D
Injection Time: 11/11/21 12:55
Method: SW846 8330B
Analyst approved: 11/12/21 11:20 James Boone
Supervisor approved: 11/12/21 15:19 Naresh Jiawan

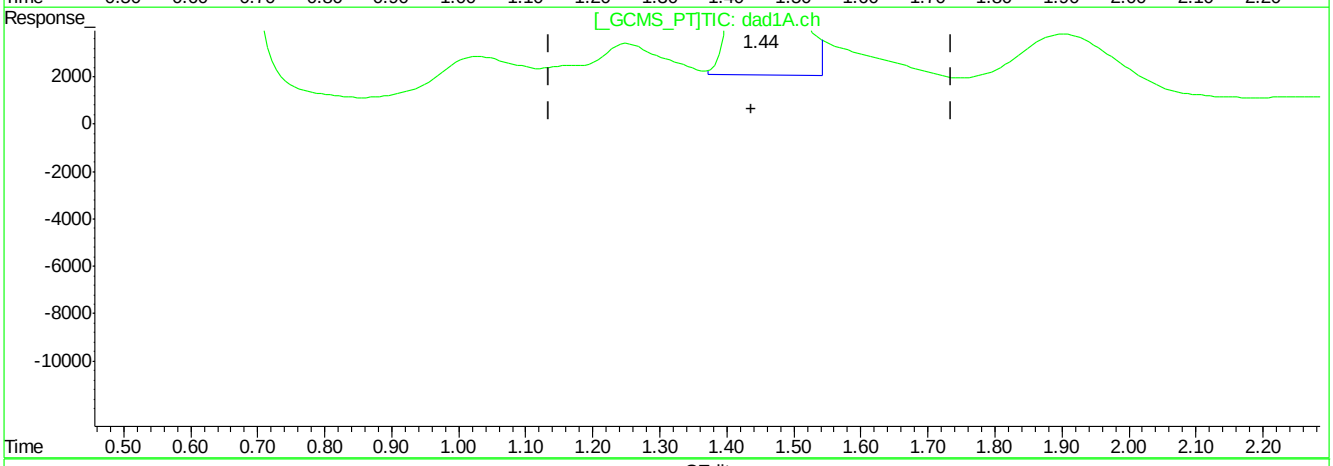
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.44	Poor instrument integration
HMX	2691-41-0	2	1.44	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.69	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.69	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1A.ch
Acq On : 11-Nov-2021, 12:55:03 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.44min 126.799ppb m

response 174129

(2) HMX #2

1.44min 145.677ppb m

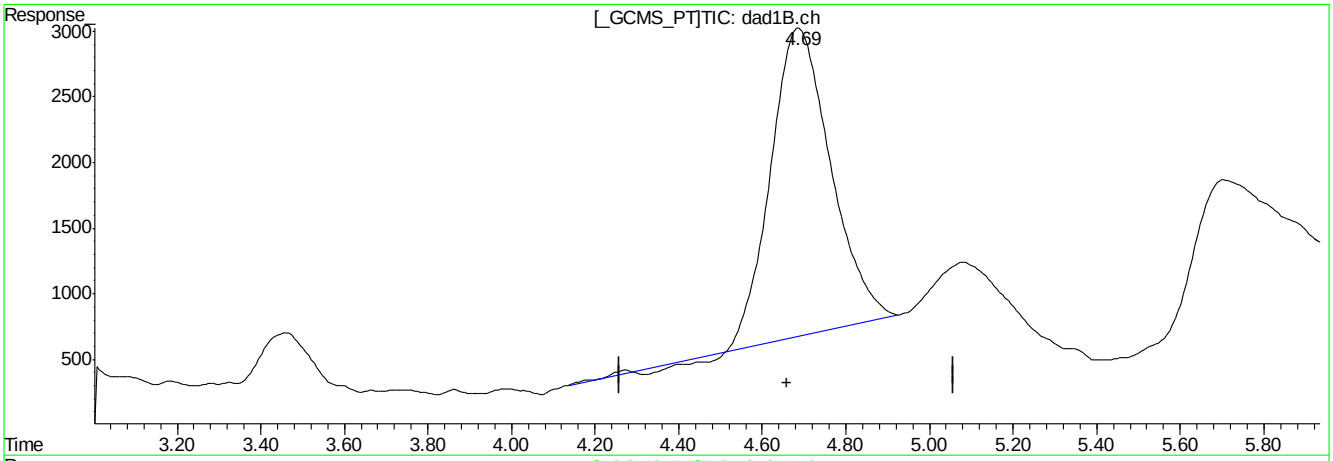
response 561885

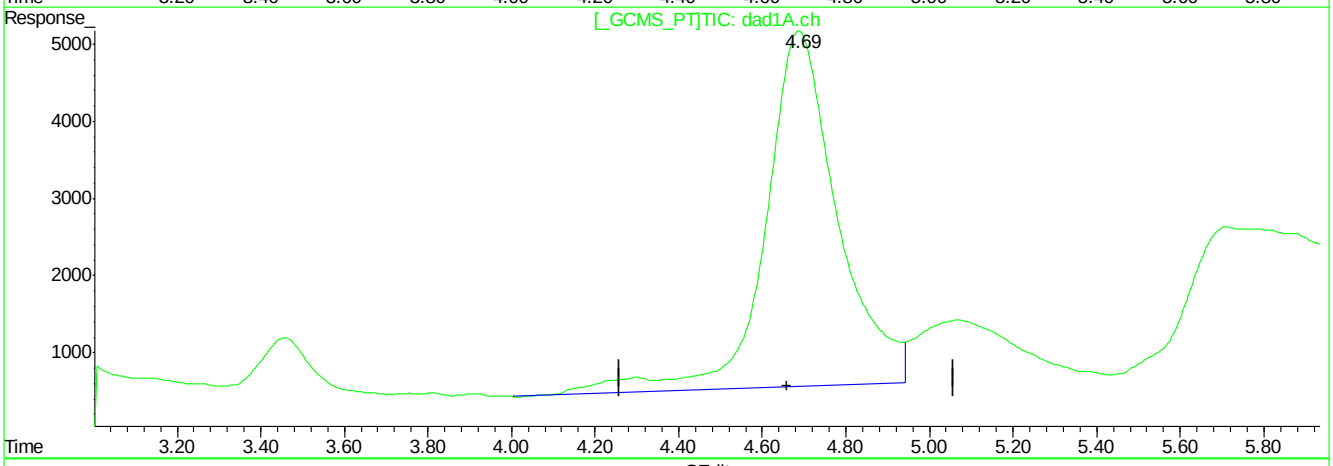
(+) = Expected Retention Time
PP391676.D GPP2490_110421.M Fri Nov 12 11:05:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1A.ch
Acq On : 11-Nov-2021, 12:55:03 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.69min 63.455ppb

response 229295

(6) 1,3,5-Trinitrobenzene #2

4.69min 78.861ppb

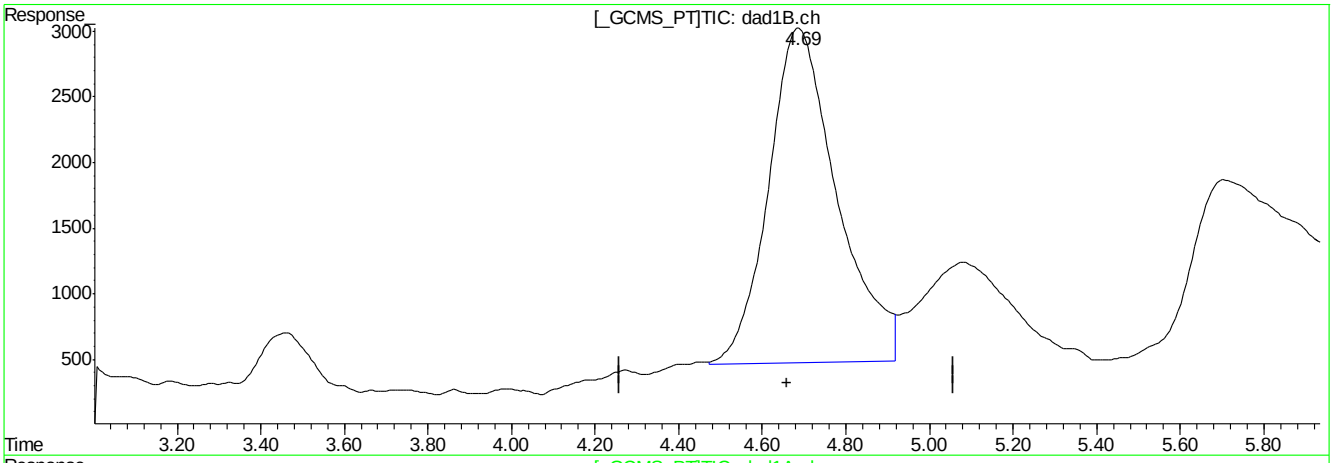
response 553336

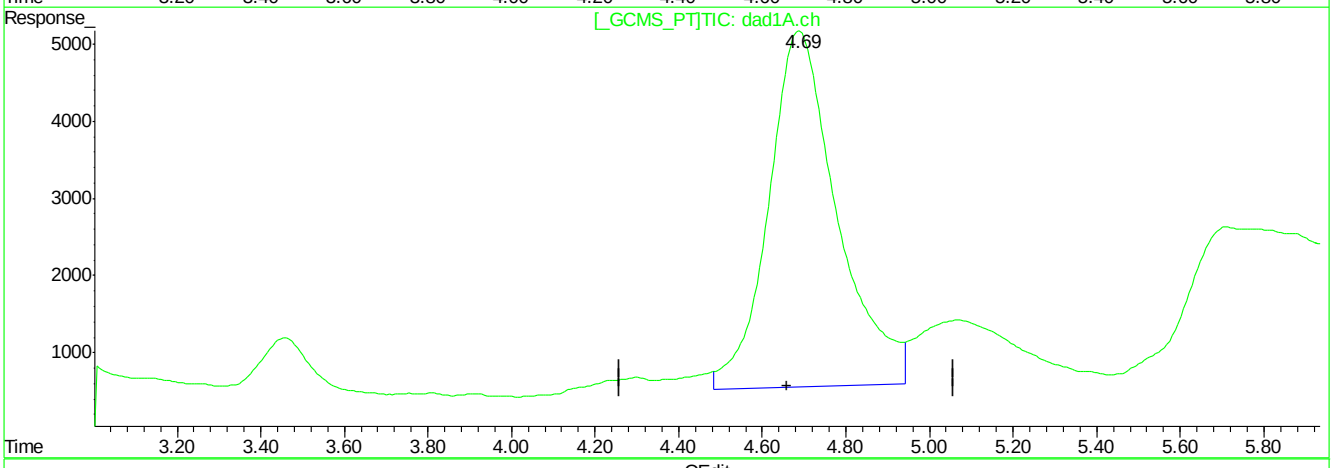
(+) = Expected Retention Time
PP391676.D GPP2490_110421.M Fri Nov 12 11:05:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391676.D\dad1A.ch
Acq On : 11-Nov-2021, 12:55:03 Operator: jamesb
Sample : FA90260-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.69min 79.994ppb m

response 289059

(6) 1,3,5-Trinitrobenzene #2

4.69min 74.993ppb m

response 526193

(+) = Expected Retention Time
PP391676.D GPP2490_110421.M Fri Nov 12 11:05:16 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 16:40

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : op88132,GBB2121,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 05 09:30:24 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.95	10.95	1221613	2128746	676.948	636.614
	Spiked Amount 500.000	Range 70 - 136		Recovery =		135.39%	127.32%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.45	1.45	1514741	4604967	1046.994	1155.151m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.85	2.85	66723	120260	38.488	44.299
6)	1,3,5-Trinitrobe	4.63	4.63	4858942	7747493	1328.316m	1363.394m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.11	6.11	241984	467368	65.933	72.906m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.70	9.70	3235629	3857152	971.159m	1023.389m
13)	2-Amino-4,6-Dini	9.90f	9.89f	1082087	1681727	339.058m	342.315m
14)	4-Amino-2,6-Dini	10.46	10.46	454361	890230	199.469	189.987
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D.

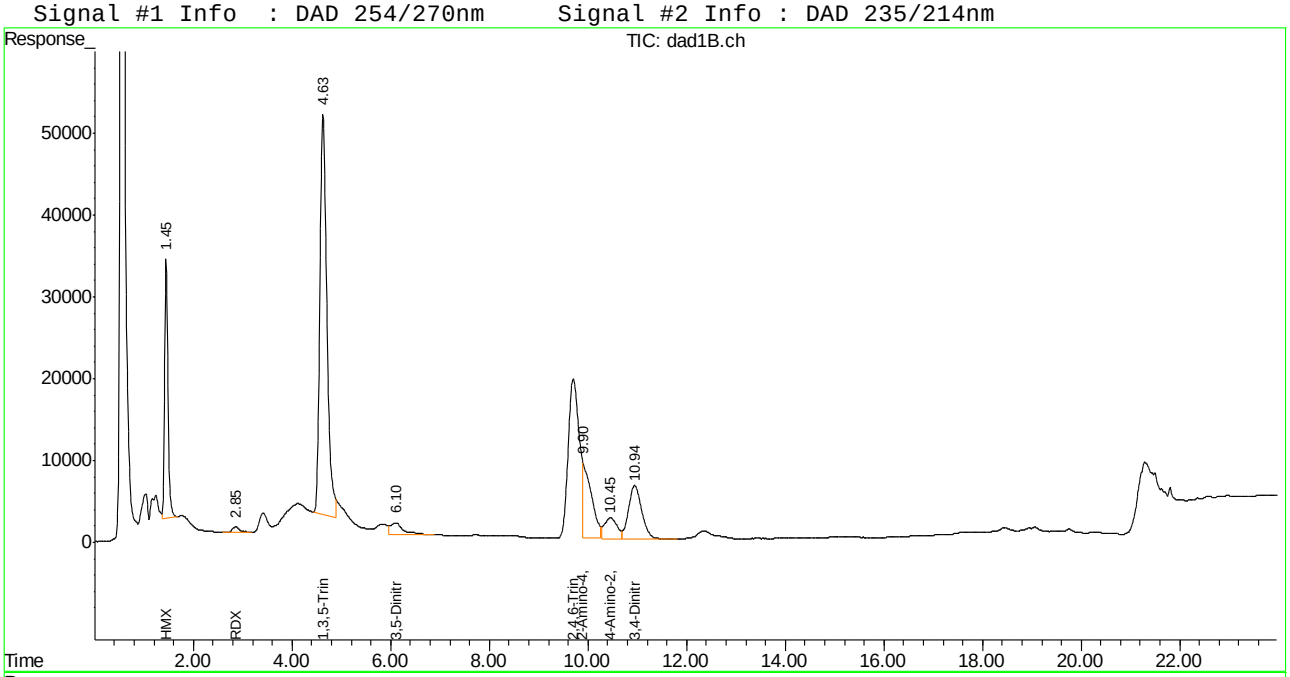
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070816.D BBB2118_103021.M Mon Nov 08 14:56:22 2021 Page 1

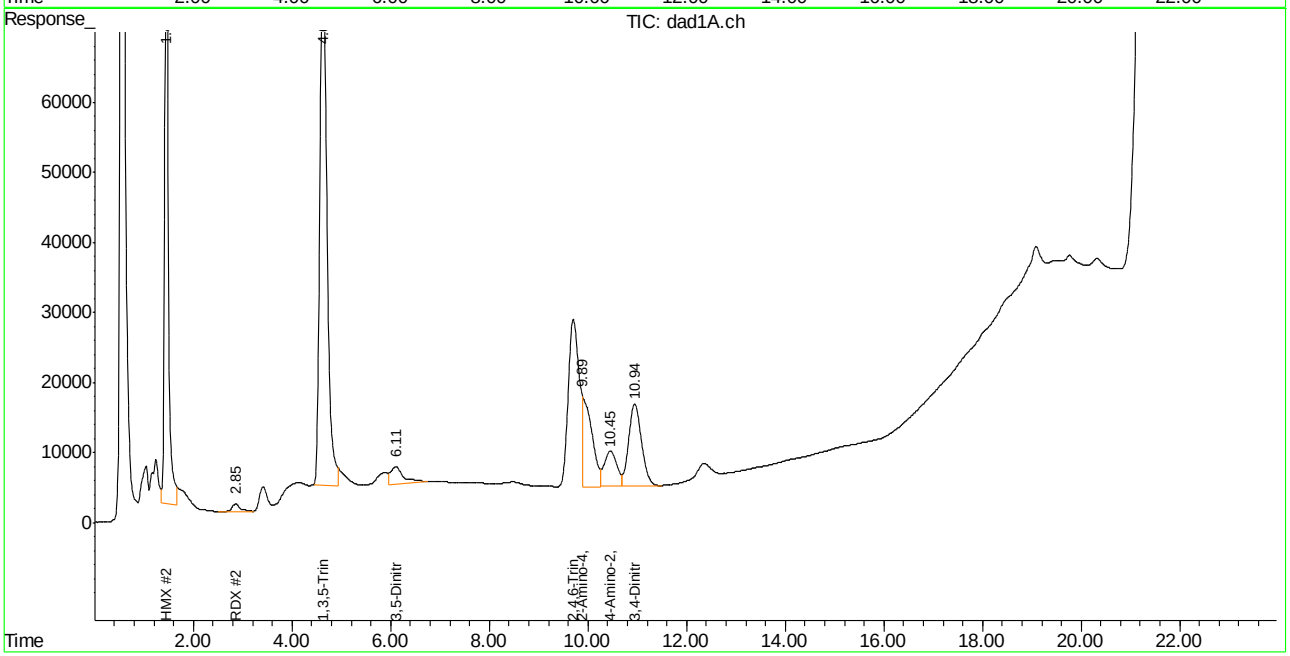
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : op88132,GBB2121,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 8 14:56 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

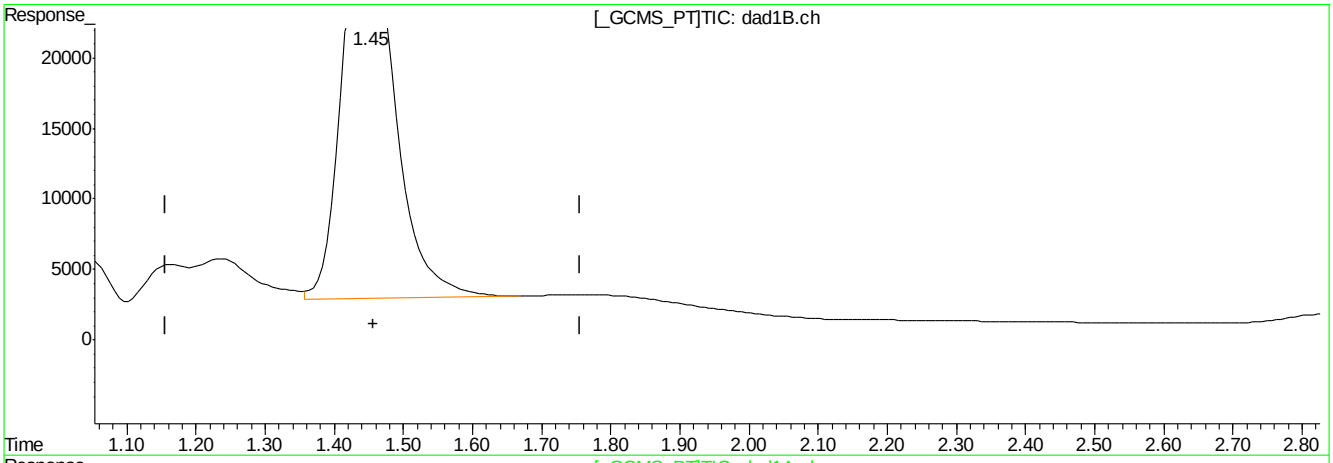
Sample Number: FA90260-4
Lab FileID: BB070816.D
Injection Time: 11/04/21 15:51
Method: SW846 8330B
Analyst approved: 11/05/21 15:02 James Boone
Supervisor approved: 11/08/21 16:40 Naresh Jiawan

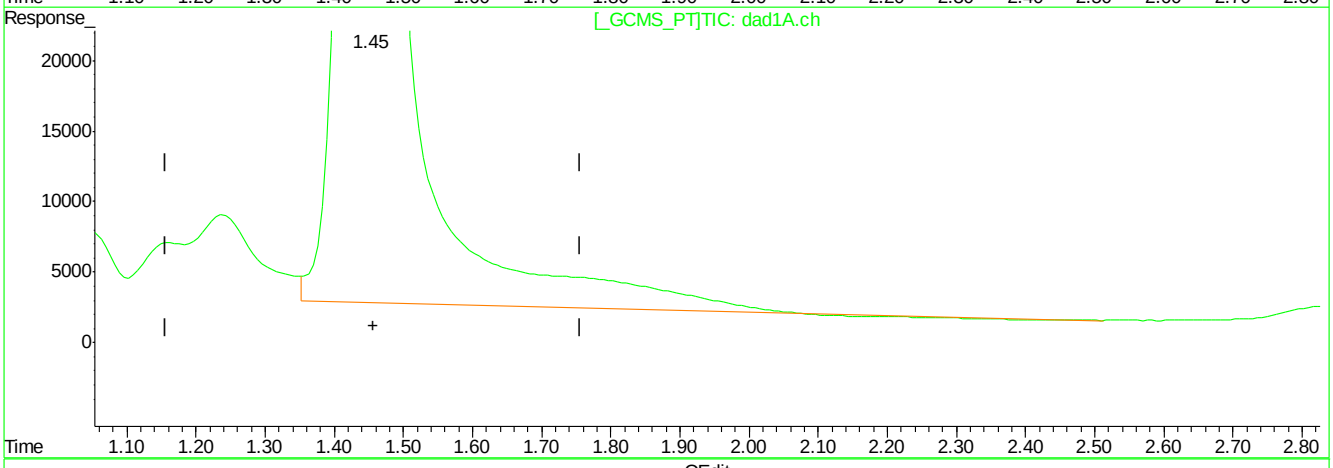
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	2	1.45	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.63	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.63	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	5.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.87	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.11	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.70	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	9.70	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	9.89	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.90	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.36	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.45min 1046.994ppb

response 1514741

(2) HMX #2

1.45min 1229.258ppb

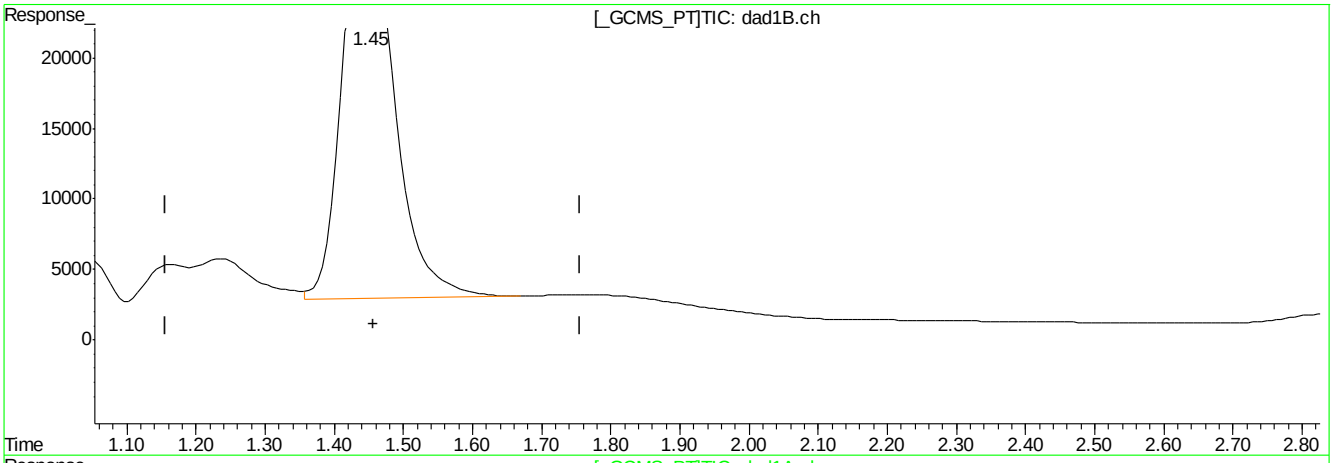
response 4900393

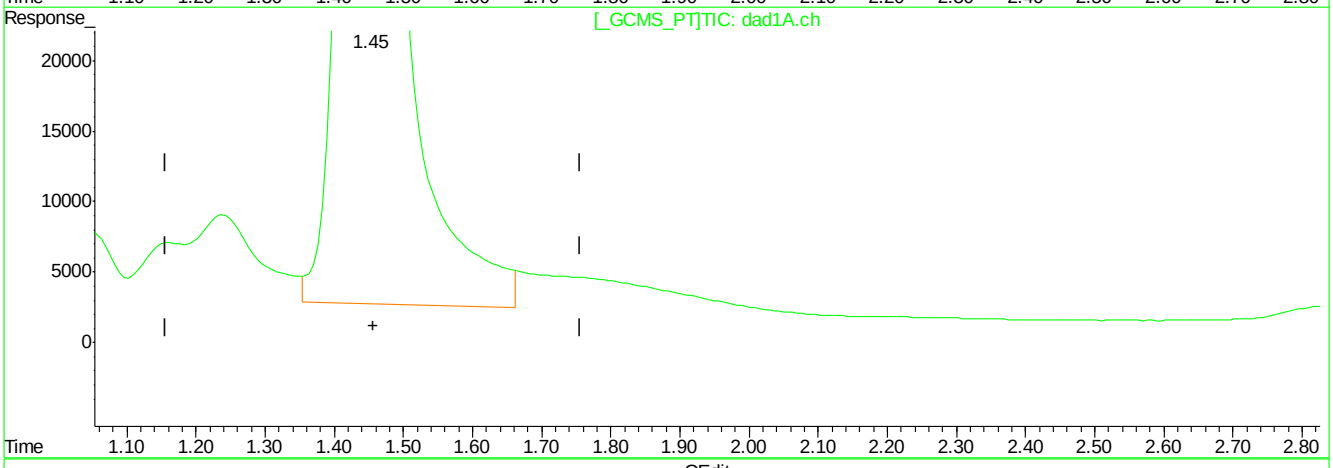
(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:52:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.45min 1046.994ppb

response 1514741

(2) HMX #2

1.45min 1155.151ppb m

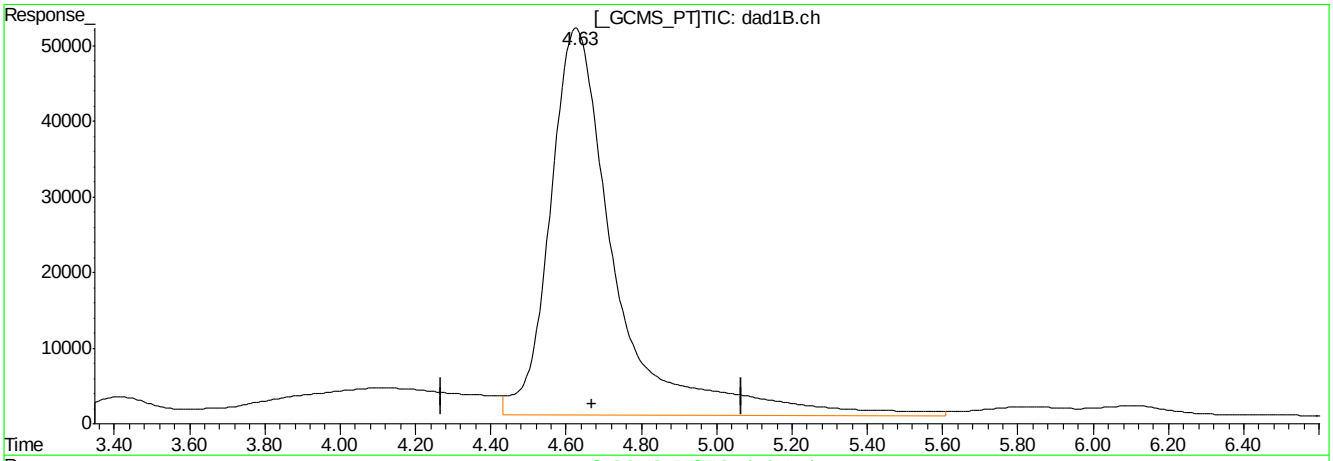
response 4604967

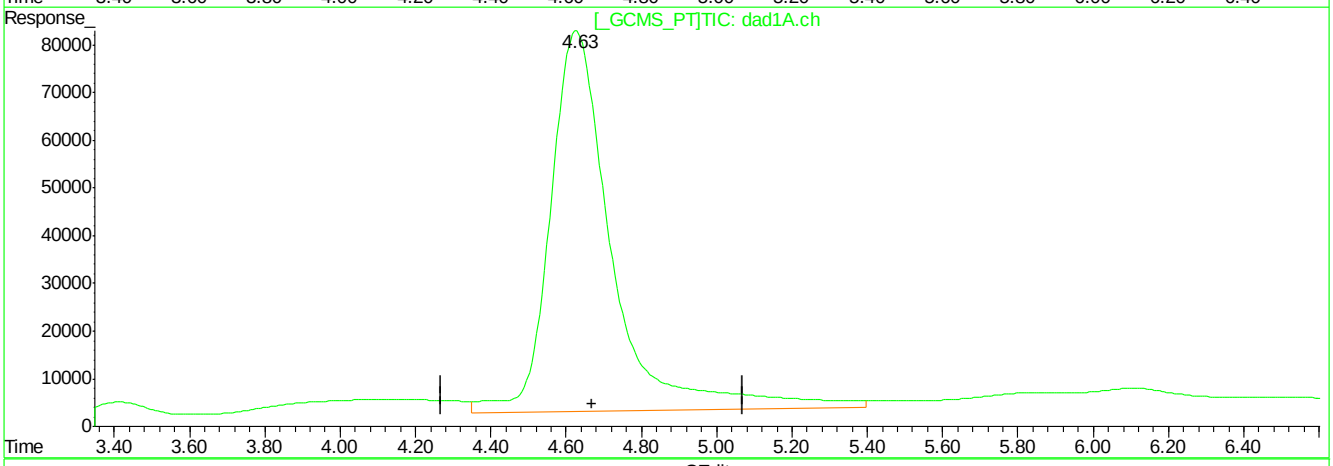
(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:53:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.63min 1698.860ppb

response 6214379

(6) 1,3,5-Trinitrobenzene #2

4.63min 1611.293ppb

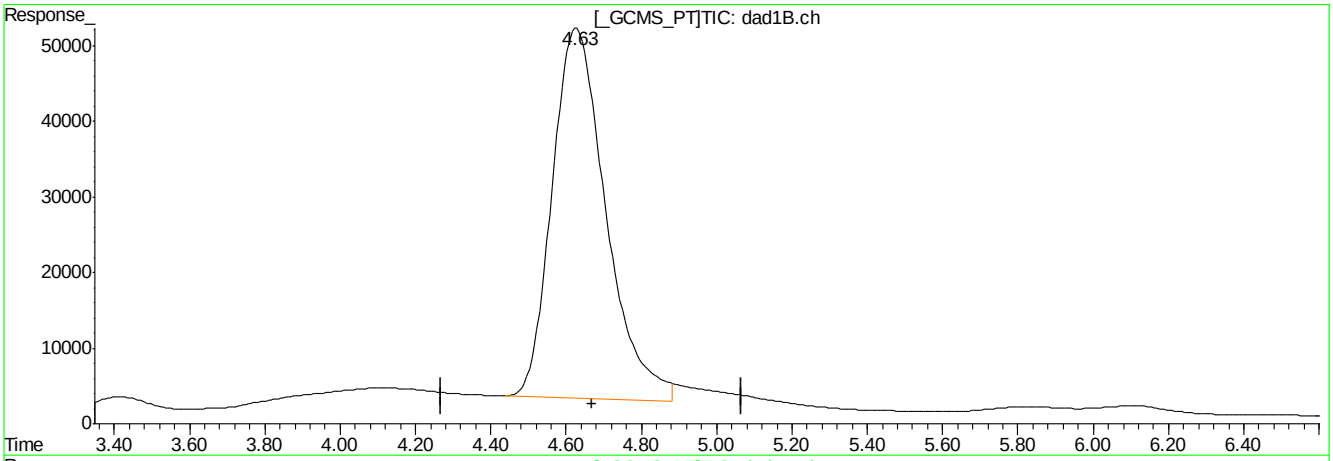
response 9156184

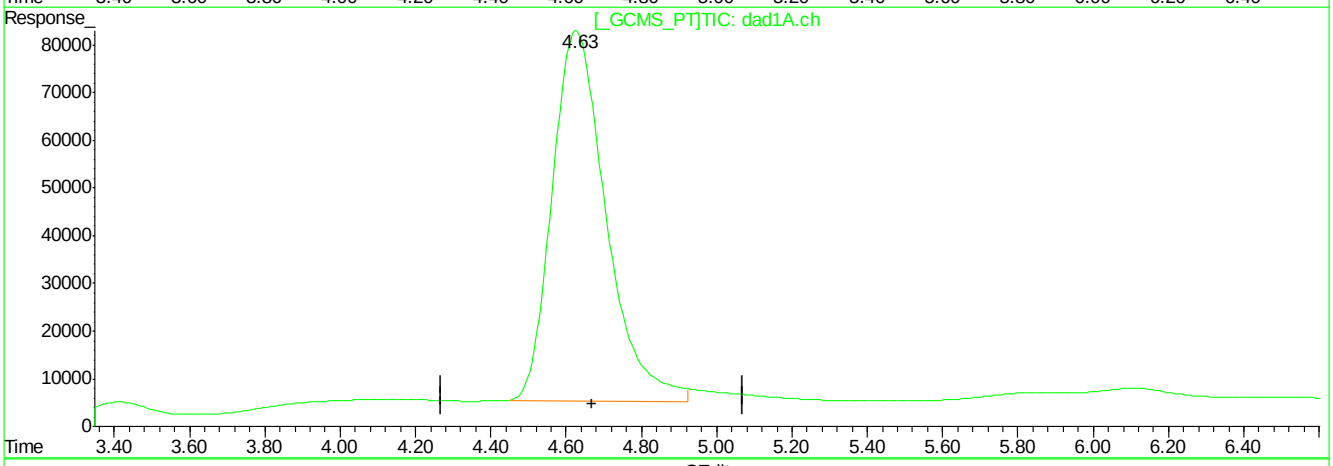
(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:53:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.63min 1328.316ppb m

response 4858942

(6) 1,3,5-Trinitrobenzene #2

4.63min 1363.394ppb m

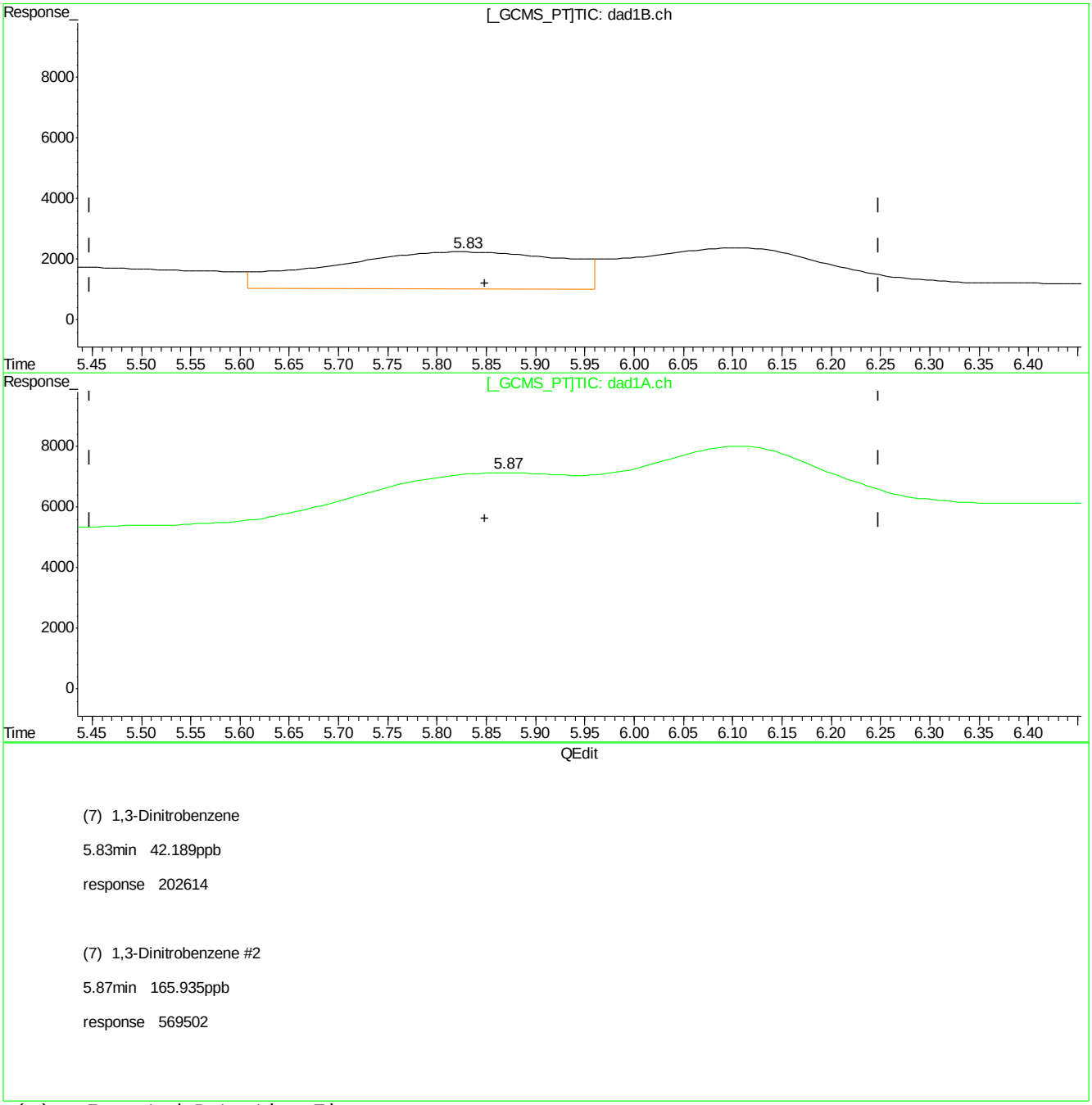
response 7747493

(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:53:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.83min 42.189ppb

response 202614

(7) 1,3-Dinitrobenzene #2

5.87min 165.935ppb

response 569502

(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:53:41 2021

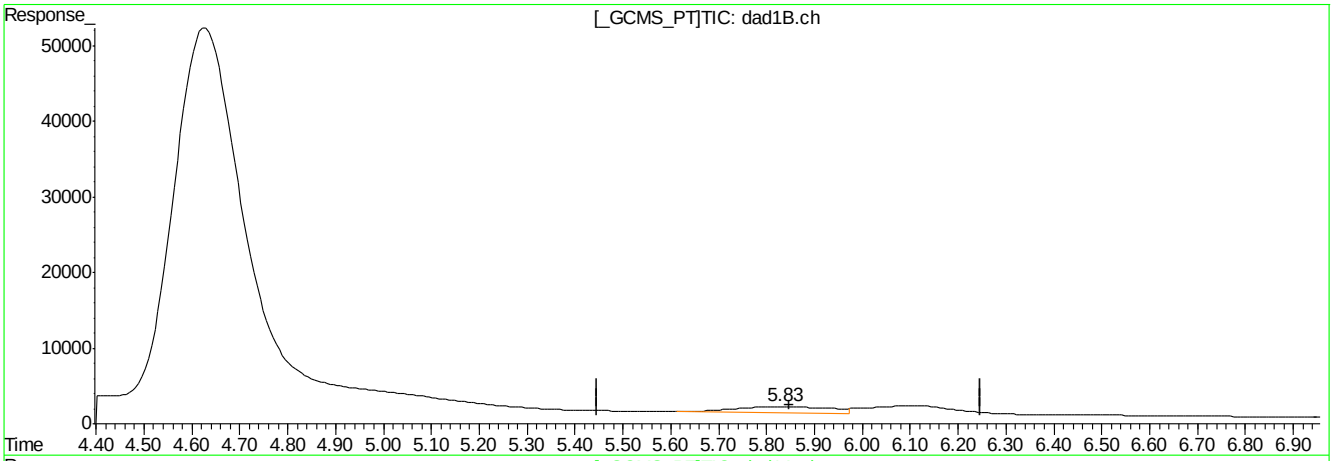
9.1.8.6

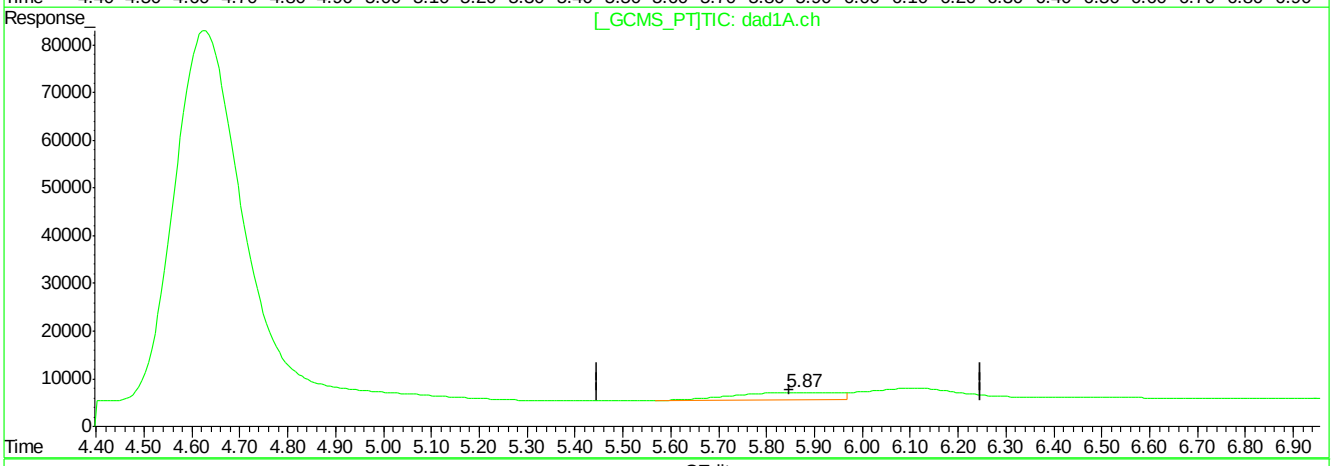
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.83min 21.944ppb m

response 105385

(7) 1,3-Dinitrobenzene #2

5.87min 70.328ppb m

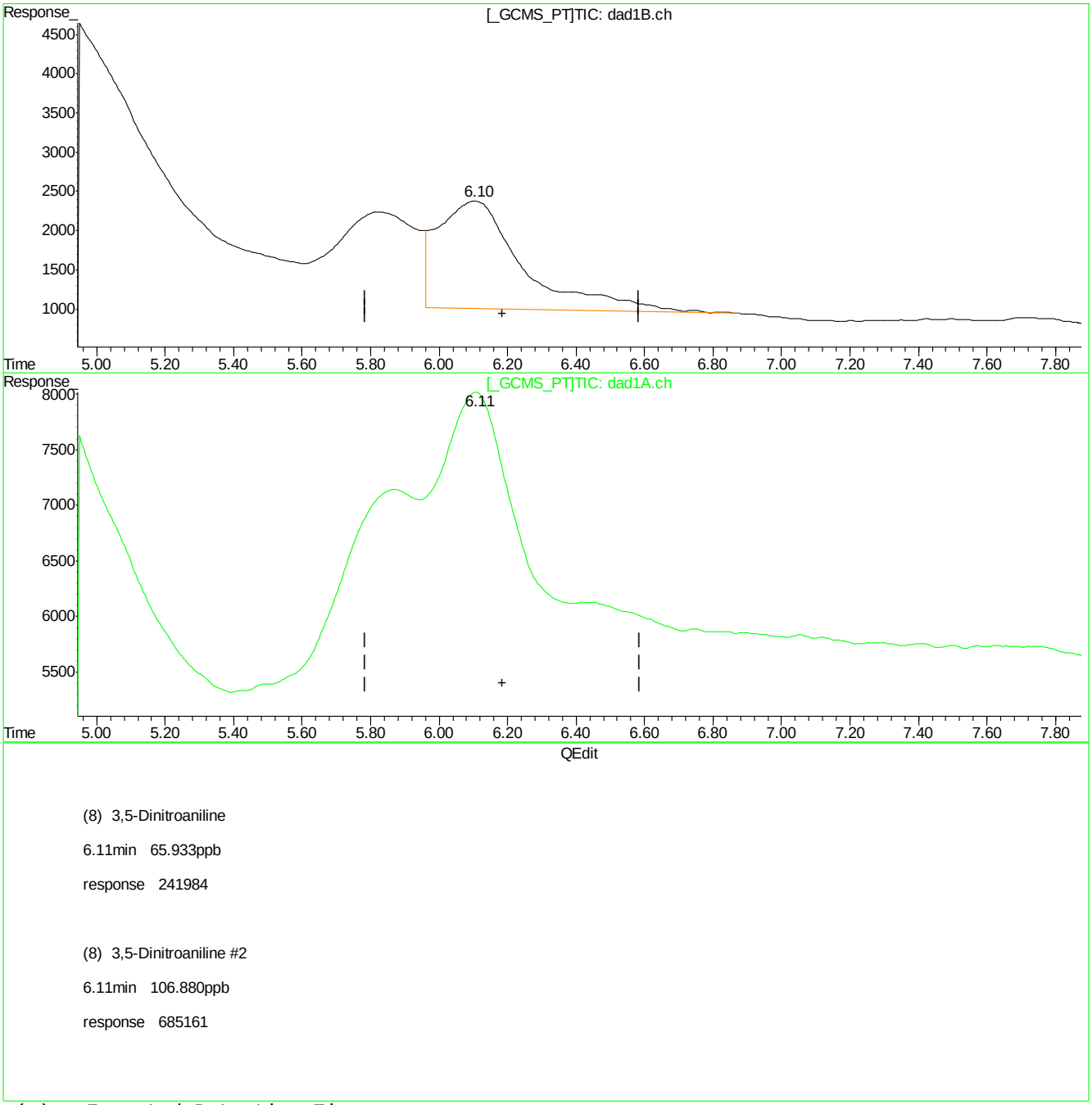
response 241372

(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:53:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.11min 65.933ppb

response 241984

(8) 3,5-Dinitroaniline #2

6.11min 106.880ppb

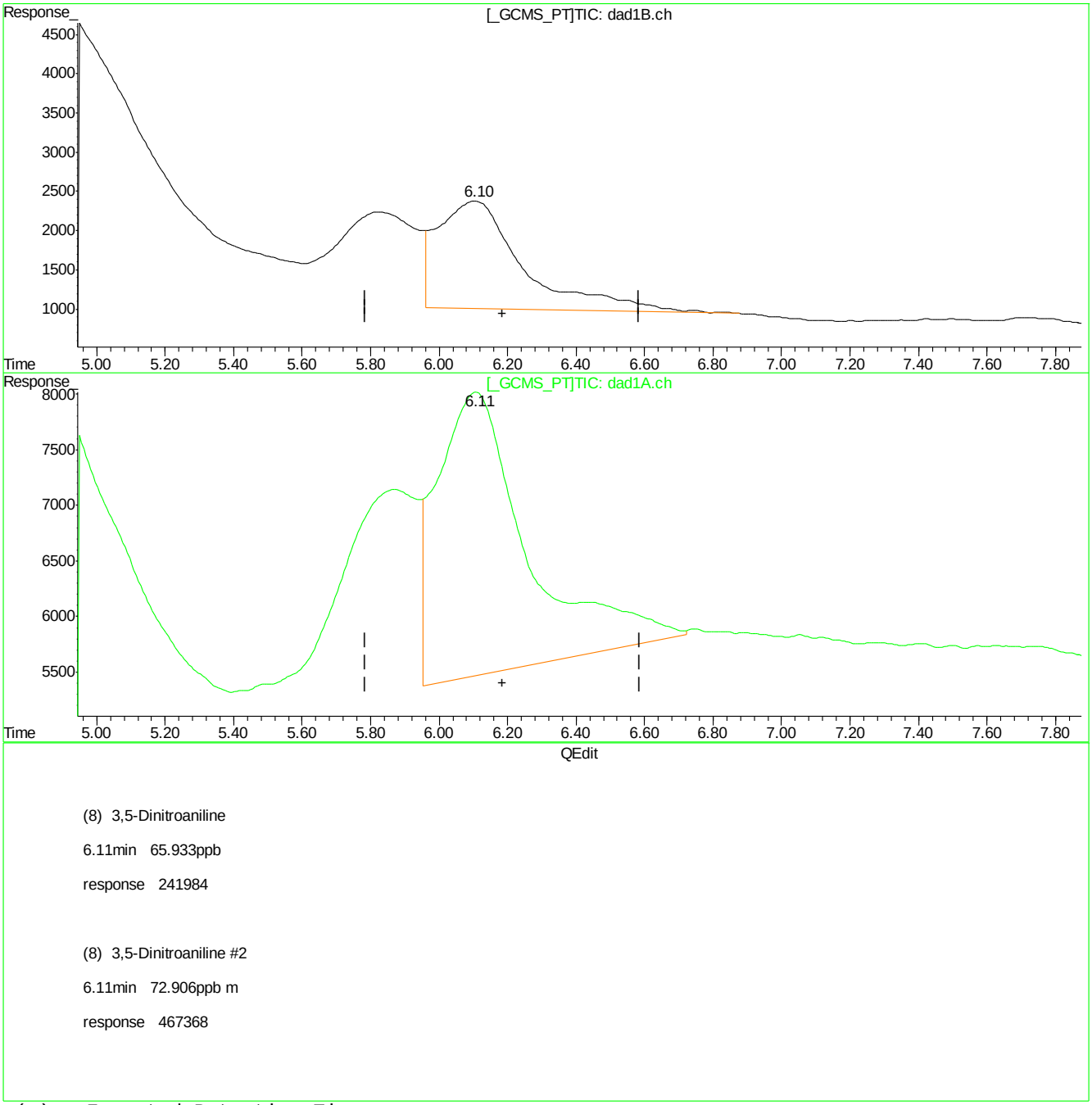
response 685161

(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:53:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.11min 65.933ppb

response 241984

(8) 3,5-Dinitroaniline #2

6.11min 72.906ppb m

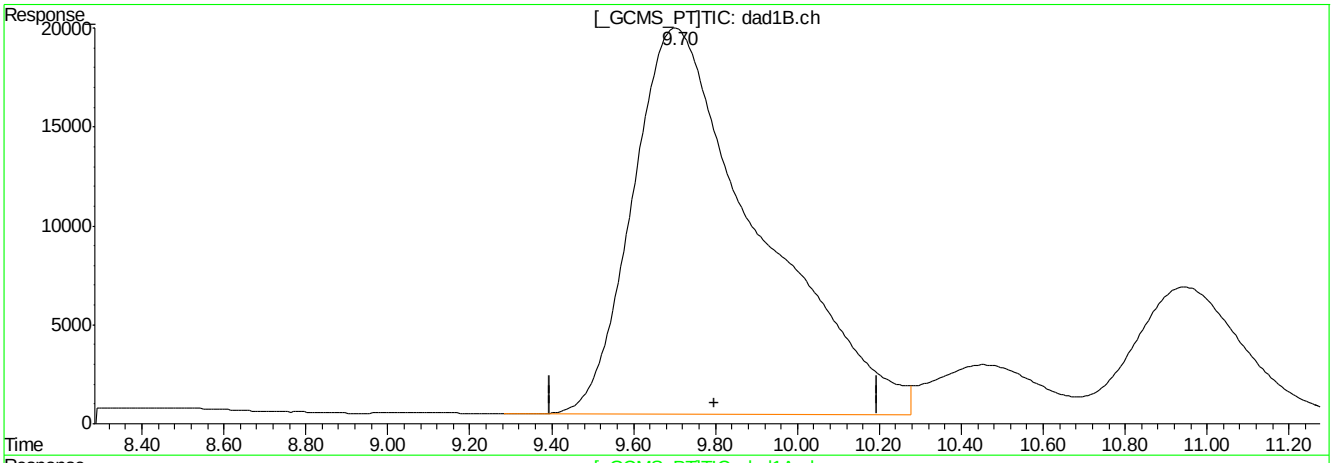
response 467368

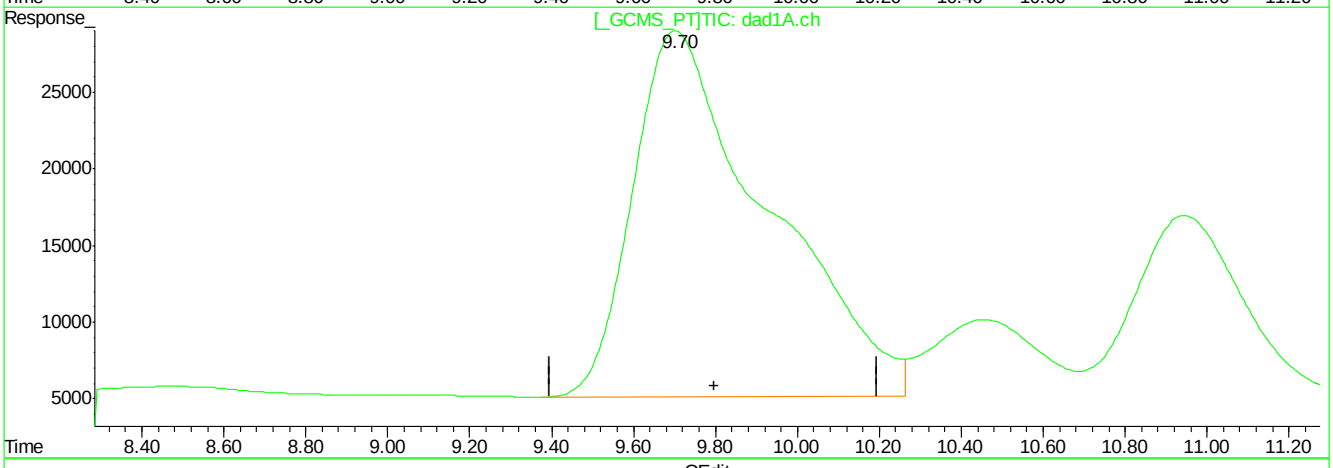
(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:54:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.70min 1259.988ppb

response 4197925

(12) 2,4,6-Trinitrotoluene #2

9.70min 1445.134ppb

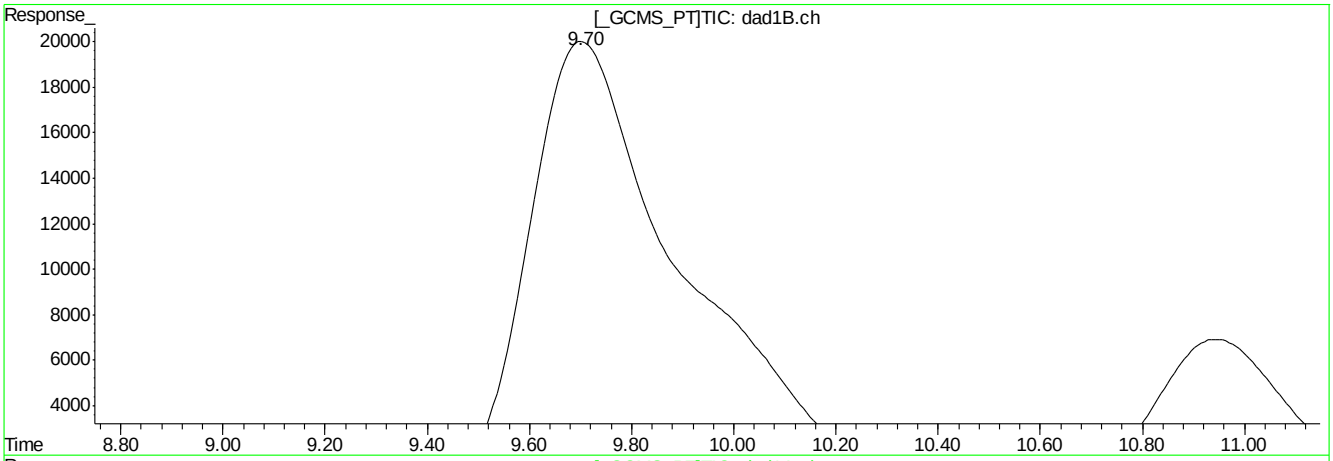
response 5446709

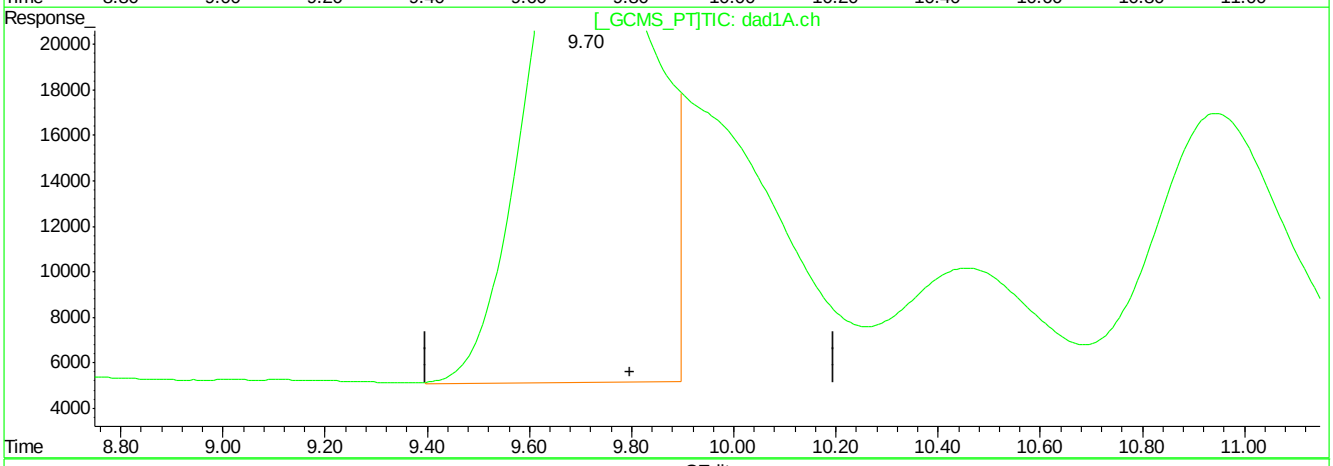
(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:54:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.70min 971.159ppb m

response 3235629

(12) 2,4,6-Trinitrotoluene #2

9.70min 1023.389ppb m

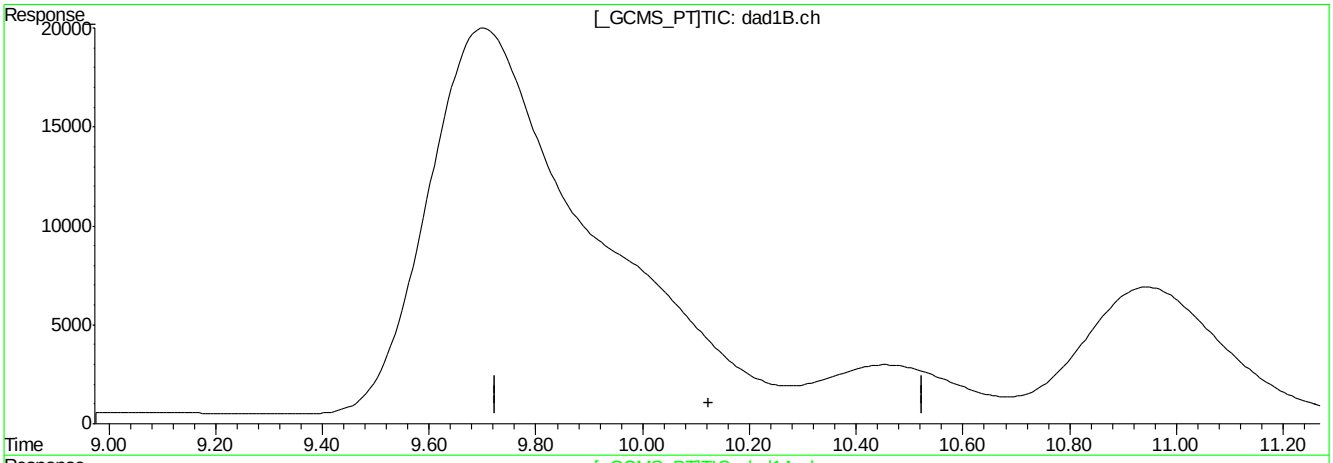
response 3857152

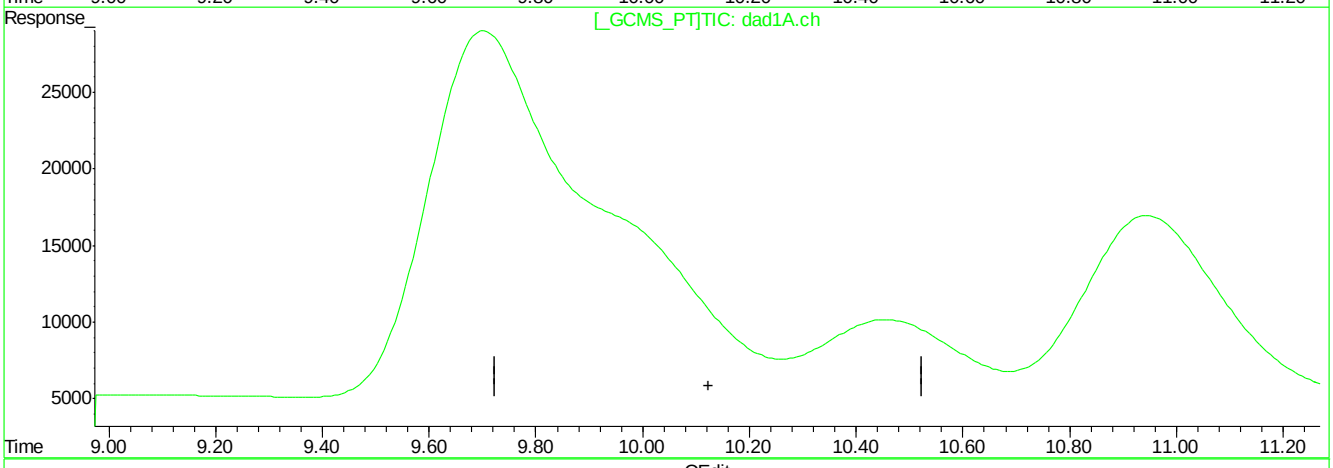
(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:54:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

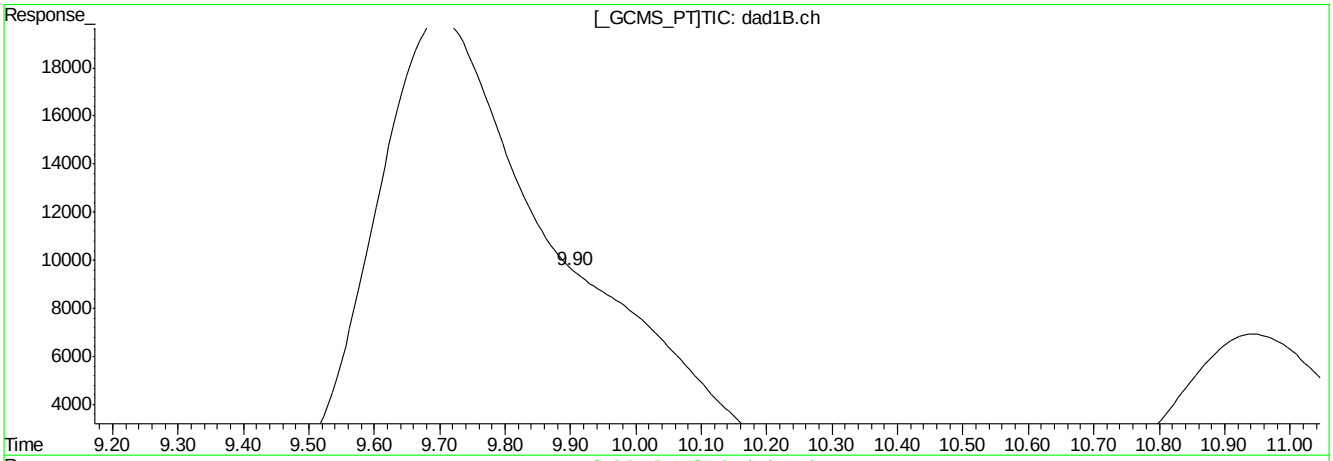
response 0

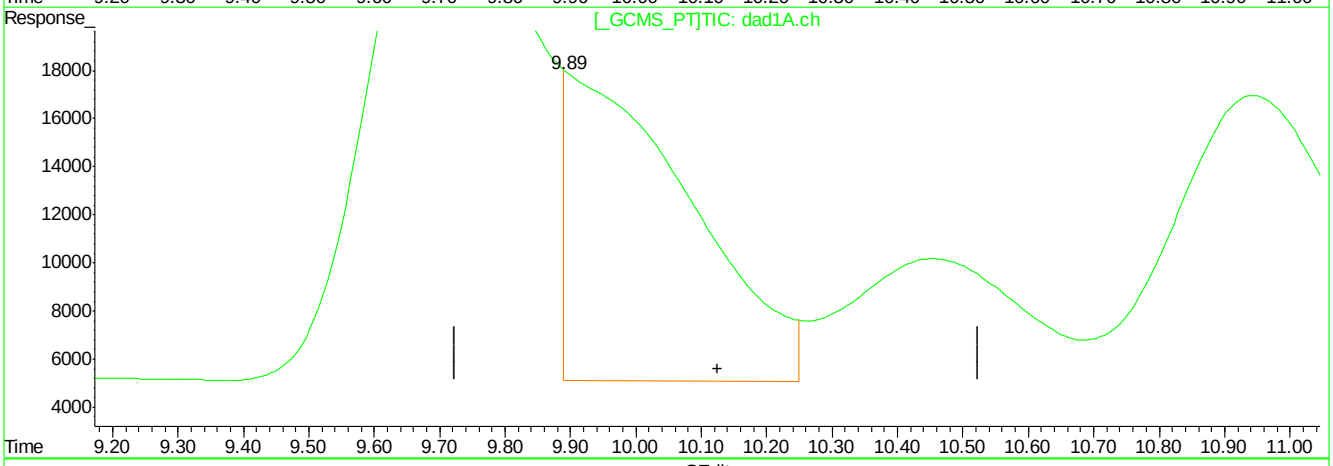
(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:54:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

9.90min 339.058ppb m

response 1082087

(13) 2-Amino-4,6-Dinitrotoluene #2

9.89min 342.315ppb m

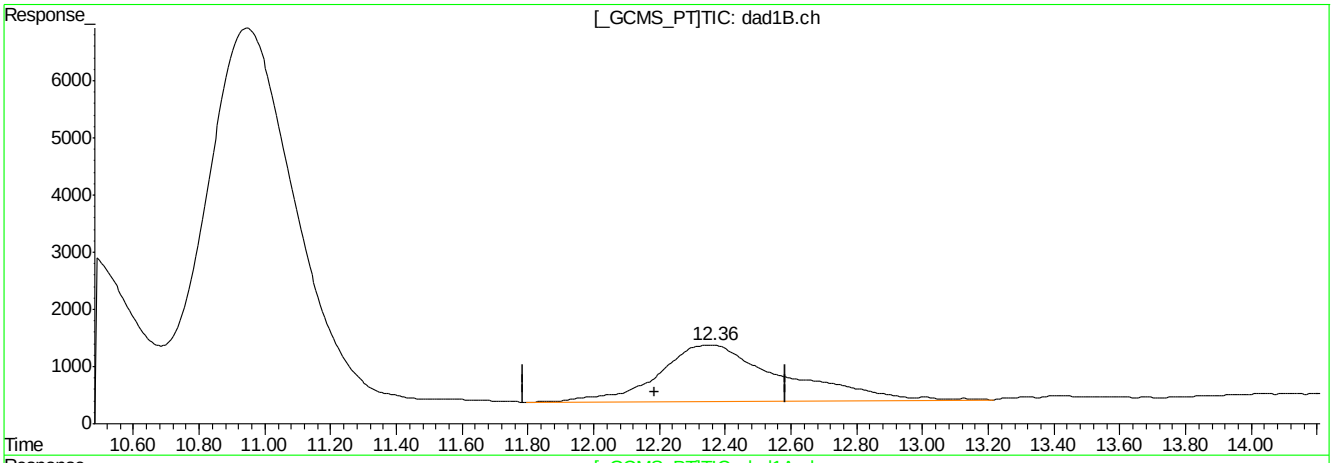
response 1681727

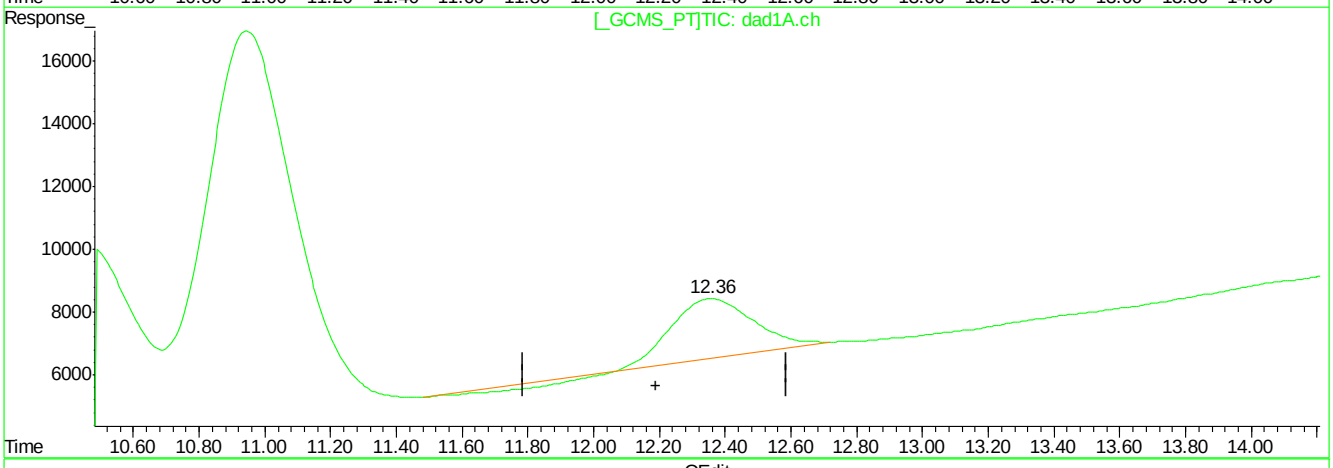
(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:54:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.35min 102.422ppb

response 261975

(17) 2,6-Dinitrotoluene #2

12.36min 94.164ppb

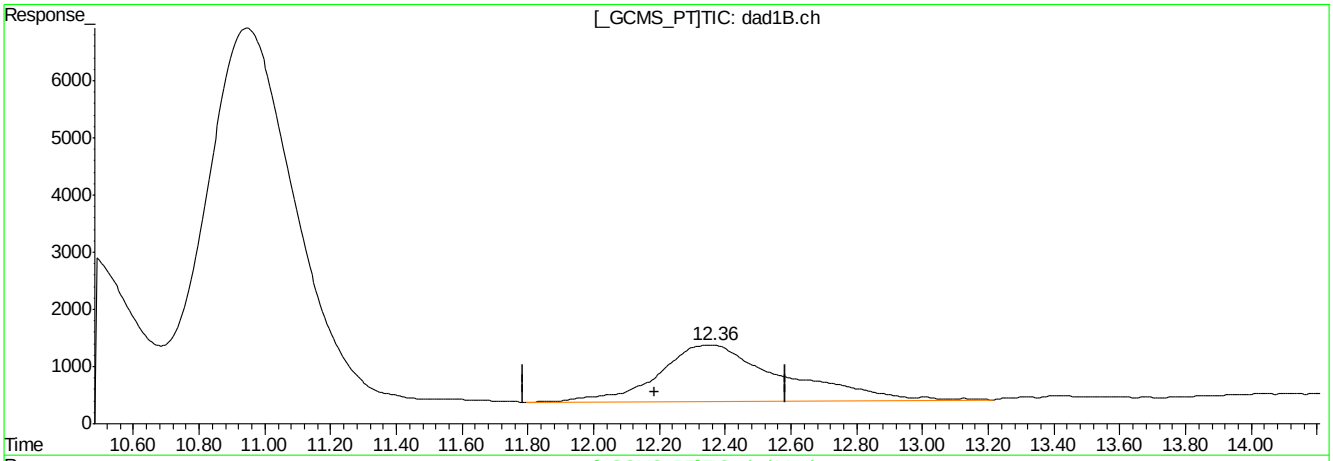
response 293754

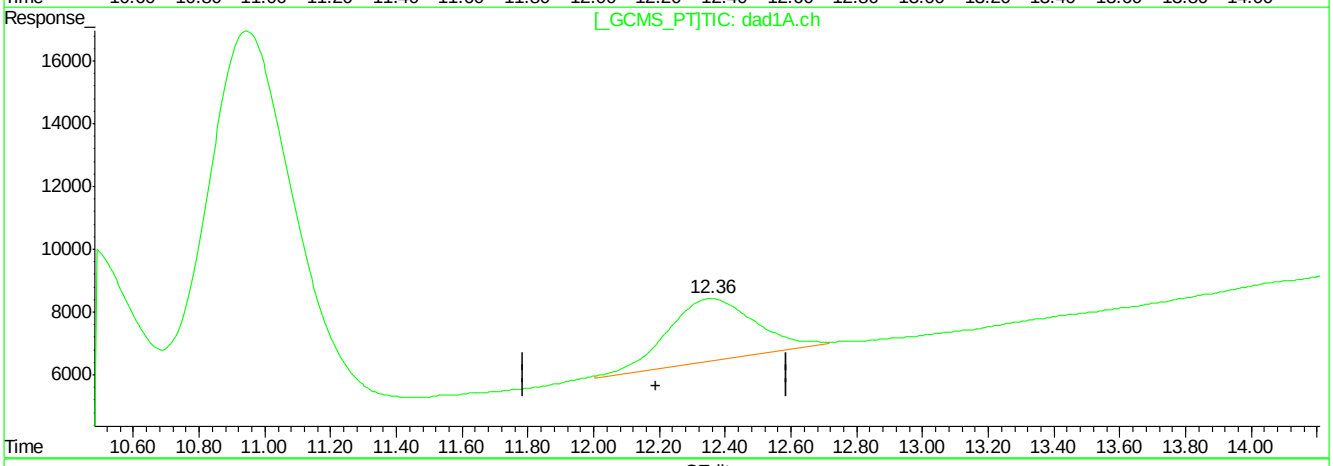
(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:54:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070816.D\dad1A.ch
Acq On : 04-Nov-2021, 15:51:15 Operator: jamesb
Sample : FA90260-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.35min 102.422ppb

response 261975

(17) 2,6-Dinitrotoluene #2

12.36min 115.975ppb m

response 361793

(+) = Expected Retention Time
BB070816.D BBB2118_103021.M Fri Nov 05 12:54:59 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 16:40

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : op88132,GGG3063,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 07 09:58:29 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.79	13.79	2954466	5979579	718.920	717.095
	Spiked Amount 500.000	Range 70 - 136		Recovery =		143.78%#	143.42%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.24	5.24	3483089	3495899	1192.135m	1196.520m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.43	7.43	11041288	11041288	1325.315	1325.315
6)	RDX	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	9.62	9.59	116482	399295	10.218	45.721m#
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.47	11.47	7162379	9747611	893.358	894.112
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.45	15.45	872006	1915661	100.176	136.119m
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.13	17.12	1248723	2255513	264.426	272.429
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	18.96	18.96	2844596	4110671	370.559	379.221m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

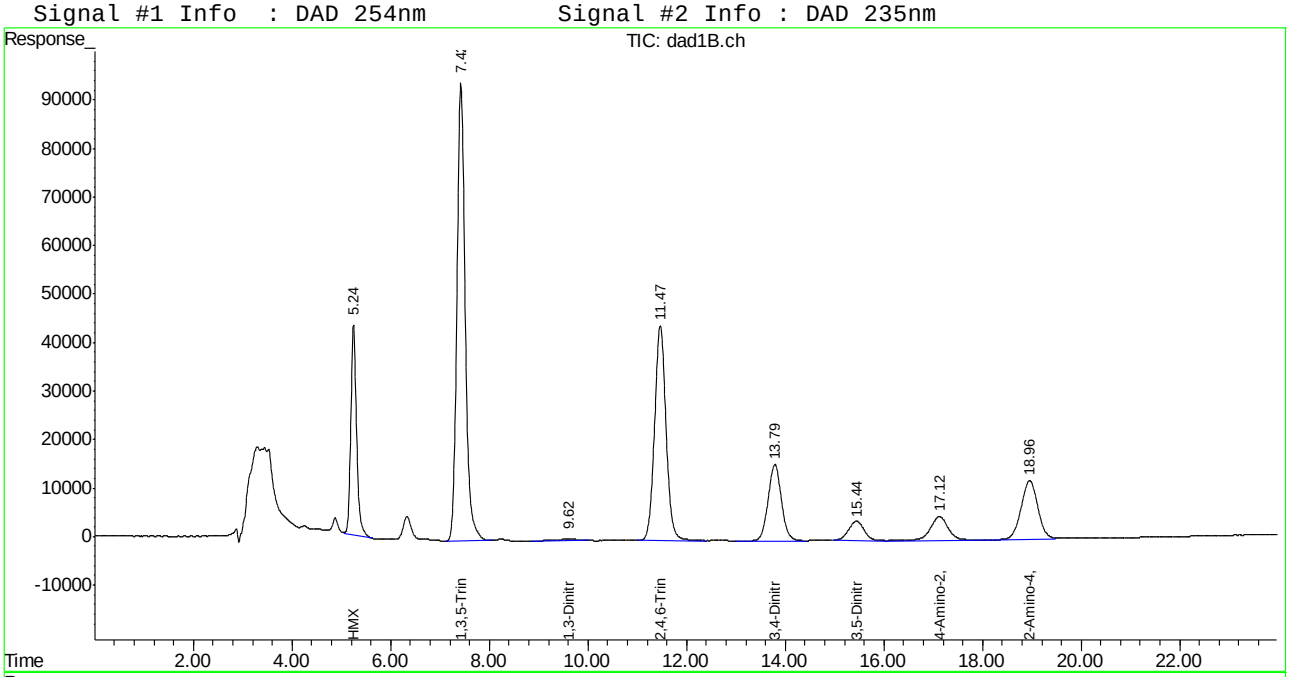
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622728.D GGG3059_103121.M Mon Nov 08 10:48:55 2021 Page 1

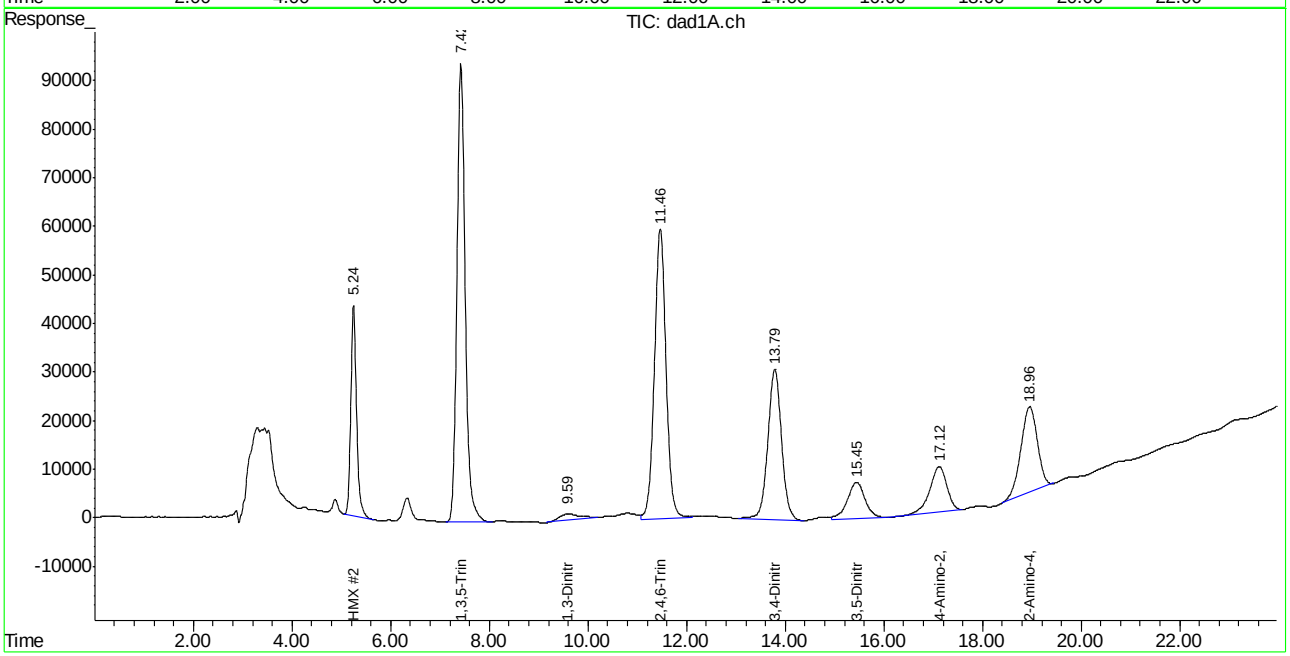
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : op88132,GGG3063,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 8 9:42 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

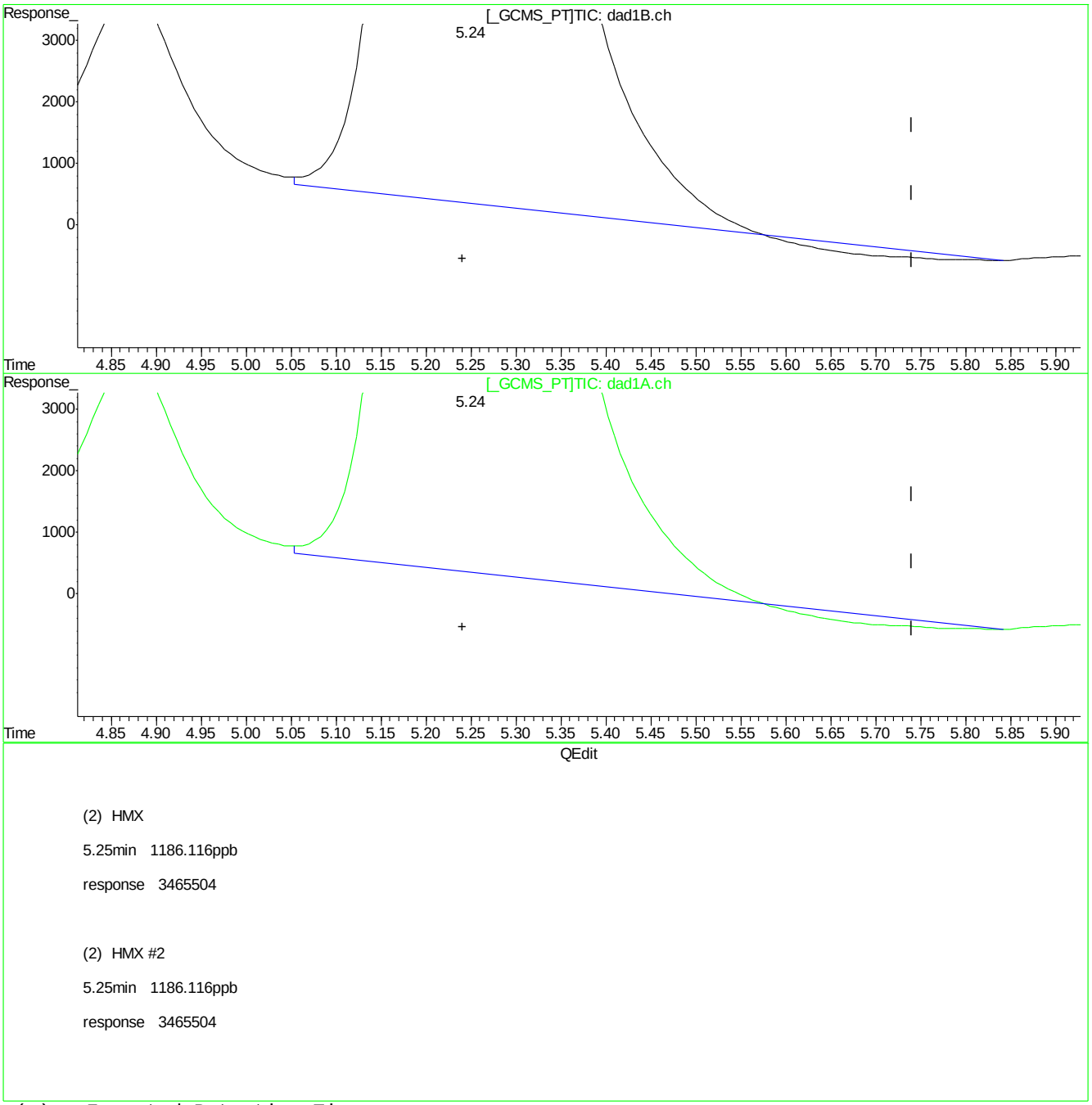
Sample Number: FA90260-4
Lab FileID: GG622728.D
Injection Time: 11/05/21 17:33
Method: SW846 8330B
Analyst approved: 11/08/21 14:44 James Boone
Supervisor approved: 11/08/21 16:40 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	5.24	Poor instrument integration
HMX	2691-41-0	2	5.24	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.59	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	15.45	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	18.96	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration

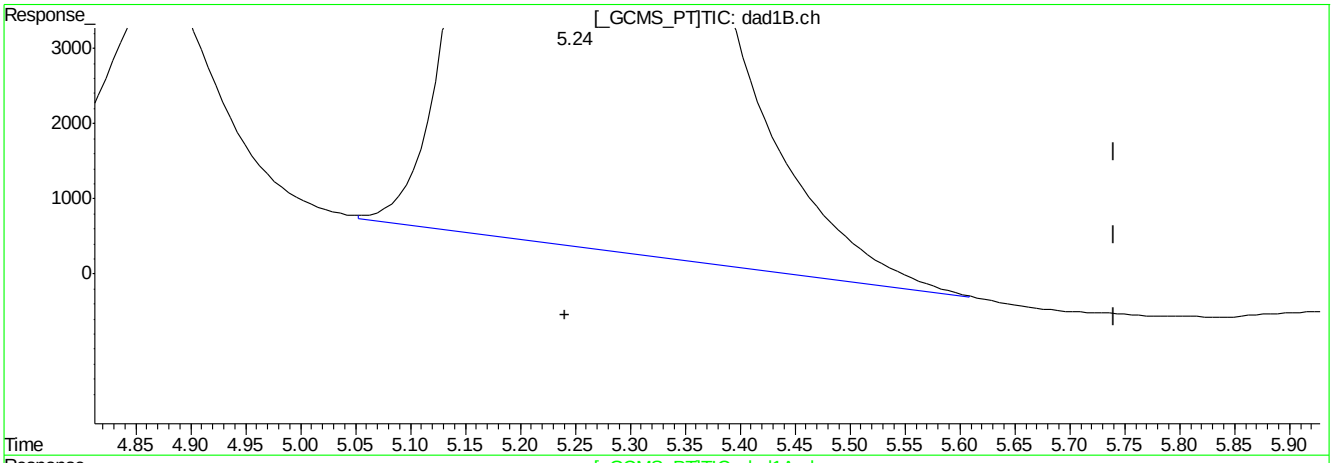


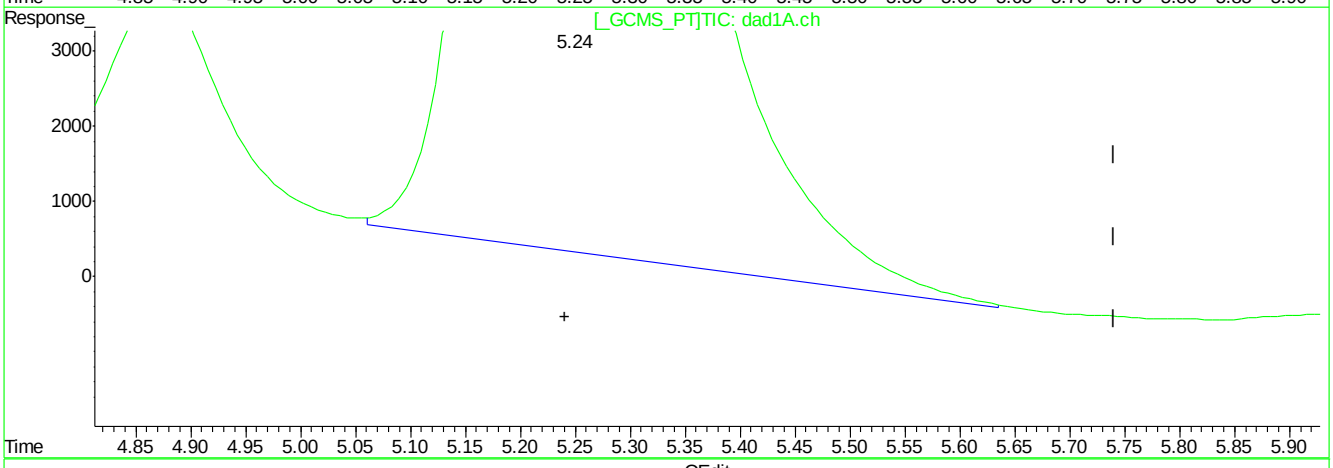
(+) = Expected Retention Time
GG622728.D GGG3059_103121.M Mon Nov 08 09:41:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.24min 1192.135ppb m

response 3483089

(2) HMX #2

5.24min 1196.520ppb m

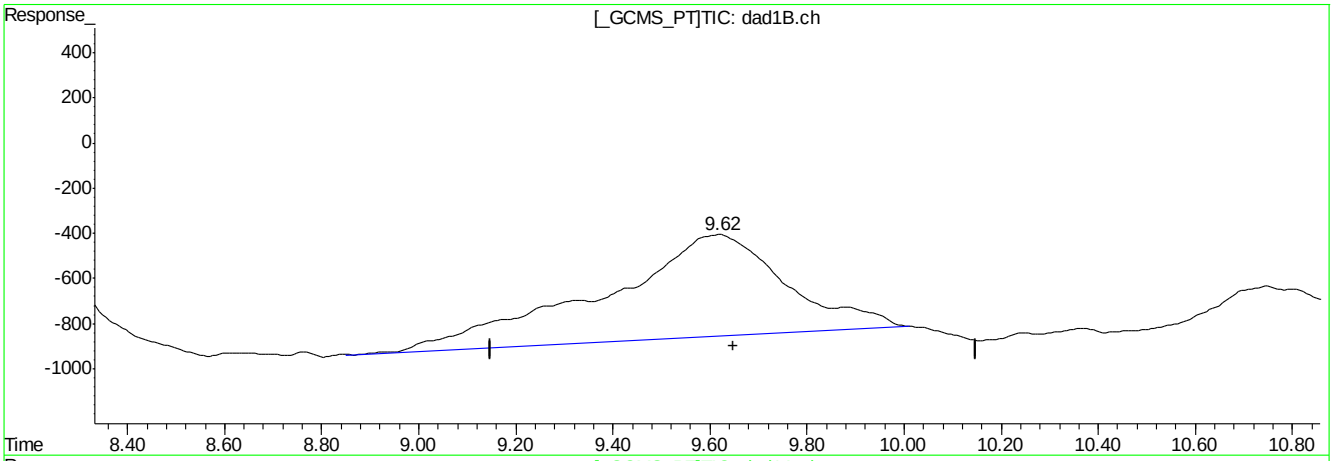
response 3495899

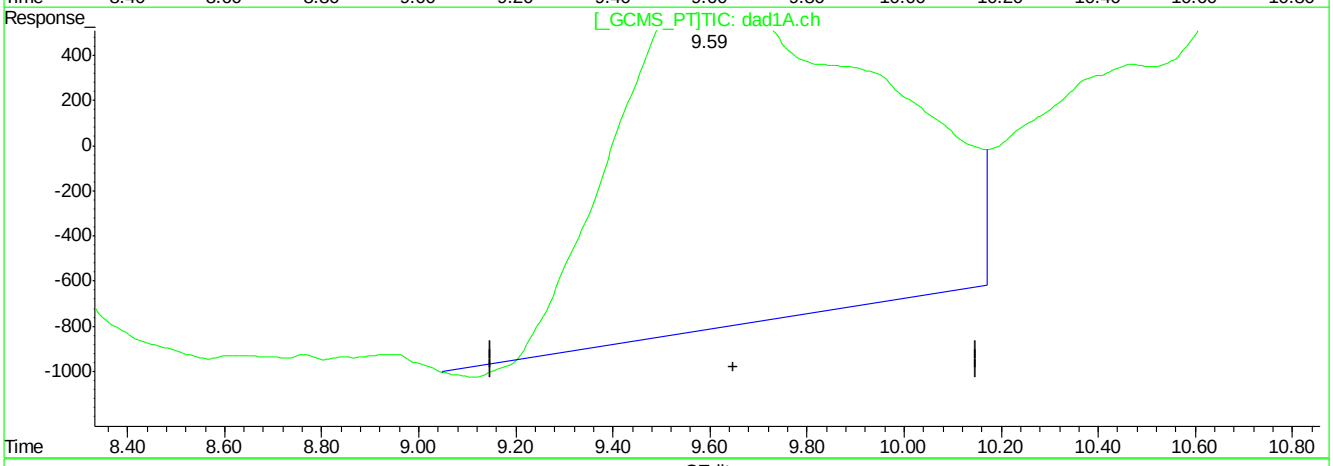
(+) = Expected Retention Time
GG622728.D GGG3059_103121.M Mon Nov 08 09:41:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.62min 10.218ppb

response 116482

(7) 1,3-Dinitrobenzene #2

9.59min 64.932ppb

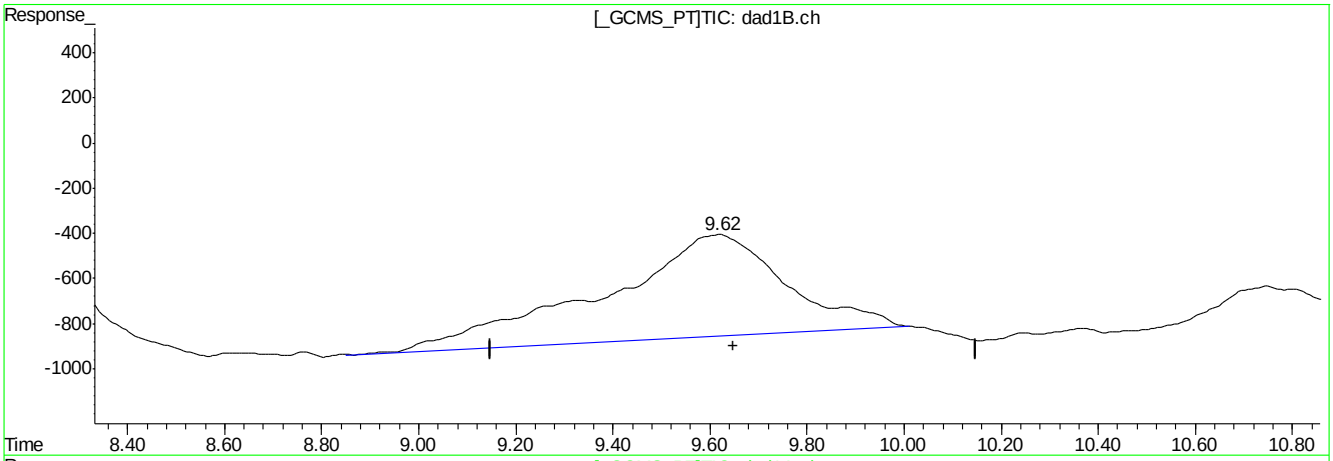
response 567066

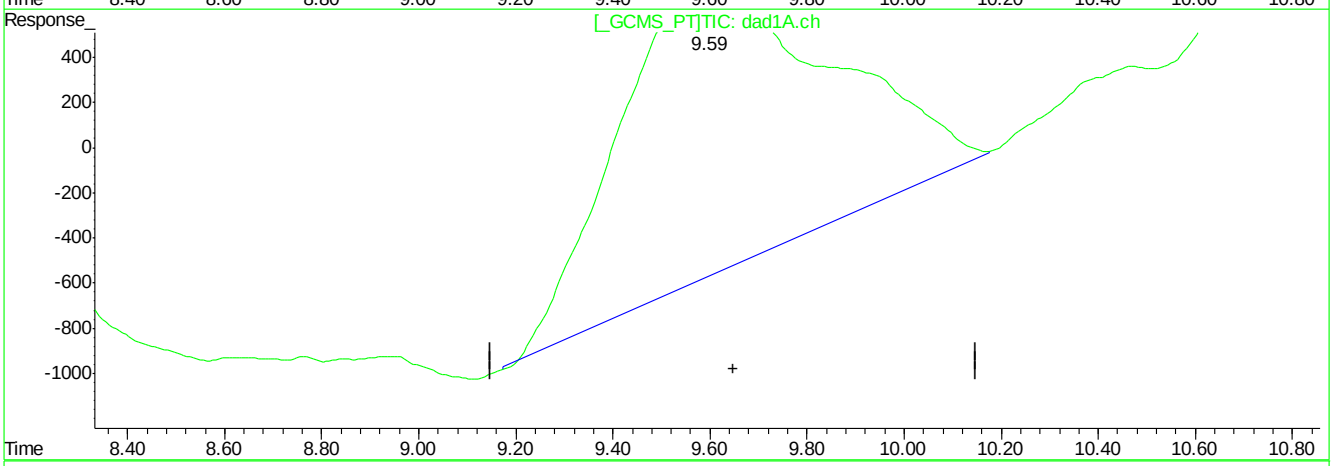
(+) = Expected Retention Time
GG622728.D GGG3059_103121.M Mon Nov 08 09:41:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.62min 10.218ppb

response 116482

(7) 1,3-Dinitrobenzene #2

9.59min 45.721ppb m

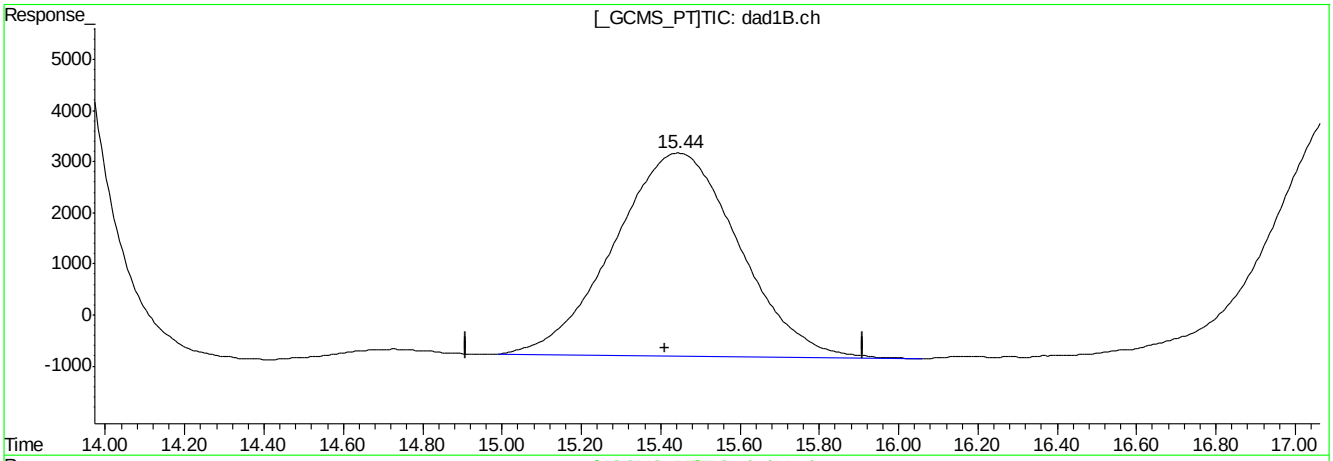
response 399295

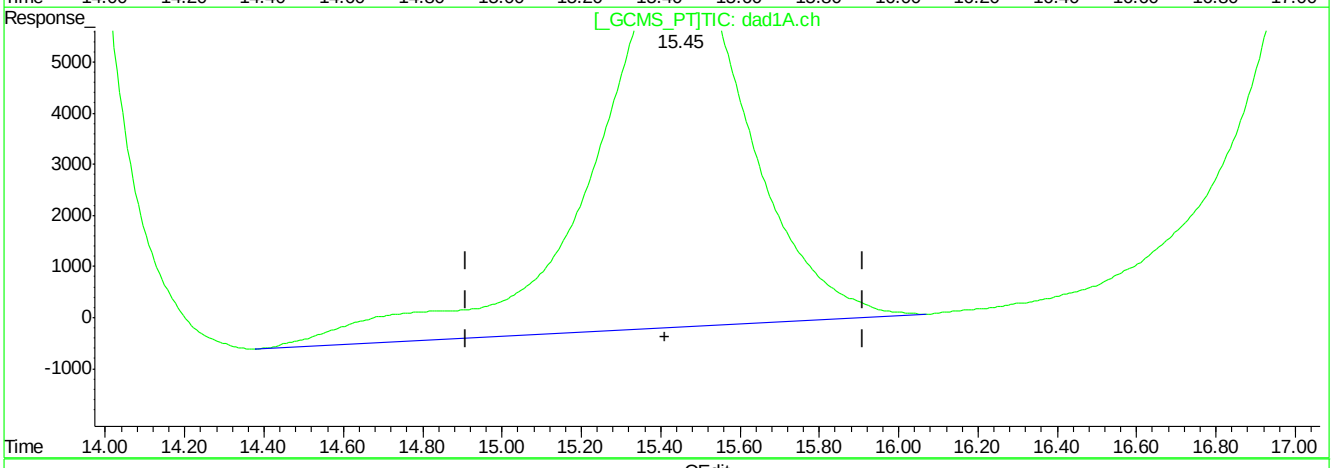
(+) = Expected Retention Time
GG622728.D GGG3059_103121.M Mon Nov 08 09:41:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,5-Dinitroaniline

15.45min 100.176ppb

response 872006

(15) 3,5-Dinitroaniline #2

15.45min 141.961ppb

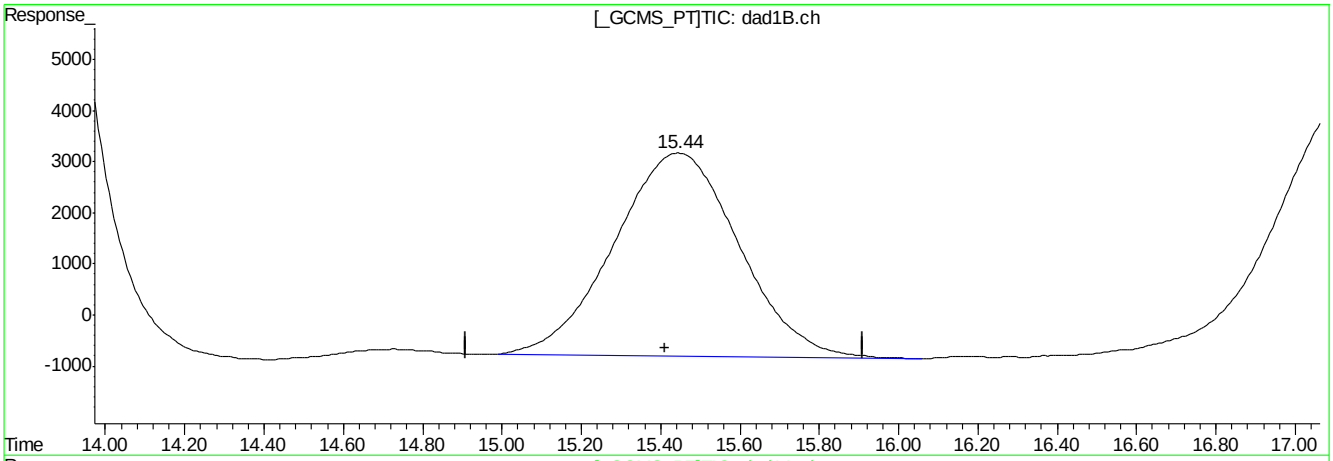
response 1997887

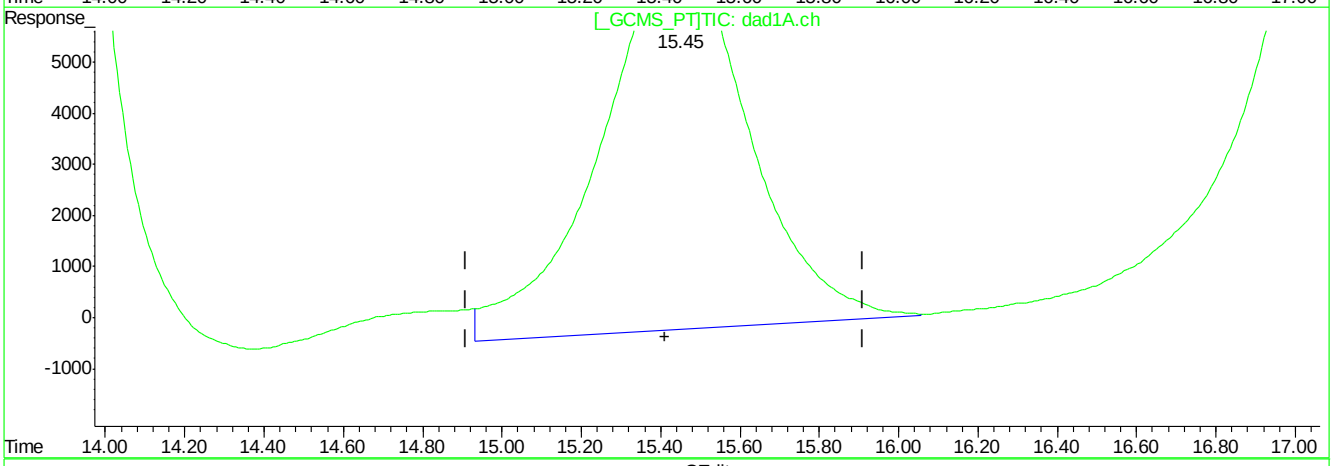
(+) = Expected Retention Time
GG622728.D GGG3059_103121.M Mon Nov 08 09:41:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,5-Dinitroaniline

15.45min 100.176ppb

response 872006

(15) 3,5-Dinitroaniline #2

15.45min 136.119ppb m

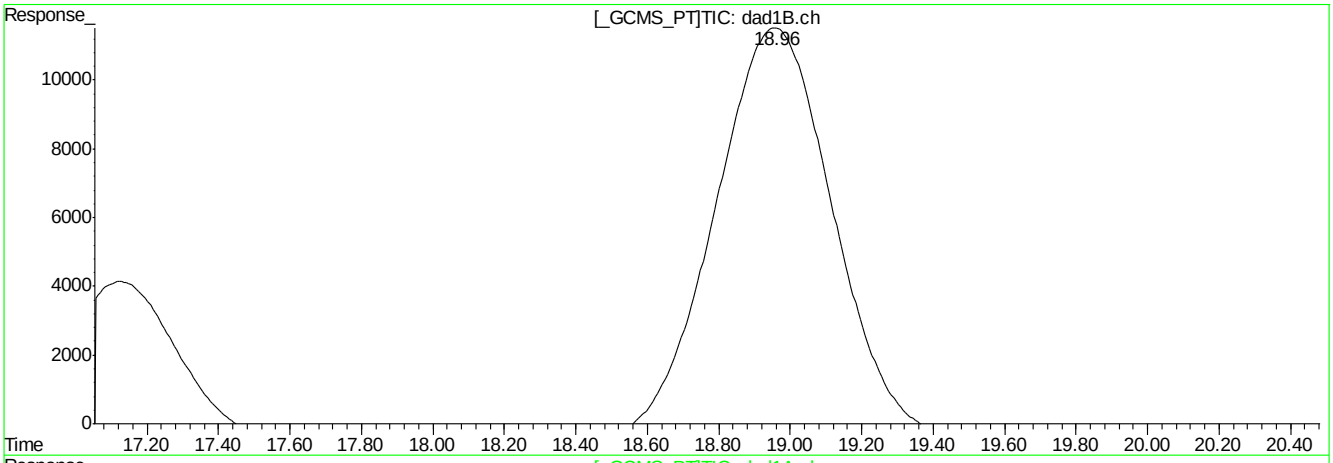
response 1915661

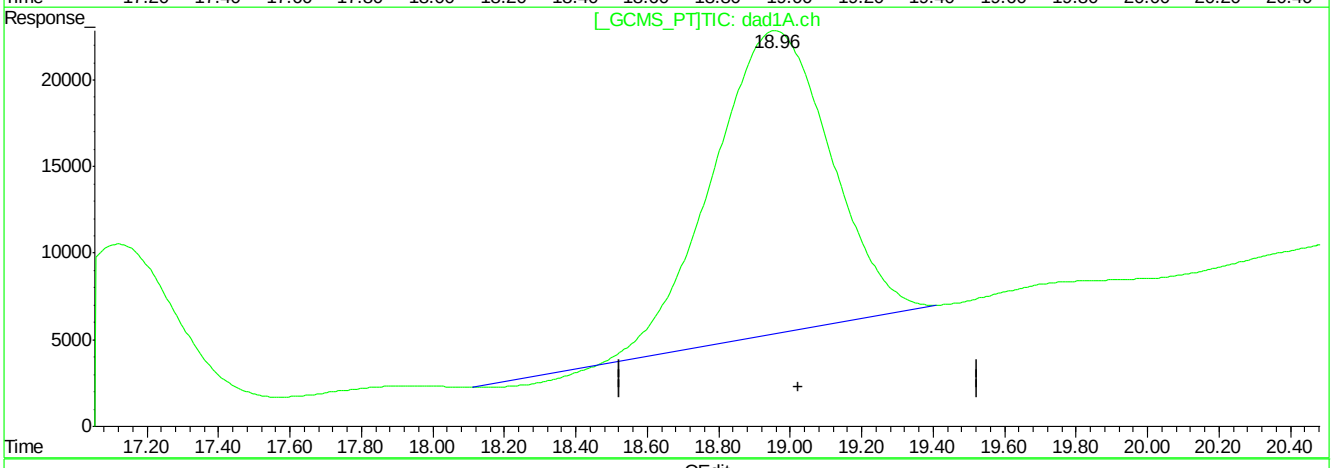
(+) = Expected Retention Time
GG622728.D GGG3059_103121.M Mon Nov 08 09:41:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.96min 370.559ppb

response 2844596

(20) 2-Amino-4,6-Dinitrotoluene #2

18.96min 367.384ppb

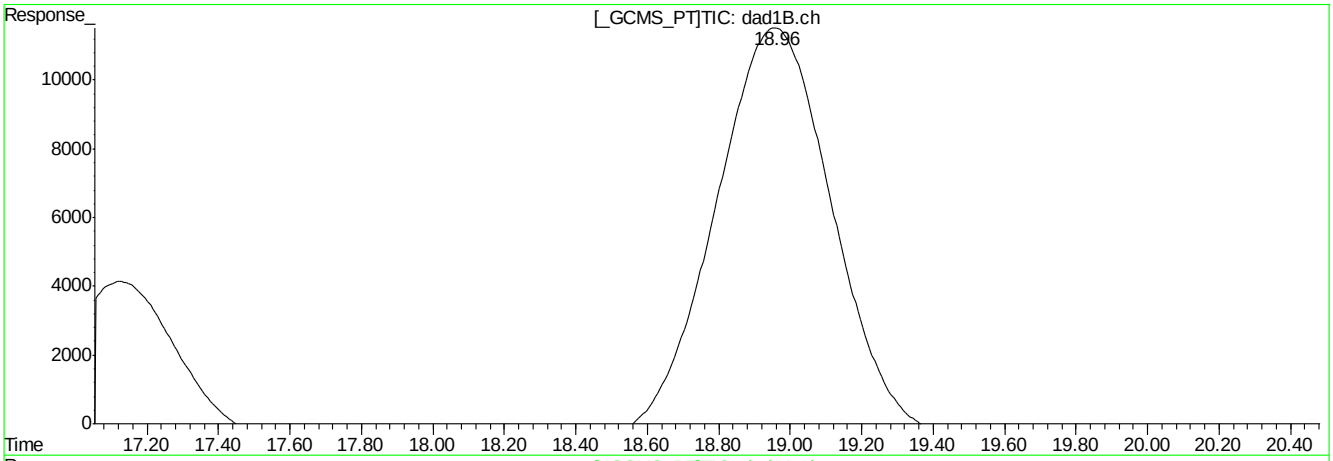
response 3982357

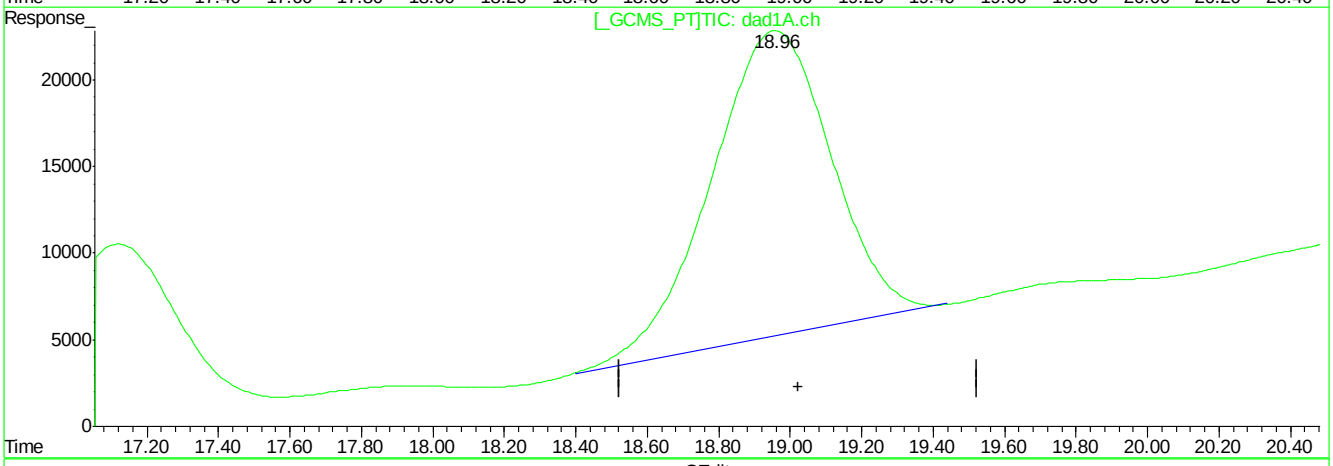
(+) = Expected Retention Time
GG622728.D GGG3059_103121.M Mon Nov 08 09:42:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622728.D\dad1A.ch
Acq On : 05-Nov-2021, 17:33:06 Operator: jamesb
Sample : FA90260-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.96min 370.559ppb

response 2844596

(20) 2-Amino-4,6-Dinitrotoluene #2

18.96min 379.221ppb m

response 4110671

(+) = Expected Retention Time
GG622728.D GGG3059_103121.M Mon Nov 08 09:42:11 2021

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070817.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070817.D\dad1A.ch
Acq On : 04-Nov-2021, 16:22:22 Operator: jamesb
Sample : FA90260-5 Inst : G1315B
Misc : op88132,GBB2121,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 05 09:30:25 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.95	10.95	1168107	2048072	647.298	612.488
	Spiked Amount 500.000	Range 70 - 136		Recovery =		129.46%	122.50%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

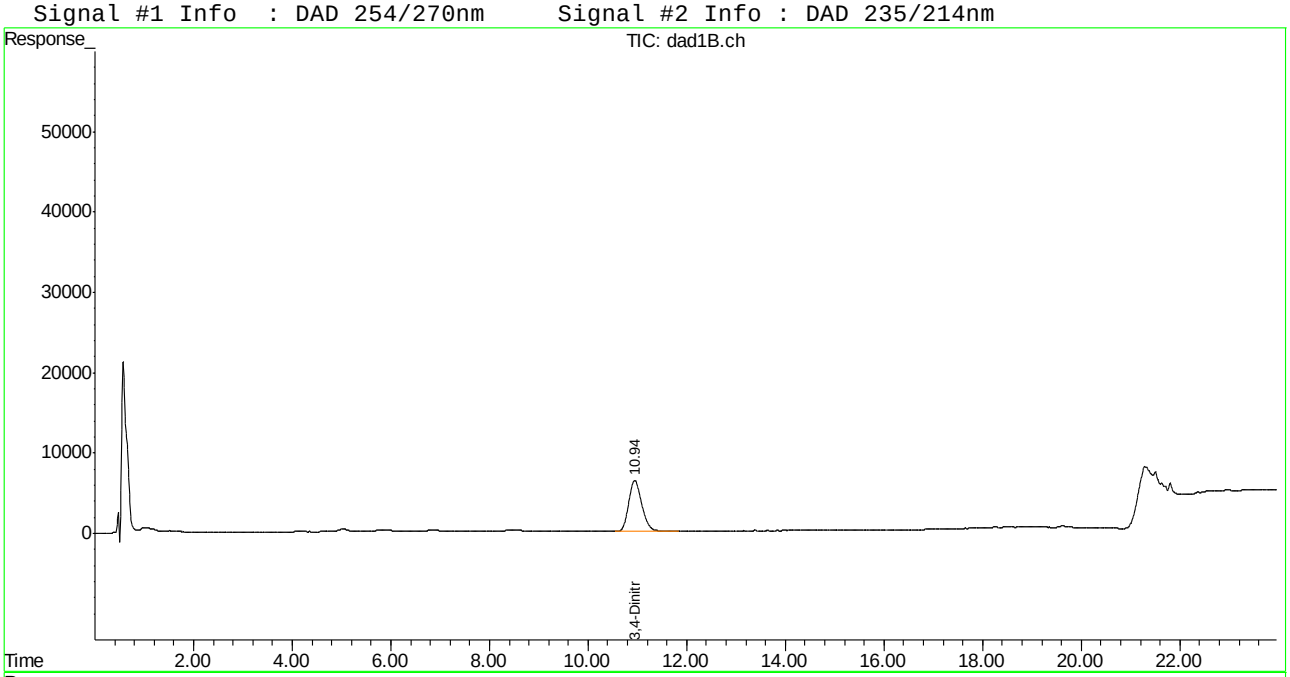
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070817.D BBB2118_103021.M Fri Nov 05 13:54:31 2021 Page 1

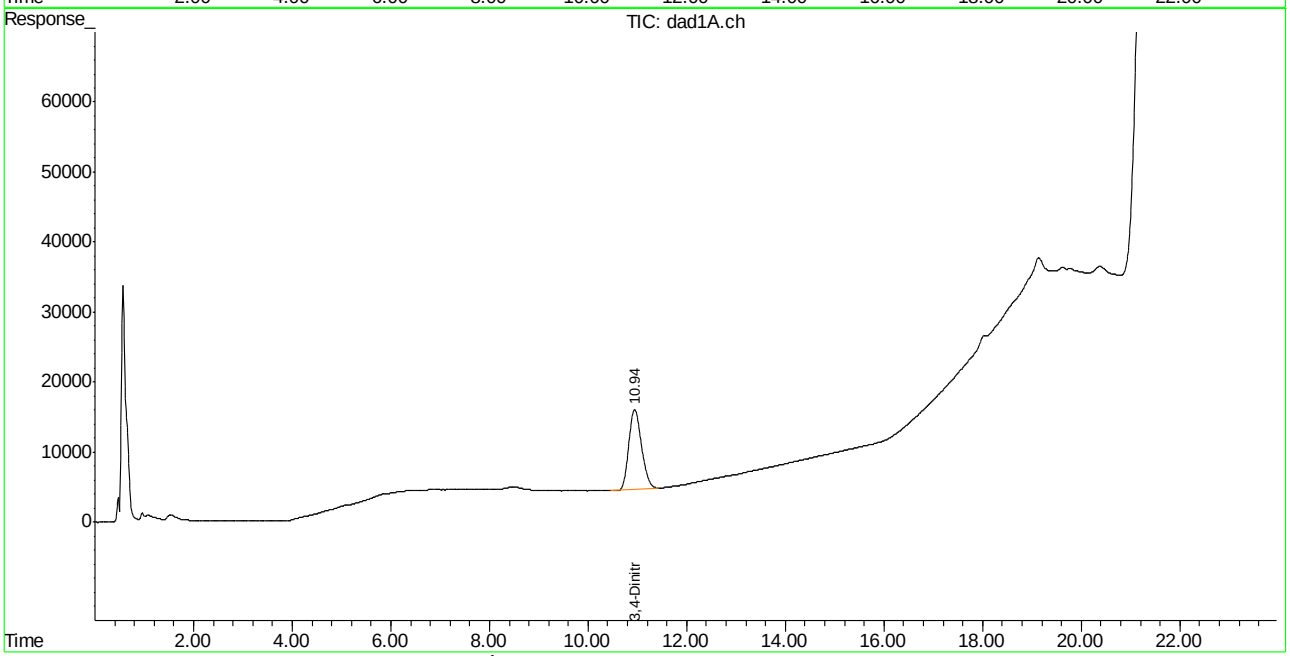
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070817.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070817.D\dad1A.ch
Acq On : 04-Nov-2021, 16:22:22 Operator: jamesb
Sample : FA90260-5 Inst : G1315B
Misc : op88132,GBB2121,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 12:56 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070809.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070809.D\dad1A.ch
Acq On : 04-Nov-2021, 12:14:03 Operator: jamesb
Sample : op88132-MB Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 04 14:13:10 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	10.95	10.96	1032301	1858572	572.042	555.817
Spiked Amount 500.000	Range 70 - 136		Recovery =		114.41%	111.16%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	0.00	0.00	0	0	N.D. d	N.D. d

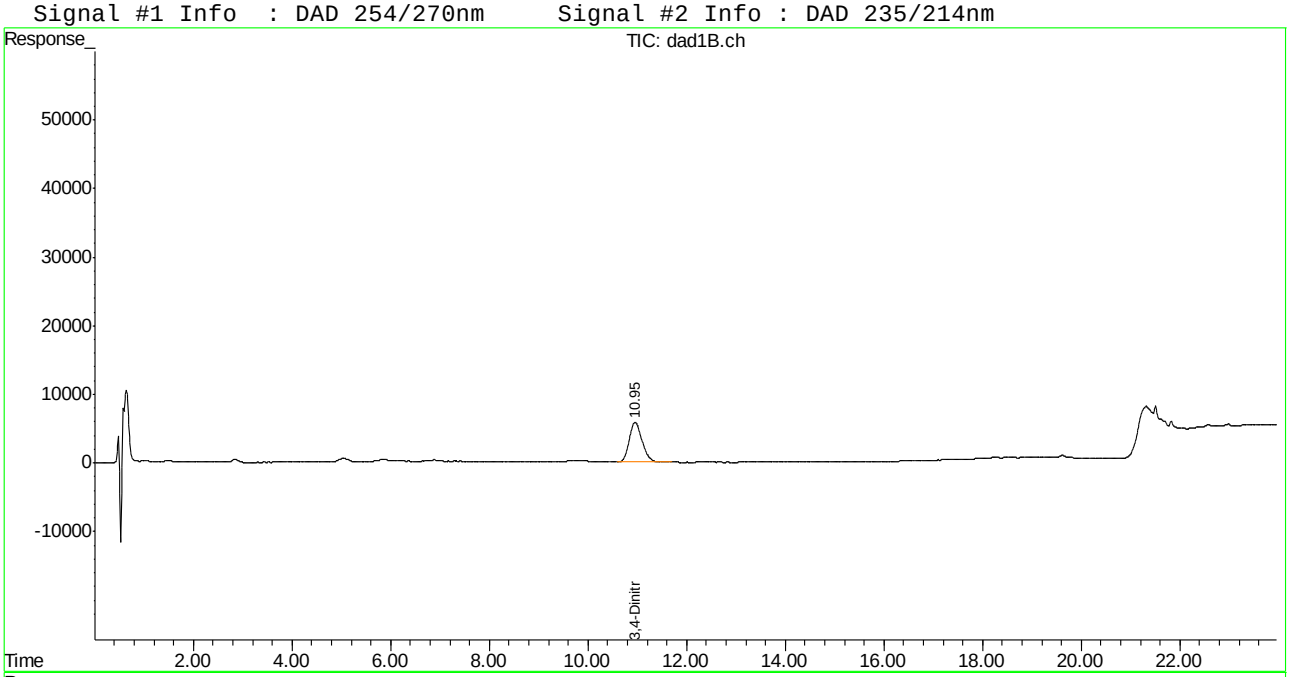
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070809.D BBB2118_103021.M Fri Nov 05 10:36:23 2021 Page 1

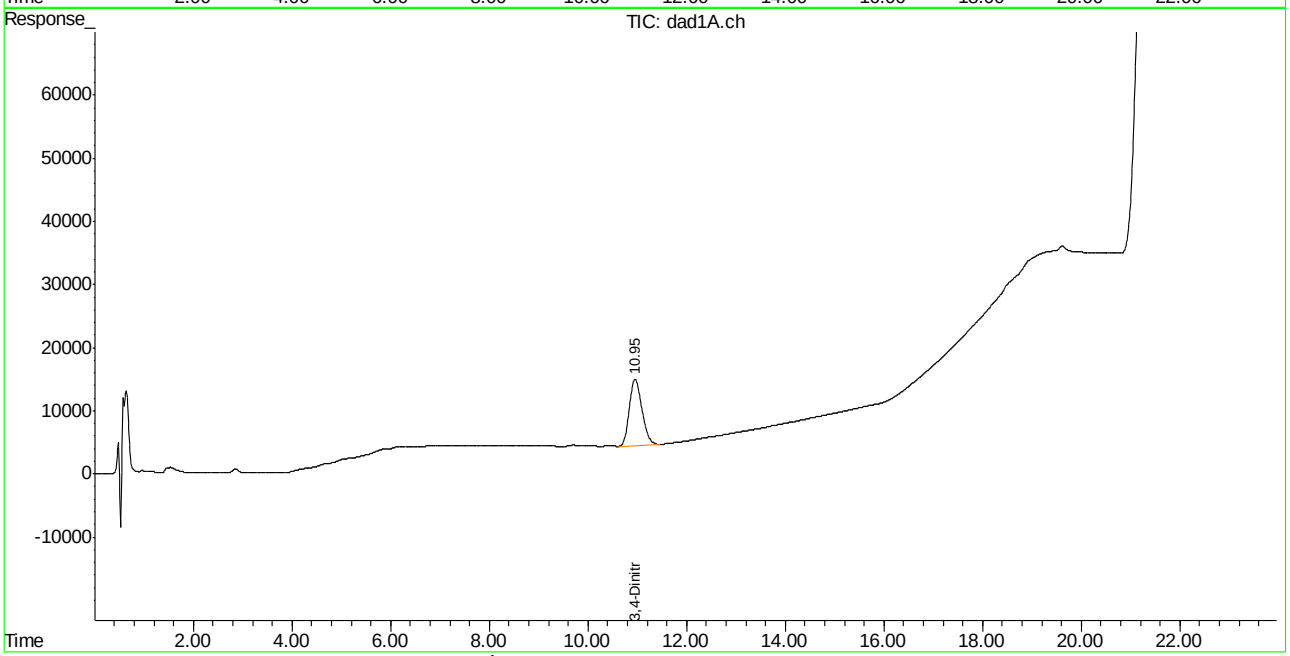
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070809.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070809.D\dad1A.ch
Acq On : 04-Nov-2021, 12:14:03 Operator: jamesb
Sample : op88132-MB Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 10:34 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/08/21 16:33

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622716.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622716.D\dad1A.ch
Acq On : 04-Nov-2021, 15:59:18 Operator: jamesb
Sample : op88132-MB Inst : G1315B
Misc : op88132,GGG3062,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 05 09:16:56 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.77	13.77	2549768	5076366	620.444	608.778m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		124.09%	121.76%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

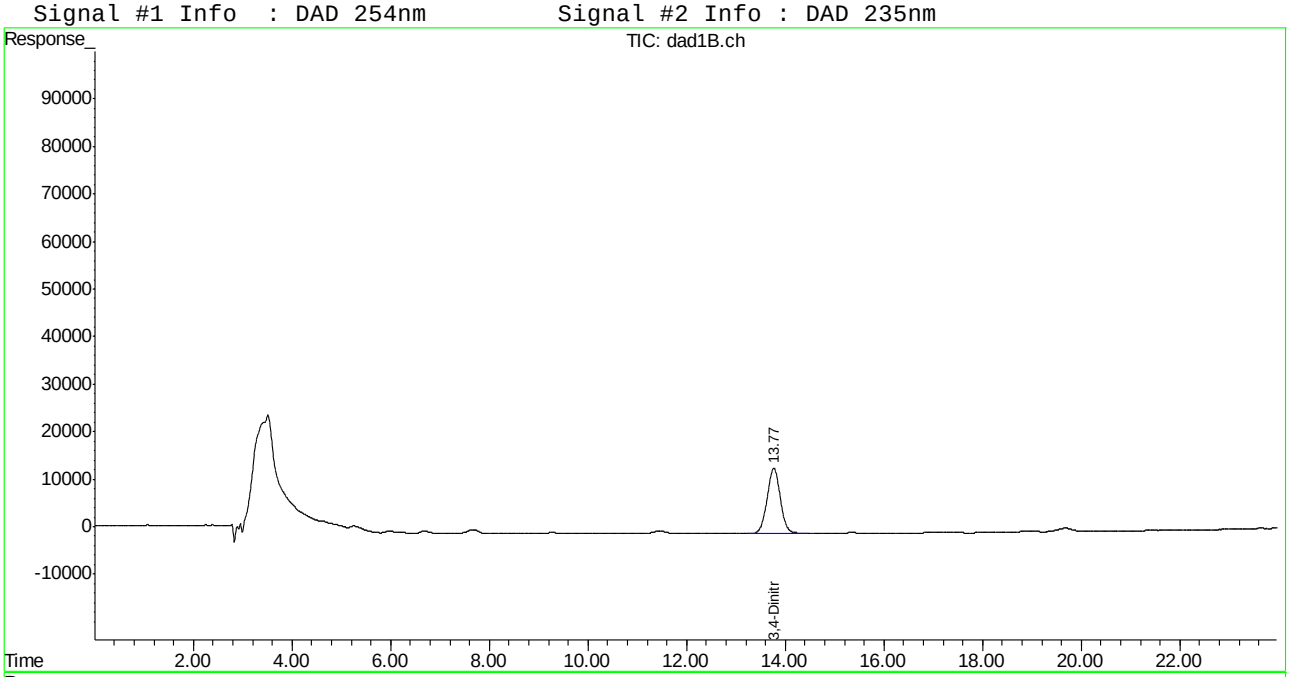
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622716.D GGG3059_103121.M Mon Nov 08 09:33:28 2021 Page 1

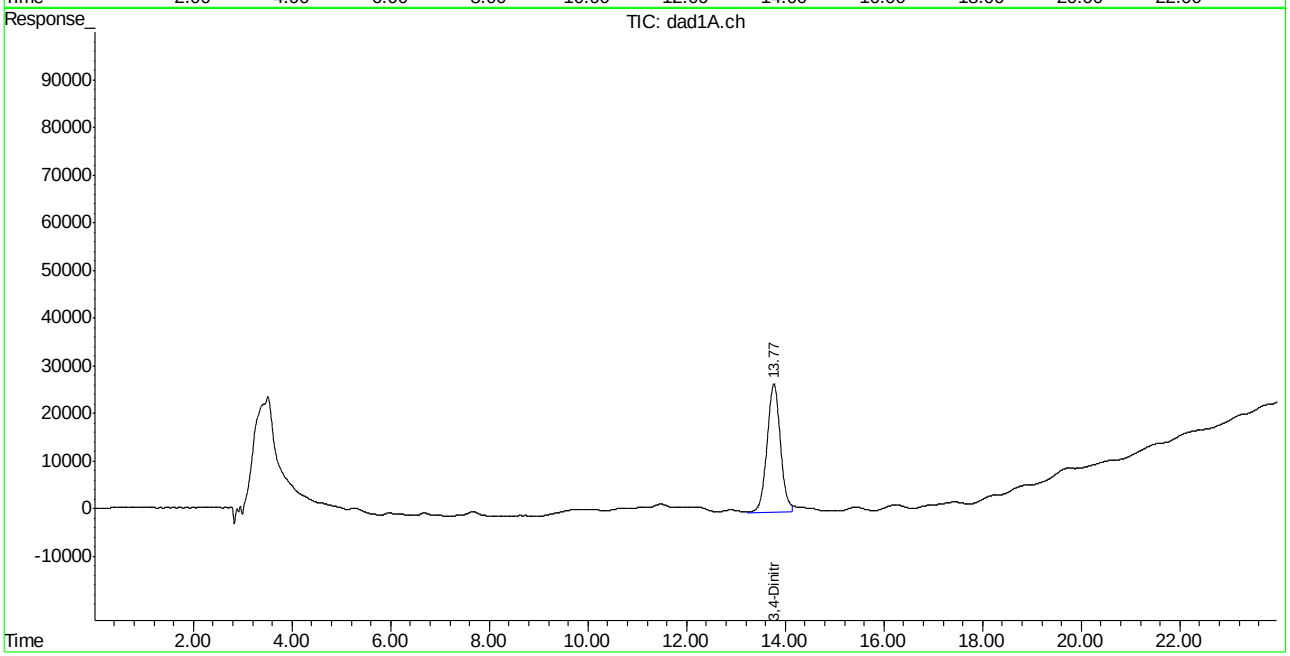
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622716.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622716.D\dad1A.ch
Acq On : 04-Nov-2021, 15:59:18 Operator: jamesb
Sample : op88132-MB Inst : G1315B
Misc : op88132,GGG3062,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 8 9:30 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

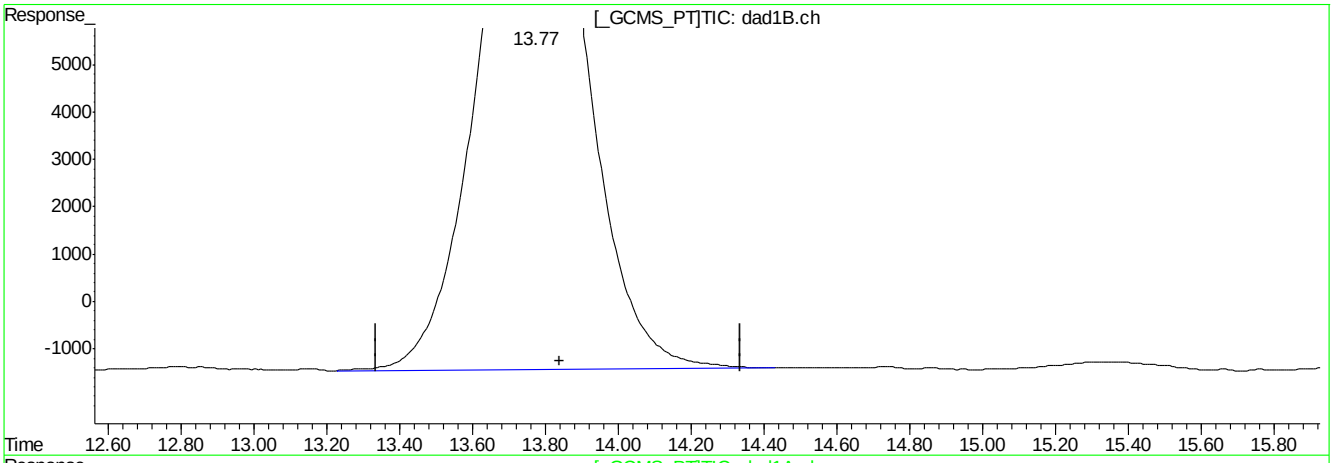
Sample Number: OP88132-MB
Lab FileID: GG622716.D
Injection Time: 11/04/21 15:59
Method: SW846 8330B
Analyst approved: 11/08/21 09:34 James Boone
Supervisor approved: 11/08/21 16:33 Naresh Jiawan

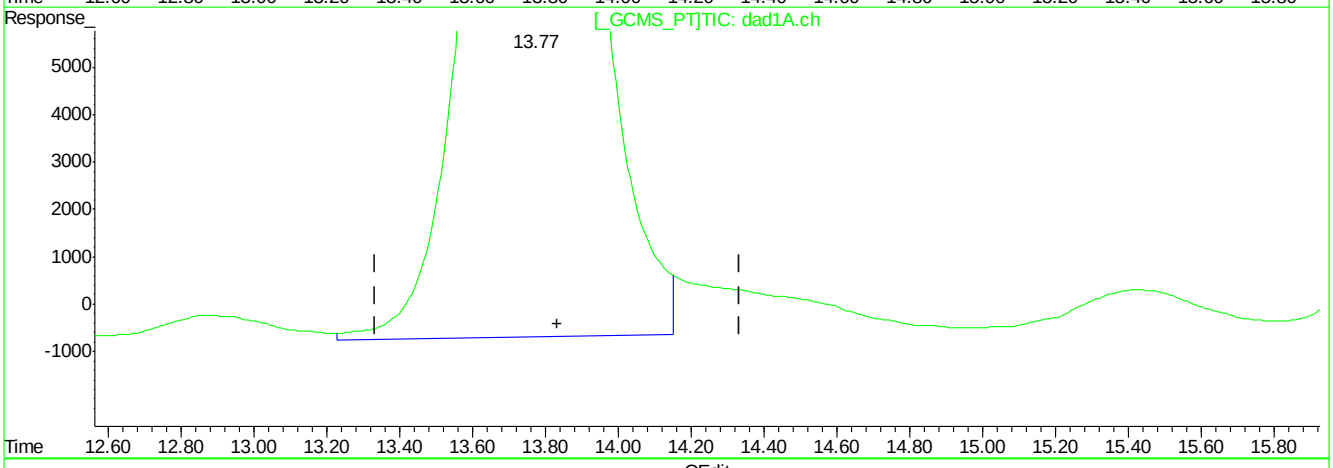
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	2	13.77	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622716.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622716.D\dad1A.ch
Acq On : 04-Nov-2021, 15:59:18 Operator: jamesb
Sample : op88132-MB Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 5 9:16 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.77min 620.444ppb

response 2549768

(12) 3,4-Dinitrotoluene #2 (S)

13.77min 608.778ppb m

response 5076366

(+) = Expected Retention Time
GG622716.D GGG3059_103121.M Mon Nov 08 09:30:34 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/05/21 16:57

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070812.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070812.D\dad1A.ch
Acq On : 04-Nov-2021, 13:47:06 Operator: jamesb
Sample : op88132-BS Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 04 14:13:13 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.97	10.97	1119777	1811378	620.516	541.703
	Spiked Amount 500.000	Range 70 - 136		Recovery =		124.10%	108.34%
	Target Compounds						
1)	TNX	1.32	1.32	256233	394679	175.713	164.912
2)	HMX	1.45	1.45	796255	2238121	550.374	561.430
3)	DNX	1.68	1.68	840903	1405550	503.589	480.009
4)	MNX	2.26	2.26	1261578	1924526	470.248	468.375
5)	RDX	2.86	2.86	950391	1493398	548.217	550.116
6)	1,3,5-Trinitrobe	4.64	4.64	1976654	3000072	540.369	527.949
7)	1,3-Dinitrobenze	5.81	5.81	2707408	1955088	563.748	569.651
8)	3,5-Dinitroanili	6.13	6.13	2068697	3555795	563.654	554.676
9)	Nitrobenzene	7.34	7.34	1555376	1539834	550.647	545.909
10)	Nitroglycerin	0.00	8.84	0	627001	N.D.	566.946 #
11)	Tetryl	9.31	9.31	1278003	2014409	468.318	475.768
12)	2,4,6-Trinitroto	9.72	9.72	1742200	1973145	522.913	523.520
13)	2-Amino-4,6-Dini	9.99	9.99	1772989	2633760	555.543	536.101
14)	4-Amino-2,6-Dini	10.48	10.48	1263265	2392864	554.586	510.670
16)	2,4-Dinitrotolue	11.62	11.62	2337285	1368277	555.168	523.149
17)	2,6-Dinitrotolue	12.07	12.08	1446210	1799937	565.409	576.979
18)	o-Nitrotoluene	15.12	15.13	1067603	1496913	537.751	534.994
19)	p-Nitrotoluene	15.70	15.70	1702463	1373279	555.437	503.535
20)	m-Nitrotoluene	16.57	16.57	1617070	1751339	548.392	503.139
21)	PETN	0.00	18.43	0	758254	N.D. d	594.733m

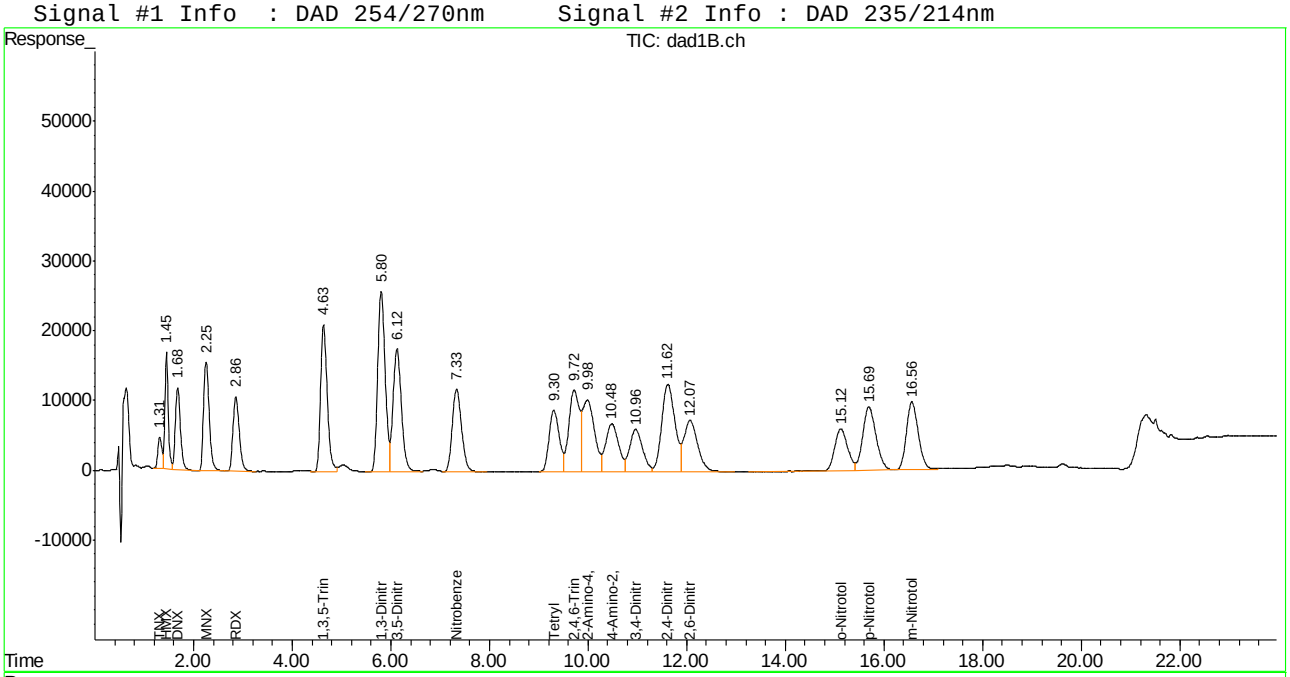
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070812.D BBB2118_103021.M Fri Nov 05 10:36:24 2021 Page 1

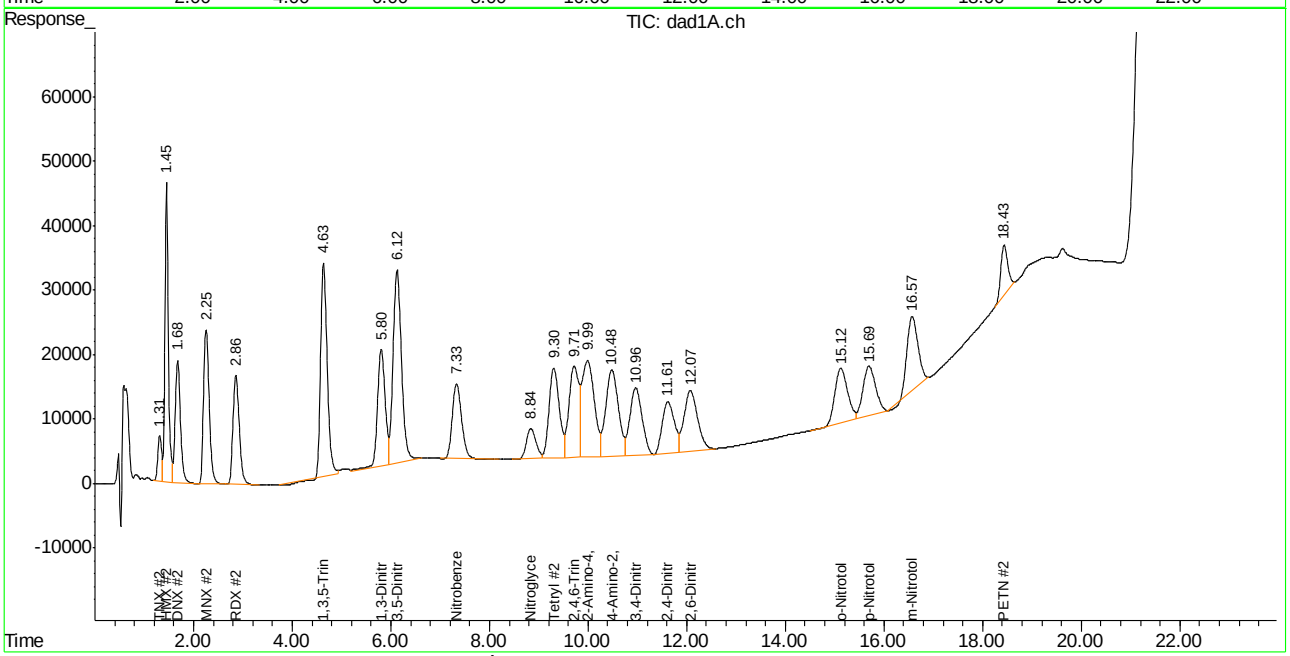
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070812.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070812.D\dad1A.ch
Acq On : 04-Nov-2021, 13:47:06 Operator: jamesb
Sample : op88132-BS Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 10:35 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

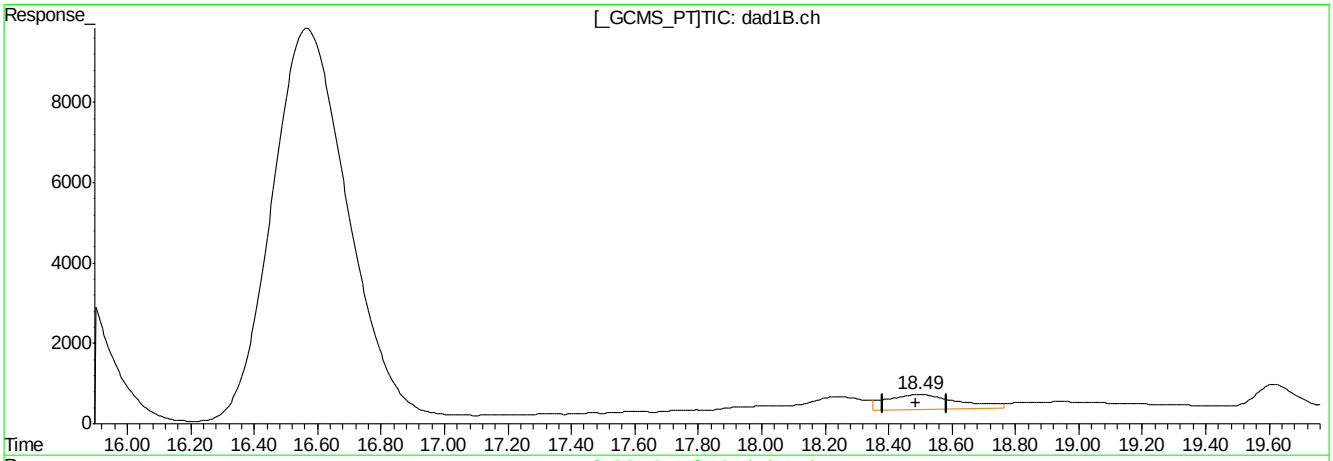
Sample Number: OP88132-BS
Lab FileID: BB070812.D
Injection Time: 11/04/21 13:47
Method: SW846 8330B
Analyst approved: 11/05/21 11:36 James Boone
Supervisor approved: 11/05/21 16:57 Naresh Jiawan

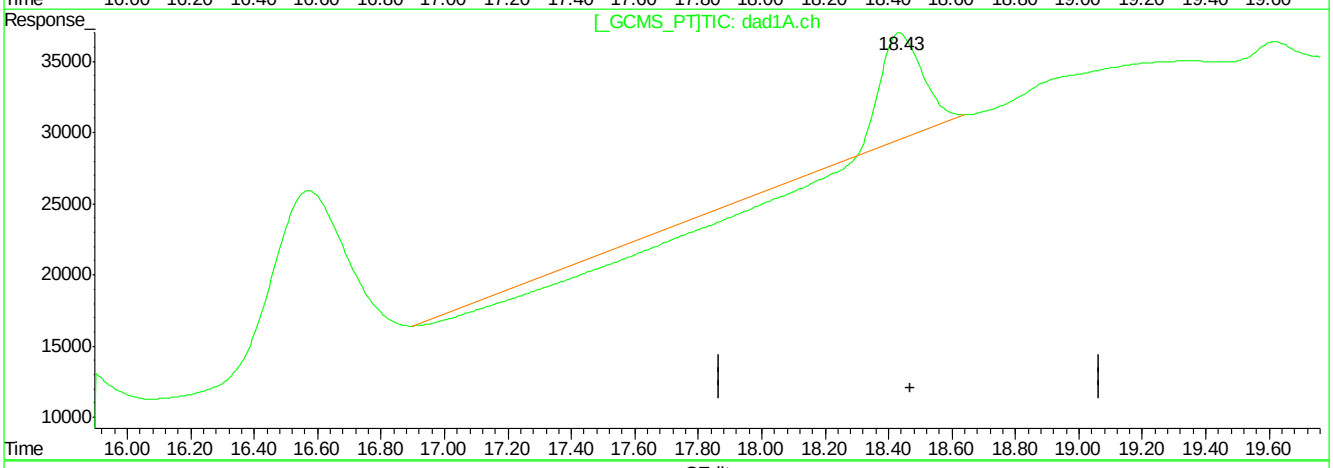
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.43	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070812.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070812.D\dad1A.ch
Acq On : 04-Nov-2021, 13:47:06 Operator: jamesb
Sample : op88132-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 4 14:13 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.50min 0.000ppb

response 56838

(21) PETN #2

18.44min 27.577ppb

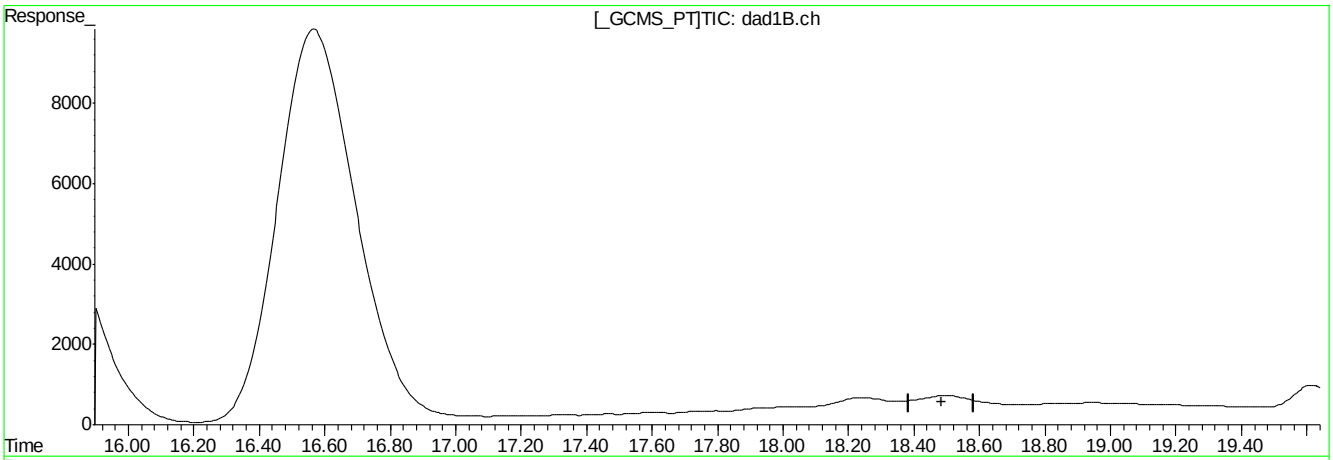
response 35159

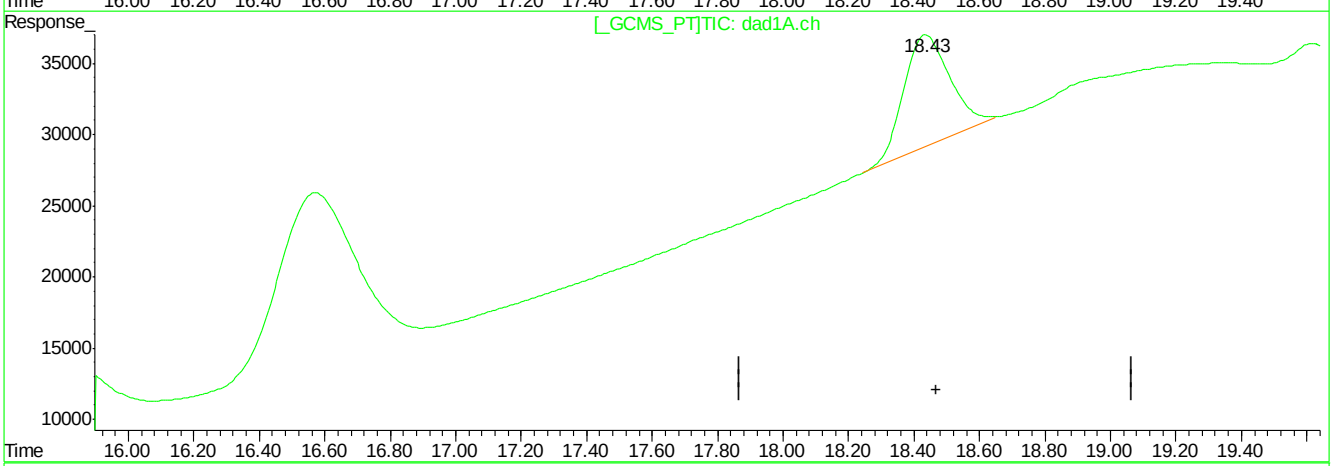
(+) = Expected Retention Time
BB070812.D BBB2118_103021.M Fri Nov 05 10:35:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070812.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070812.D\dad1A.ch
Acq On : 04-Nov-2021, 13:47:06 Operator: jamesb
Sample : op88132-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 4 14:13 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.43min 594.733ppb m

response 758254

(+) = Expected Retention Time
BB070812.D BBB2118_103021.M Fri Nov 05 10:35:39 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/05/21 17:13

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : op88132,GBB2121,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 05 09:30:26 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.94	10.94	1074322	1771818	595.328	529.872
	Spiked Amount 500.000	Range 70 - 136		Recovery =		119.07%	105.97%
	Target Compounds						
1)	TNX	1.31	1.31	270390	462955	185.421m	193.440m
2)	HMX	1.44	1.44	1042482	2926253	720.567m	734.047m
3)	DNX	1.67	1.67	972293	1621233	582.274m	553.667m
4)	MNX	2.25	2.25	1674114	2436191	624.019	592.900
5)	RDX	2.85	2.85	1051546	1617433	606.566	595.806
6)	1,3,5-Trinitrobe	4.62	4.62	6633813	10160480	1813.523m	1788.028m
7)	1,3-Dinitrobenze	5.80	5.80	2688324	1970811	559.774	574.232
8)	3,5-Dinitroanili	6.12	6.12	2182870	3997810	594.762	623.627
9)	Nitrobenzene	7.33	7.33	1526981	1539419	540.594	545.762
10)	Nitroglycerin	0.00	8.83	0	608119	N.D.	549.873 #
11)	Tetryl	9.28	9.28	1251813	1985288	458.720	468.890
12)	2,4,6-Trinitroto	9.69	9.70	3702412	4323042	1111.262m	1147.000
13)	2-Amino-4,6-Dini	9.86f	9.95	1945187	2849445	609.499m	580.004
14)	4-Amino-2,6-Dini	10.45	10.45	1383535	2667322	607.386	569.243
16)	2,4-Dinitrotolue	11.59	11.60	2295809	1346889	545.316	514.972
17)	2,6-Dinitrotolue	12.05	12.05	1736834	2207096	679.031	707.496
18)	o-Nitrotoluene	15.10	15.11	1119542	1549774	563.913m	553.886
19)	p-Nitrotoluene	15.68	15.68	1702471	1385601	555.440	508.053
20)	m-Nitrotoluene	16.55	16.56	1638406	1927629	555.628	553.786m
21)	PETN	0.00	18.43	0	744380	N.D. d	583.852m

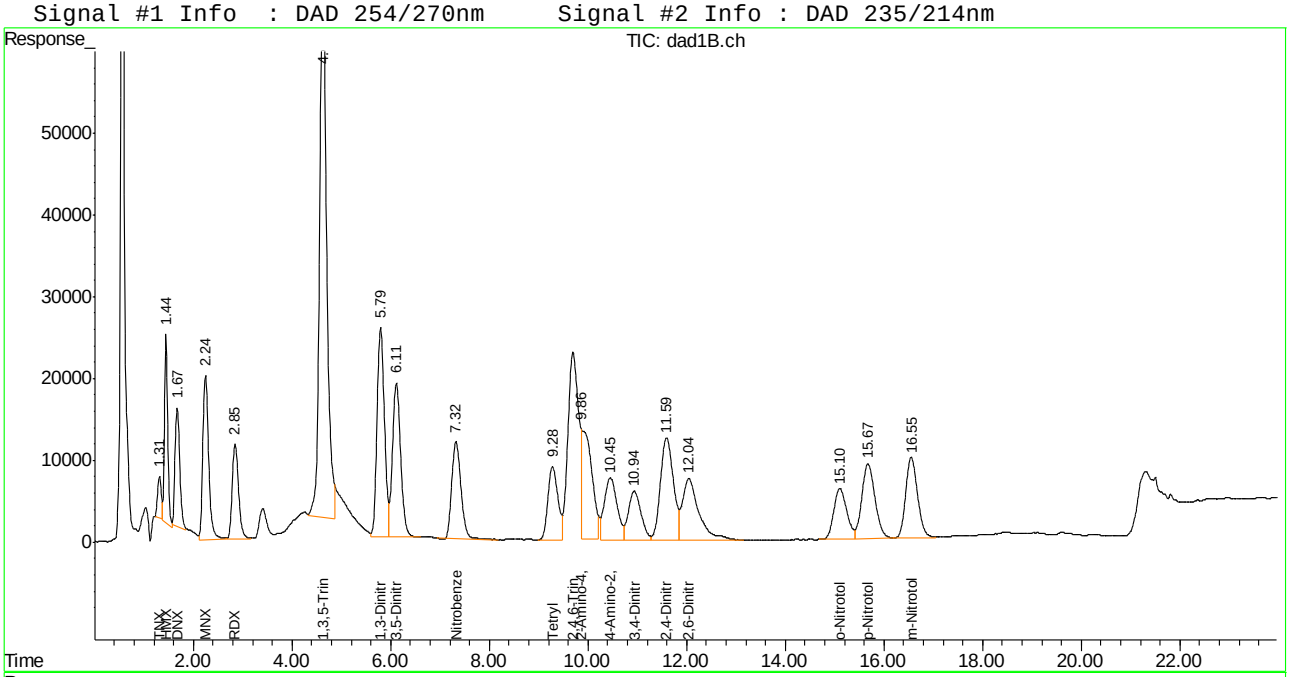
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070818.D BBB2118_103021.M Fri Nov 05 13:54:32 2021 Page 1

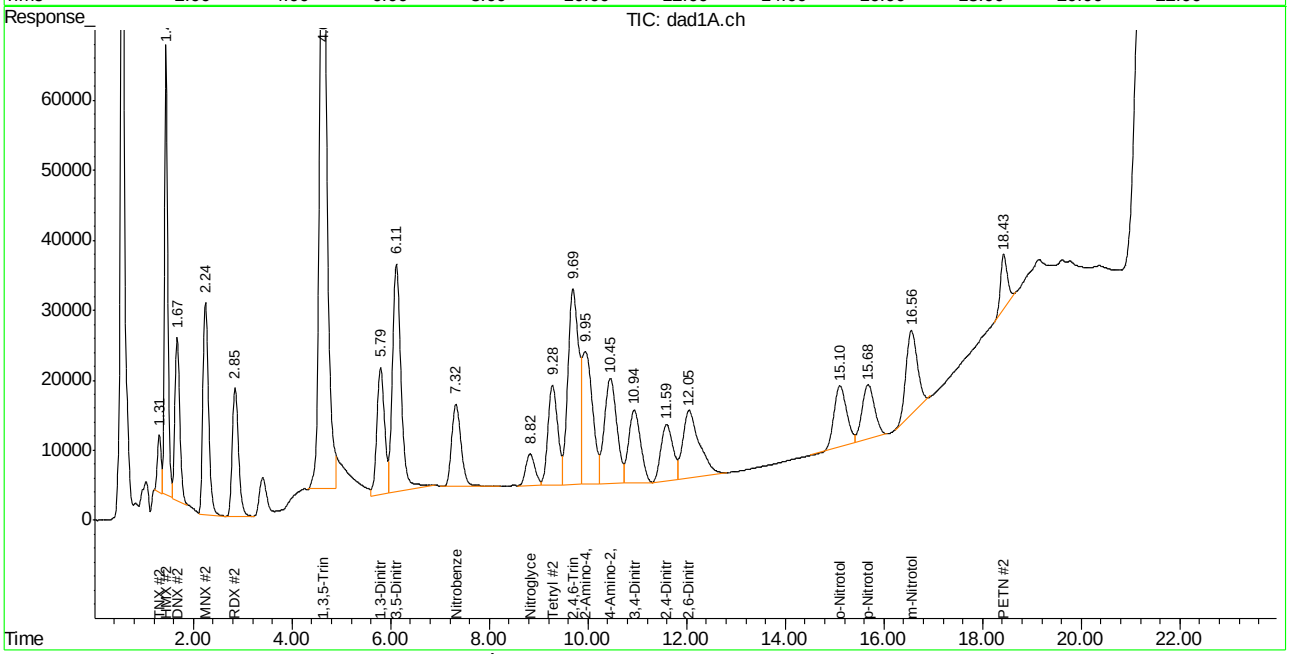
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : op88132,GBB2121,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 12:58 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

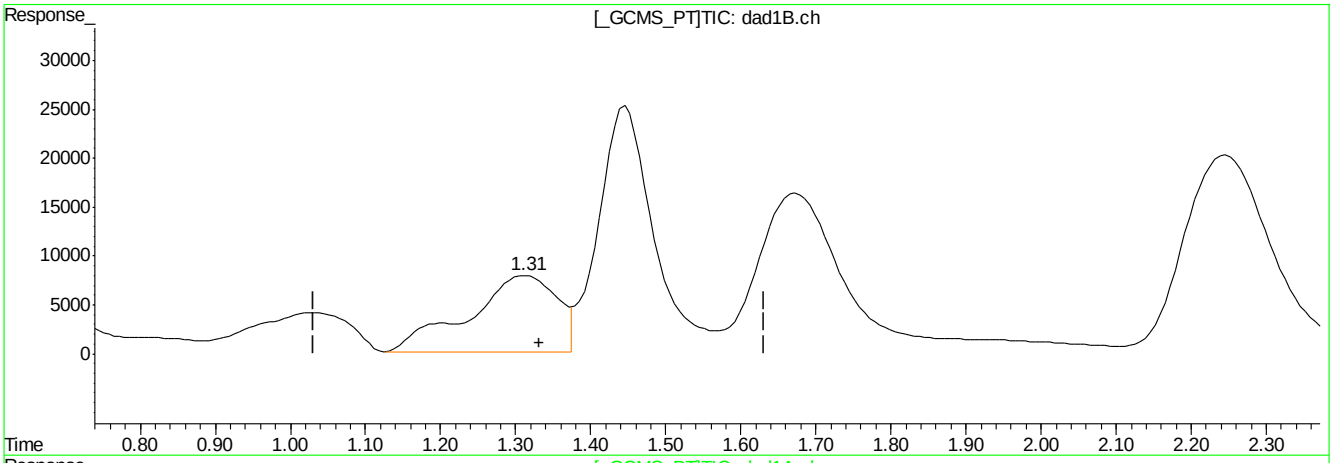
Sample Number: OP88132-MS
Lab FileID: BB070818.D
Injection Time: 11/04/21 16:53
Method: SW846 8330B
Analyst approved: 11/05/21 15:02 James Boone
Supervisor approved: 11/05/21 17:13 Naresh Jiawan

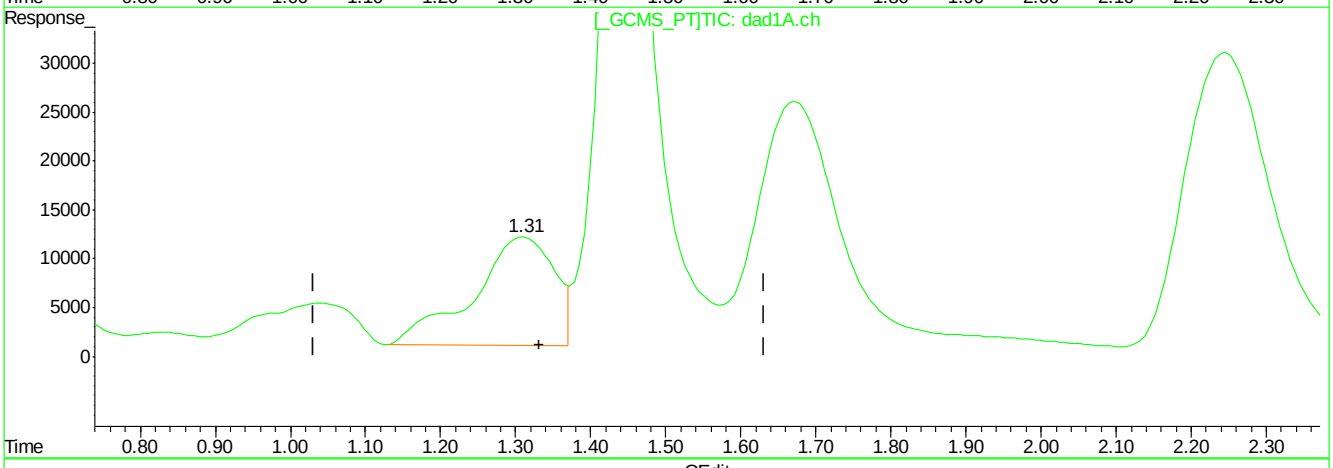
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.31	Poor instrument integration
TNX		2	1.31	Poor instrument integration
HMX	2691-41-0	1	1.44	Poor instrument integration
HMX	2691-41-0	2	1.44	Poor instrument integration
DNX		1	1.67	Poor instrument integration
DNX		2	1.67	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.62	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.62	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.69	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.86	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.10	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.56	Poor instrument integration
PETN	78-11-5	2	18.43	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 433.848ppb

response 632659

(1) TNX #2

1.31min 339.908ppb

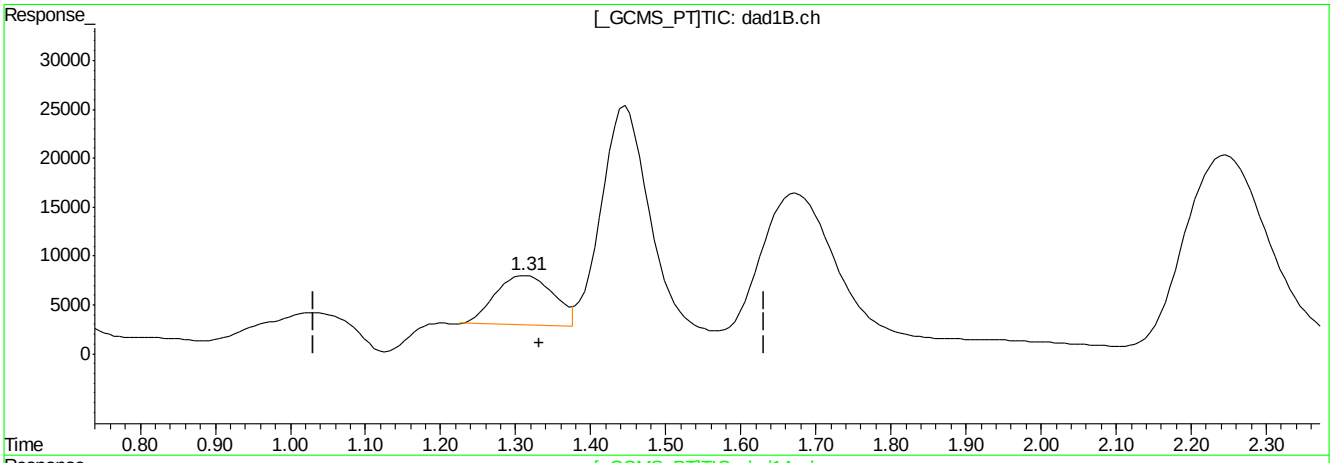
response 813494

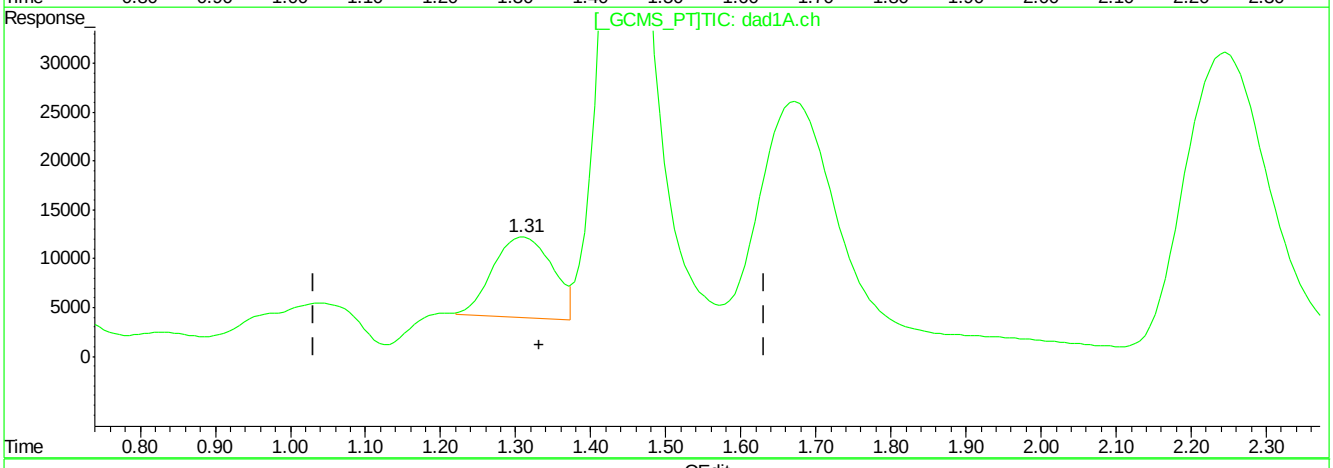
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:56:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 185.421ppb m

response 270390

(1) TNX #2

1.31min 193.440ppb m

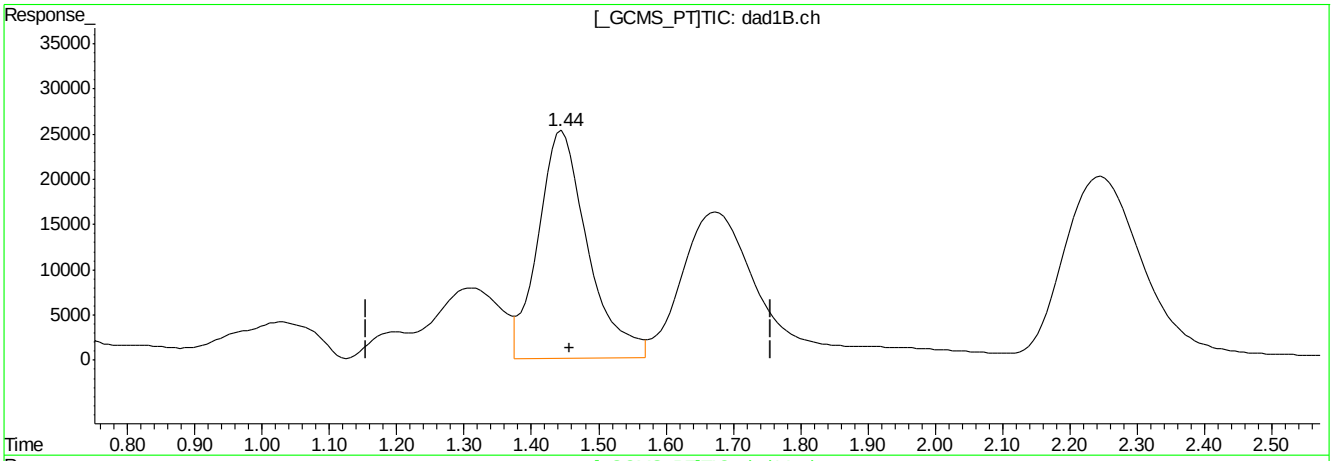
response 462955

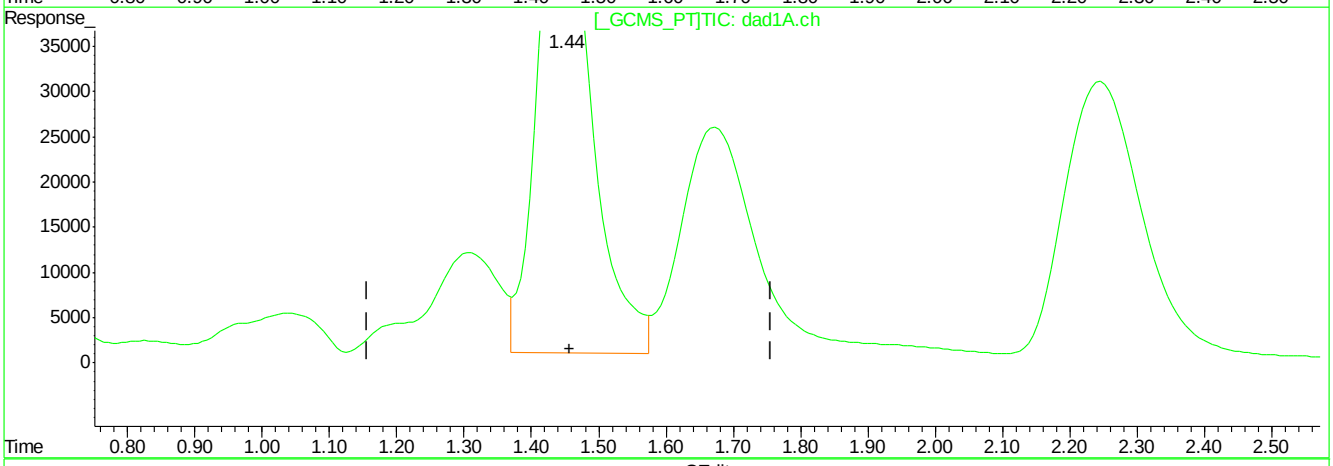
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:57:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.45min 883.687ppb

response 1278475

(2) HMX #2

1.45min 812.825ppb

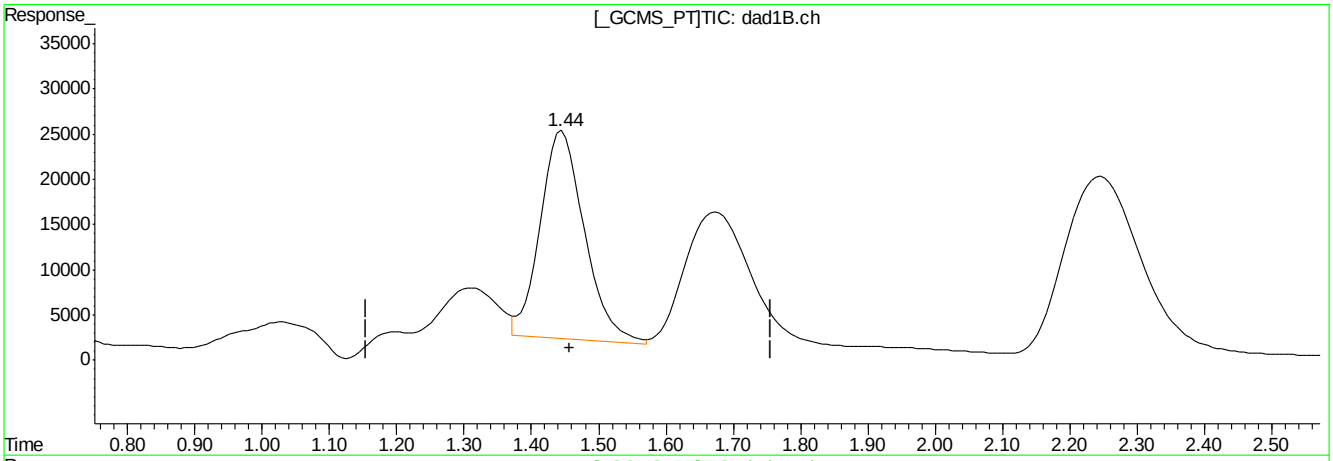
response 3240298

(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:57:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(2) HMX

1.44min 720.567ppb m

response 1042482

(2) HMX #2

1.44min 734.047ppb m

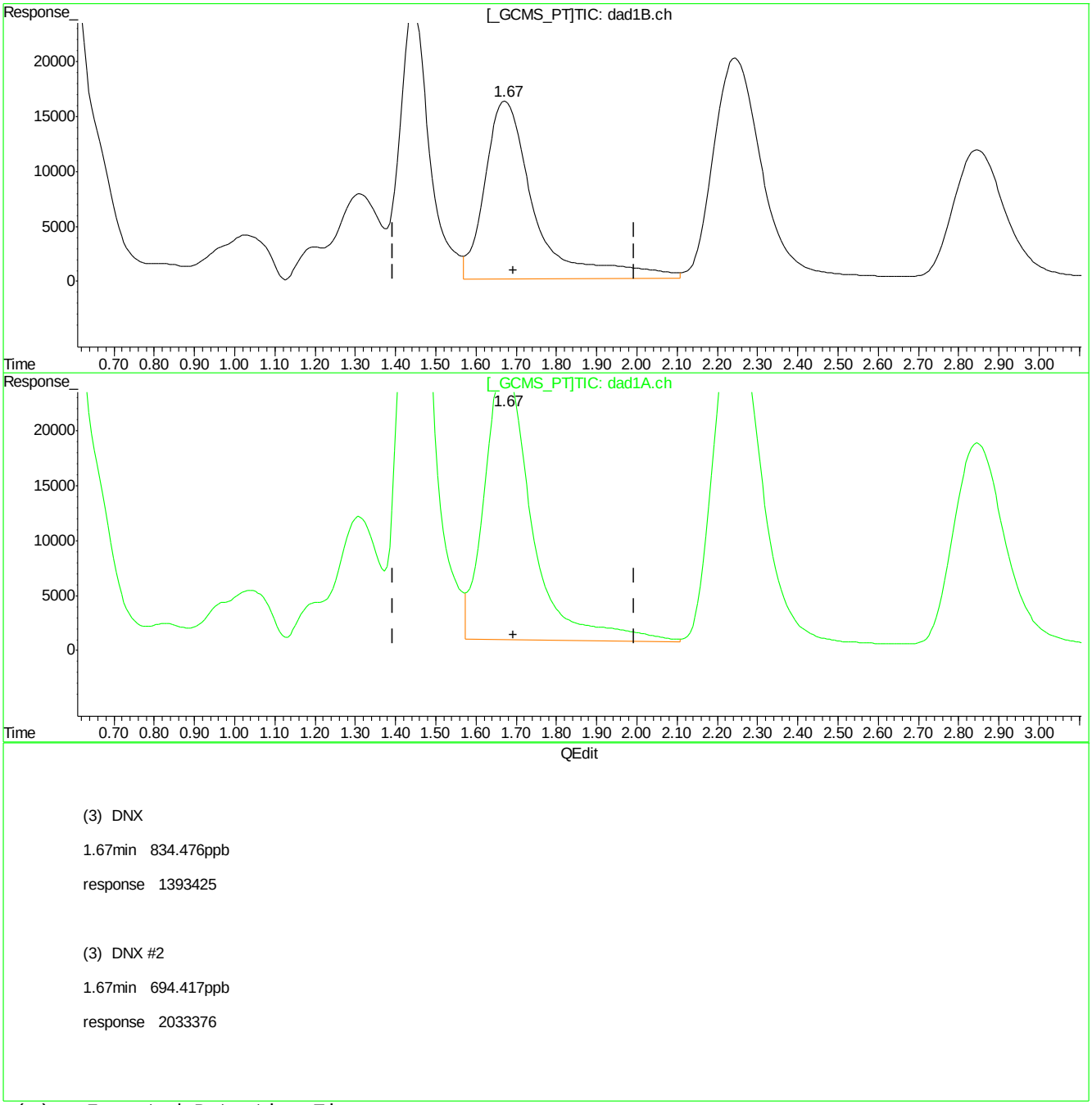
response 2926253

(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:57:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration

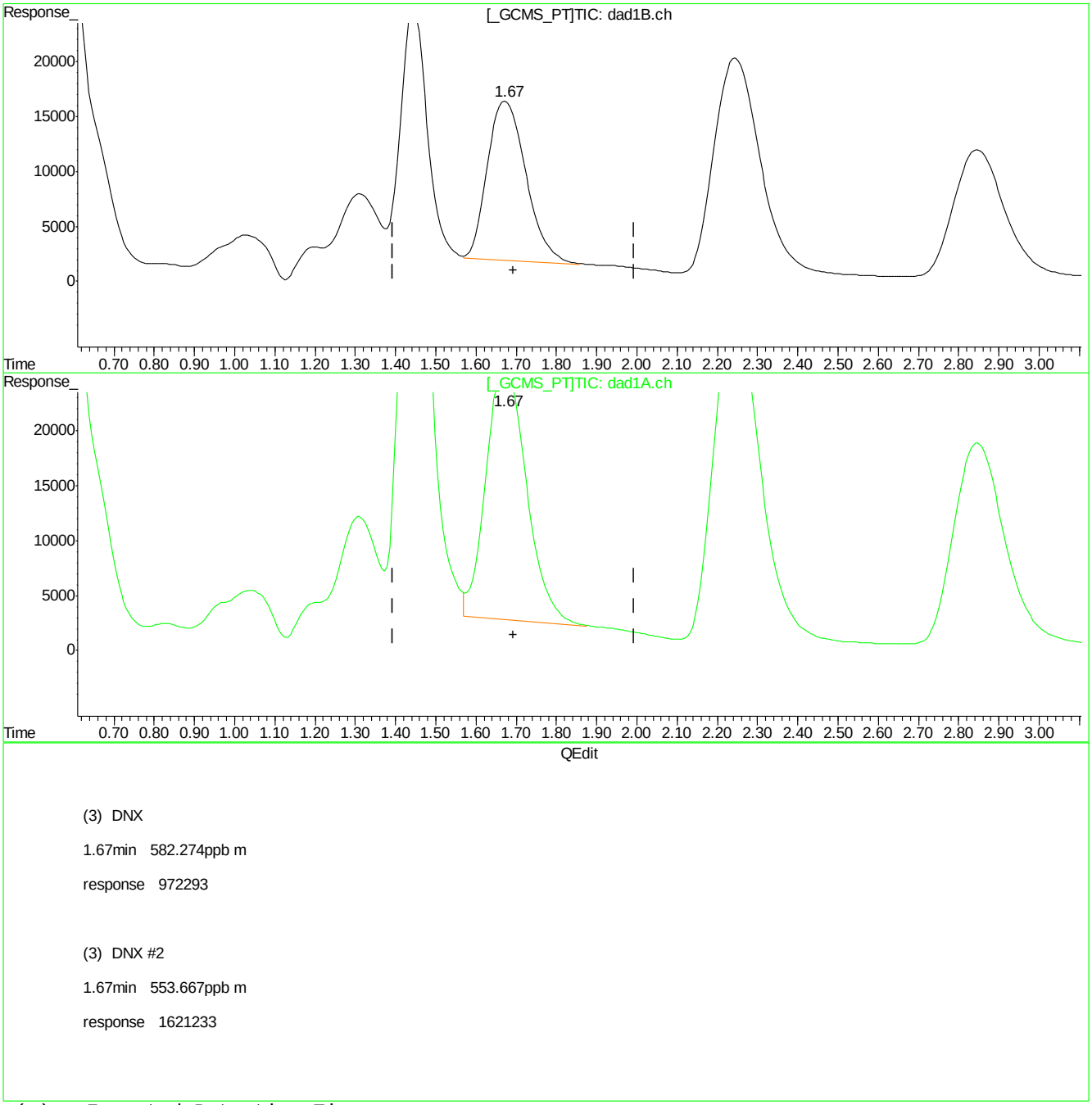


(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:57:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(3) DNX

1.67min 582.274ppb m

response 972293

(3) DNX #2

1.67min 553.667ppb m

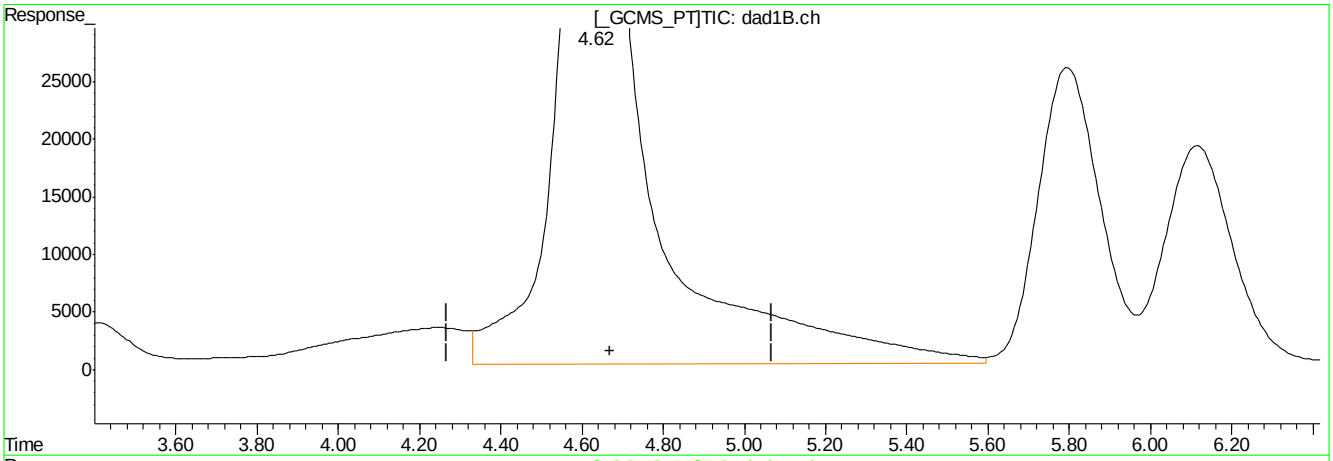
response 1621233

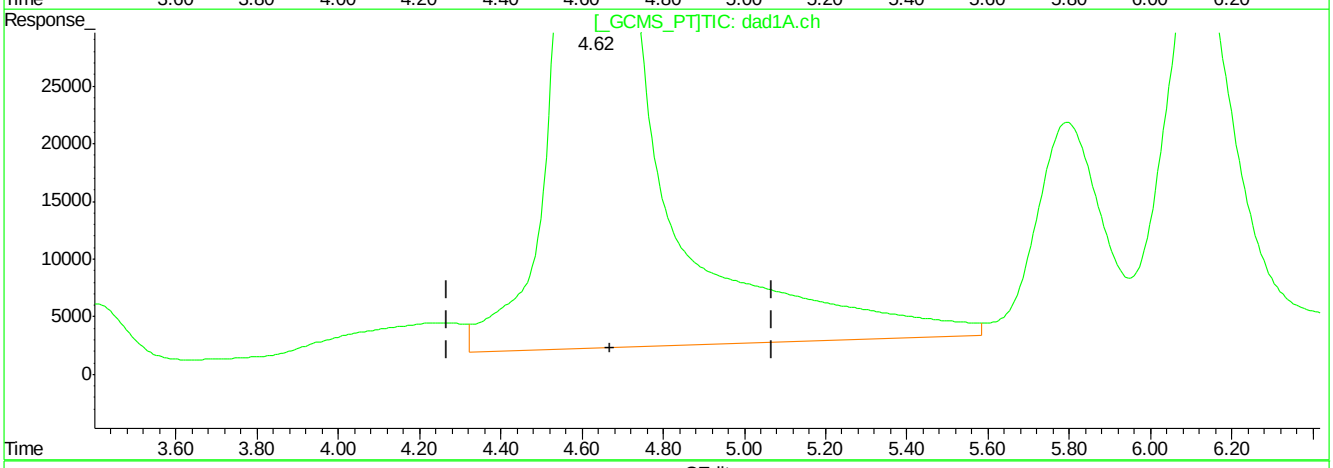
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:57:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.63min 2383.615ppb

response 8719193

(6) 1,3,5-Trinitrobenzene #2

4.63min 2157.492ppb

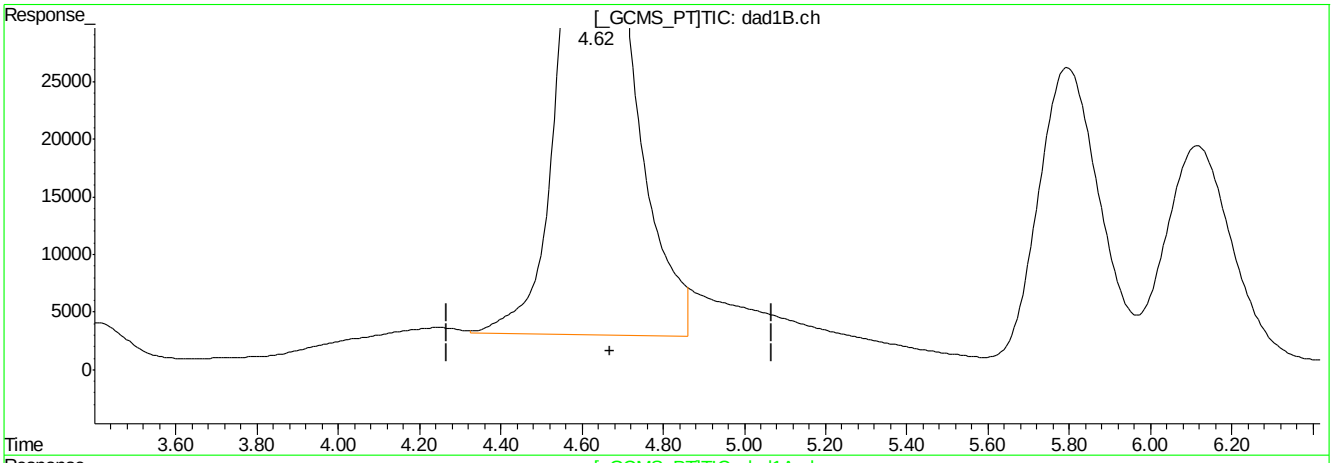
response 12259963

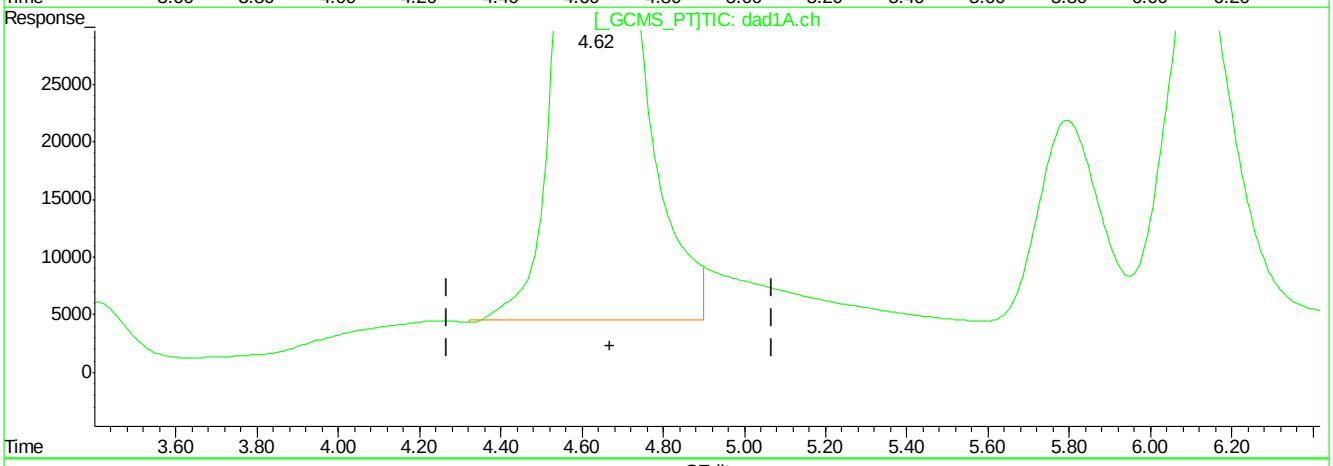
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:57:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.62min 1813.523ppb m

response 6633813

(6) 1,3,5-Trinitrobenzene #2

4.62min 1788.028ppb m

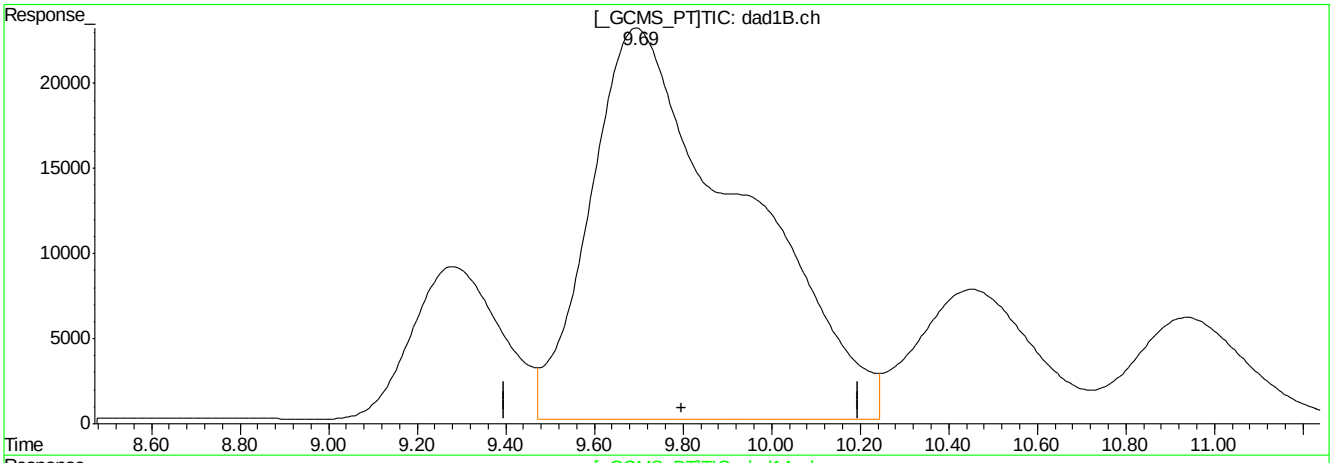
response 10160480

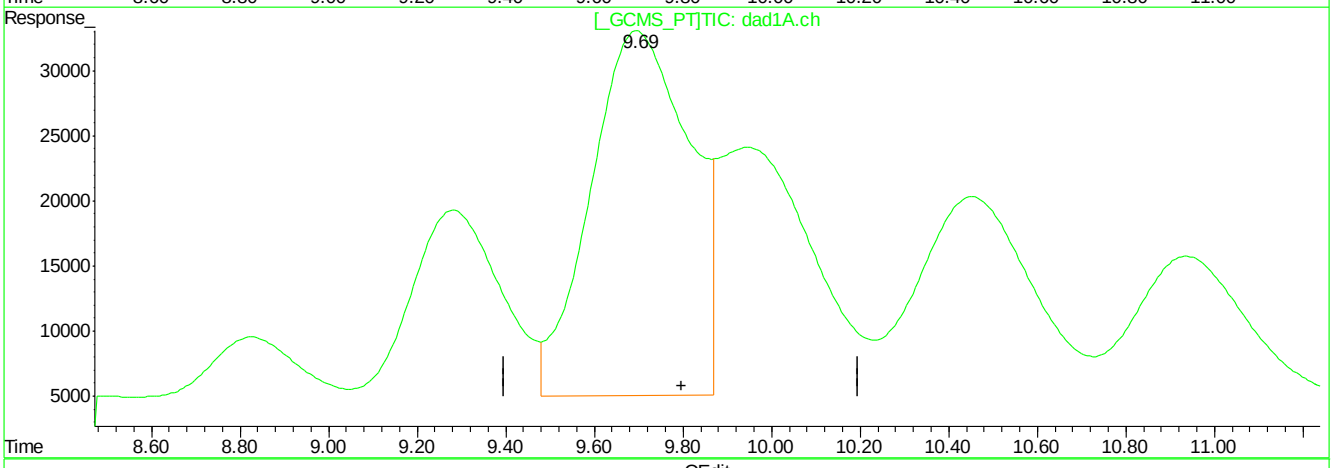
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:57:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.70min 1654.592ppb

response 5512635

(12) 2,4,6-Trinitrotoluene #2

9.70min 1147.000ppb

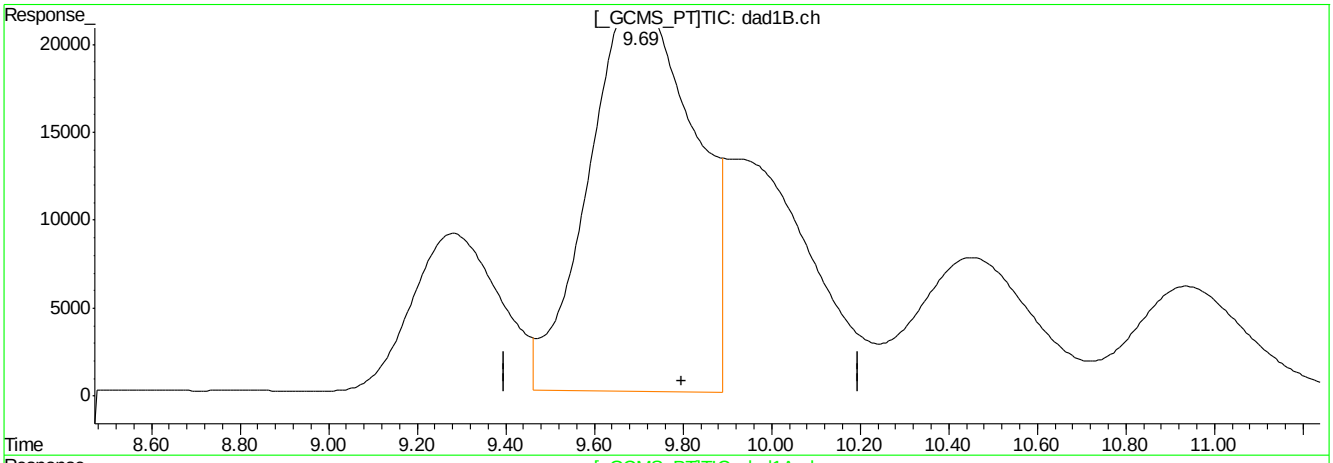
response 4323042

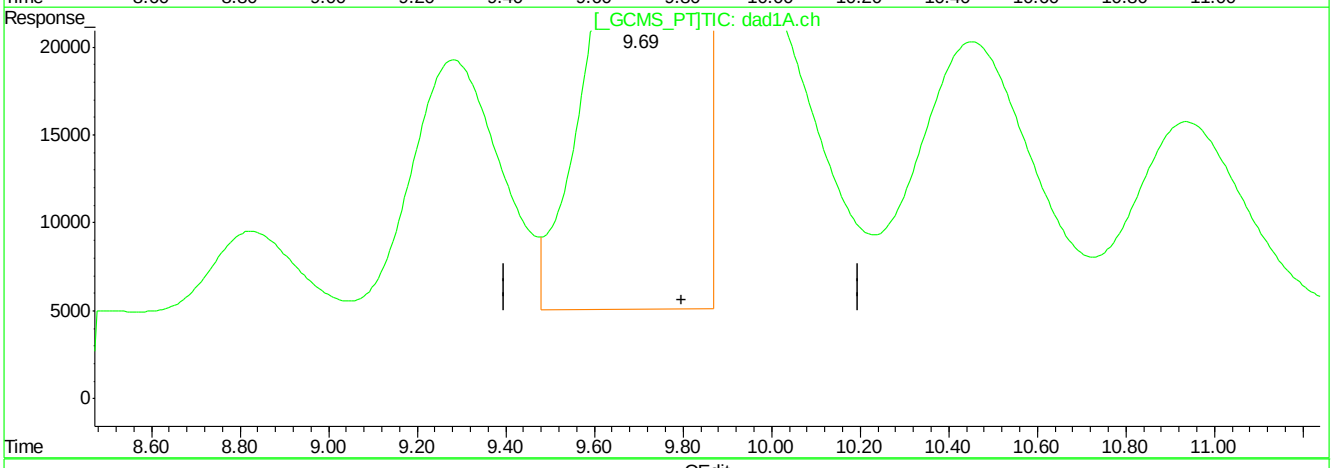
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:58:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.69min 1111.262ppb m

response 3702412

(12) 2,4,6-Trinitrotoluene #2

9.70min 1147.000ppb

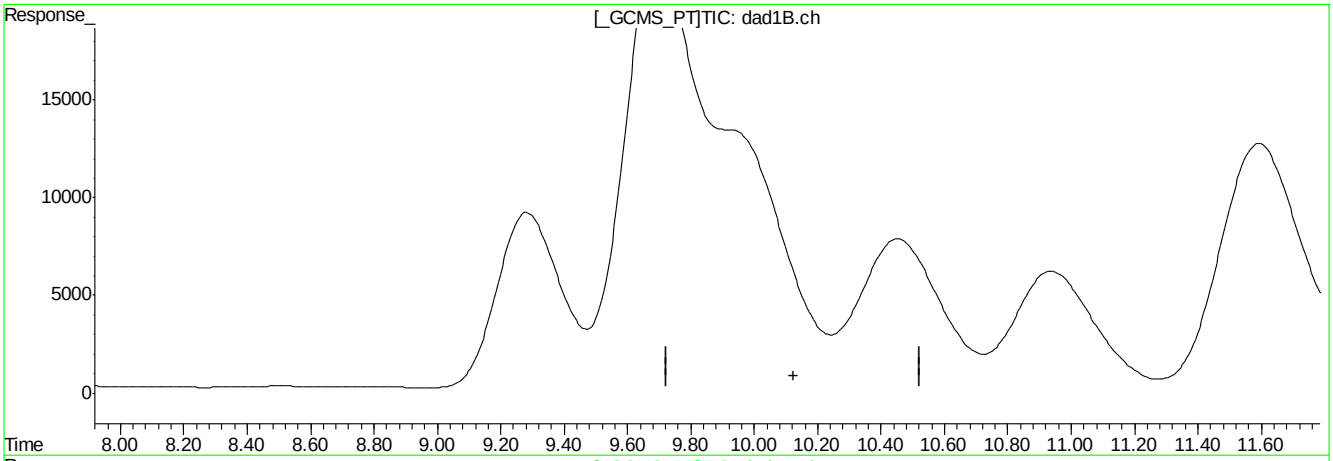
response 4323042

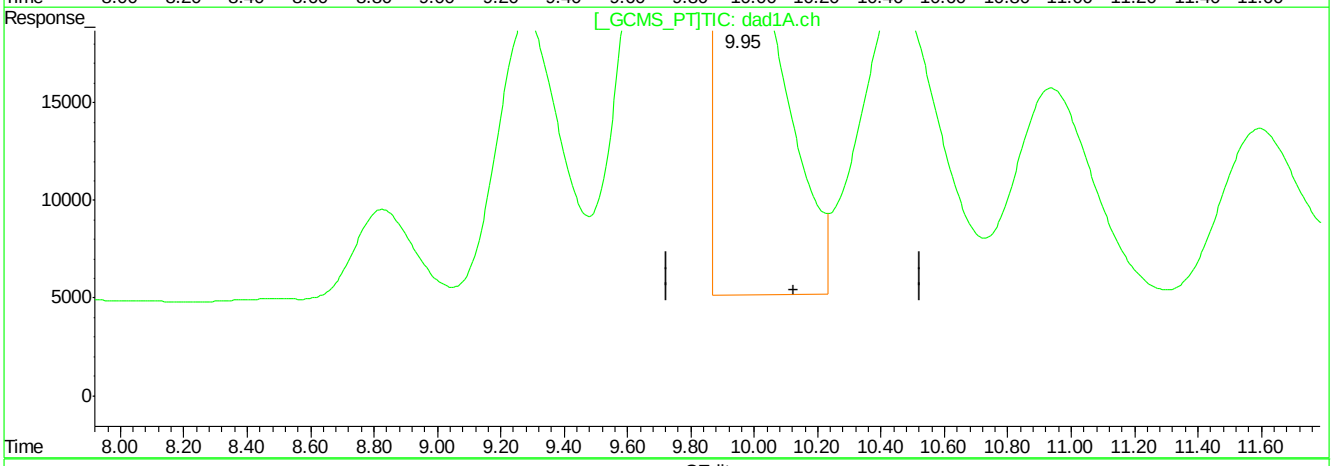
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:58:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

9.95min 580.004ppb

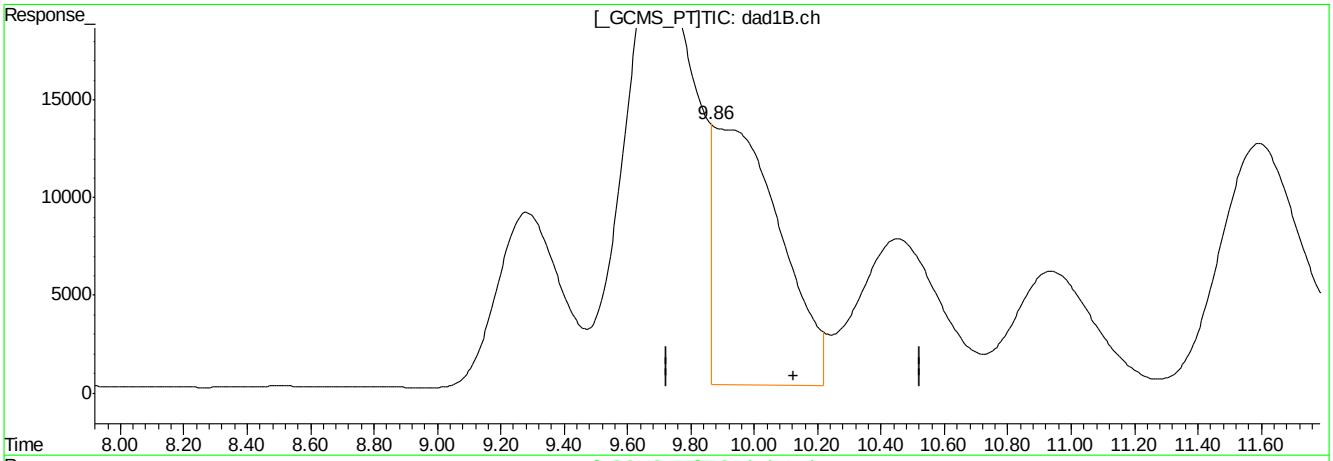
response 2849445

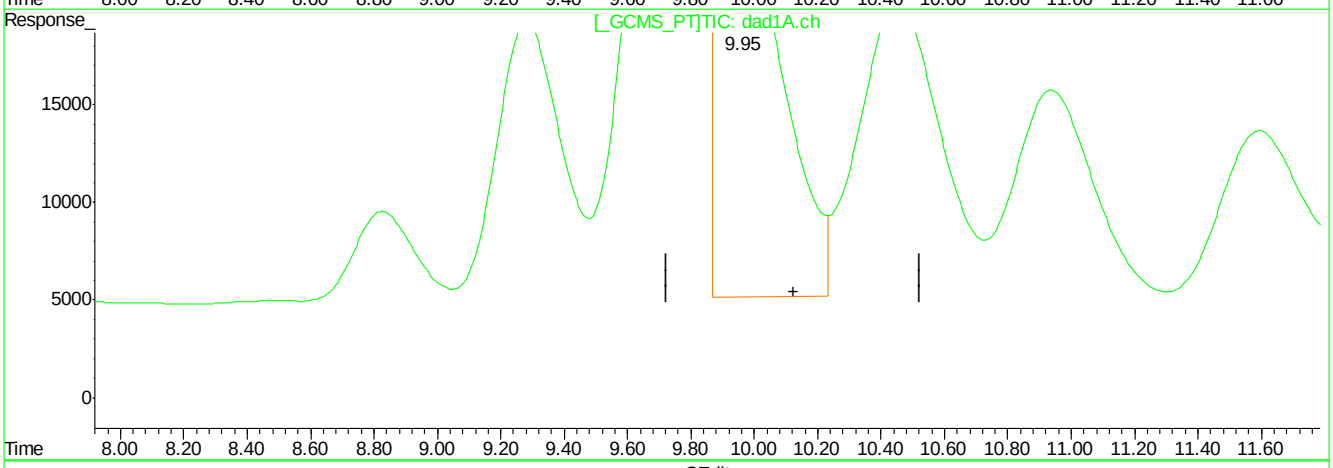
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:58:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

9.86min 609.499ppb m

response 1945187

(13) 2-Amino-4,6-Dinitrotoluene #2

9.95min 580.004ppb

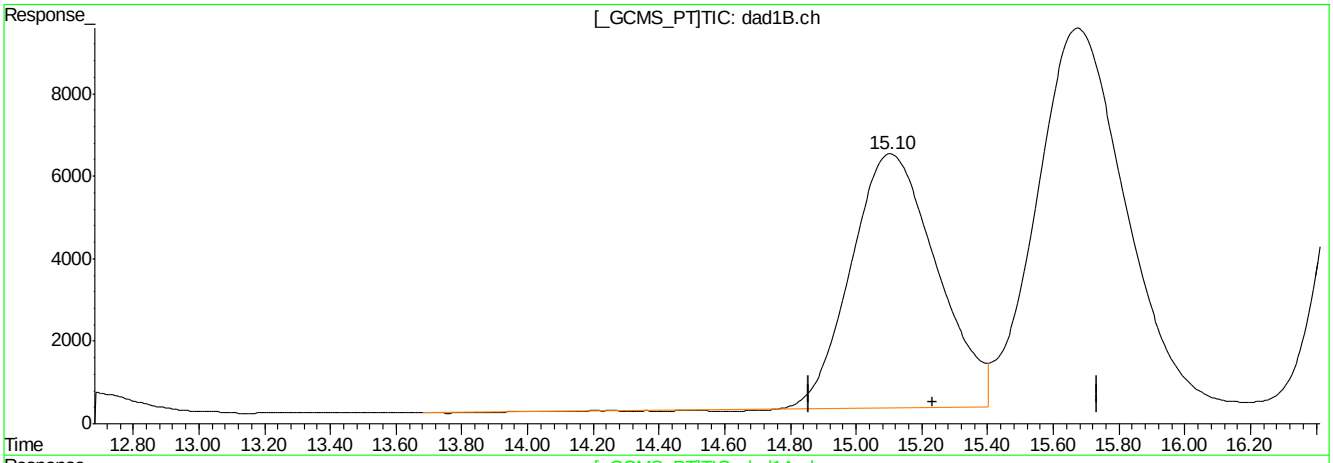
response 2849445

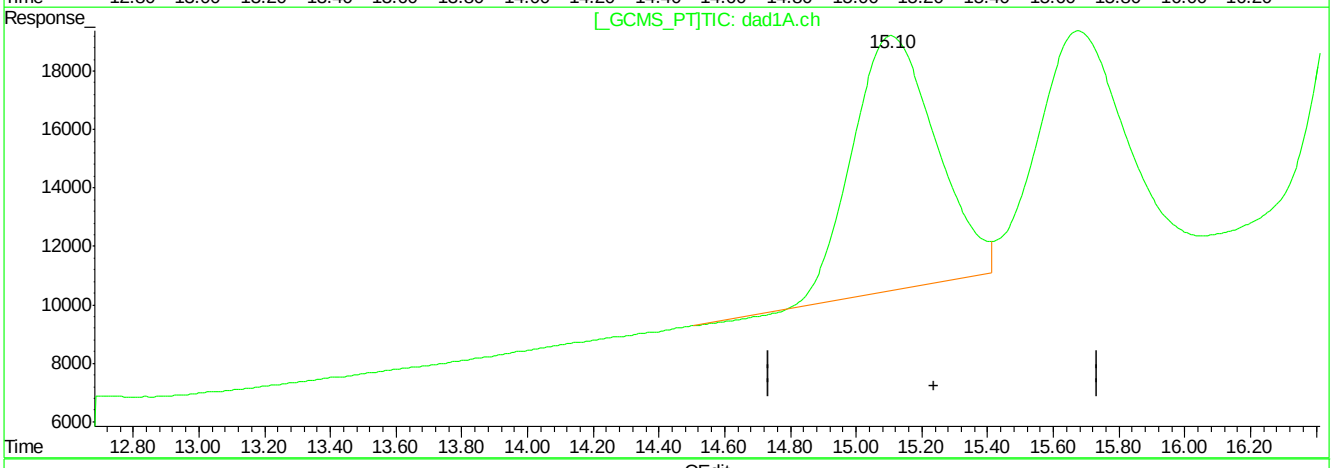
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:58:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.11min 555.831ppb

response 1103496

(18) o-Nitrotoluene #2

15.11min 553.886ppb

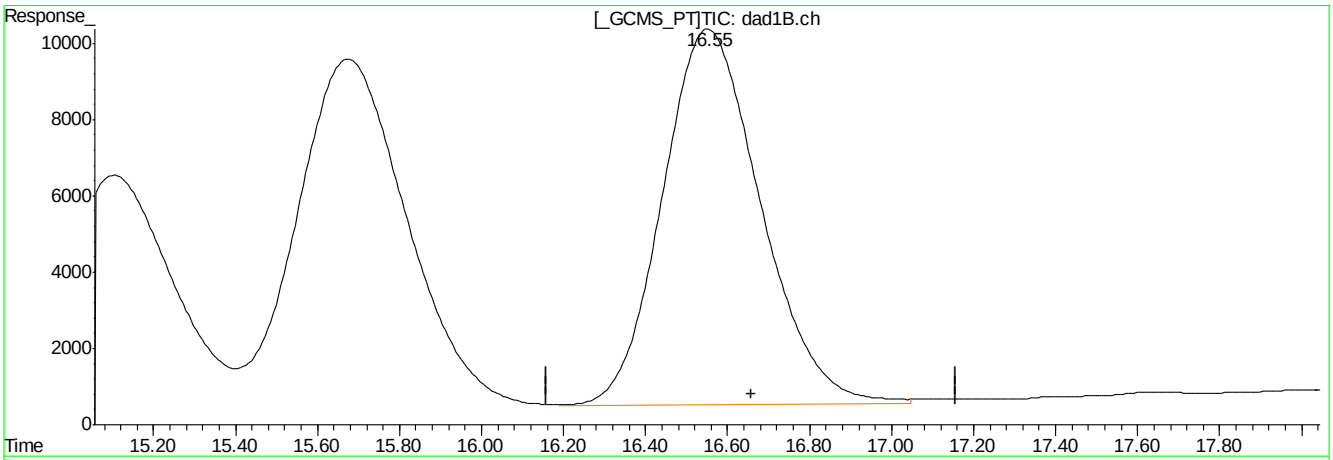
response 1549774

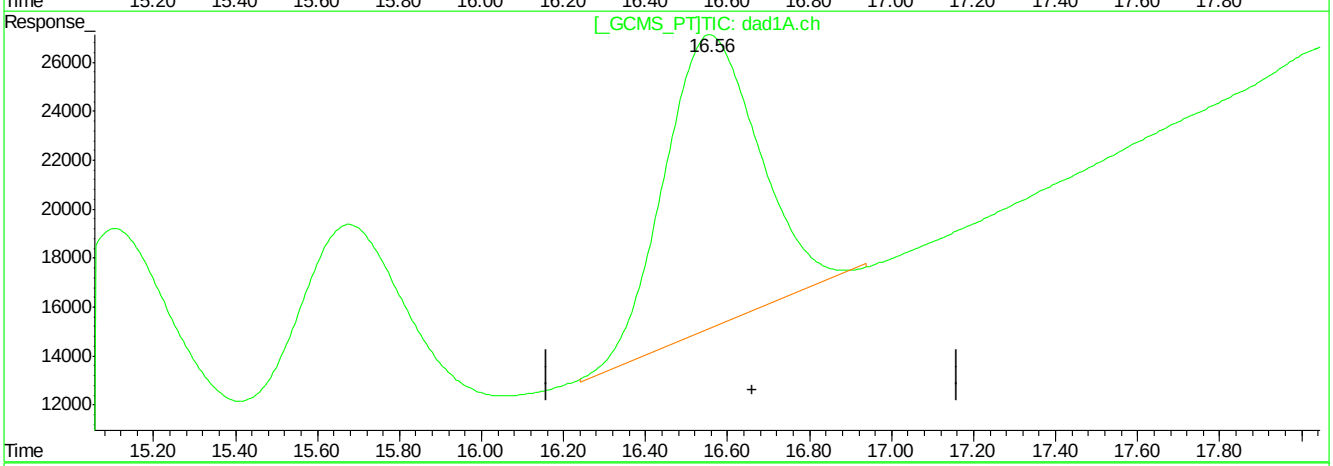
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:58:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.55min 555.628ppb

response 1638406

(20) m-Nitrotoluene #2

16.56min 553.786ppb m

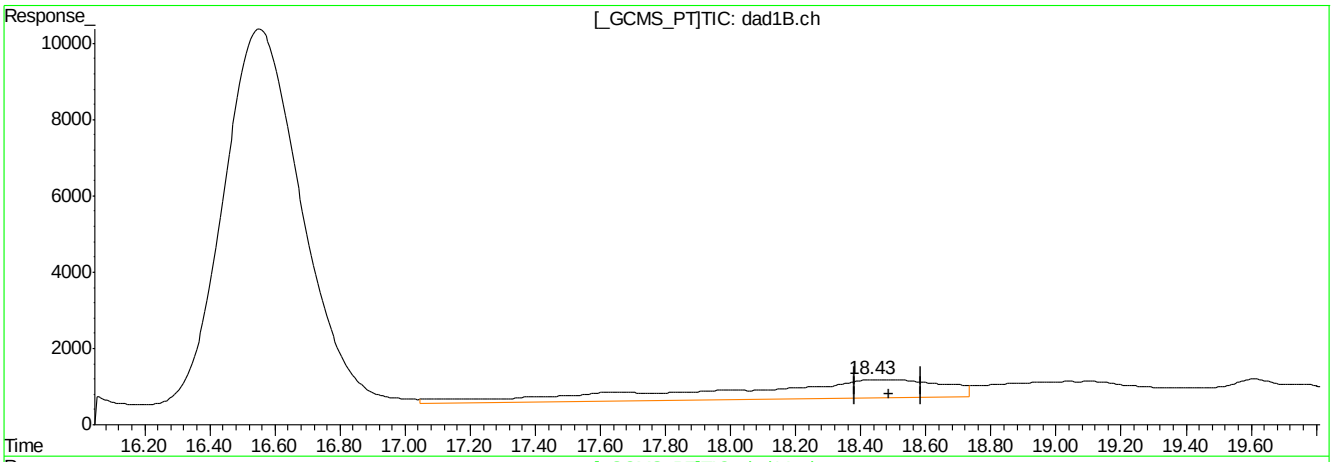
response 1927629

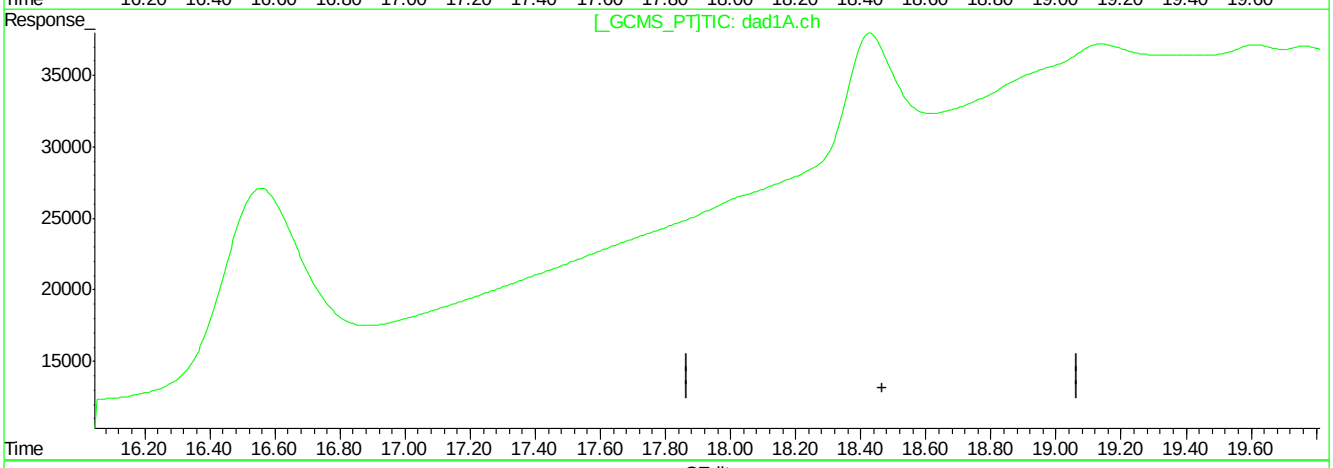
(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:58:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.44min 0.000ppb

response 243184

(21) PETN #2

0.00min 0.000ppb

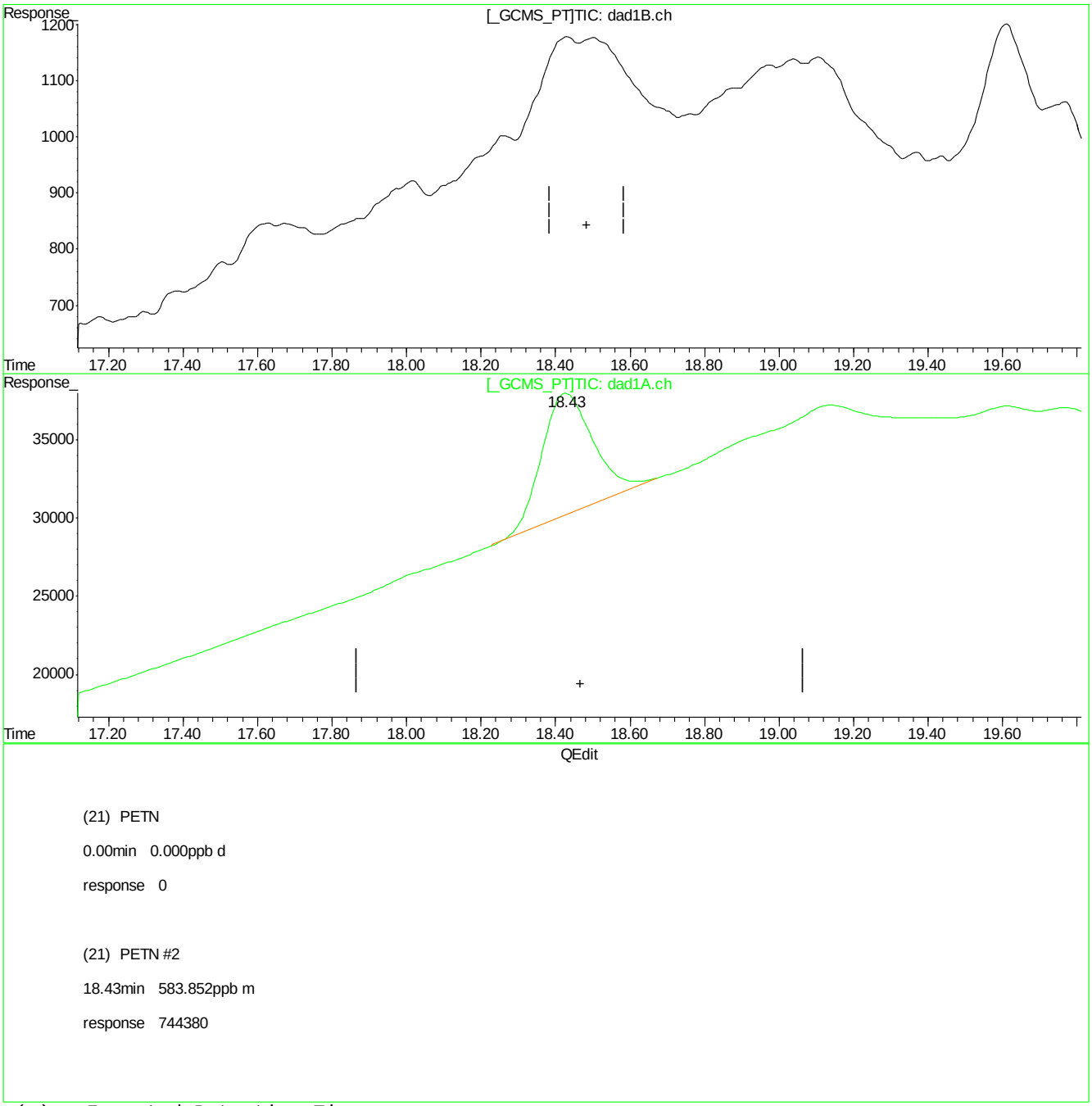
response 0

(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:58:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070818.D\dad1A.ch
Acq On : 04-Nov-2021, 16:53:22 Operator: jamesb
Sample : op88132-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
BB070818.D BBB2118_103021.M Fri Nov 05 12:58:54 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/05/21 17:13

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : op88132,GBB2121,502,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 05 09:30:29 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.95	10.95	1091387	1768290	604.784	528.817
	Spiked Amount 500.000	Range 70 - 136		Recovery =		120.96%	105.76%
	Target Compounds						
1)	TNX	1.31	1.31	263897	382062	180.968m	159.640m
2)	HMX	1.44	1.44	1045141	2949173	722.405m	739.796m
3)	DNX	1.67	1.67	951651	1547767	569.912m	528.577m
4)	MNX	2.25	2.25	1693913	2450210	631.399	596.312
5)	RDX	2.85	2.85	1061254	1644112	612.166	605.634
6)	1,3,5-Trinitrobe	4.63	4.63	7182106	11209691	1963.413m	1972.666m
7)	1,3-Dinitrobenze	5.80	5.80	2796172	2075377	582.231	604.700
8)	3,5-Dinitroanili	6.12	6.12	2245305	3762368	611.774	586.900m
9)	Nitrobenzene	7.33	7.33	1611996	1578630	570.692	559.664
10)	Nitroglycerin	0.00	8.83	0	657837	N.D.	594.829 #
11)	Tetryl	9.29	9.29	1310900	2076214	480.372	490.365
12)	2,4,6-Trinitroto	9.70	9.71	3998215	4626118	1200.046m	1227.413
13)	2-Amino-4,6-Dini	9.90f	9.96	1894564	2965970	593.636m	603.723
14)	4-Amino-2,6-Dini	10.47	10.47	1448450	2774296	635.885	592.073
16)	2,4-Dinitrotolue	11.60	11.61	2382265	1382240	565.852	528.488
17)	2,6-Dinitrotolue	12.06	12.06	1844692	2326104	721.199	745.645
18)	o-Nitrotoluene	15.12	15.12	1147296	1596198	577.893	570.478
19)	p-Nitrotoluene	15.69	15.69	1772196	1439217	578.188	527.712
20)	m-Nitrotoluene	16.56	16.57	1712720	1840628	580.830	528.791
21)	PETN	0.00	18.43	0	830828	N.D. d	651.656m

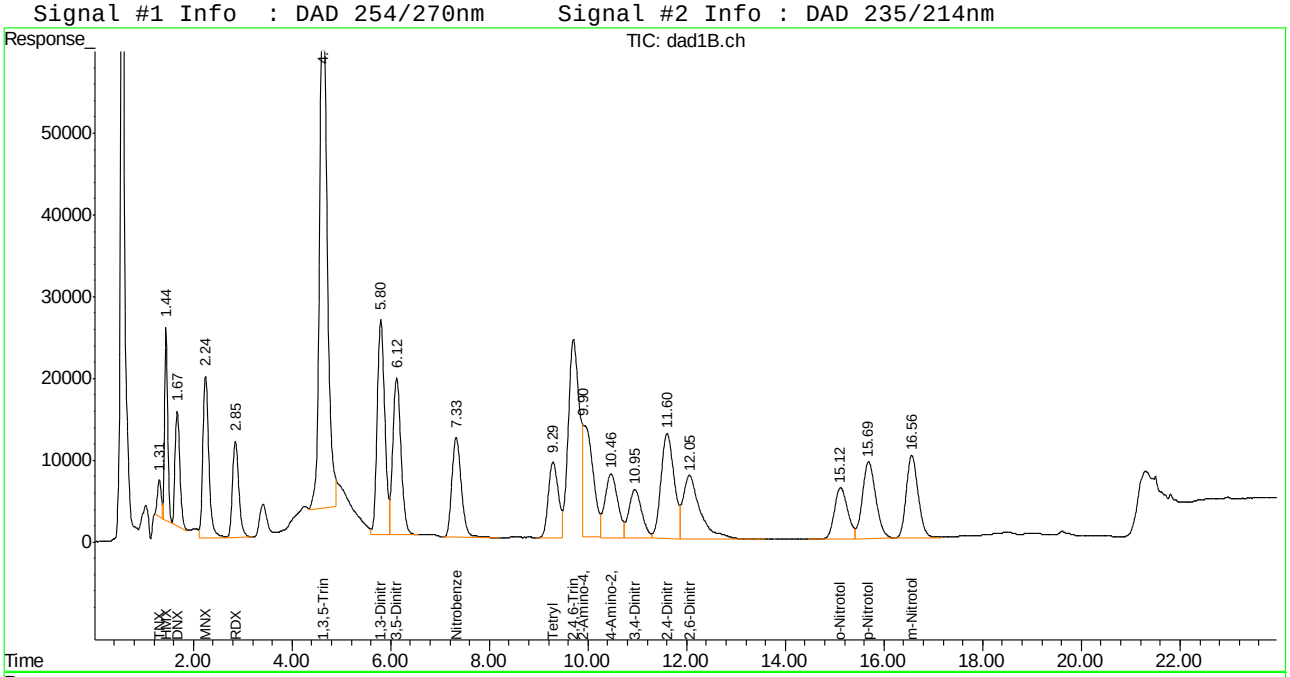
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070821.D BBB2118_103021.M Fri Nov 05 13:54:33 2021 Page 1

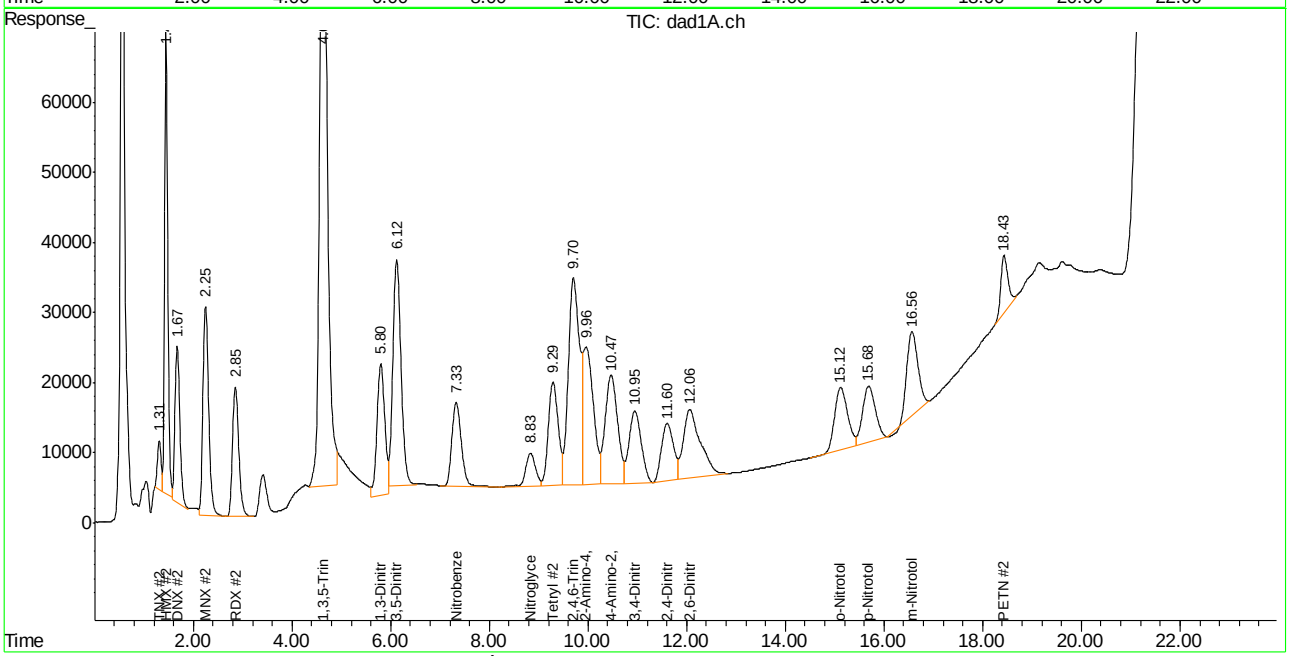
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : op88132,GBB2121,502,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 13:00 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

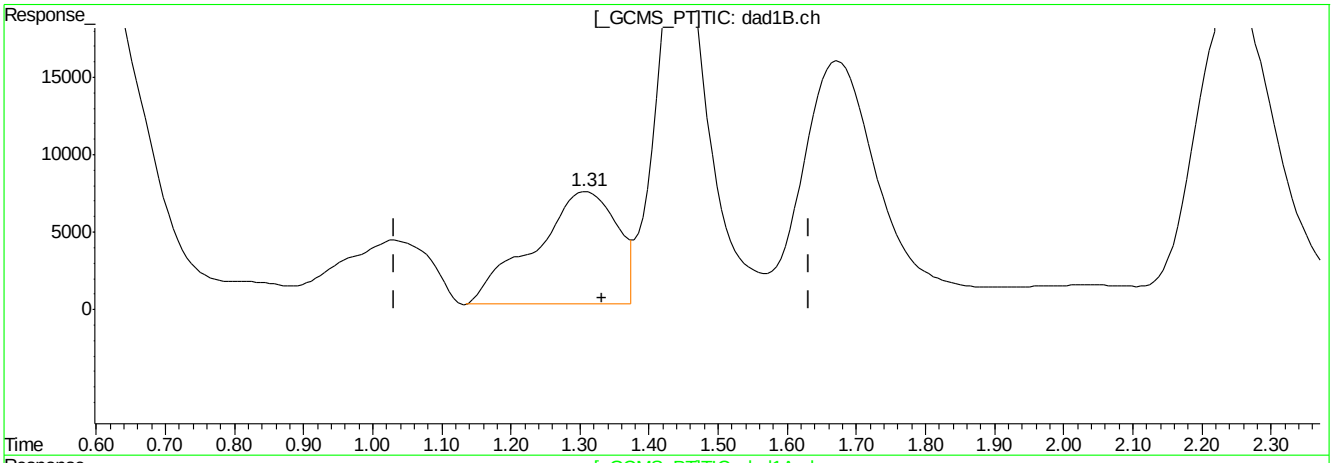
Sample Number: OP88132-MSD
Lab FileID: BB070821.D
Injection Time: 11/04/21 18:26
Method: SW846 8330B
Analyst approved: 11/05/21 15:02 James Boone
Supervisor approved: 11/05/21 17:13 Naresh Jiawan

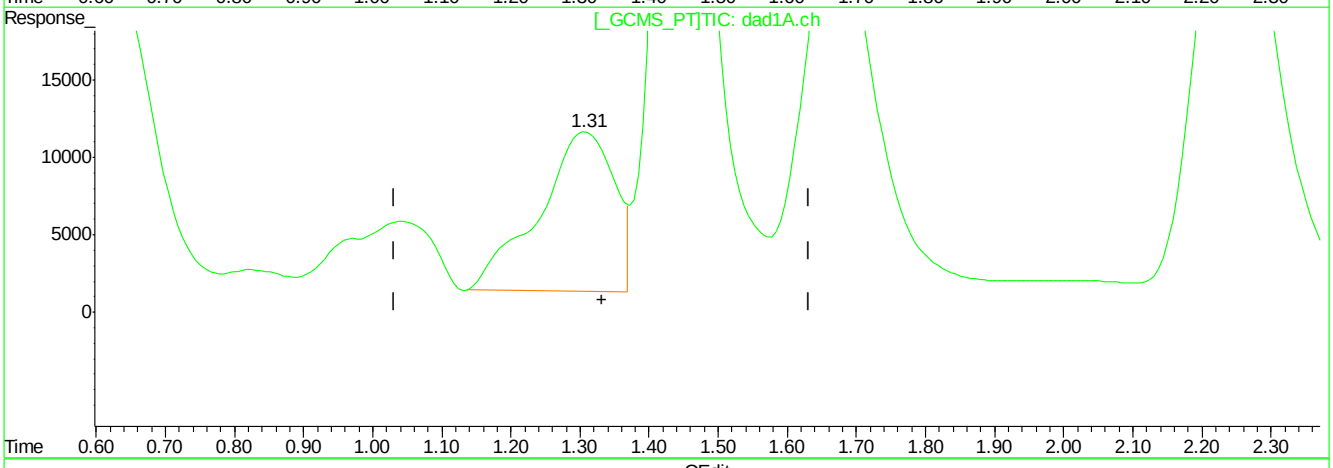
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.31	Poor instrument integration
TNX		2	1.31	Poor instrument integration
HMX	2691-41-0	1	1.44	Poor instrument integration
HMX	2691-41-0	2	1.44	Poor instrument integration
DNX		1	1.67	Poor instrument integration
DNX		2	1.67	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.63	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.63	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.12	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.70	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.90	Poor instrument integration
PETN	78-11-5	2	18.43	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 407.969ppb

response 594922

(1) TNX #2

1.31min 321.874ppb

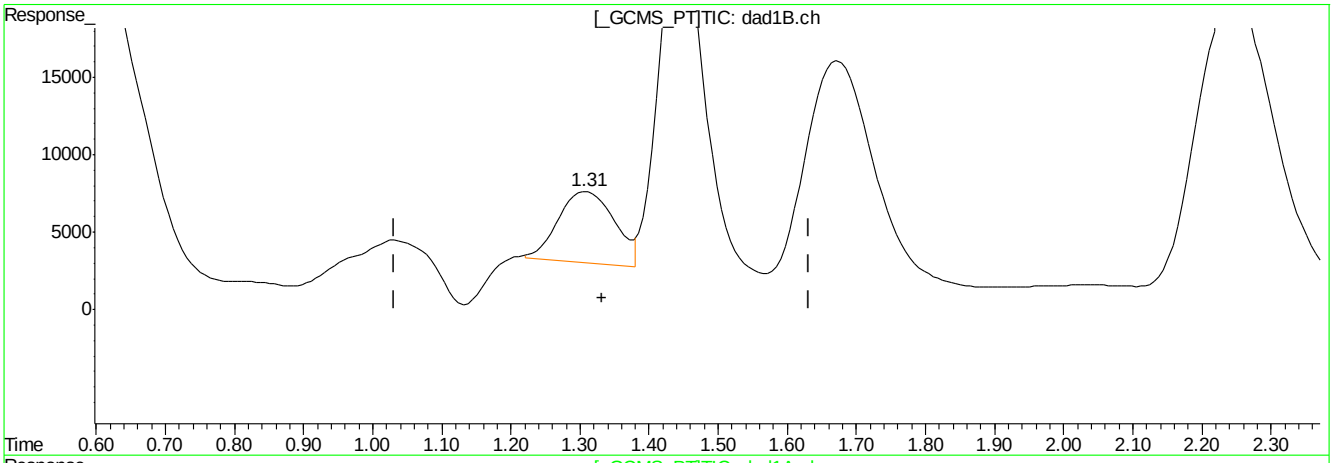
response 770334

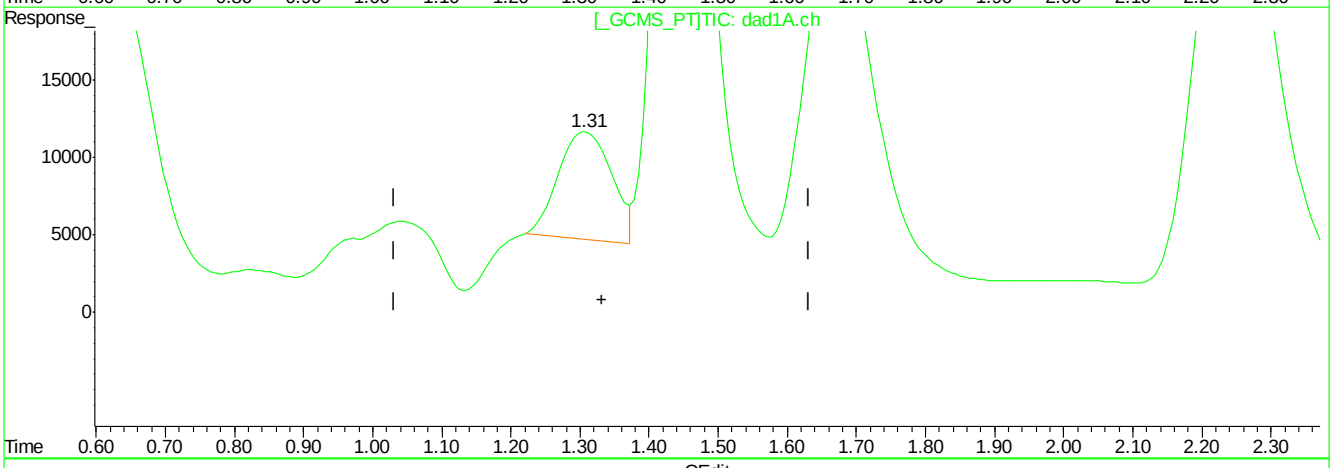
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 12:59:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 180.968ppb m

response 263897

(1) TNX #2

1.31min 159.640ppb m

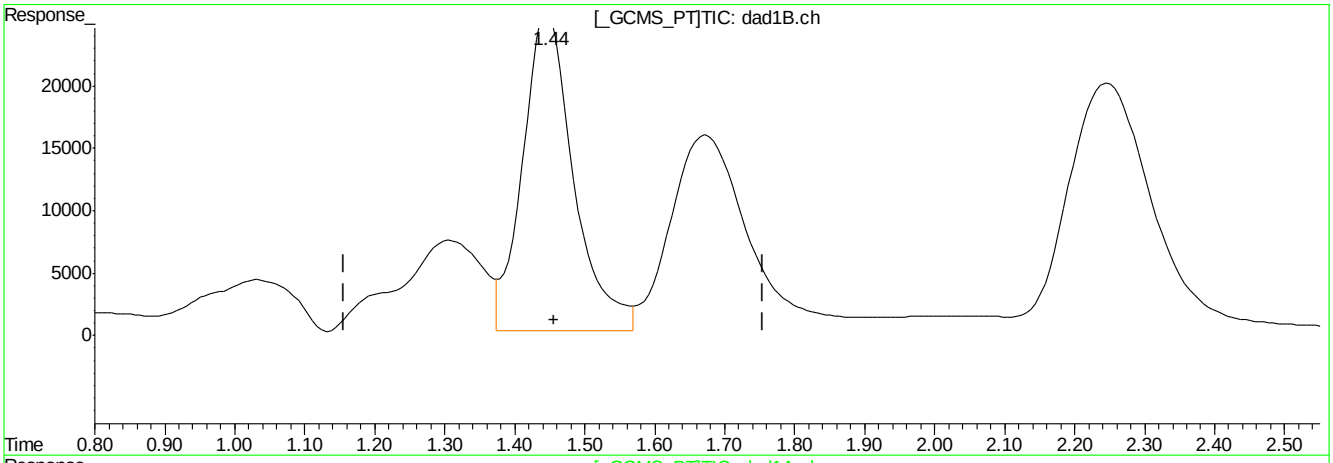
response 382062

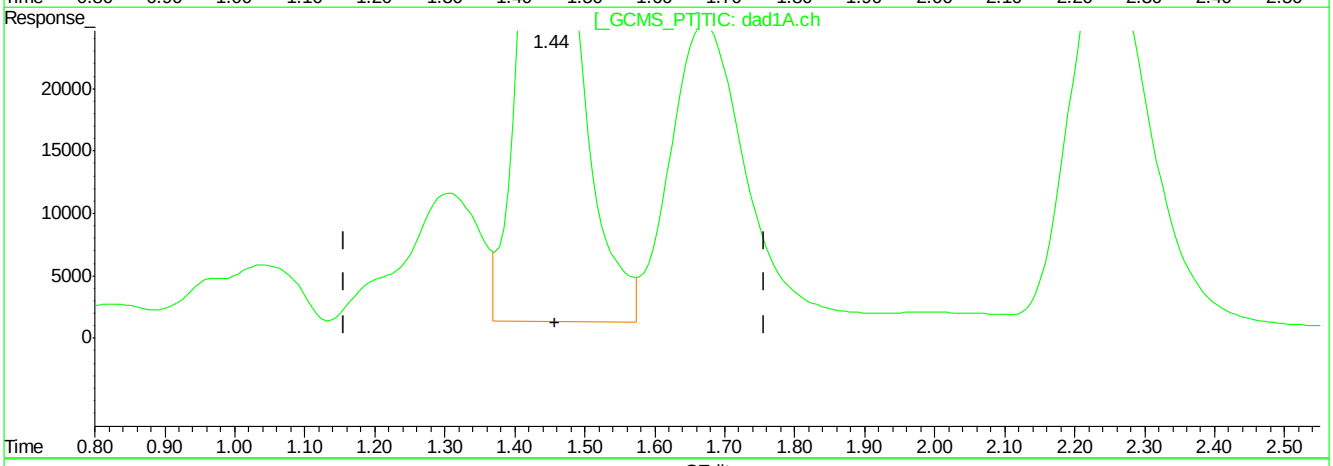
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 12:59:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.45min 889.999ppb

response 1287608

(2) HMX #2

1.45min 822.311ppb

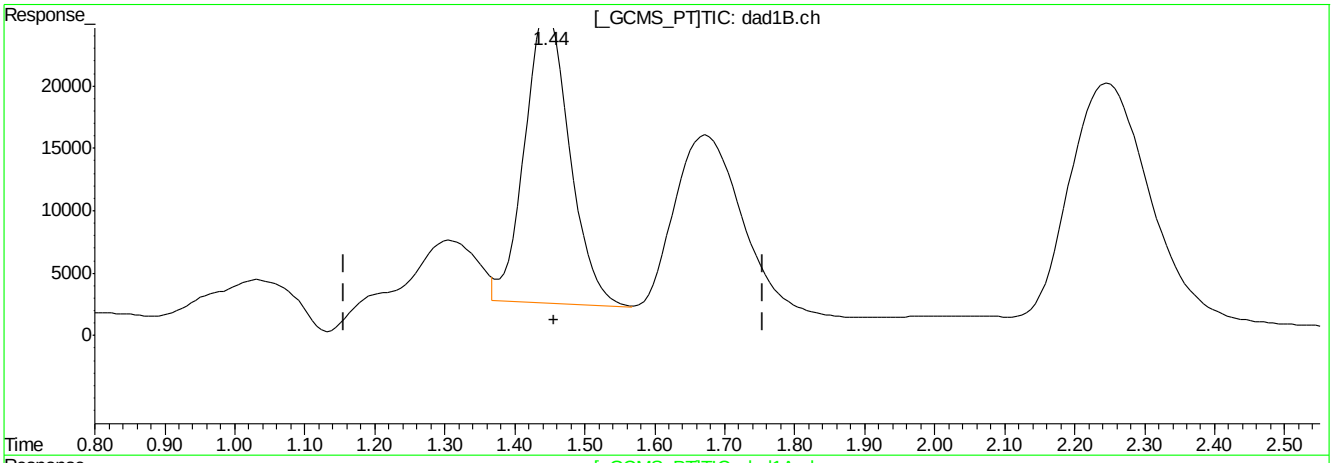
response 3278116

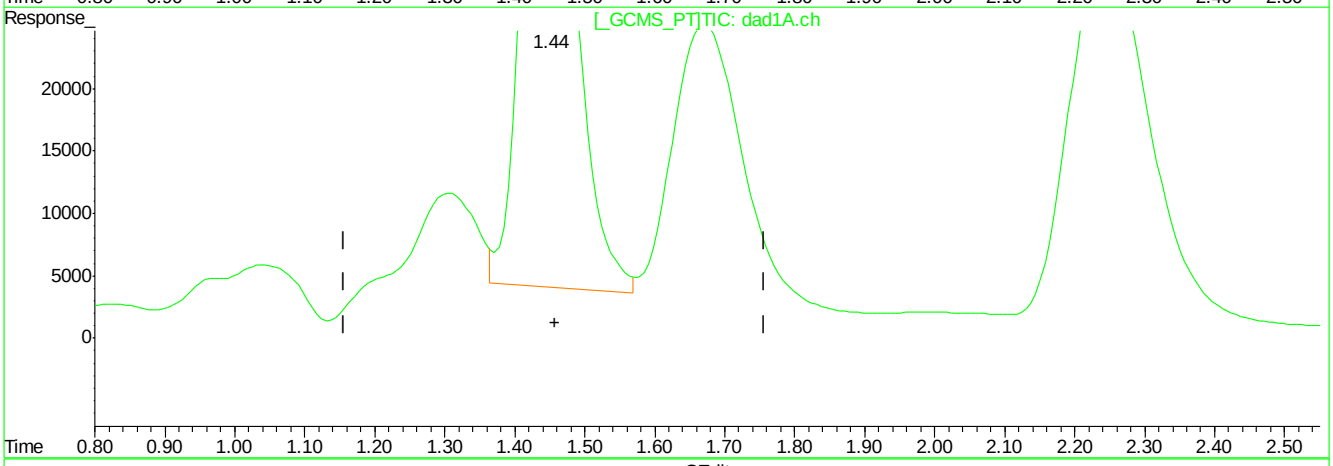
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 12:59:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.44min 722.405ppb m

response 1045141

(2) HMX #2

1.44min 739.796ppb m

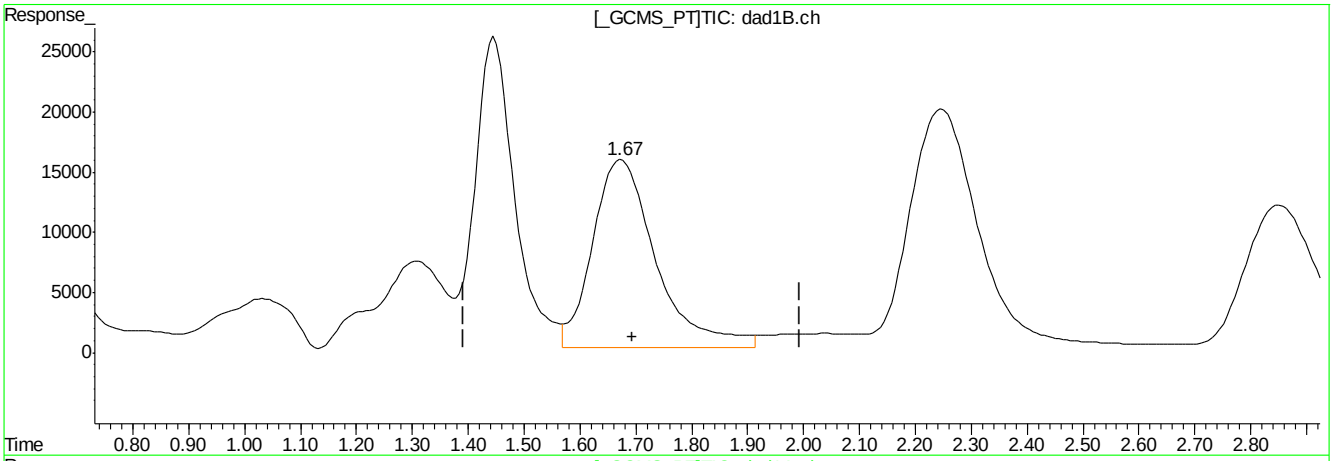
response 2949173

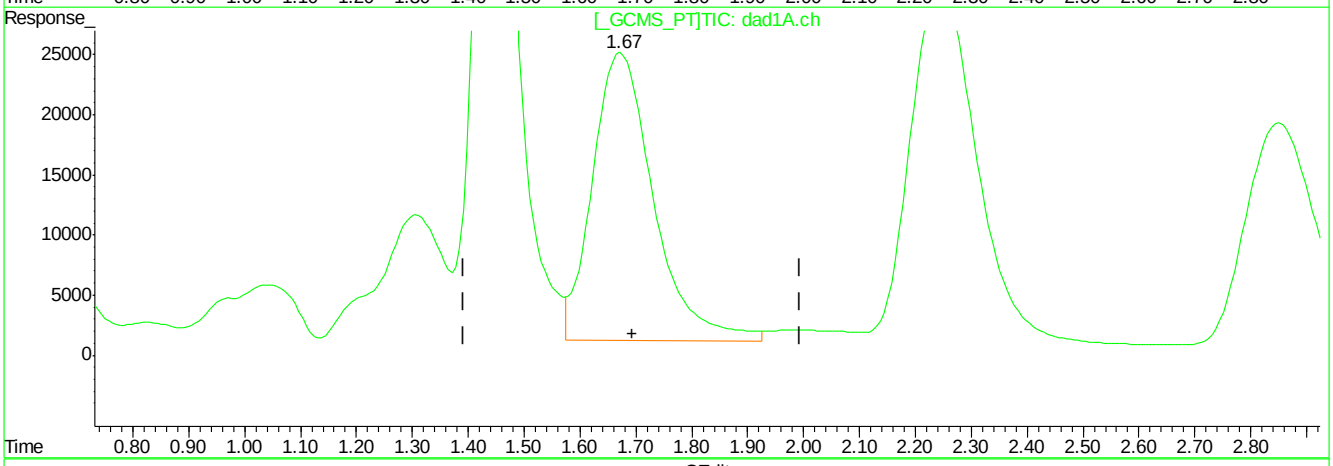
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 12:59:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.67min 738.817ppb

response 1233692

(3) DNX #2

1.67min 626.741ppb

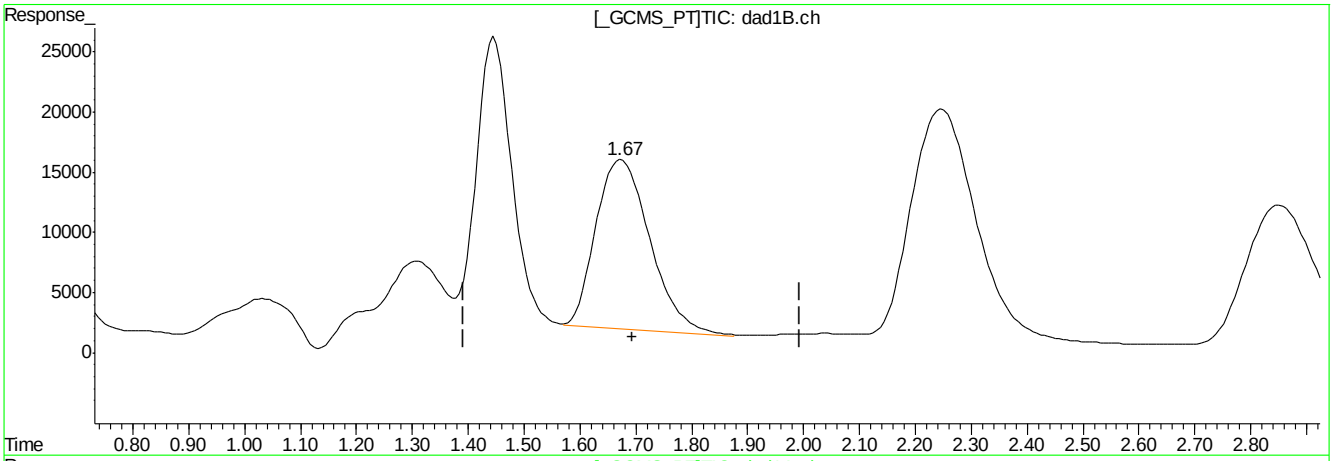
response 1835207

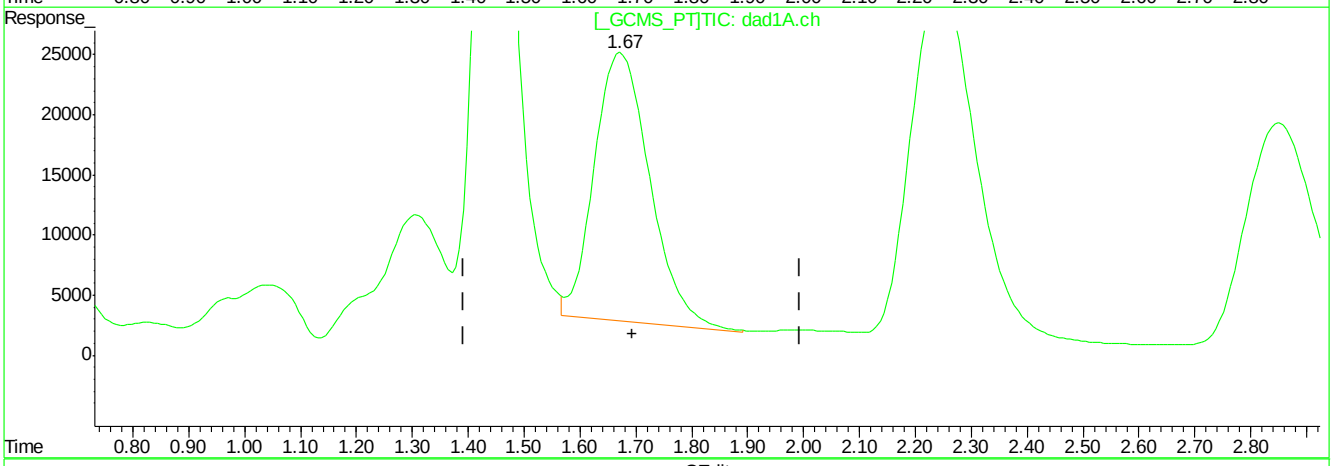
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 12:59:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.67min 569.912ppb m

response 951651

(3) DNX #2

1.67min 528.577ppb m

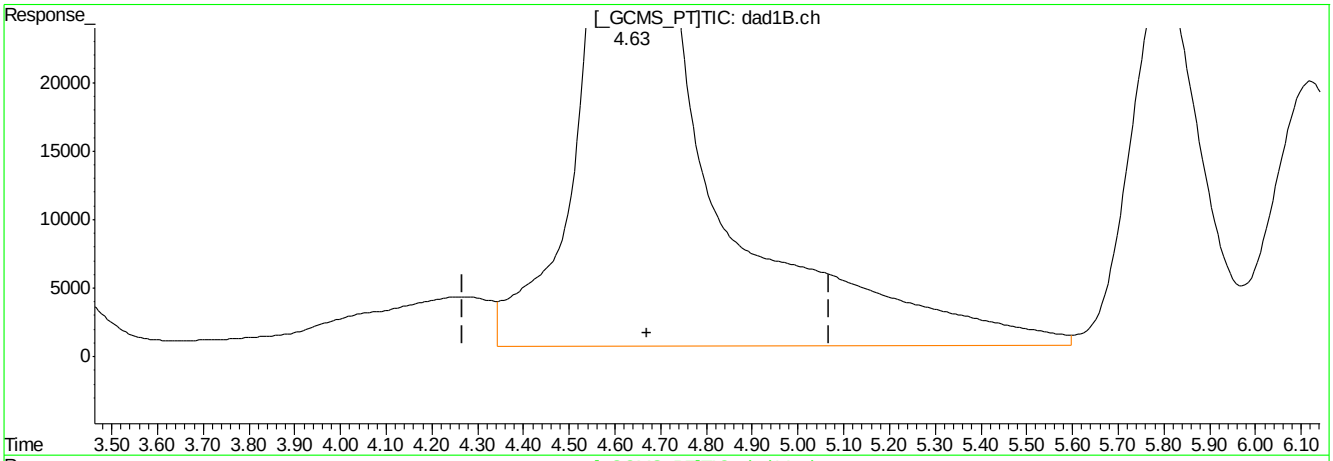
response 1547767

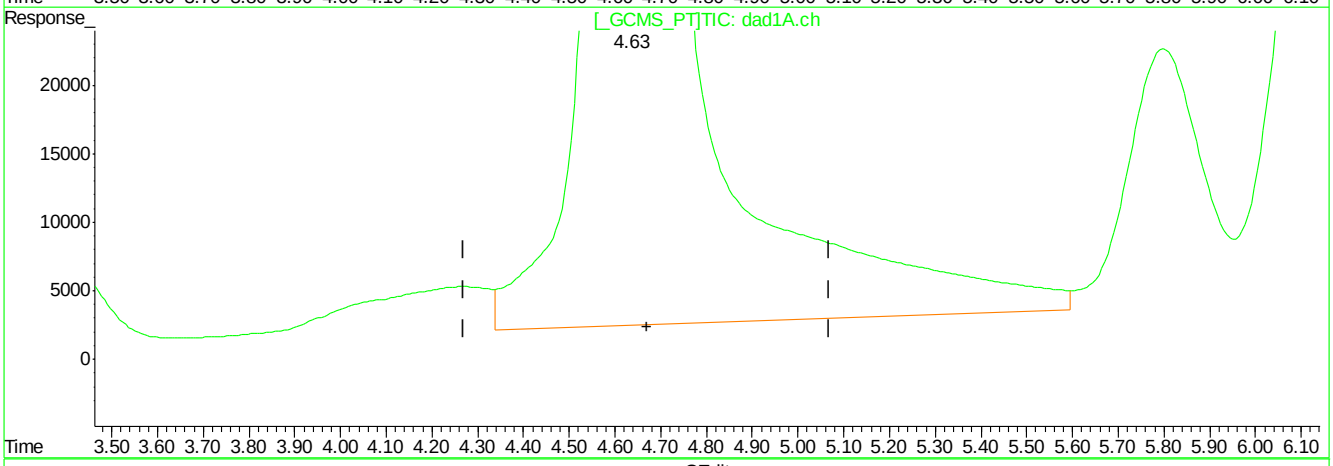
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 12:59:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.63min 2665.103ppb

response 9748868

(6) 1,3,5-Trinitrobenzene #2

4.63min 2408.218ppb

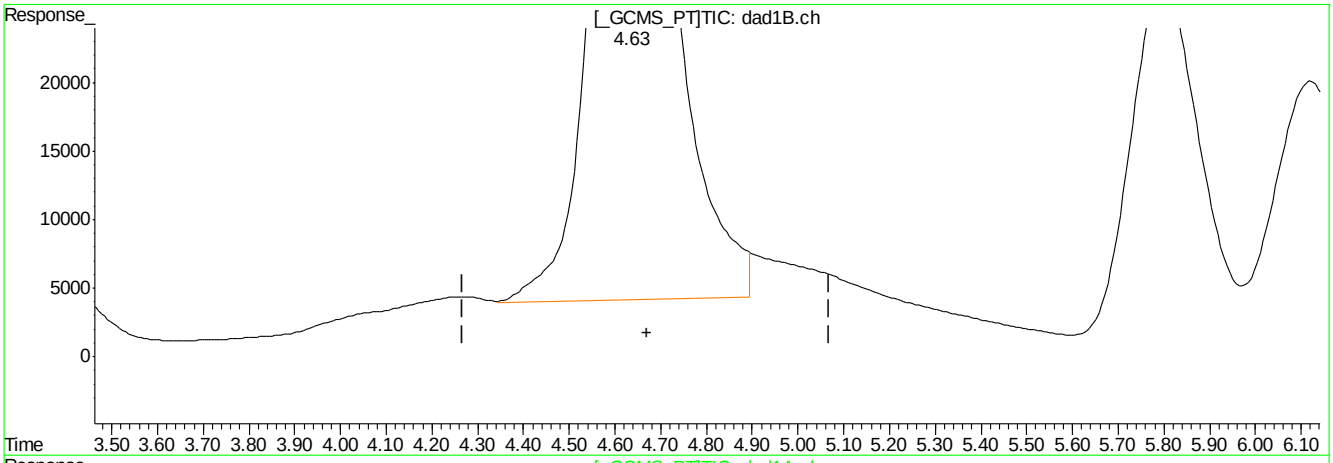
response 13684715

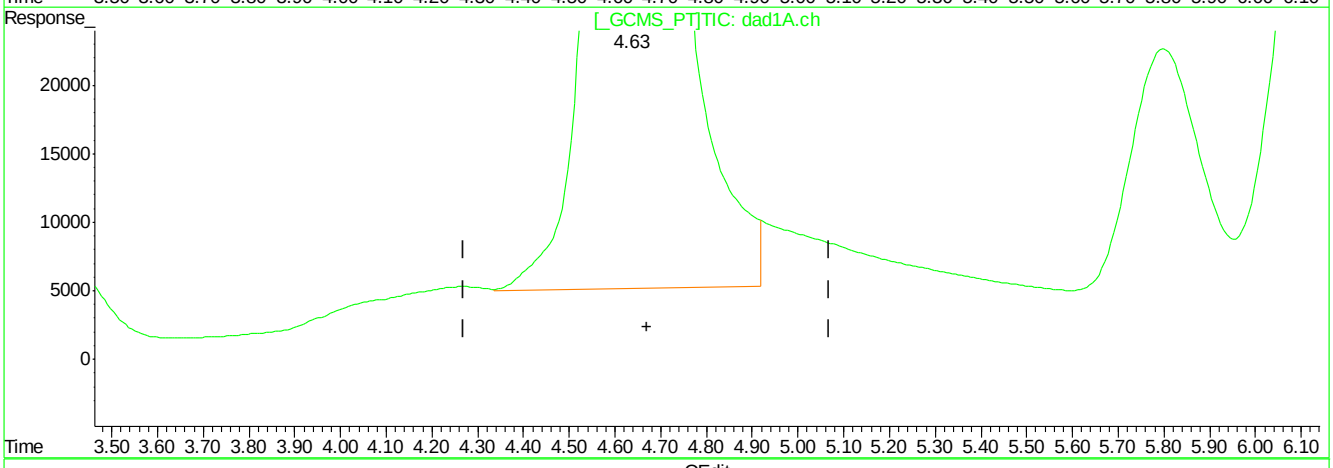
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 12:59:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.63min 1963.413ppb m

response 7182106

(6) 1,3,5-Trinitrobenzene #2

4.63min 1972.666ppb m

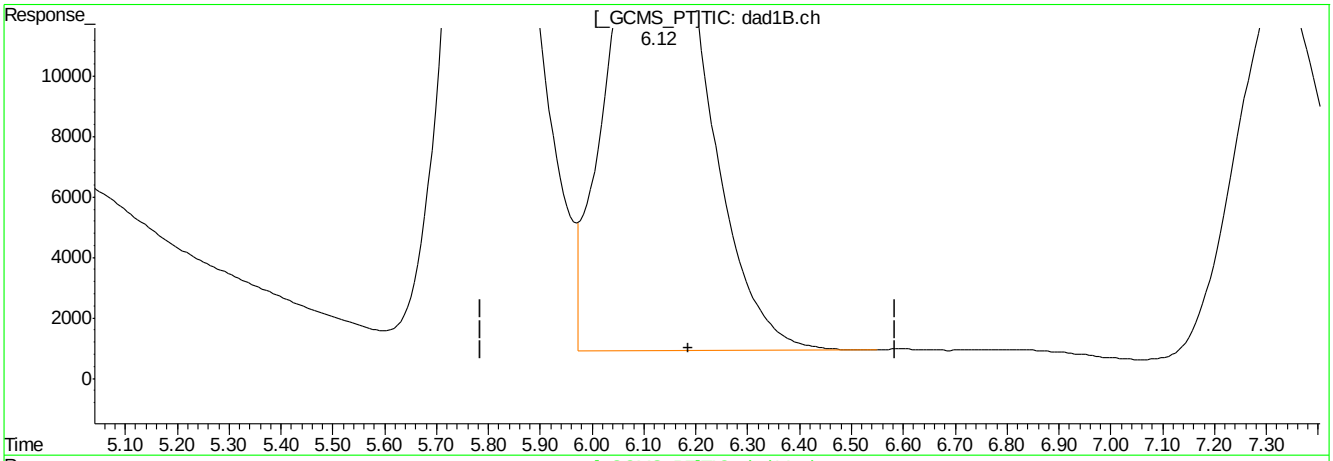
response 11209691

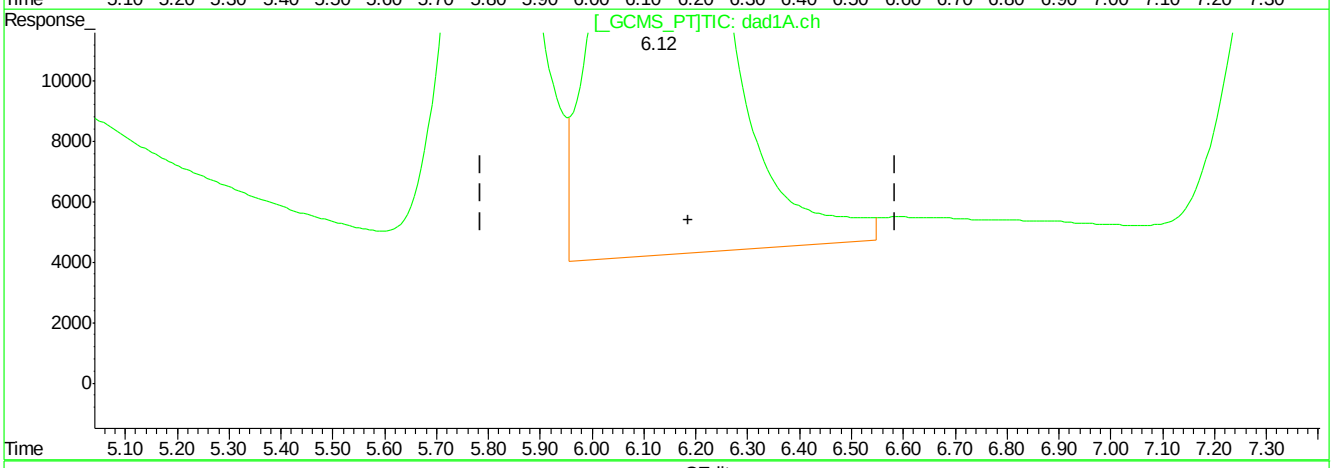
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 13:00:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.12min 611.774ppb

response 2245305

(8) 3,5-Dinitroaniline #2

6.12min 637.640ppb

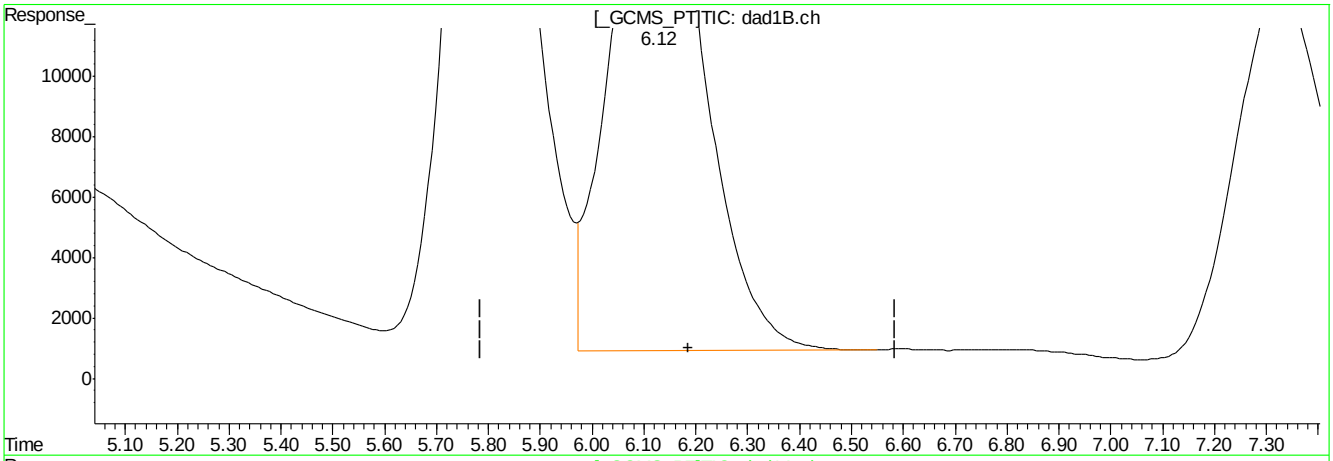
response 4087645

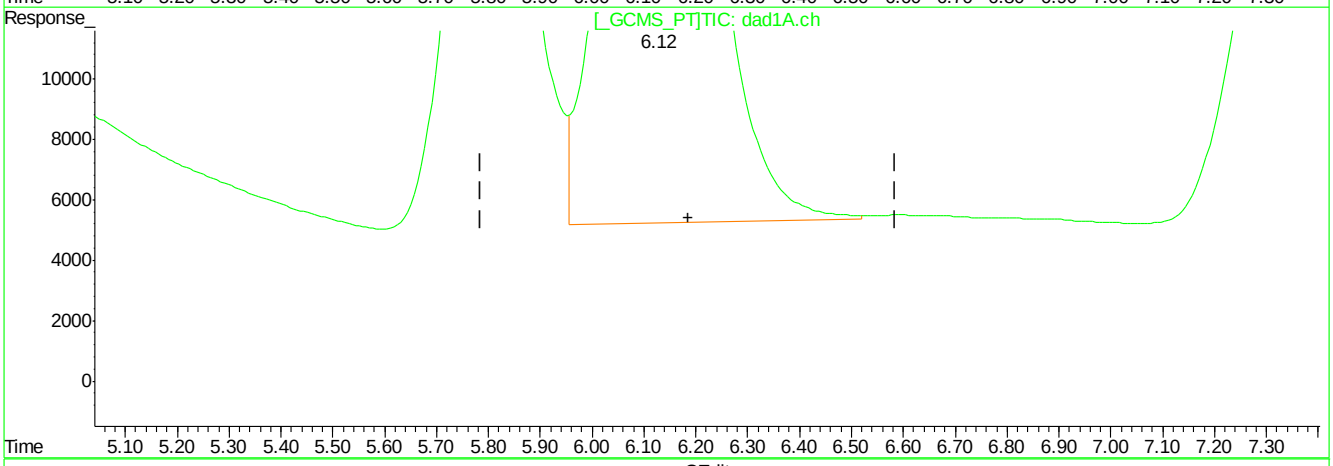
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 13:00:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.12min 611.774ppb

response 2245305

(8) 3,5-Dinitroaniline #2

6.12min 586.900ppb m

response 3762368

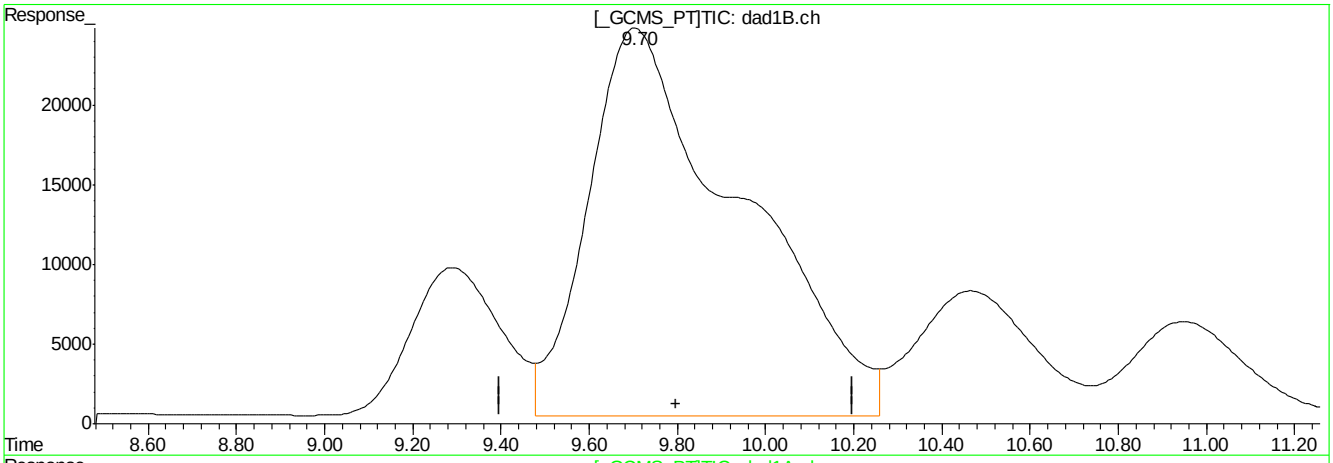
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 13:00:15 2021

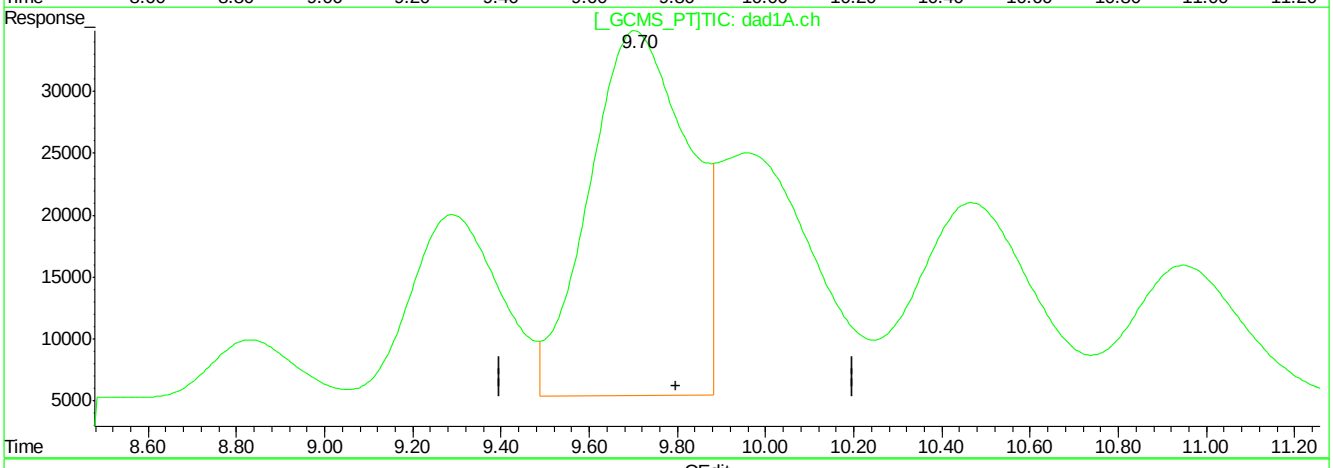
BB070821.D edits: 3,5-Dinitroaniline

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.71min 1759.639ppb

response 5862624

(12) 2,4,6-Trinitrotoluene #2

9.71min 1227.413ppb

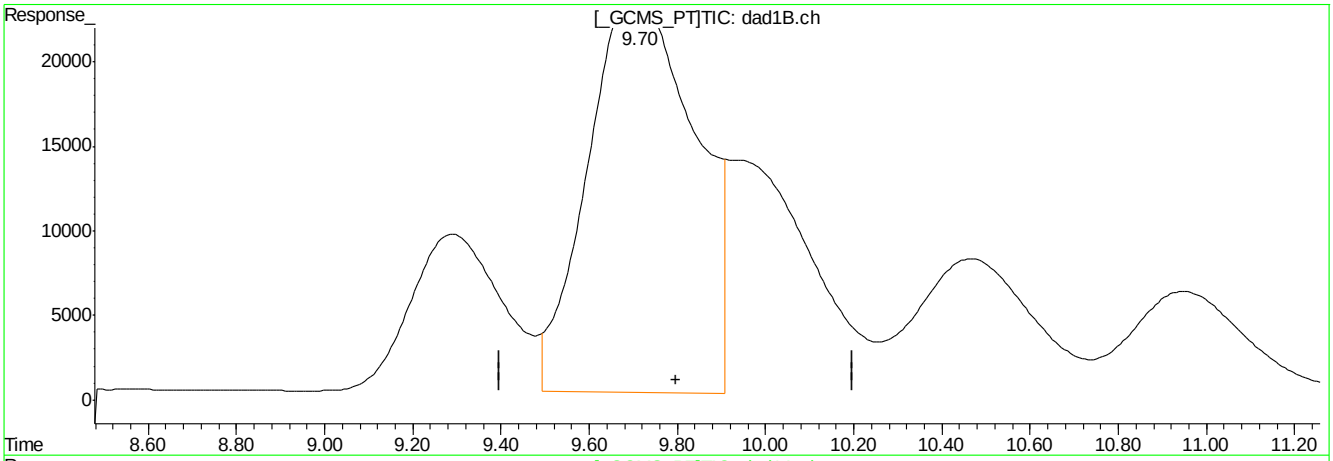
response 4626118

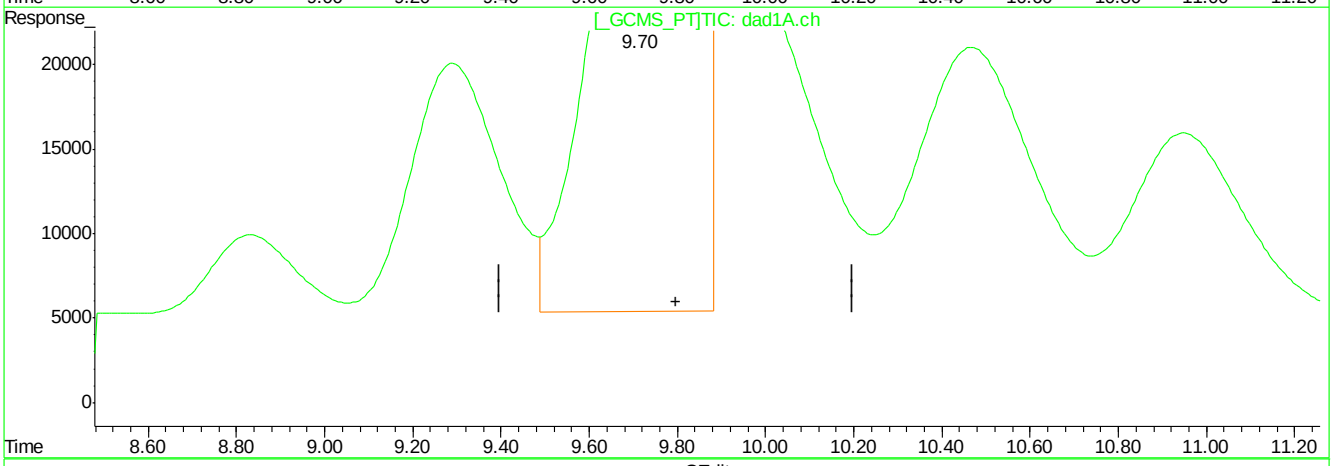
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 13:00:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.70min 1200.046ppb m

response 3998215

(12) 2,4,6-Trinitrotoluene #2

9.71min 1227.413ppb

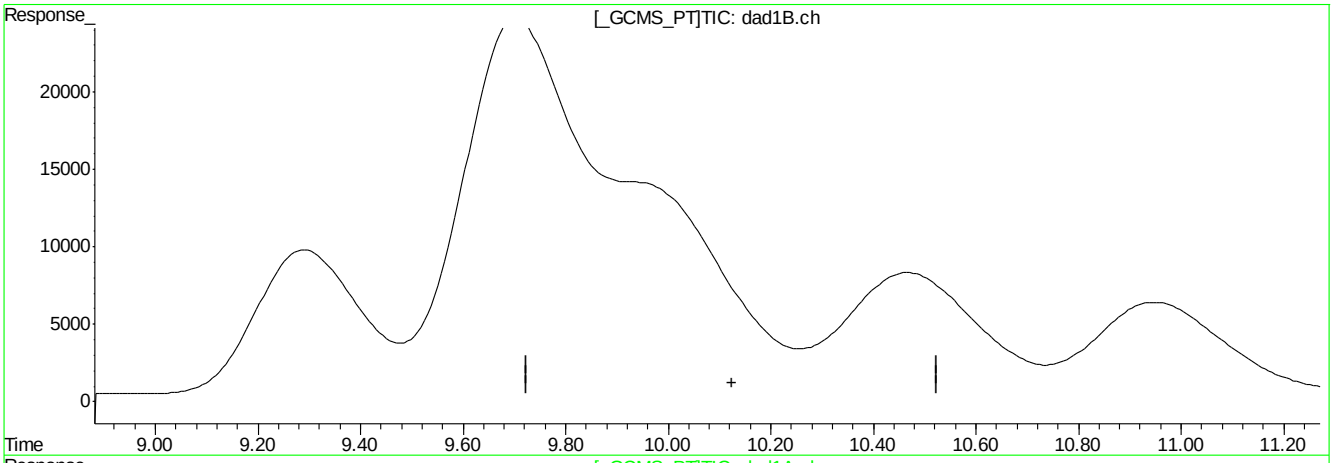
response 4626118

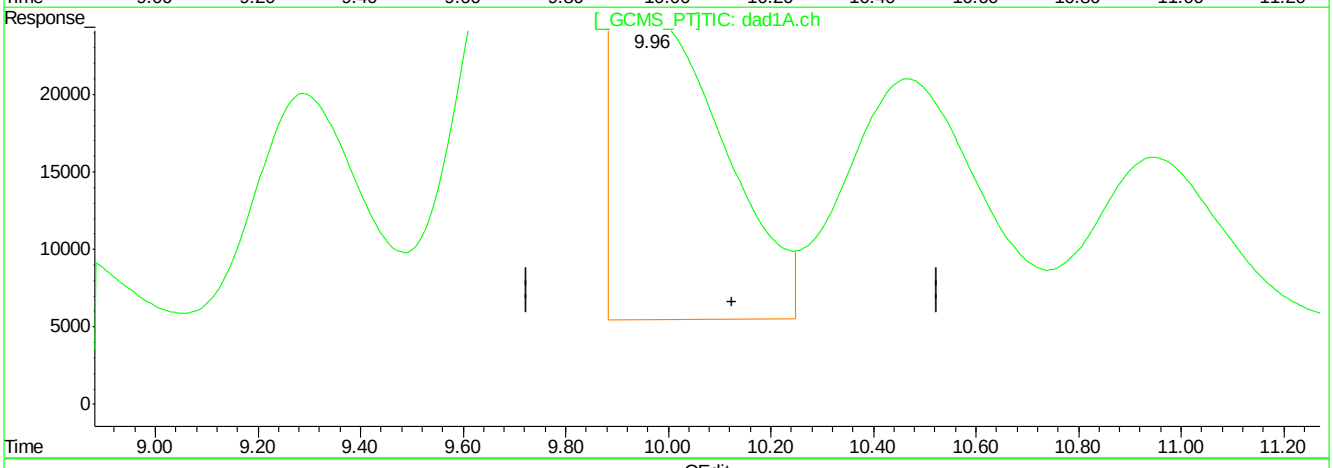
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 13:00:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

9.96min 603.723ppb

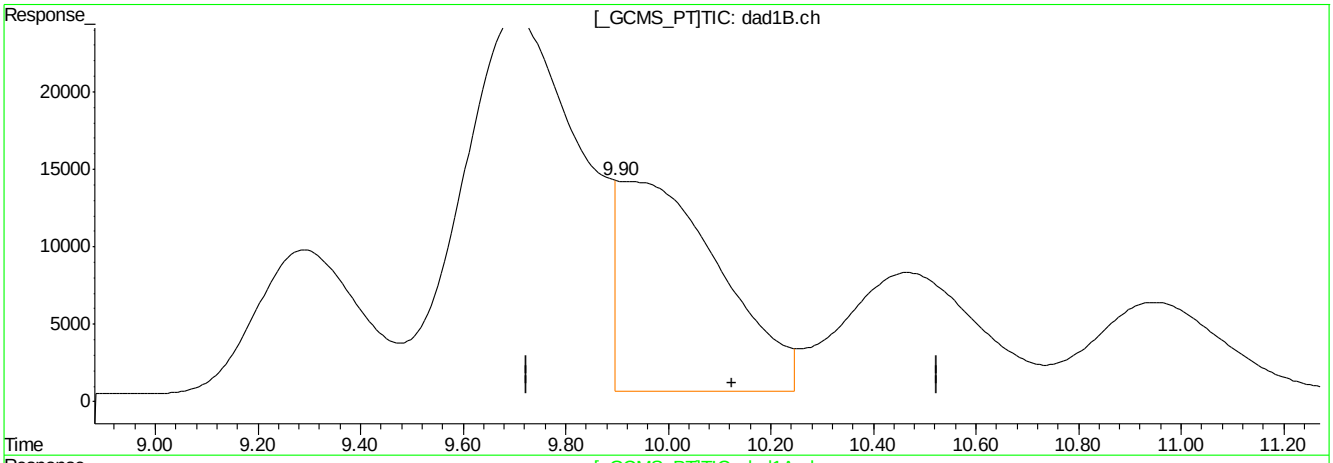
response 2965970

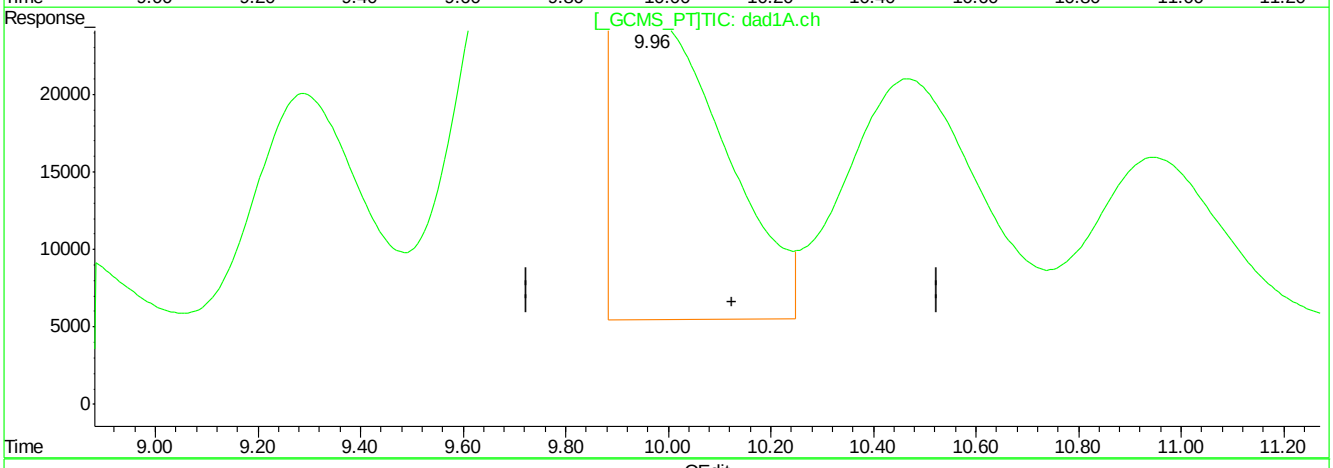
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 13:00:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

9.90min 593.636ppb m

response 1894564

(13) 2-Amino-4,6-Dinitrotoluene #2

9.96min 603.723ppb

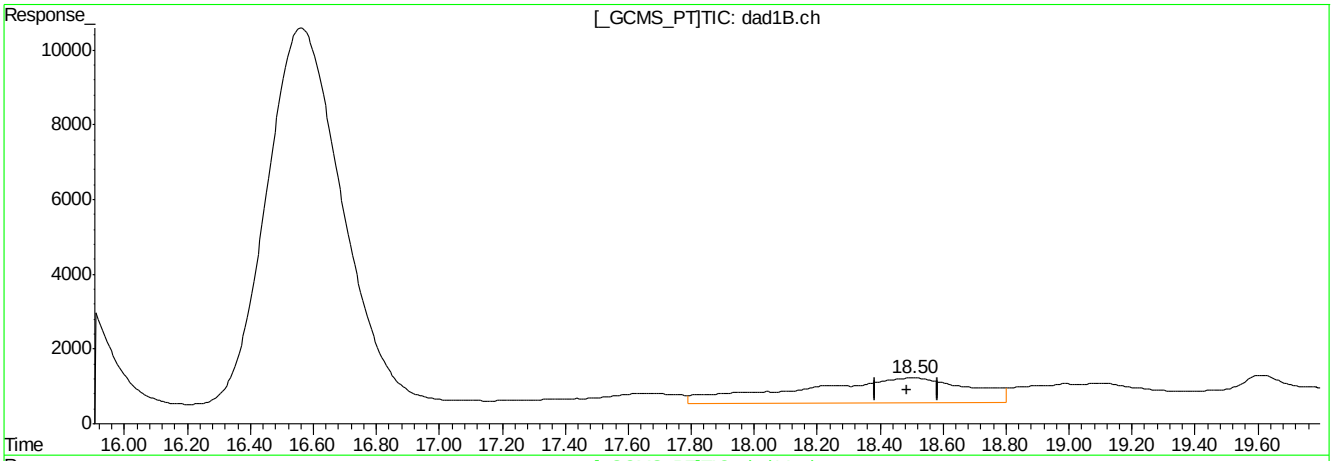
response 2965970

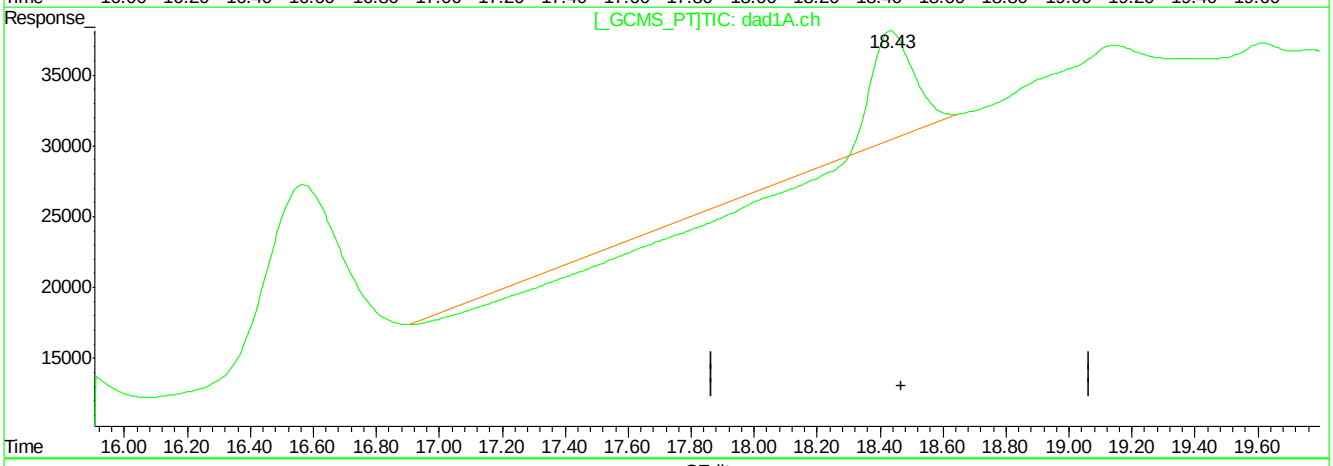
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 13:00:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.50min 0.000ppb

response 256065

(21) PETN #2

18.44min 36.449ppb

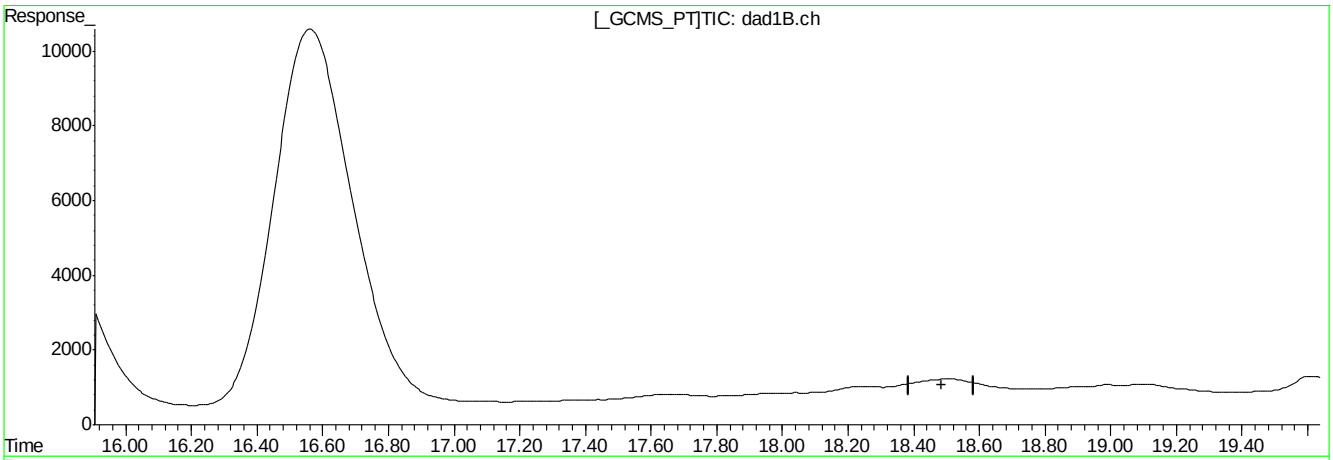
response 46470

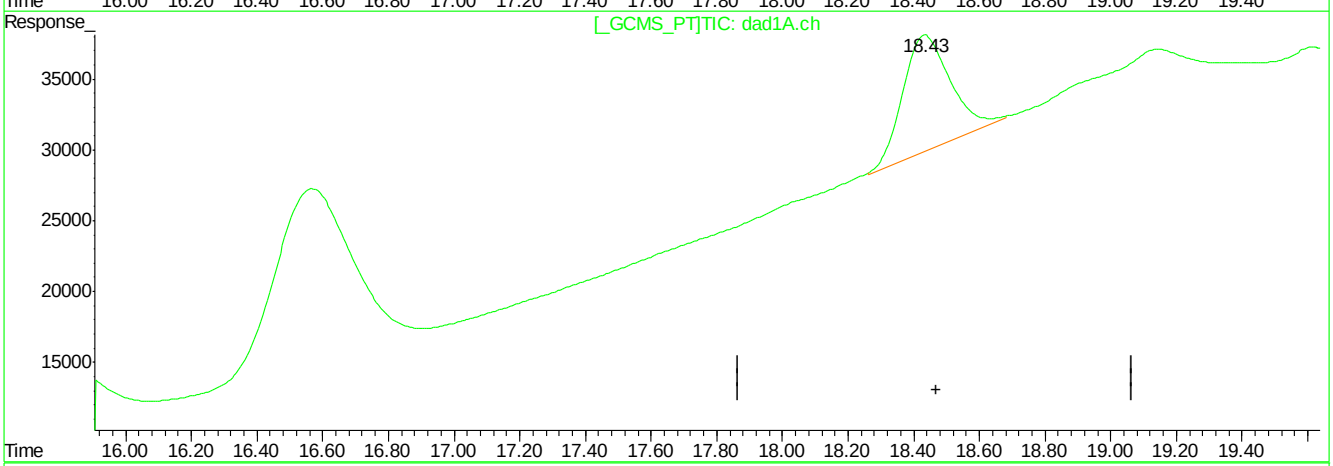
(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 13:00:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070821.D\dad1A.ch
Acq On : 04-Nov-2021, 18:26:31 Operator: jamesb
Sample : op88132-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.43min 651.656ppb m

response 830828

(+) = Expected Retention Time
BB070821.D BBB2118_103021.M Fri Nov 05 13:01:00 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 13:51

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 01 08:23:54 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.01	11.06	33441	38925	15.533m	10.419m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	3.11%#	2.08%#
	Target Compounds						
1)	TNX	1.33	1.33	8019	14235	6.660m	7.687m
2)	HMX	1.46	1.47	44701	197613	28.172m	46.779 #
3)	DNX	1.69	1.68	32757	71610	18.032m	25.563m#
4)	MNX	2.27	2.27	51009	77436	21.707	21.151
5)	RDX	2.88	2.88	29912	43488	16.110	14.761
6)	1,3,5-Trinitrobe	4.66	4.66	61399	90818	15.456	14.634m
7)	1,3-Dinitrobenze	5.83	5.84	78460	66081	15.058m	18.478m
8)	3,5-Dinitroanili	6.16	6.16	58709	116556	14.765	16.843m
9)	Nitrobenzene	7.38	7.37	48825	49335	15.998	16.214
10)	Nitroglycerin	0.00	8.86	0	16881	N.D.	13.611m#
11)	Tetryl	9.33	9.35	47618	66045	15.792m	13.580
12)	2,4,6-Trinitroto	9.75	9.75	56113	52165	15.474m	12.277
13)	2-Amino-4,6-Dini	10.09	10.08	59627	61779	17.265m	11.974
14)	4-Amino-2,6-Dini	10.54	10.56	40613	57455	16.273m	11.704
16)	2,4-Dinitrotolue	11.69	11.86	69983	44812	15.342m	14.197m
17)	2,6-Dinitrotolue	12.10	12.30	45603	48441	16.578m	14.387m
18)	o-Nitrotoluene	15.18	15.30	32090	50371	14.735	16.673m
19)	p-Nitrotoluene	15.76	15.86	51065	34980	15.218	12.151m
20)	m-Nitrotoluene	16.63	16.63	50369	62504	16.093	15.626m
21)	PETN	0.00	18.44	0	21509	N.D.	16.212m#

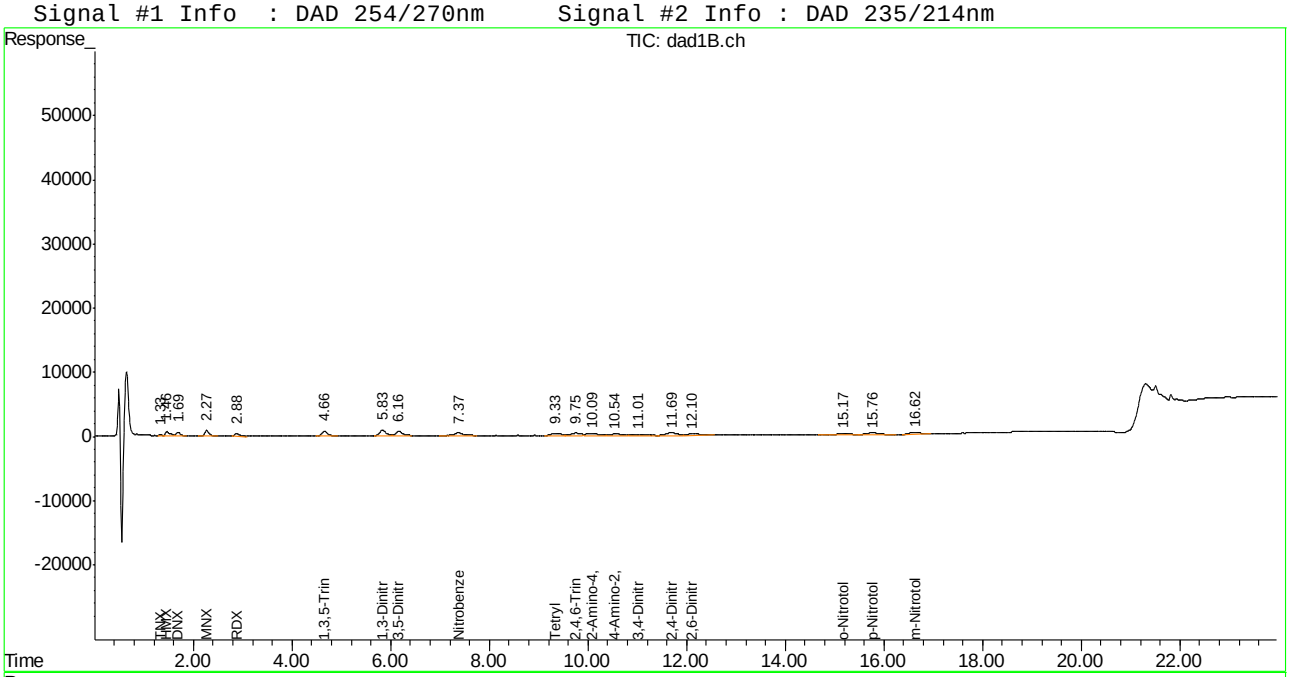
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070754.D BBB2118_103021.M Mon Nov 01 11:46:11 2021 Page 1

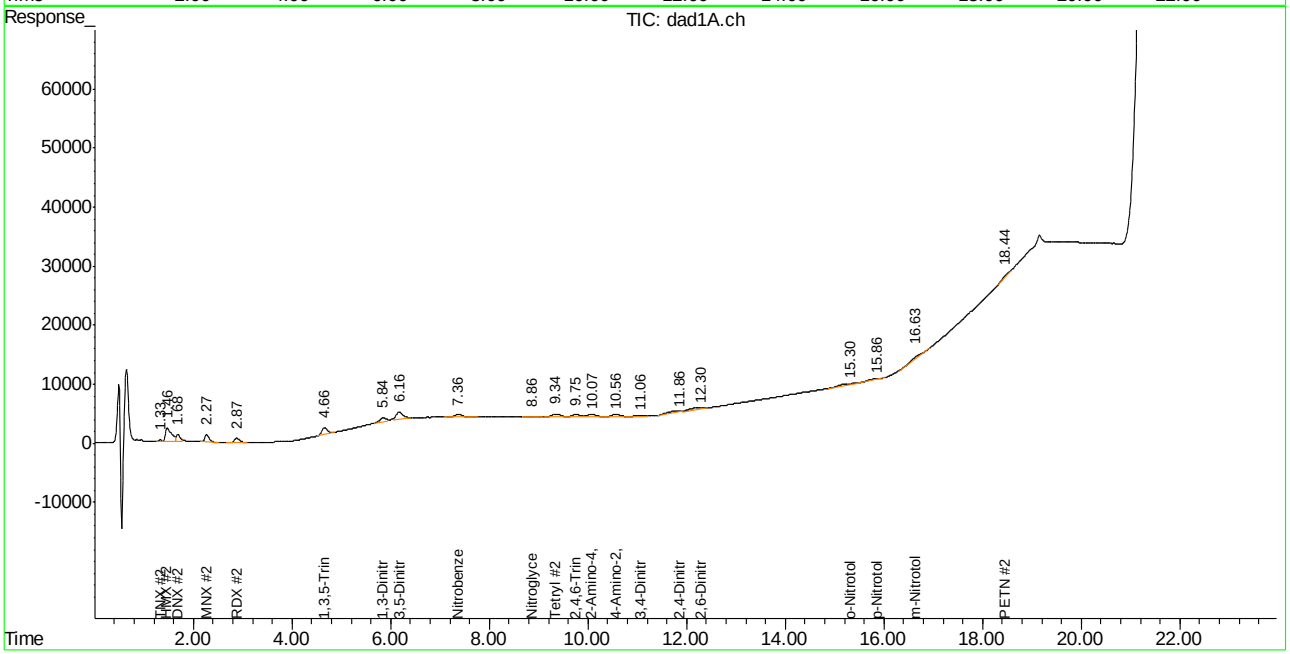
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:43 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

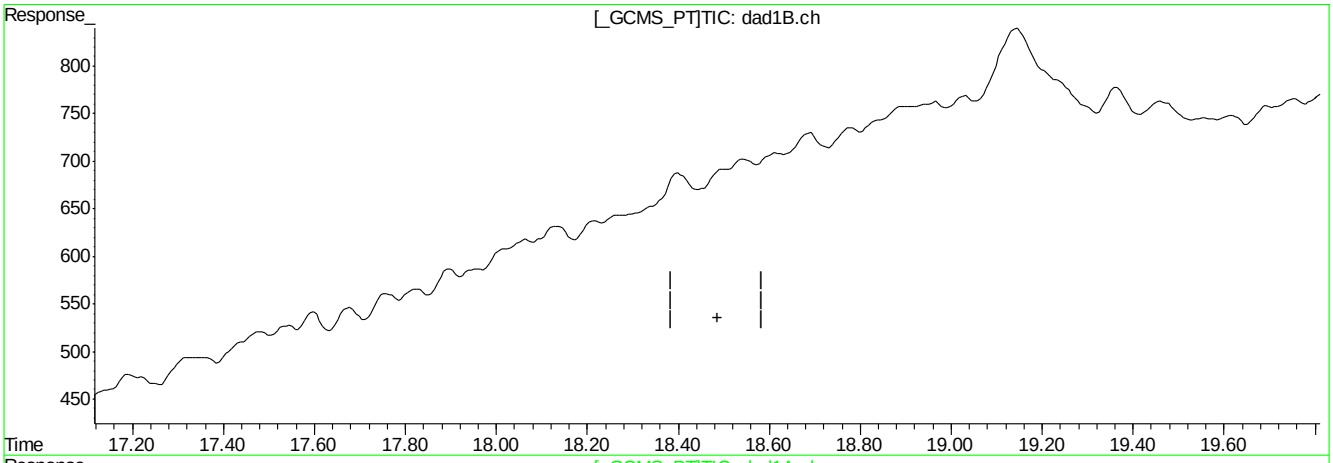
Sample Number: GBB2118-IC2118
Lab FileID: BB070754.D
Injection Time: 10/30/21 13:28
Method: SW846 8330A
Analyst approved: 11/01/21 12:47 James Boone
Supervisor approved: 11/01/21 13:51 Naresh Jiawan

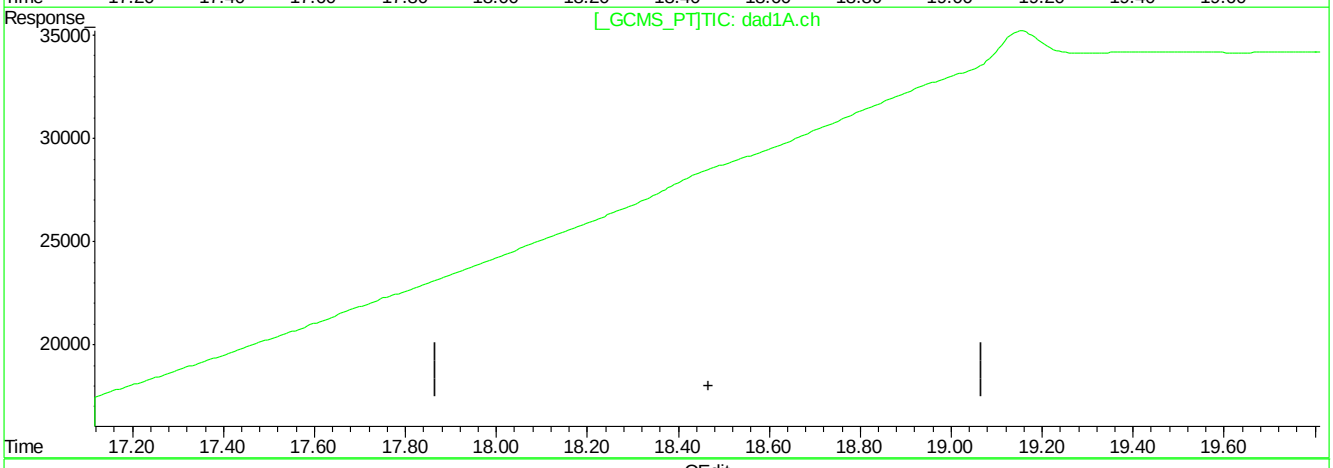
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.33	Poor instrument integration
TNX		2	1.33	Poor instrument integration
HMX	2691-41-0	1	1.46	Poor instrument integration
DNX		2	1.68	Poor instrument integration
DNX		1	1.69	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.66	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	5.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.84	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.16	Poor instrument integration
Nitroglycerine	55-63-0	2	8.86	Poor instrument integration
Tetryl	479-45-8	1	9.33	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.75	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.09	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.54	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.01	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.06	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	11.69	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.86	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.10	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.30	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.30	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.86	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.63	Poor instrument integration
PETN	78-11-5	2	18.44	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

response 0

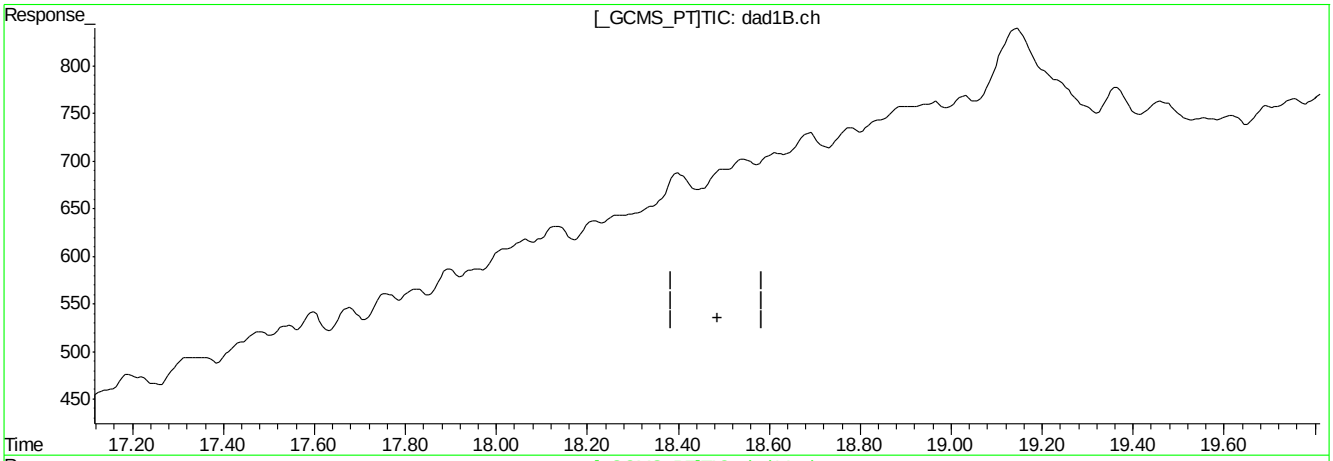
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:38:18 2021

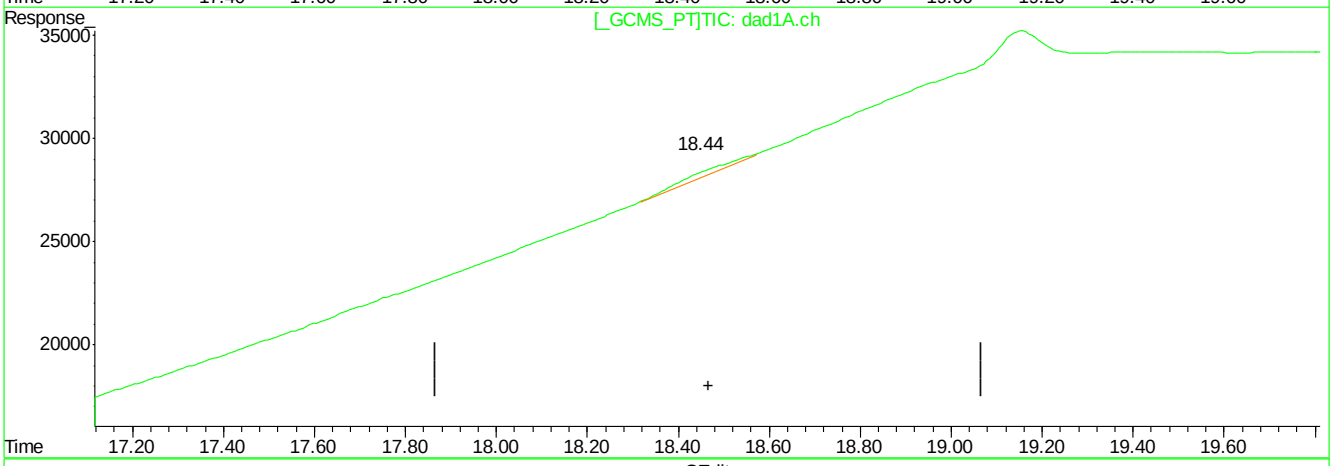
BB070754.D edits: PETN

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.44min 16.212ppb m

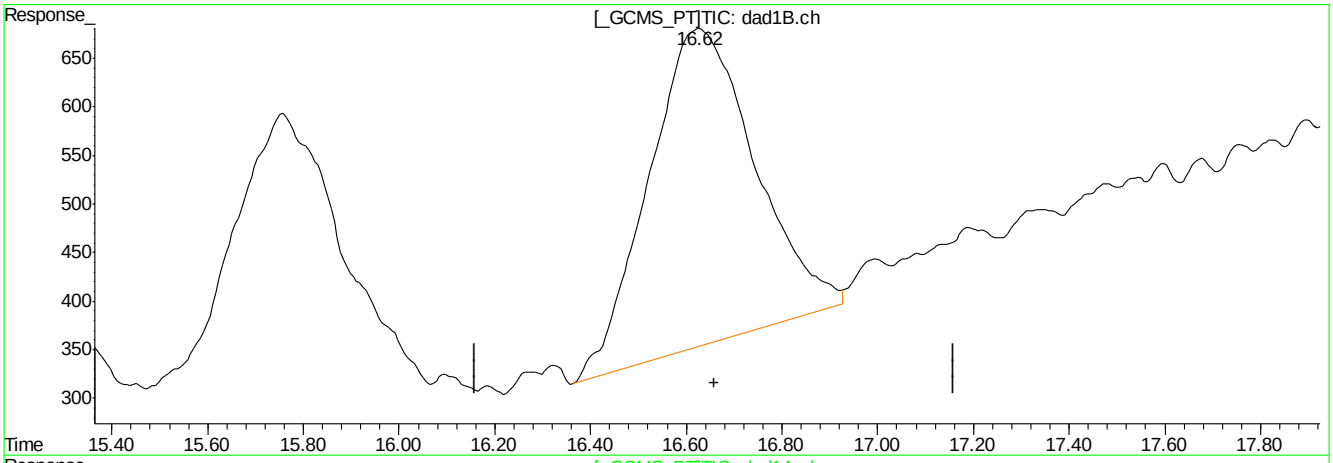
response 21509

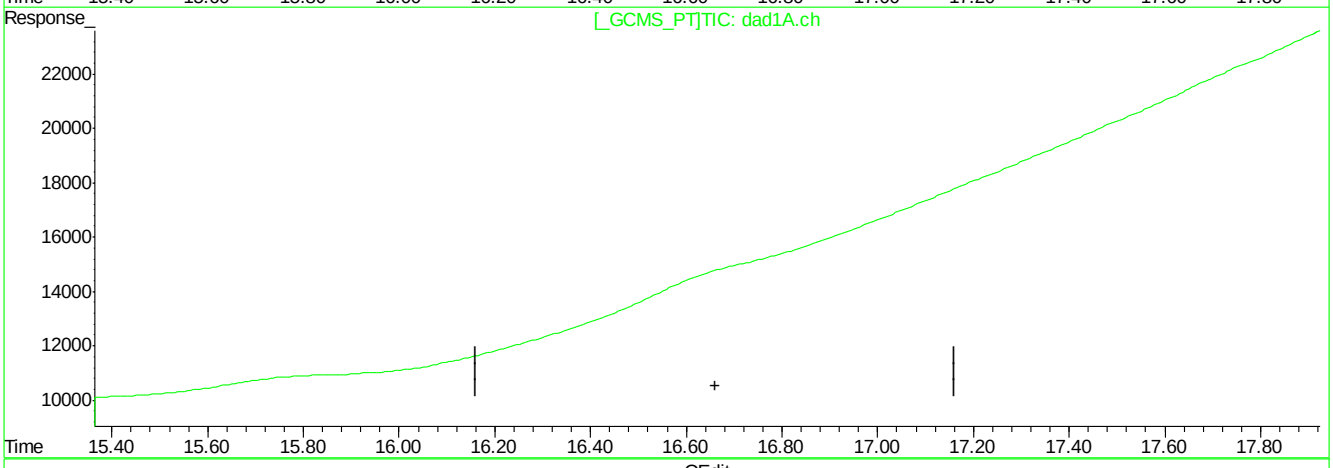
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:38:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.63min 16.093ppb

response 50369

(20) m-Nitrotoluene #2

0.00min 0.000ppb

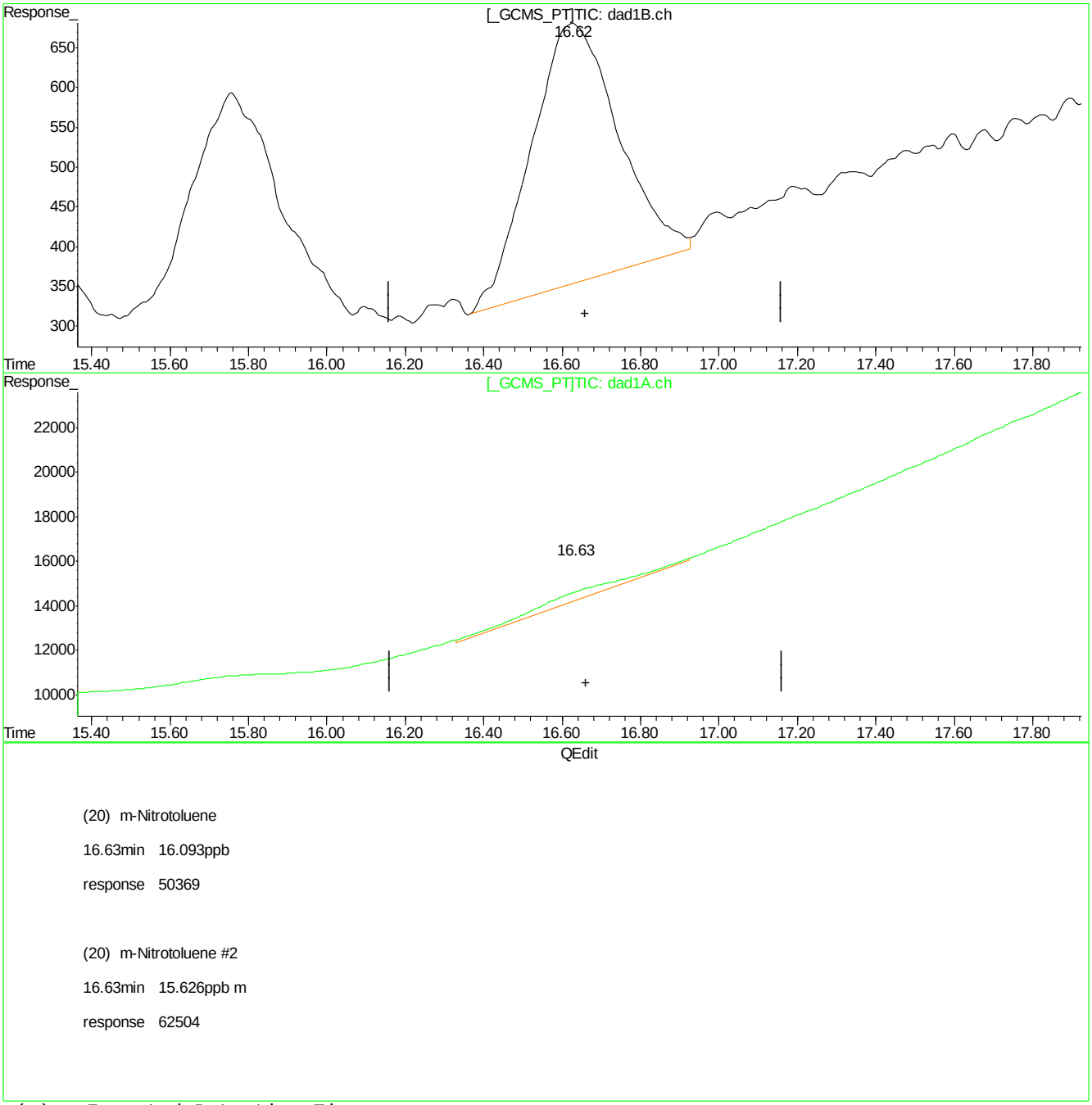
response 0

(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:38:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.63min 16.093ppb

response 50369

(20) m-Nitrotoluene #2

16.63min 15.626ppb m

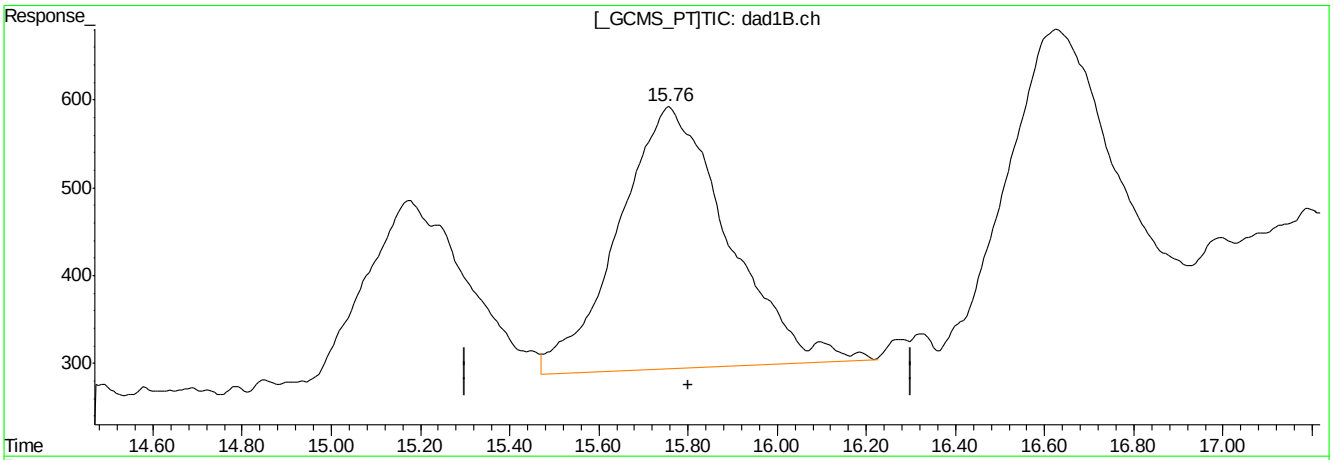
response 62504

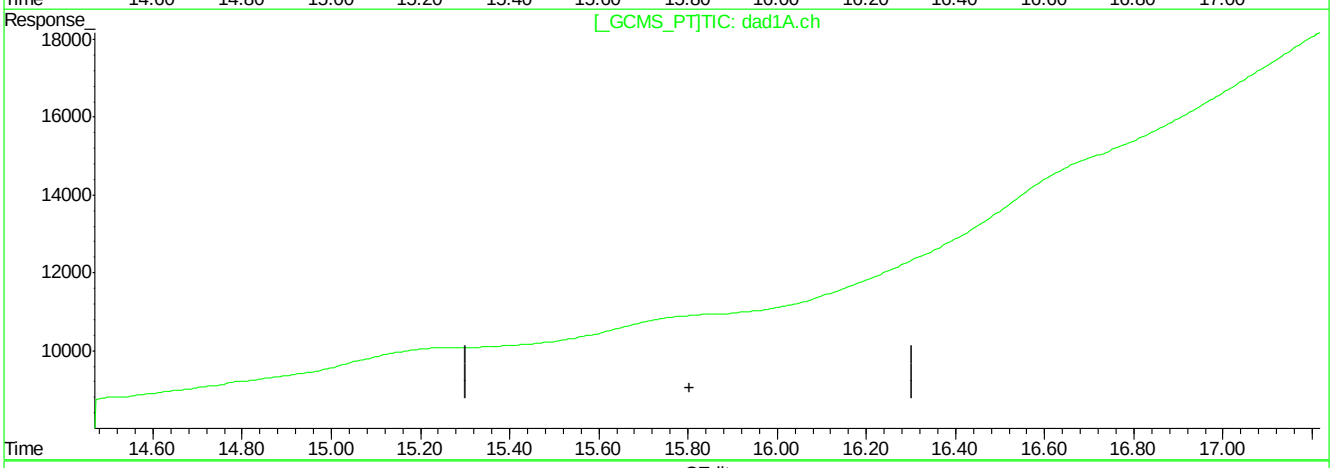
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:38:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.76min 15.218ppb

response 51065

(19) p-Nitrotoluene #2

0.00min 0.000ppb

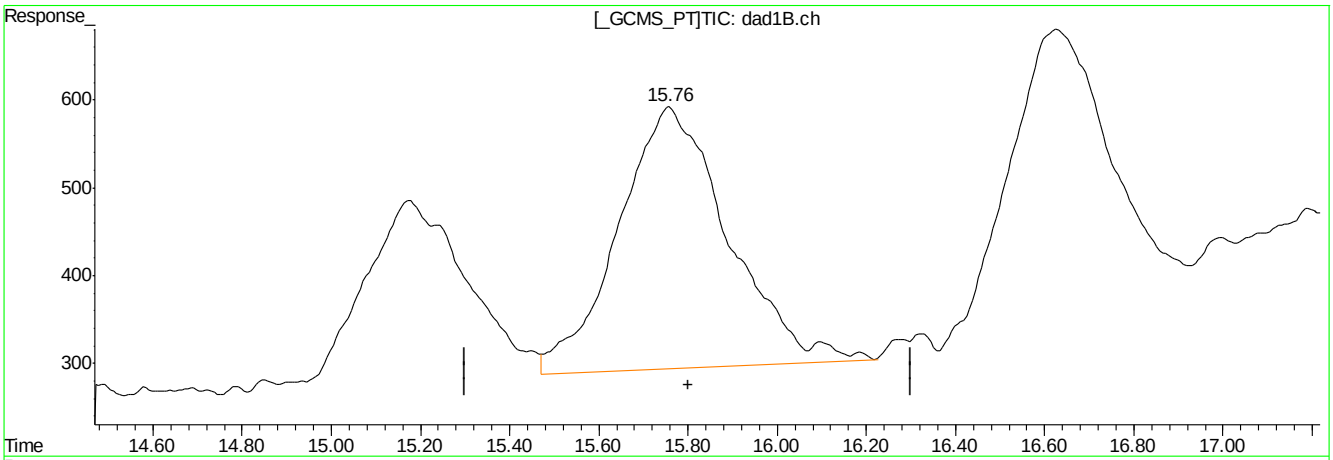
response 0

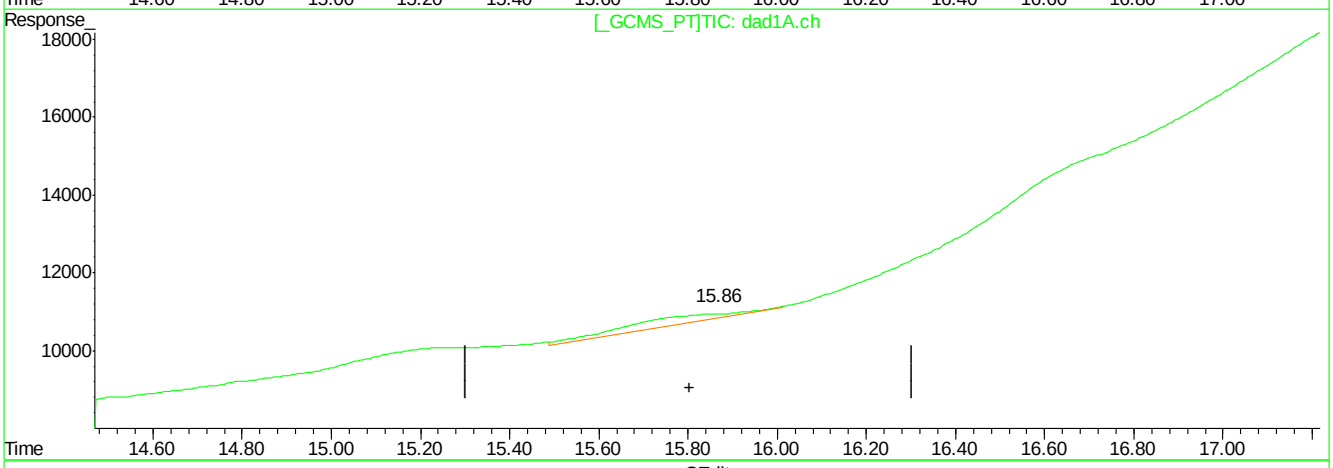
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:38:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.76min 15.218ppb

response 51065

(19) p-Nitrotoluene #2

15.86min 12.151ppb m

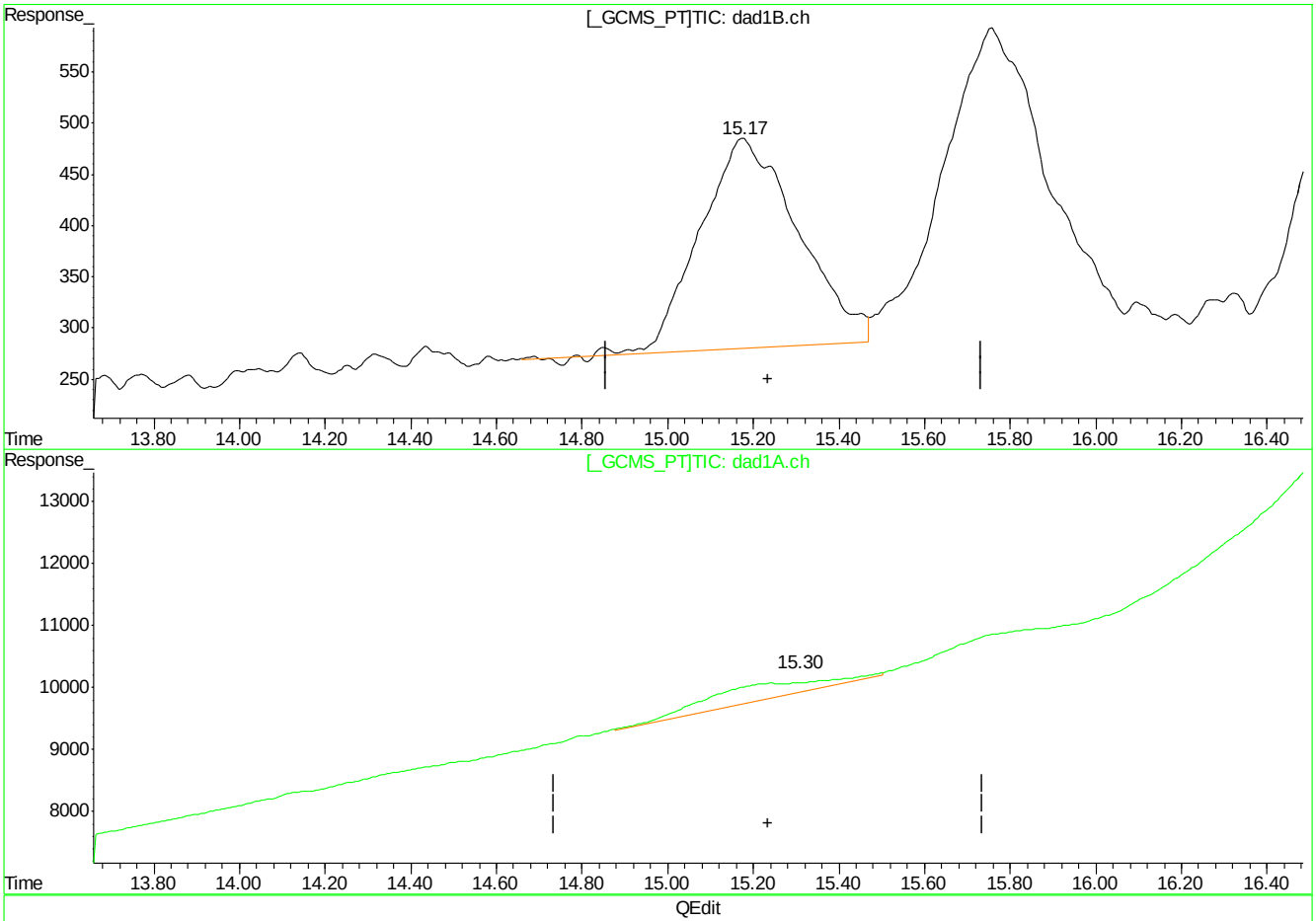
response 34980

(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:38:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.18min 14.735ppb

response 32090

(18) o-Nitrotoluene #2

15.30min 16.673ppb m

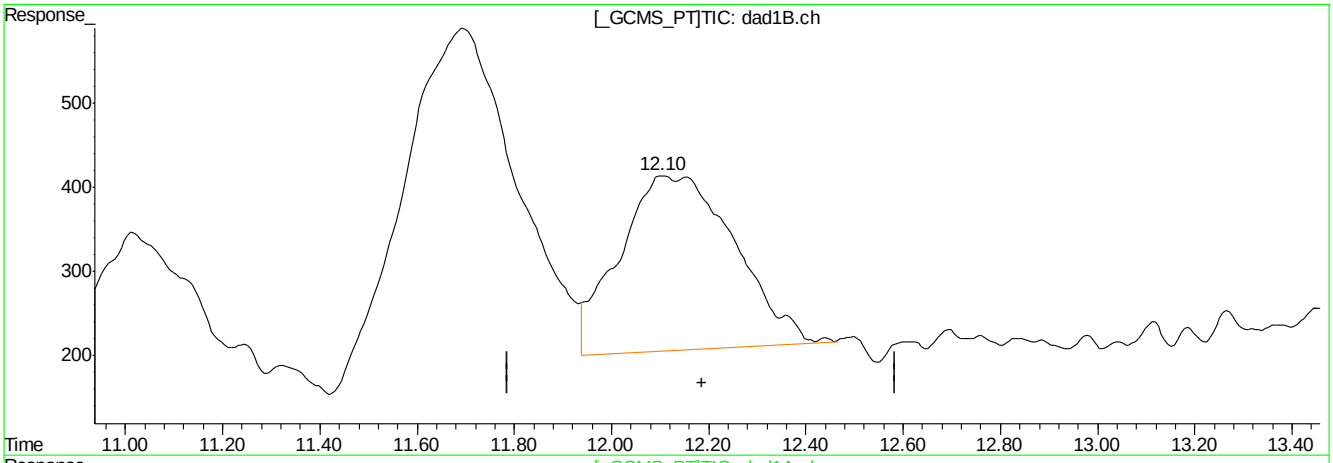
response 50371

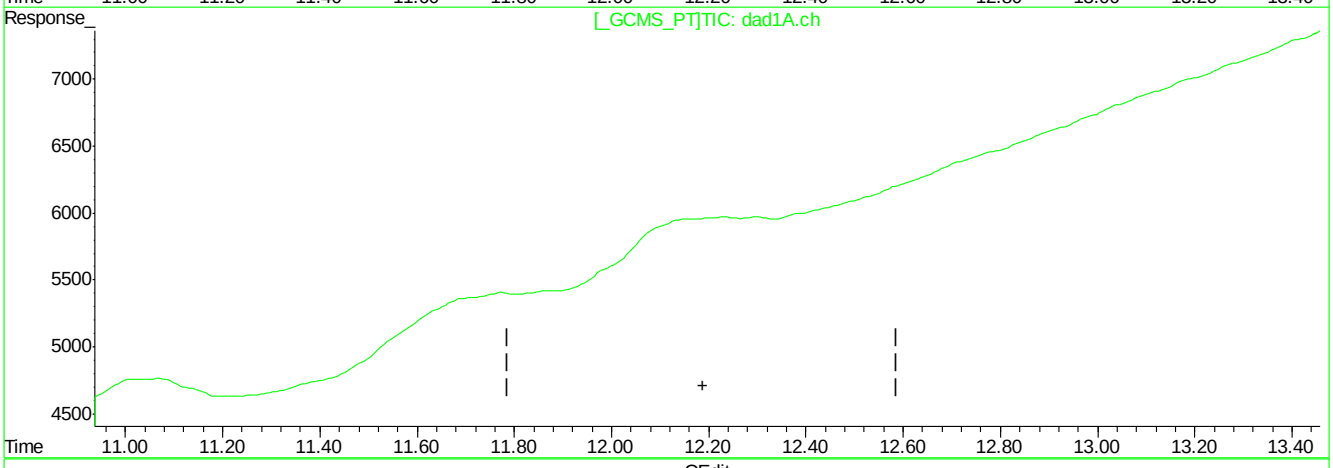
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:38:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.11min 12.523ppb

response 34448

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

response 0

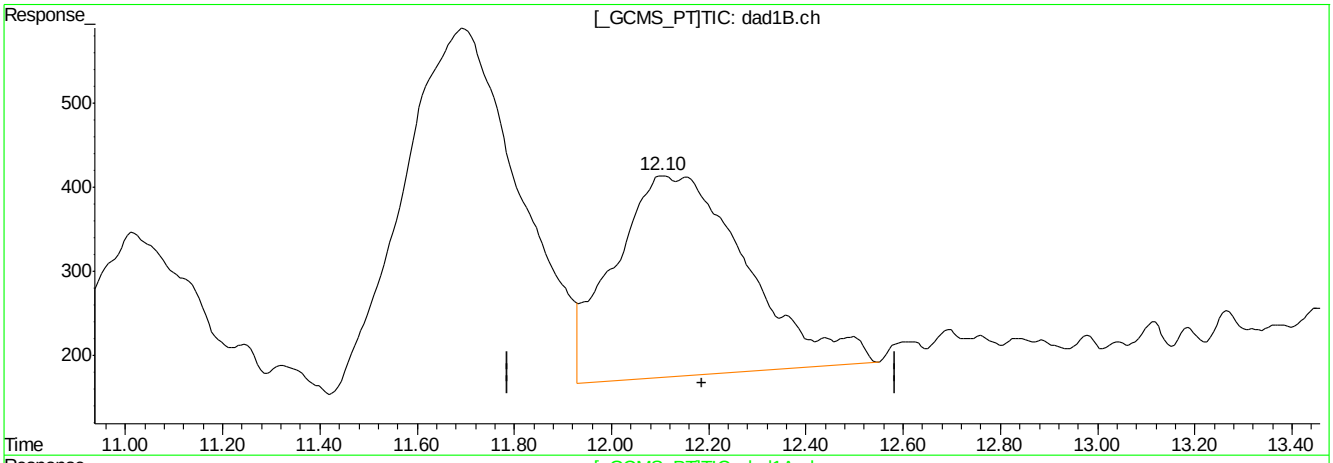
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:38:57 2021

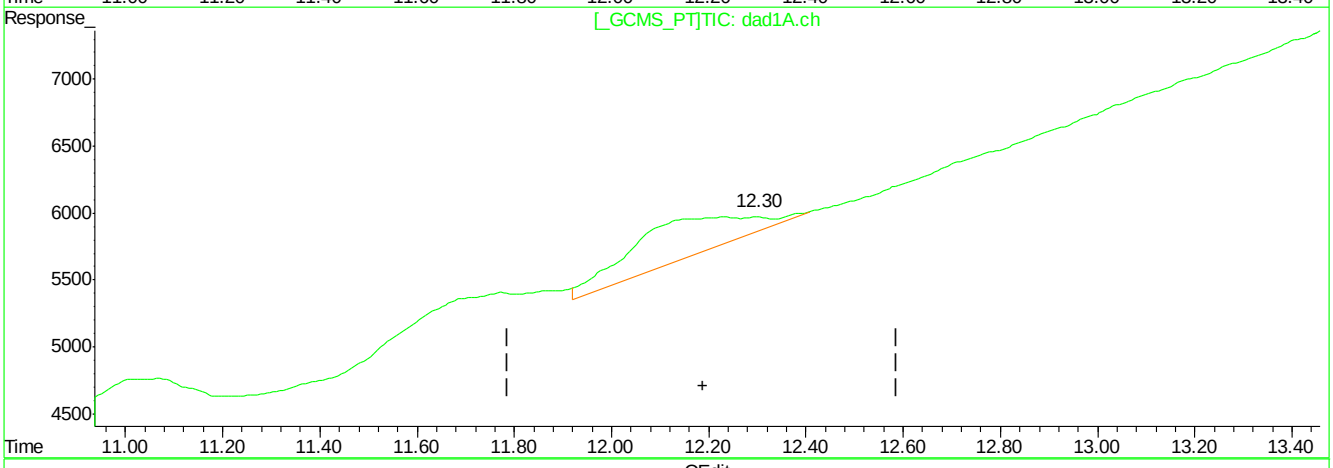
BB070754.D edits: 2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.10min 16.578ppb m

response 45603

(17) 2,6-Dinitrotoluene #2

12.30min 14.387ppb m

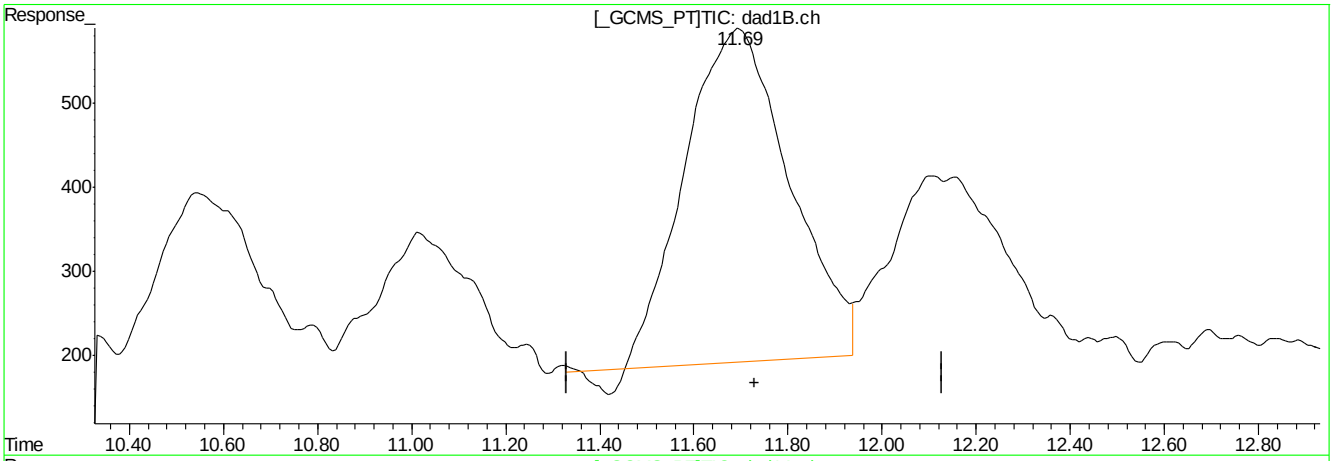
response 48441

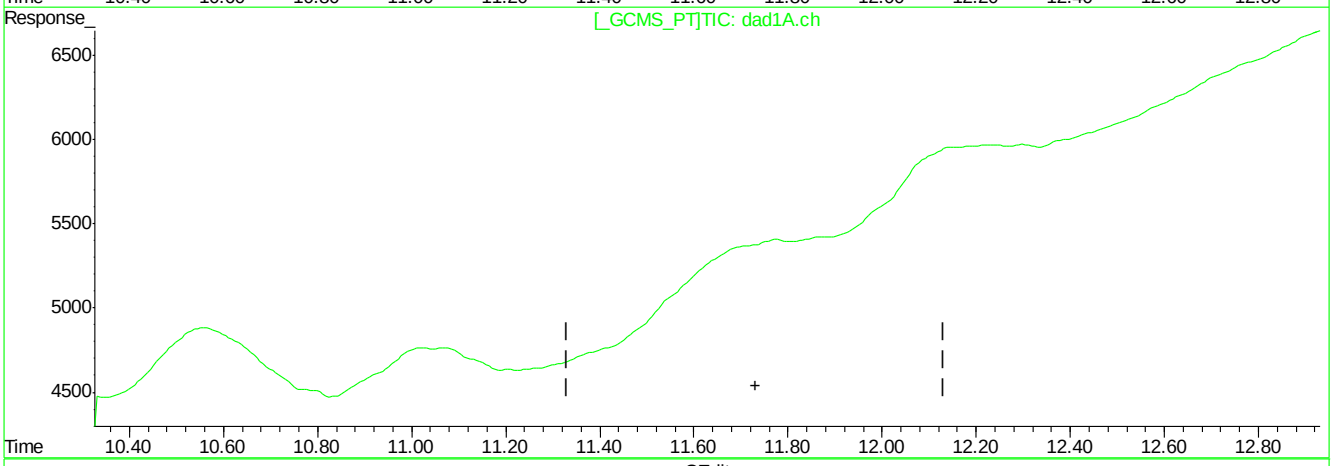
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:39:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.70min 13.352ppb

response 60903

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

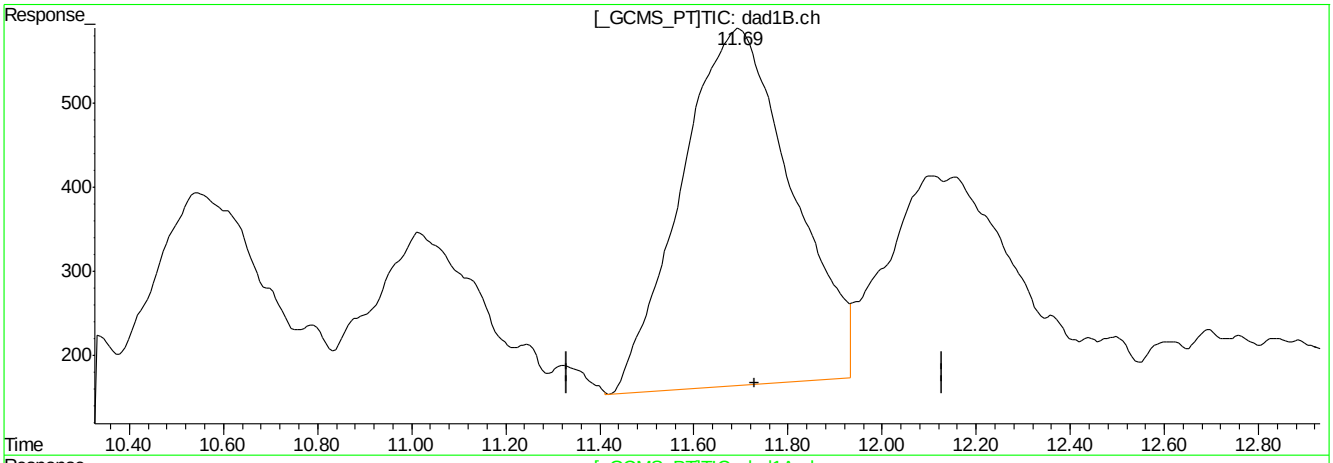
response 0

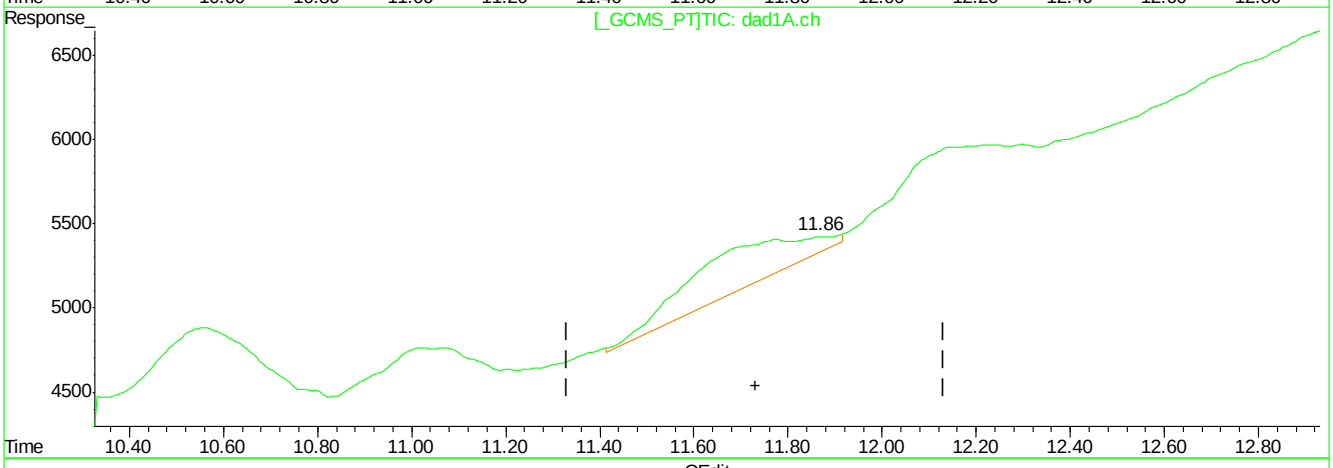
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:39:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.69min 15.342ppb m

response 69983

(16) 2,4-Dinitrotoluene #2

11.86min 14.197ppb m

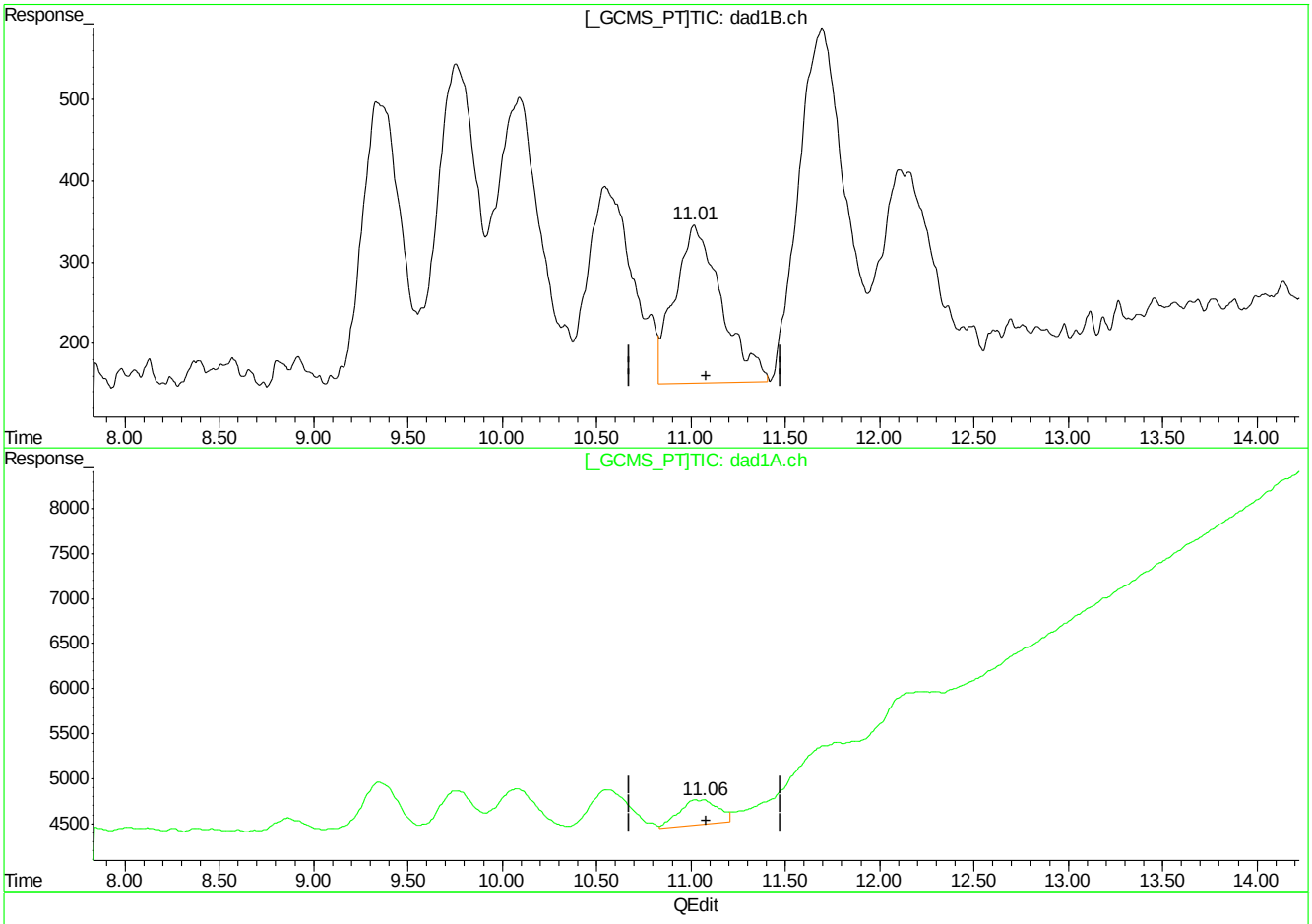
response 44812

(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:39:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(15) 3,4-Dinitrotoluene (S)

11.01min 15.533ppb m

response 33441

(15) 3,4-Dinitrotoluene #2 (S)

11.06min 10.419ppb m

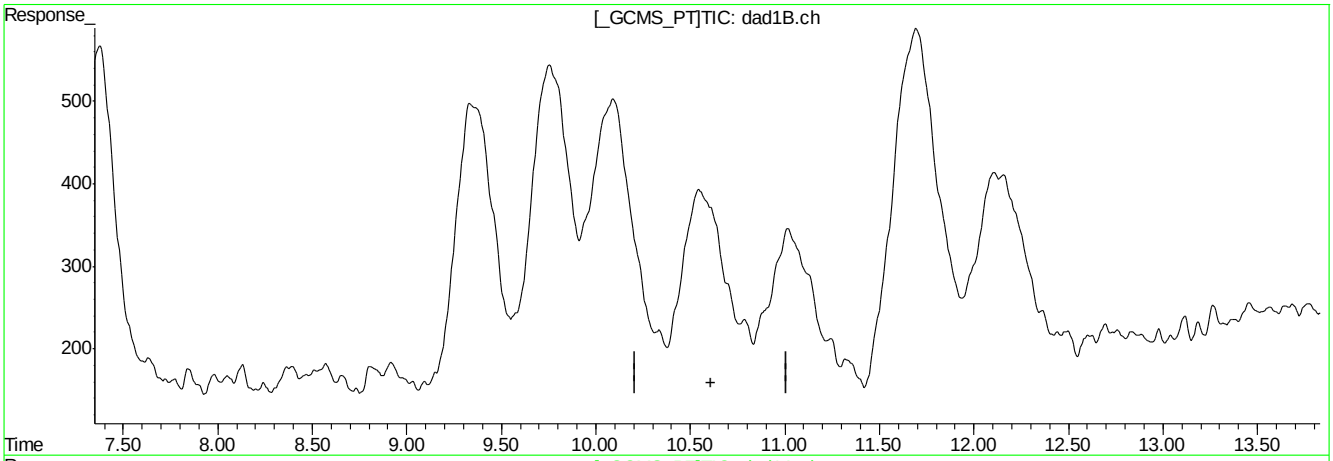
response 38925

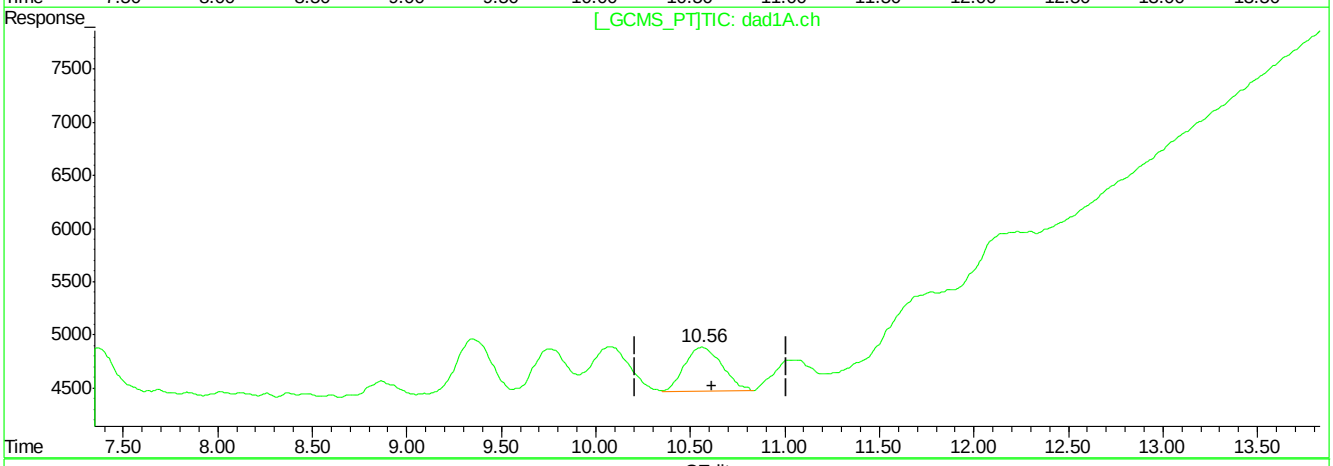
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:40:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(14) 4-Amino-2,6-Dinitrotoluene #2

10.56min 11.704ppb

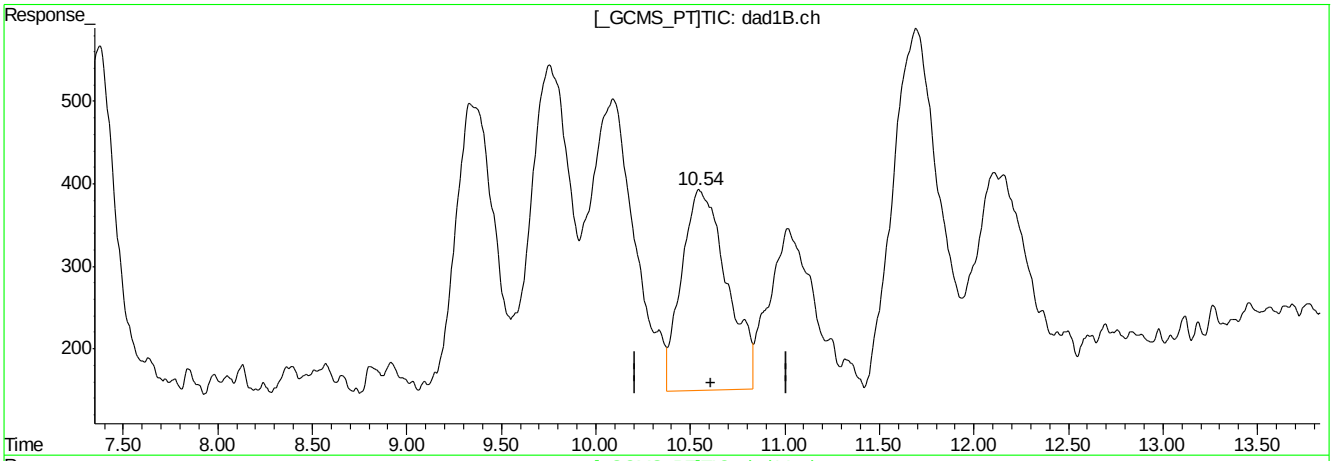
response 57455

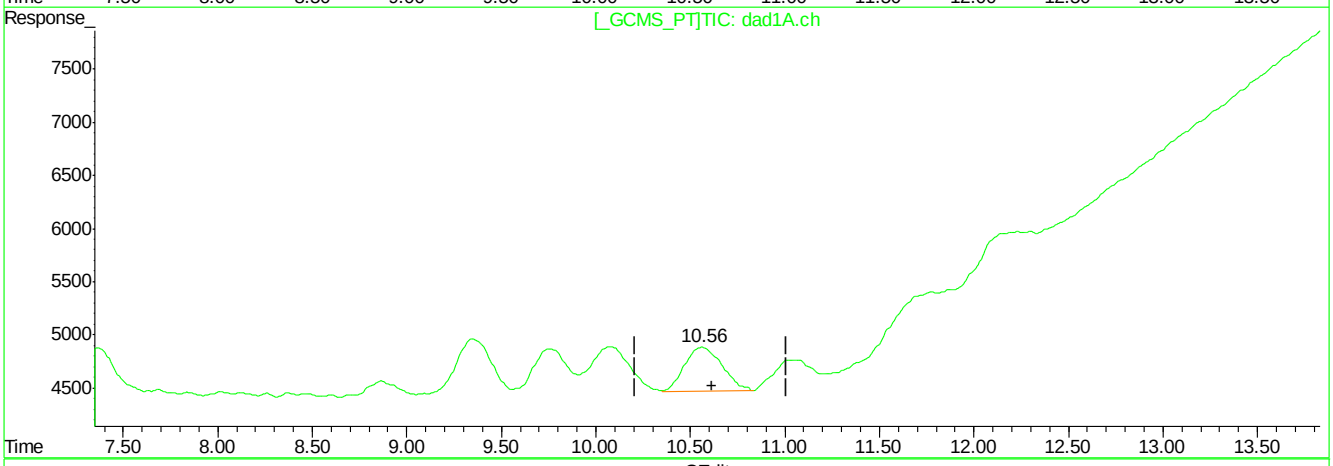
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:40:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.54min 16.273ppb m

response 40613

(14) 4-Amino-2,6-Dinitrotoluene #2

10.56min 11.704ppb

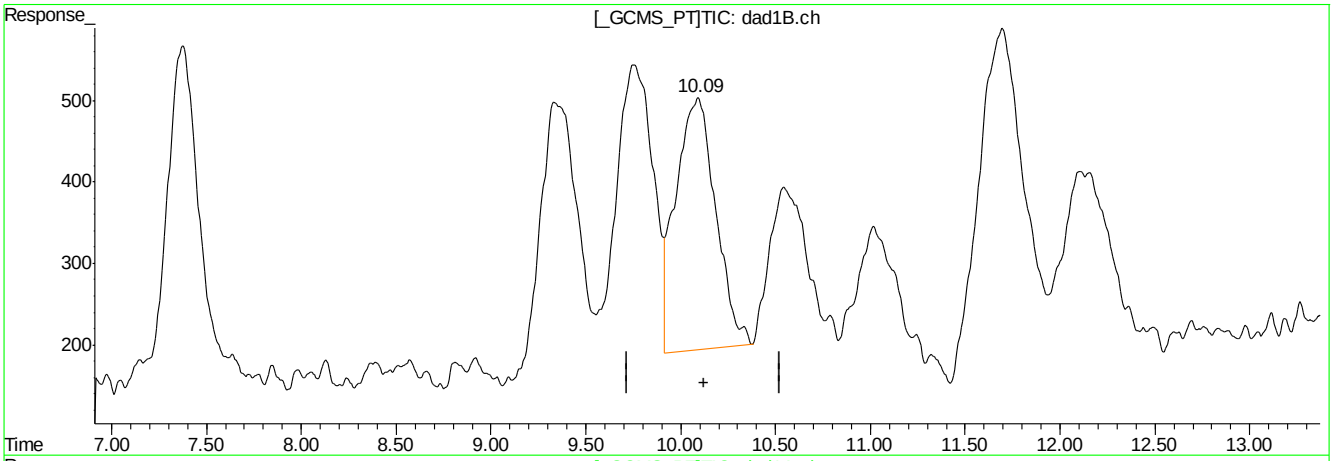
response 57455

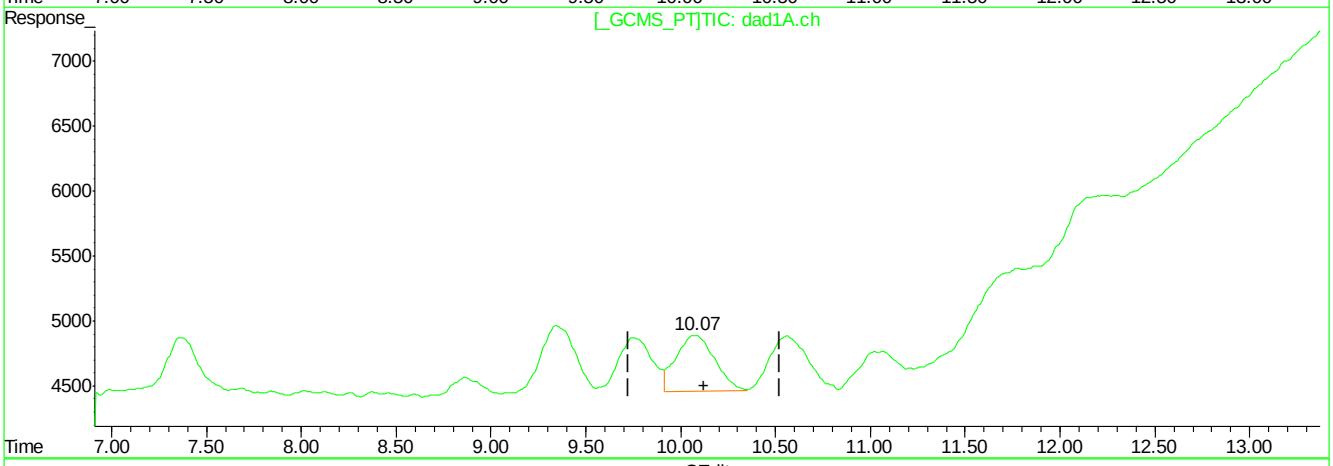
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:40:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.09min 13.181ppb

response 45522

(13) 2-Amino-4,6-Dinitrotoluene #2

10.08min 11.974ppb

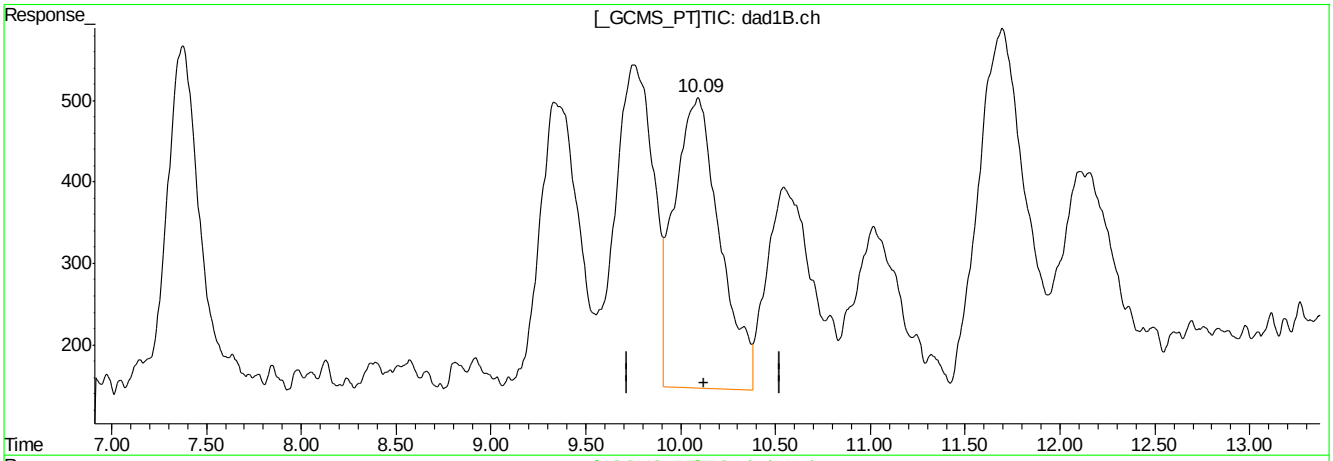
response 61779

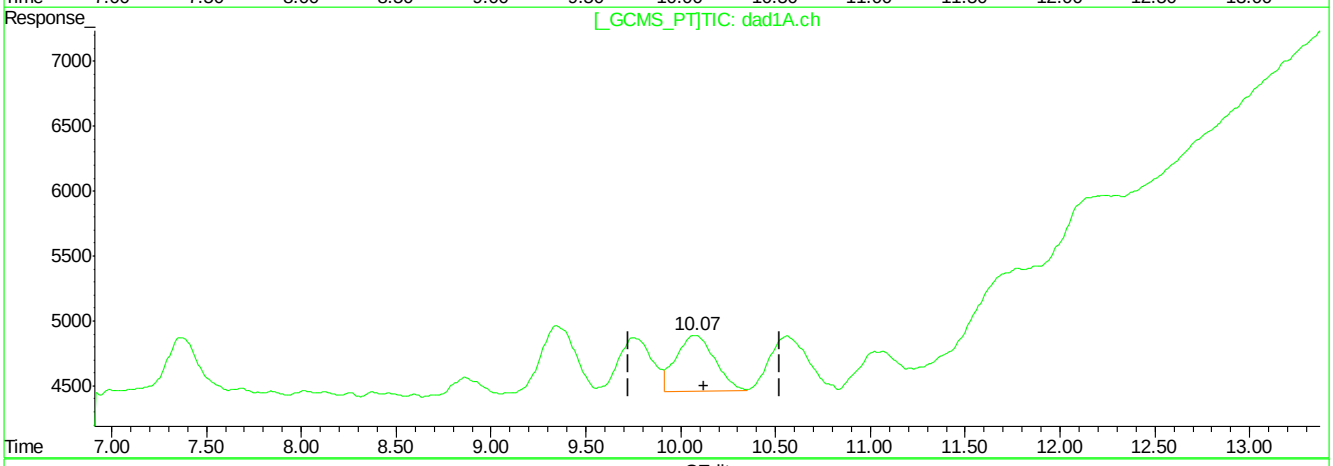
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:40:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.09min 17.265ppb m

response 59627

(13) 2-Amino-4,6-Dinitrotoluene #2

10.08min 11.974ppb

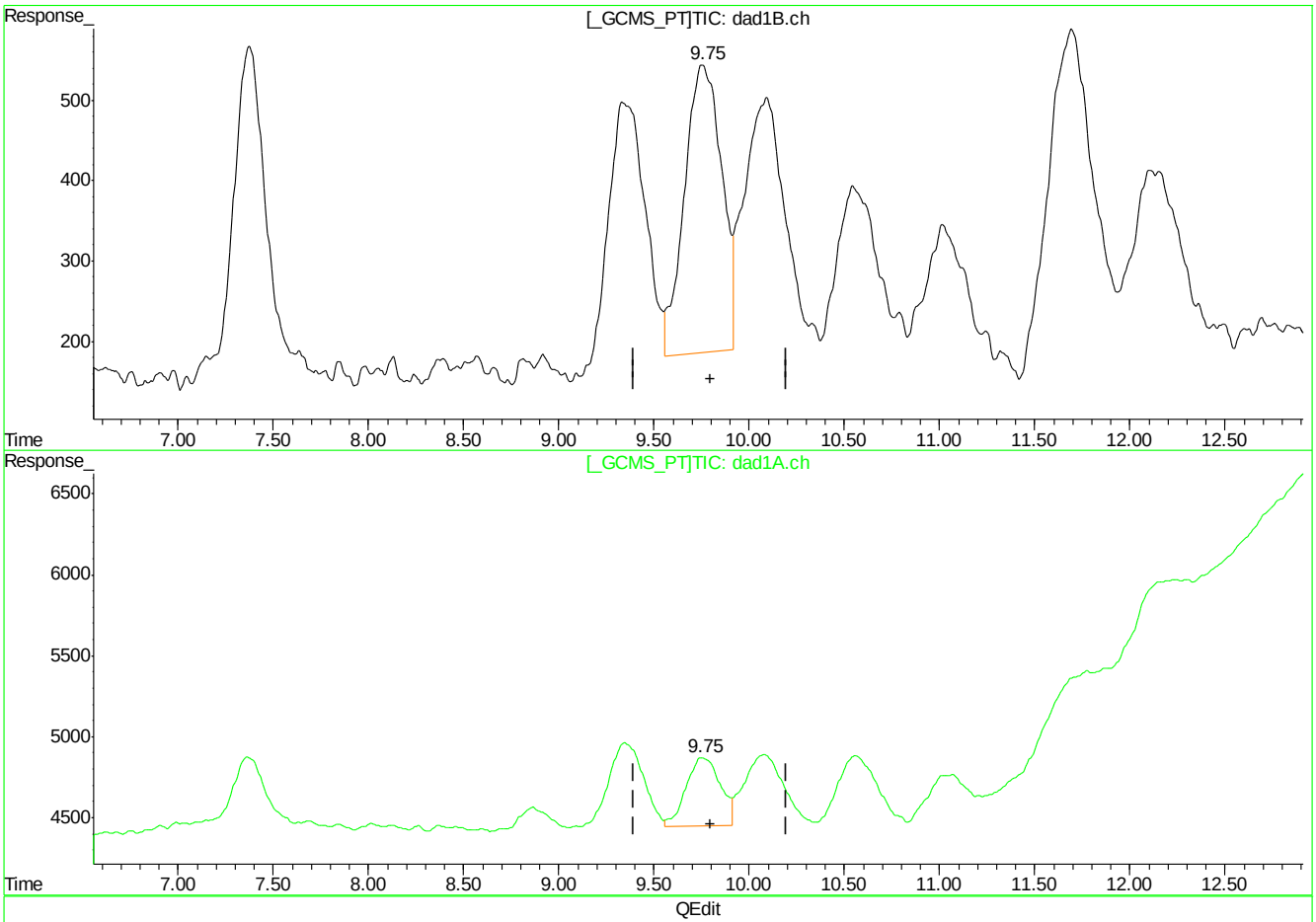
response 61779

(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:40:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



QEdit

(12) 2,4,6-Trinitrotoluene

9.76min 13.332ppb

response 48346

(12) 2,4,6-Trinitrotoluene #2

9.75min 12.277ppb

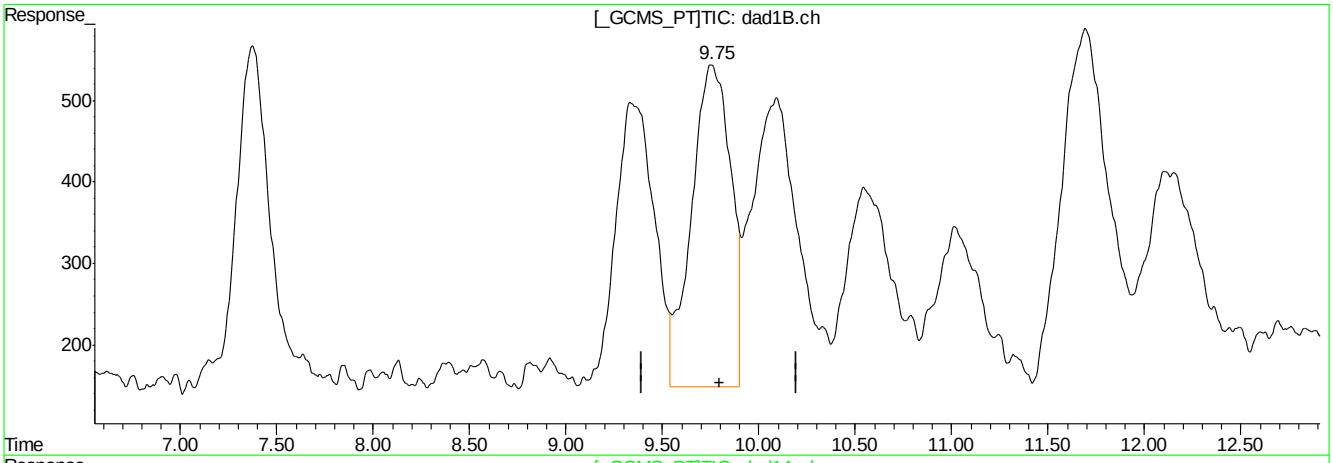
response 52165

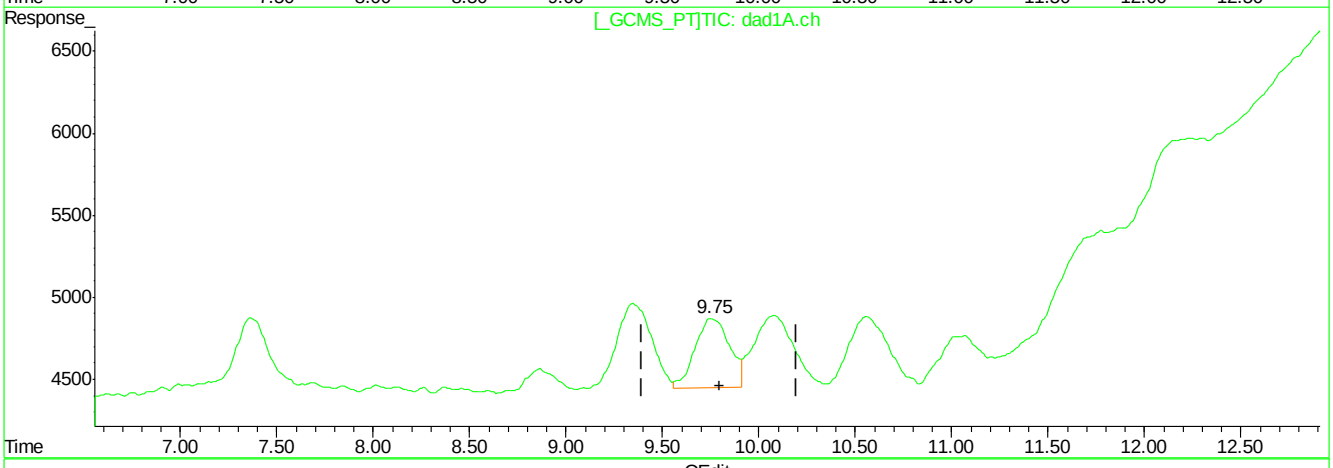
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:40:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.75min 15.474ppb m

response 56113

(12) 2,4,6-Trinitrotoluene #2

9.75min 12.277ppb

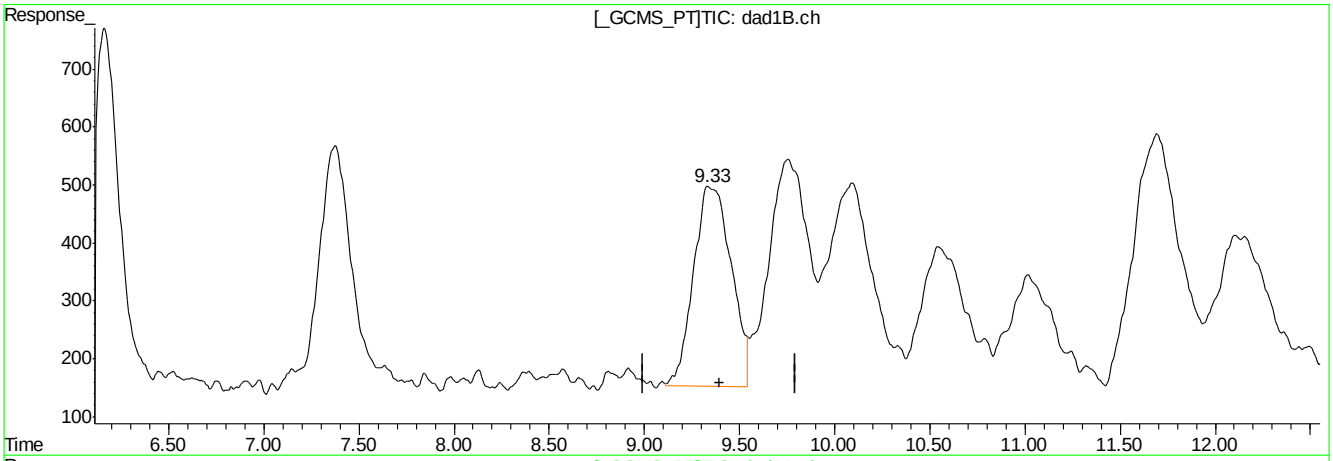
response 52165

(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:40:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(11) Tetryl

9.33min 15.792ppb m

response 47618

(11) Tetryl #2

9.35min 13.580ppb

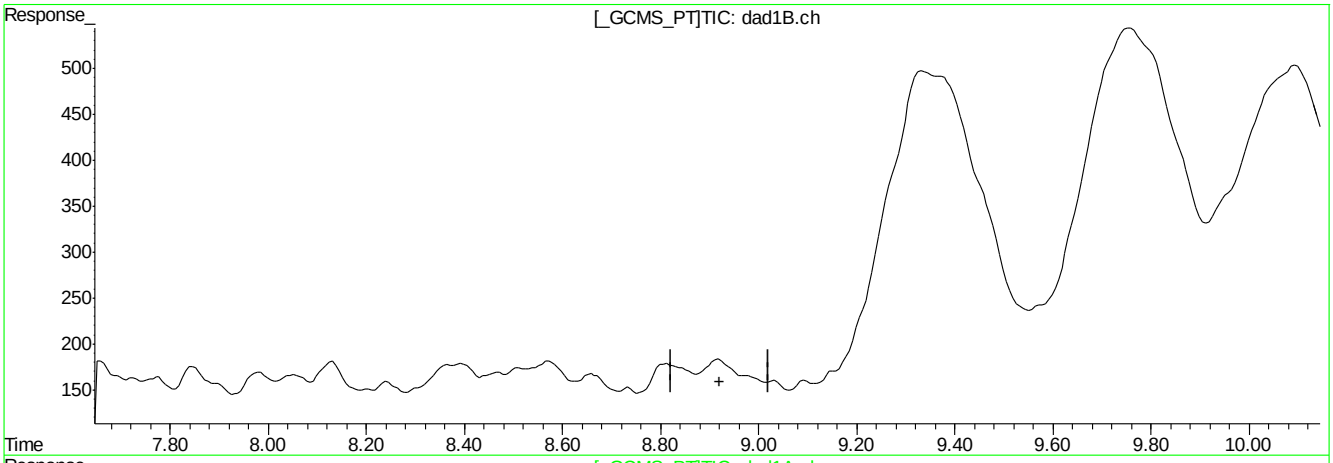
response 66045

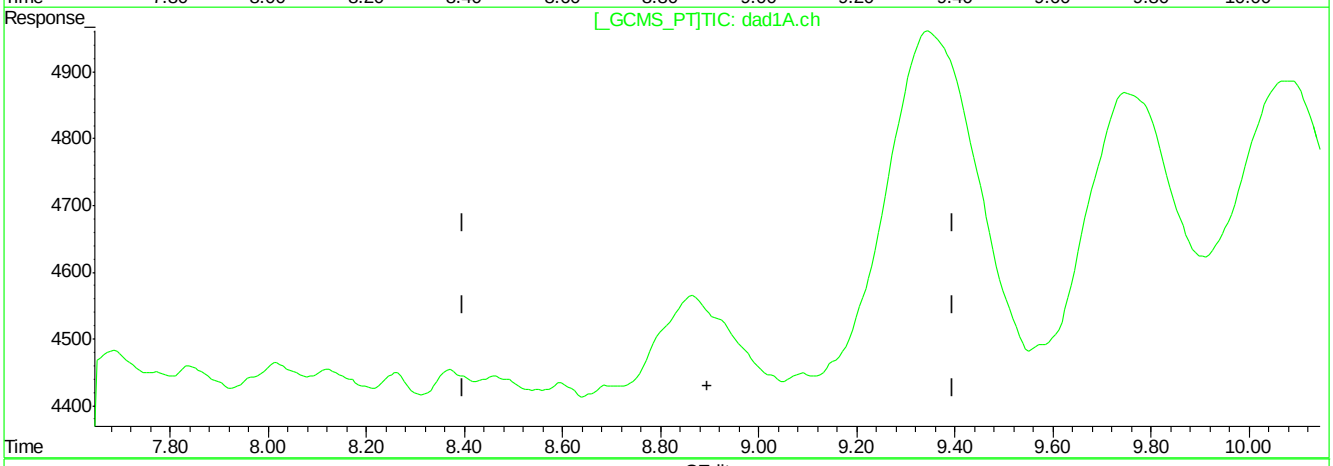
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:40:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

0.00min 0.000ppb

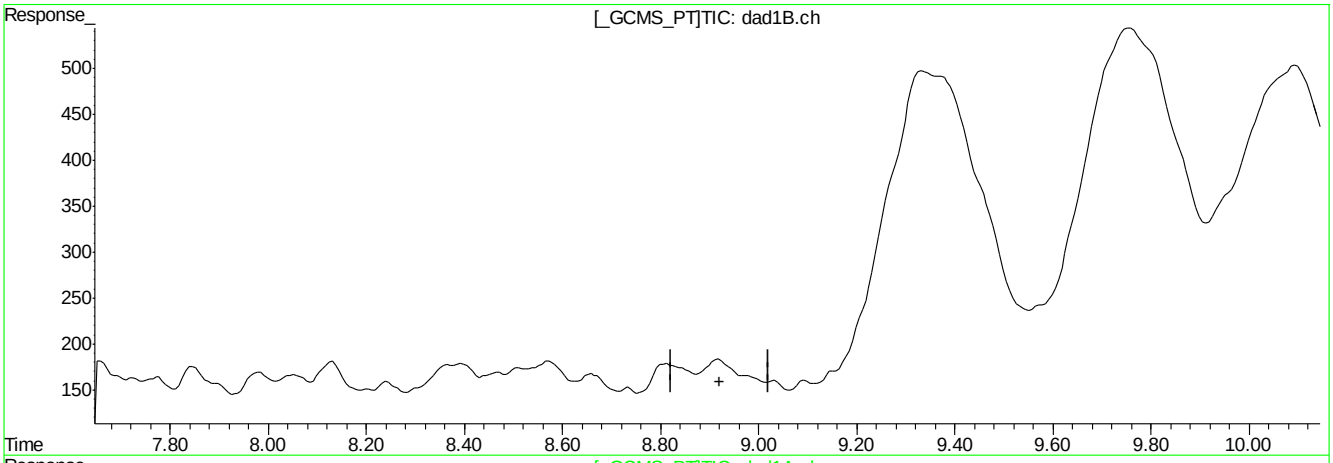
response 0

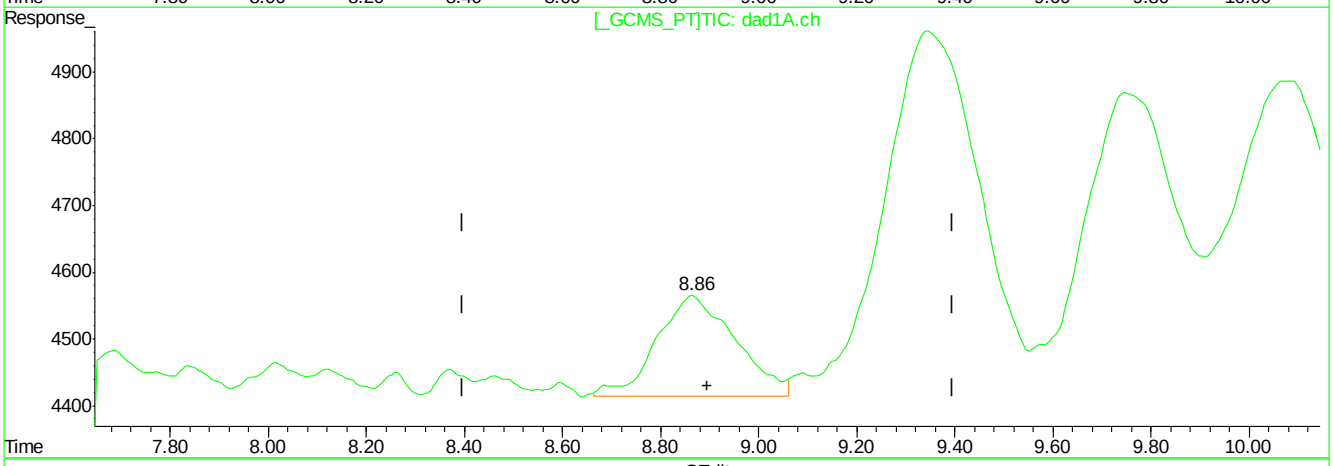
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:40:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

8.86min 13.611ppb m

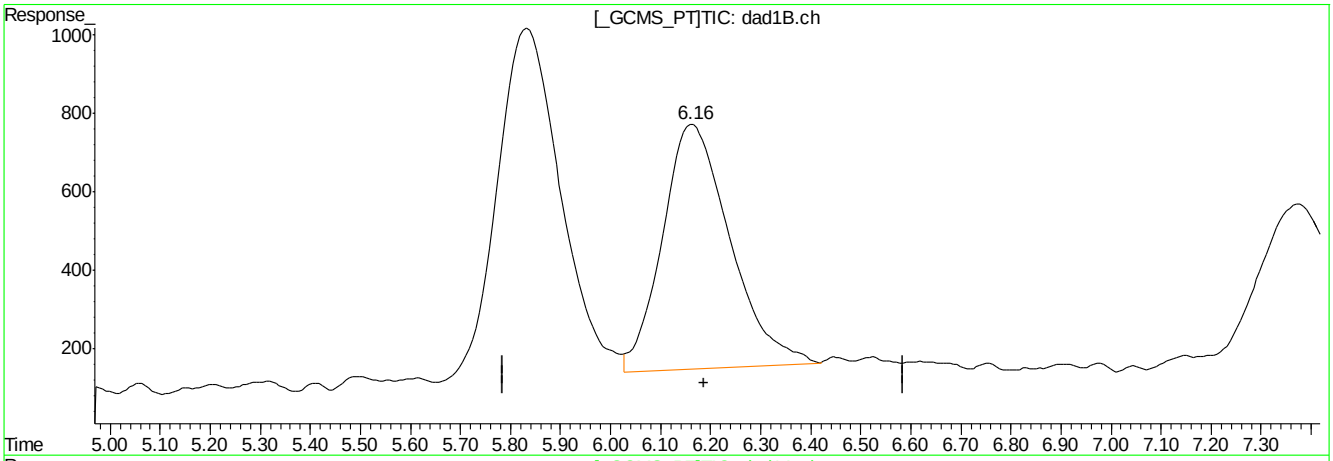
response 16881

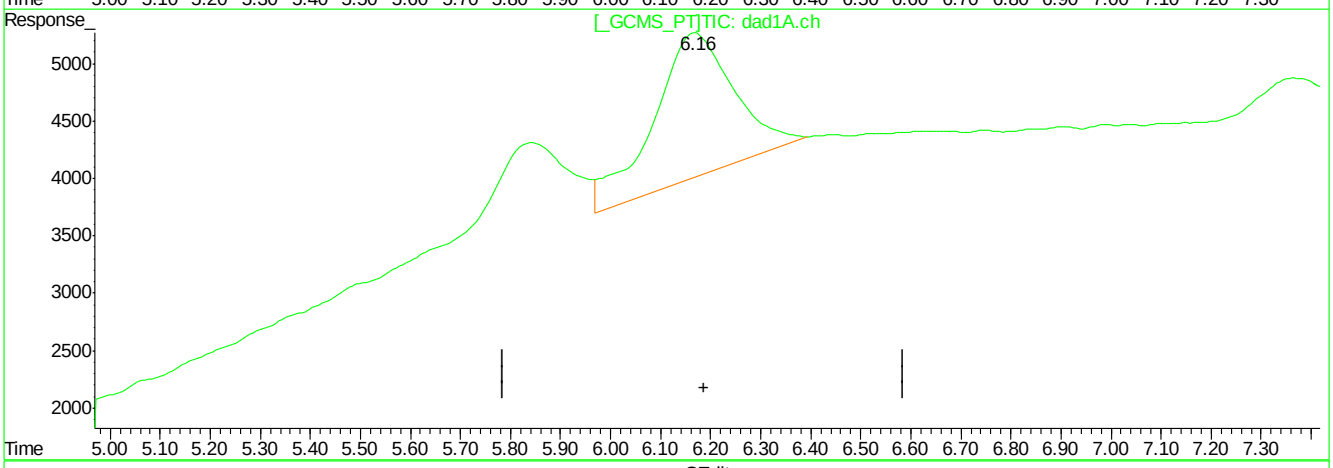
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:41:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.16min 14.765ppb

response 58709

(8) 3,5-Dinitroaniline #2

6.17min 20.360ppb

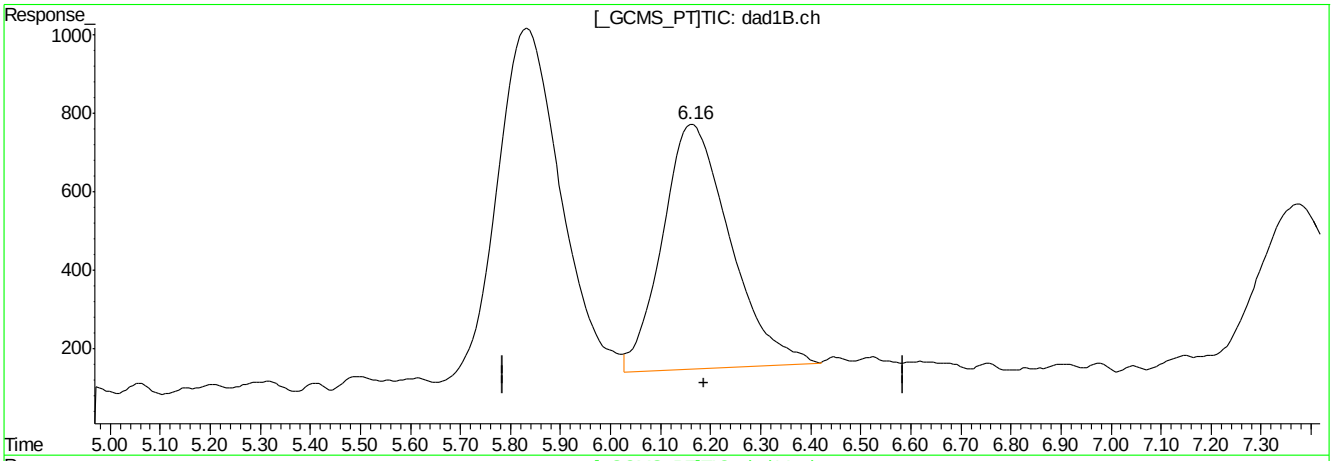
response 140898

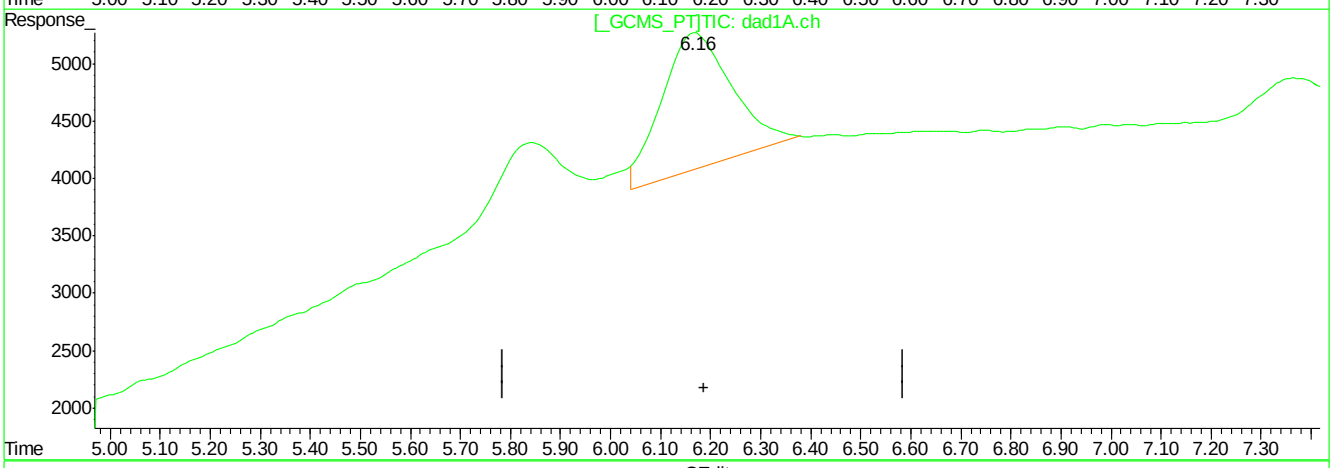
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:41:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.16min 14.765ppb

response 58709

(8) 3,5-Dinitroaniline #2

6.16min 16.843ppb m

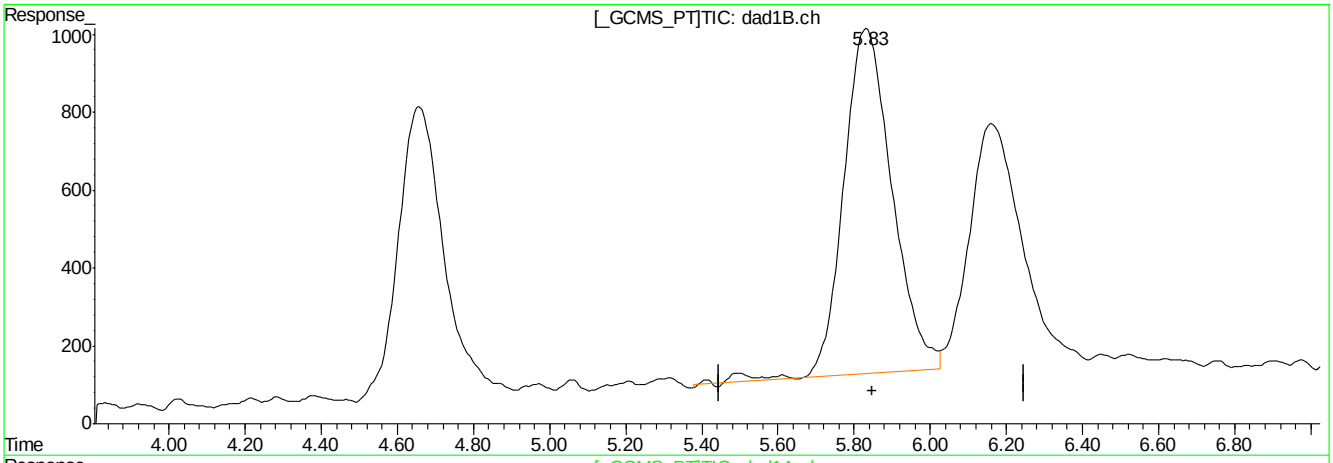
response 116556

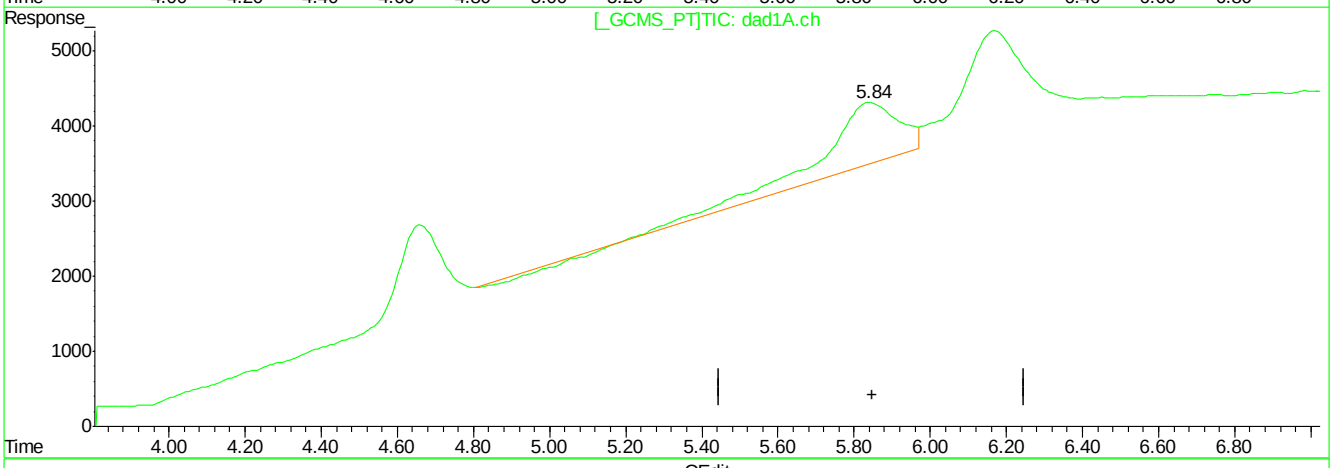
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:41:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.83min 15.017ppb

response 78247

(7) 1,3-Dinitrobenzene #2

5.84min 30.088ppb

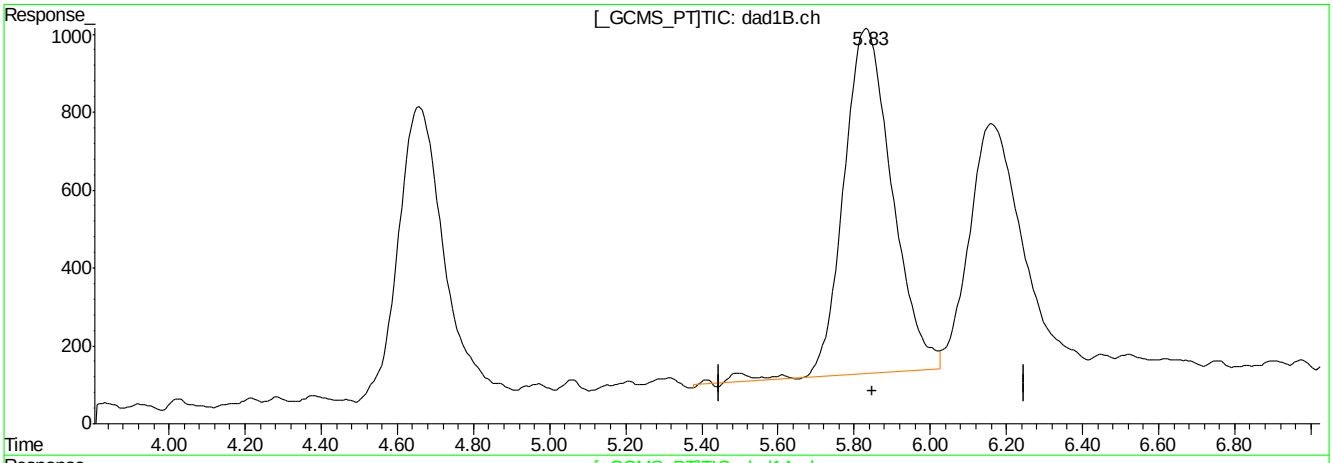
response 107600

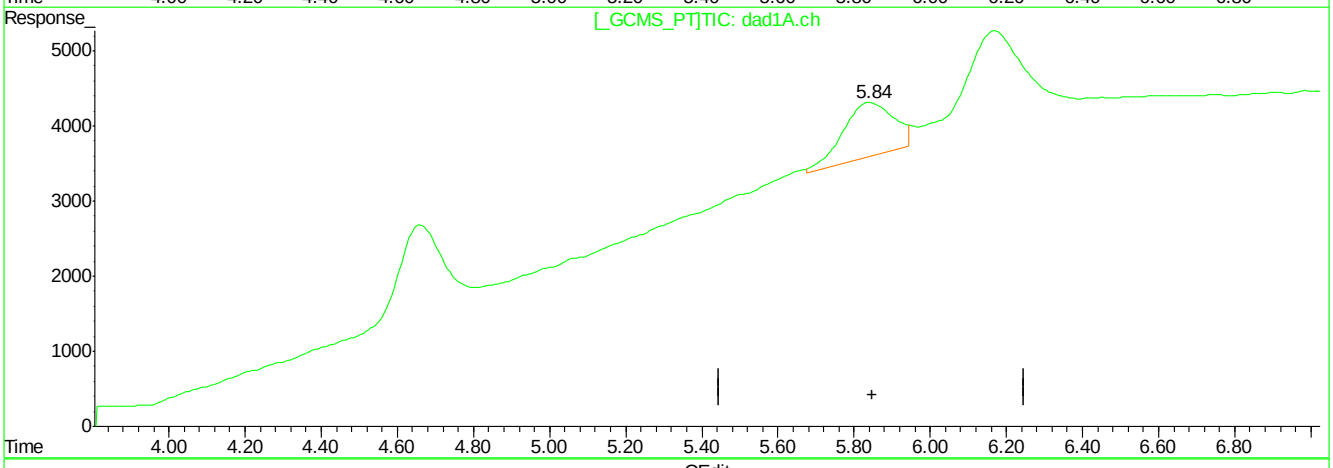
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:41:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.83min 15.017ppb

response 78247

(7) 1,3-Dinitrobenzene #2

5.84min 18.478ppb m

response 66081

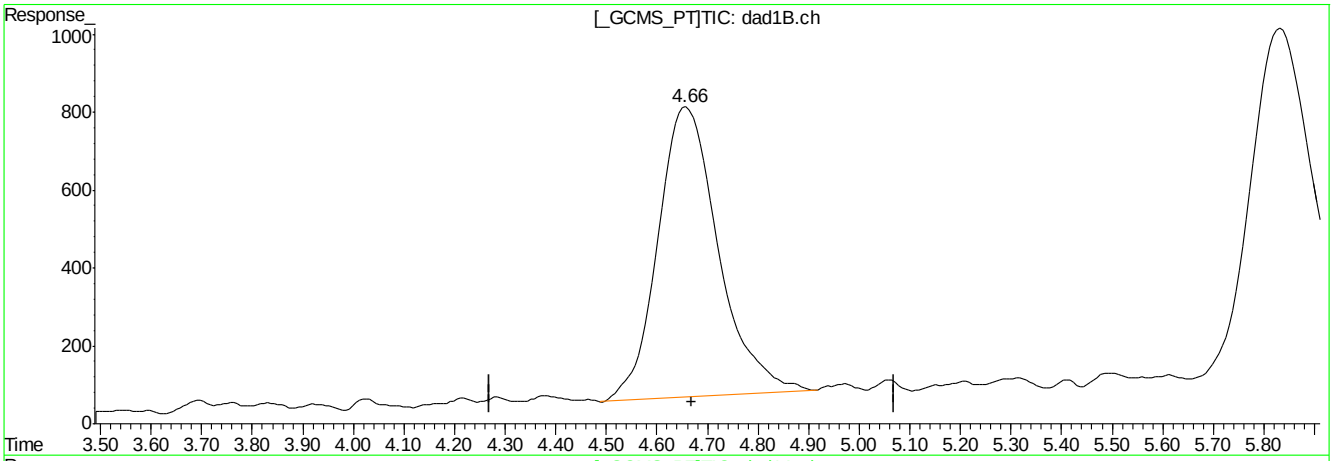
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:41:34 2021

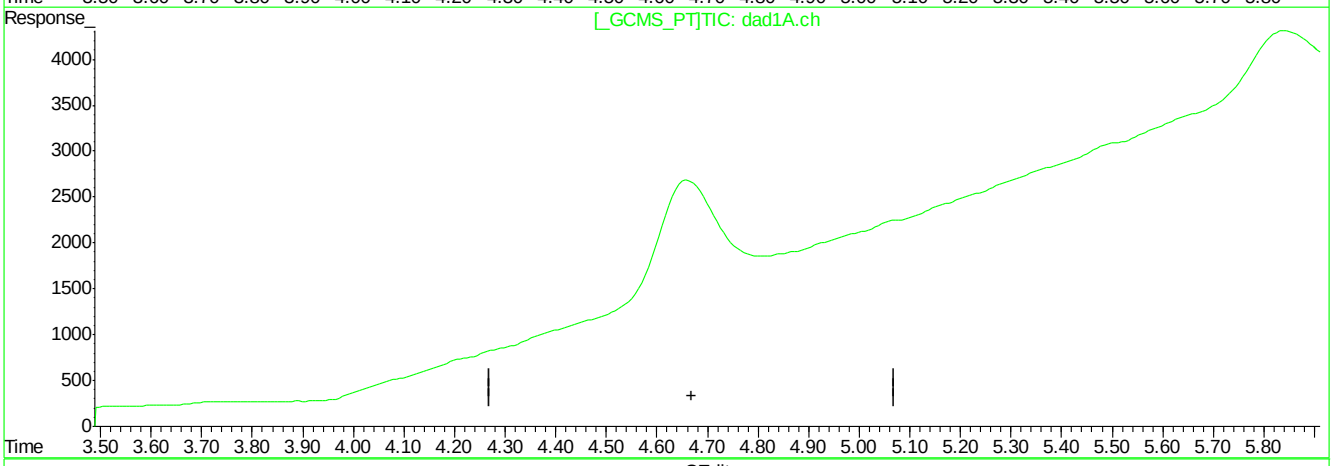
BB070754.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.66min 15.456ppb

response 61399

(6) 1,3,5-Trinitrobenzene #2

0.00min 0.000ppb

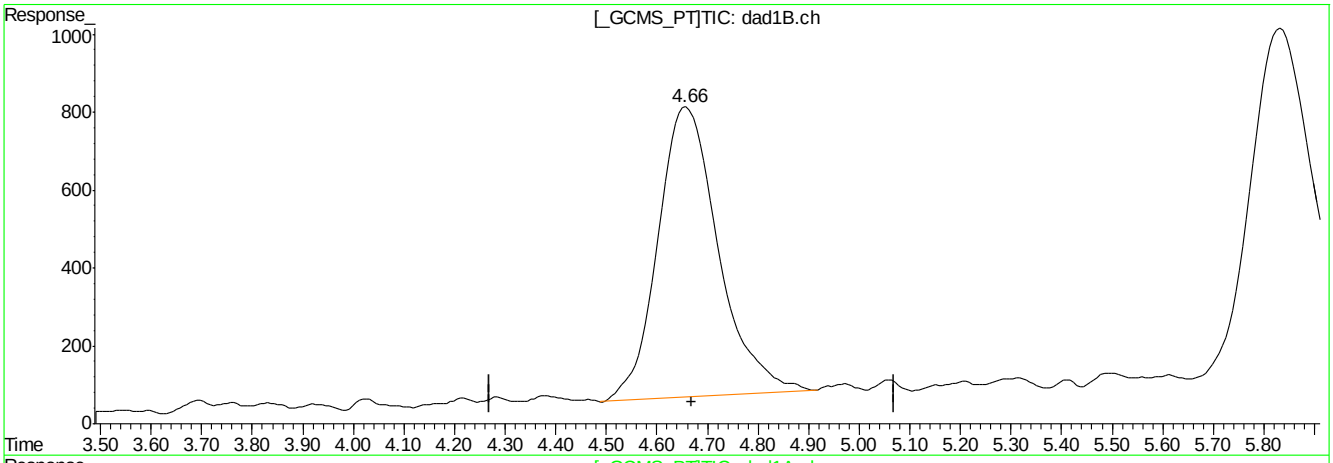
response 0

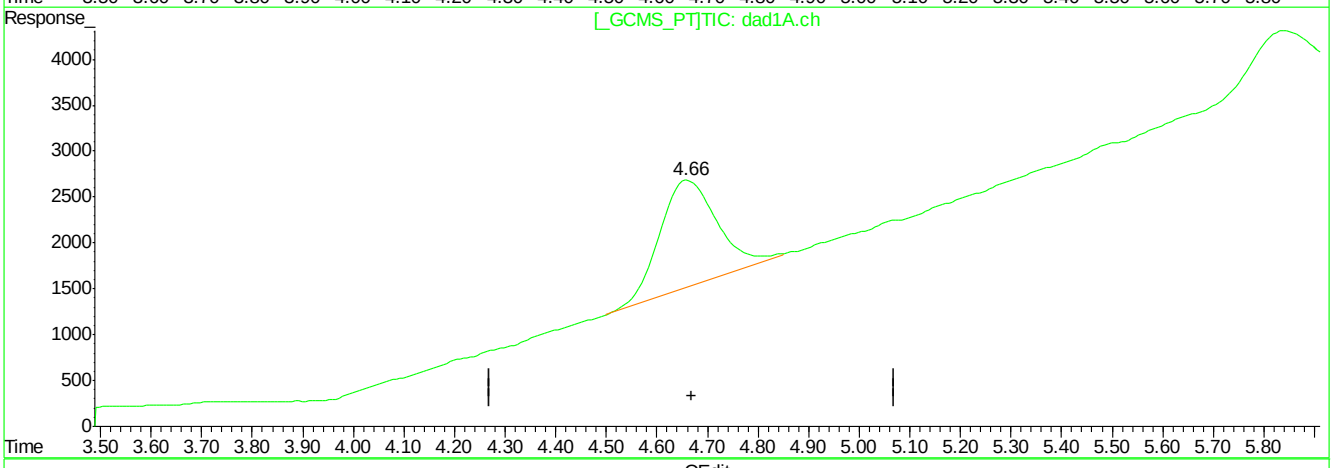
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:41:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.66min 15.456ppb

response 61399

(6) 1,3,5-Trinitrobenzene #2

4.66min 14.634ppb m

response 90818

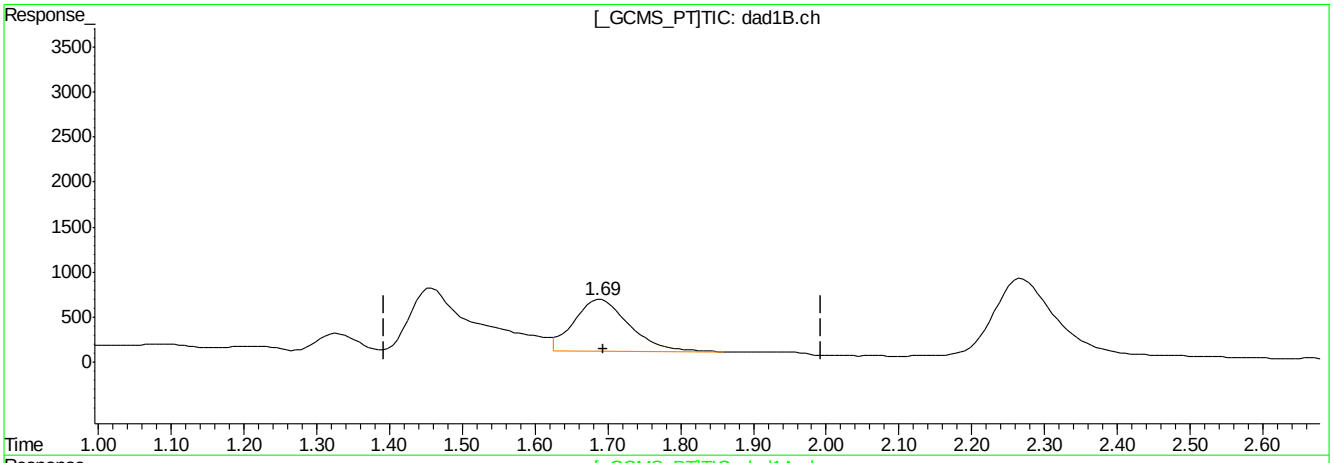
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:41:56 2021

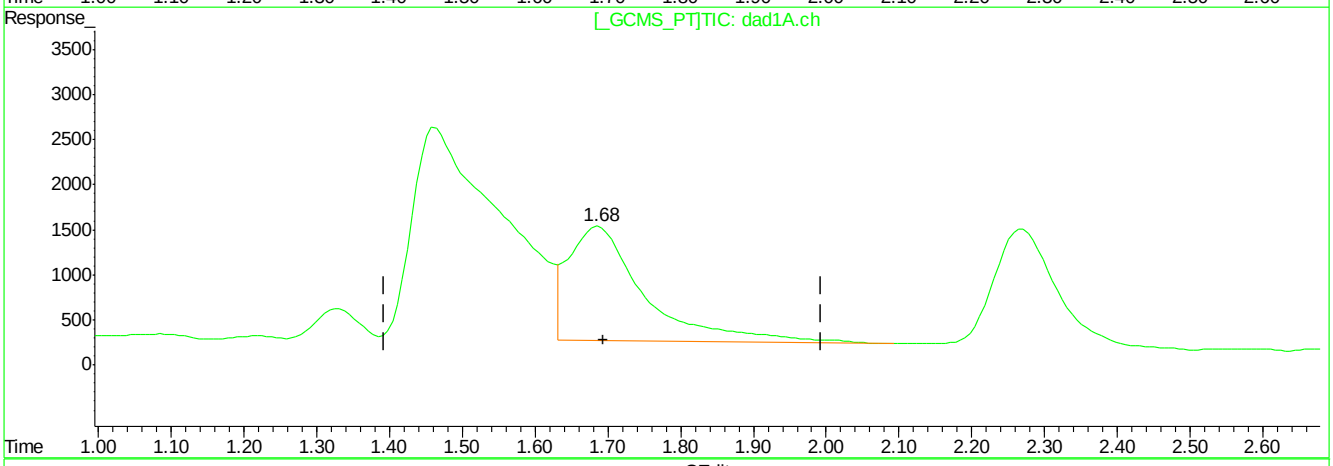
BB070754.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.69min 16.667ppb

response 30276

(3) DNX #2

1.69min 33.452ppb

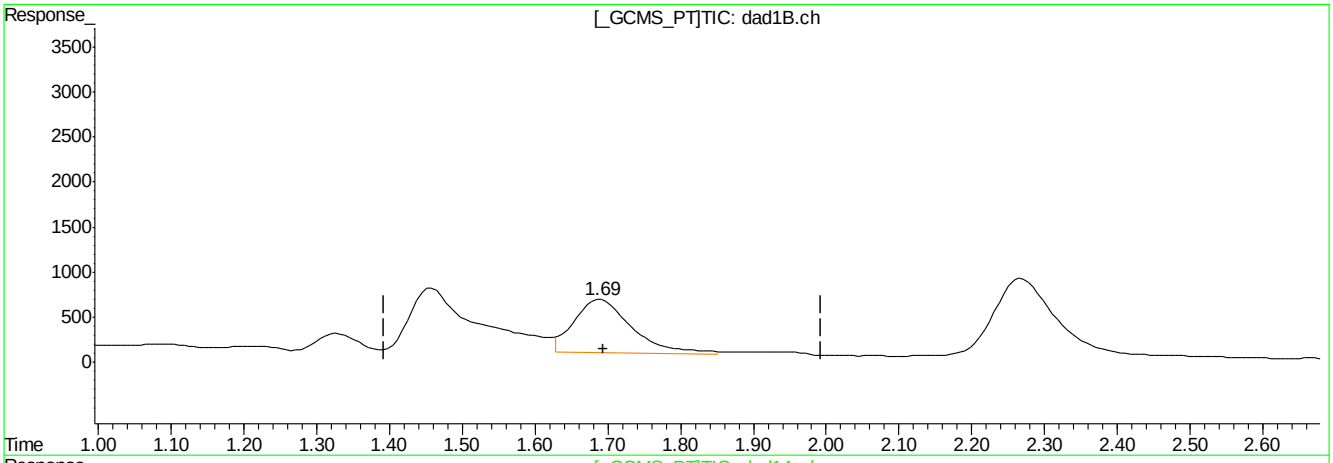
response 93710

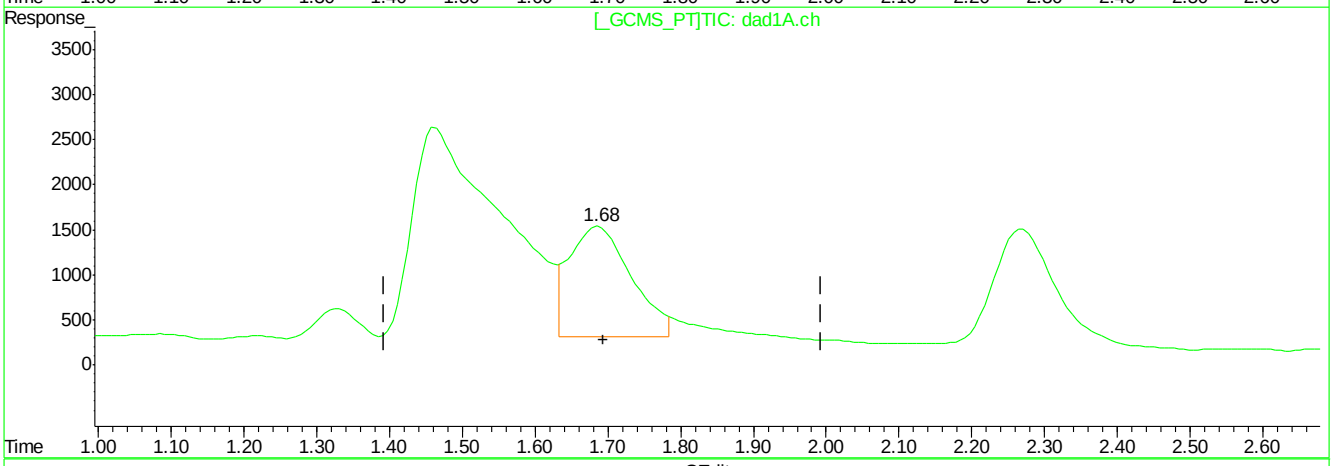
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:42:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.69min 18.032ppb m

response 32757

(3) DNX #2

1.68min 25.563ppb m

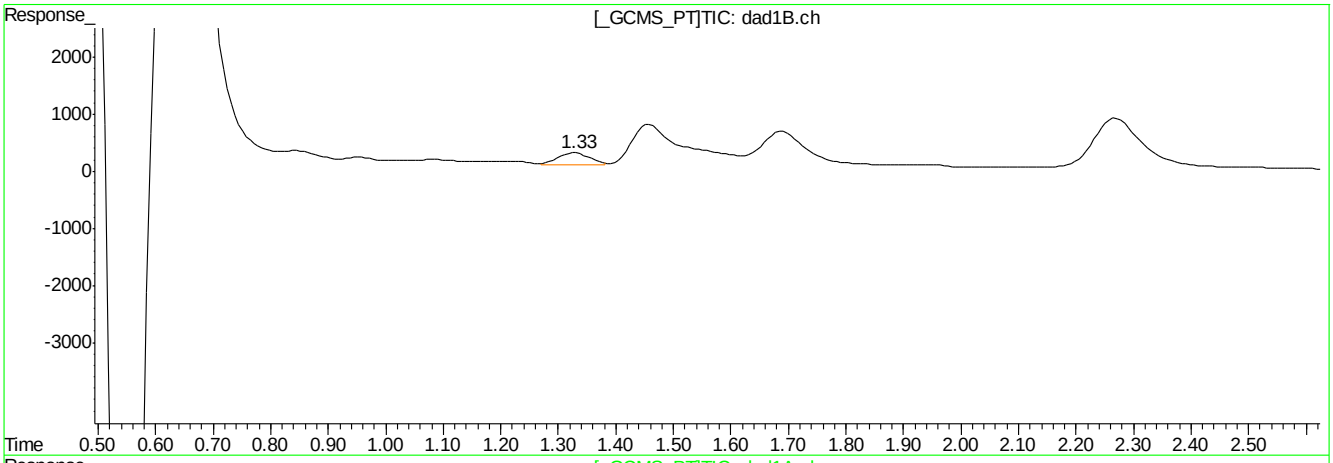
response 71610

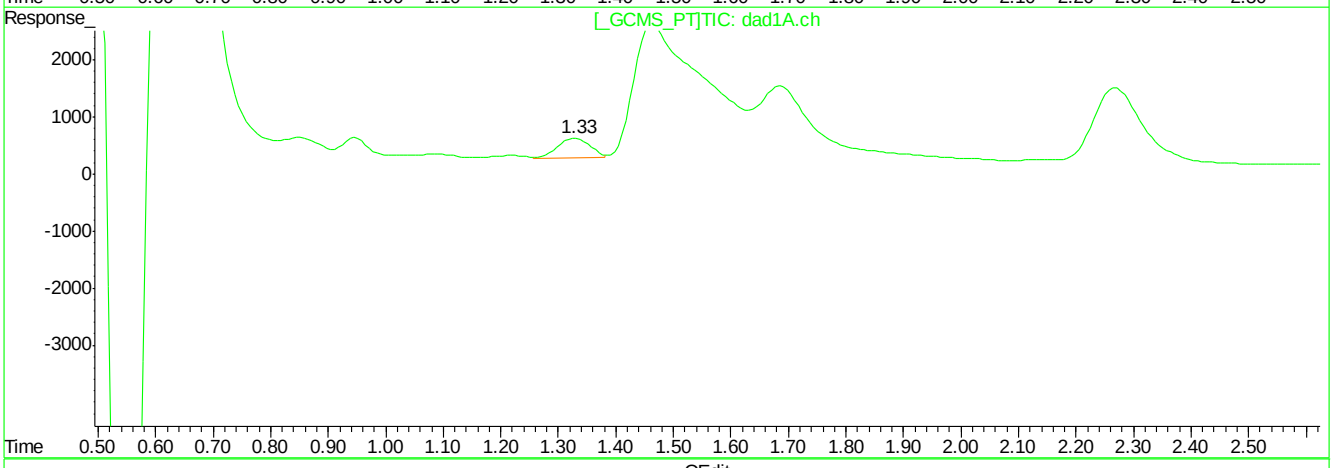
(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:42:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070754.D\dad1A.ch
Acq On : 30-Oct-2021, 13:28:35 Operator: jamesb
Sample : ic2118-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 6.660ppb m

response 8019

(1) TNX #2

1.33min 7.687ppb m

response 14235

(+) = Expected Retention Time
BB070754.D BBB2118_103021.M Mon Nov 01 08:43:16 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 13:51

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 01 08:23:55 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.06	11.07	80309	96457	37.303	25.817
Spiked Amount	500.000	Range	70 - 136	Recovery	=	7.46%#	5.16%#
	Target Compounds						
1)	TNX	1.33	1.33	28008	49491	23.261m	26.725
2)	HMX	1.46	1.46	72102	235250	45.442	55.688
3)	DNX	1.69	1.69	77272	149659	42.537	53.425
4)	MNX	2.27	2.27	149032	225906	63.422	61.703
5)	RDX	2.88	2.88	83436	127297	44.937	43.207m
6)	1,3,5-Trinitrobe	4.66	4.66	170757	261450	42.984	42.128m
7)	1,3-Dinitrobenze	5.84	5.84	229732	168108	44.091	47.008m
8)	3,5-Dinitroanili	6.18	6.17	176847	314569	44.476	45.456m
9)	Nitrobenzene	7.38	7.38	133127	139432	43.620	45.824
10)	Nitroglycerin	0.00	8.88	0	49078	N.D.	39.572 #
11)	Tetryl	9.38	9.37	128825	192235	42.722	39.527
12)	2,4,6-Trinitroto	9.77	9.78	159357	172013	43.945	40.483
13)	2-Amino-4,6-Dini	10.10	10.10	150062	180551	43.451	34.996
14)	4-Amino-2,6-Dini	10.58	10.59	105927	155194	42.444	31.613
16)	2,4-Dinitrotolue	11.71	11.72	199070	108194	43.641	34.278
17)	2,6-Dinitrotolue	12.16	12.17	121287	130984	44.092	38.902
18)	o-Nitrotoluene	15.20	15.23	94215	138619	43.261m	45.884m
19)	p-Nitrotoluene	15.78	15.78	146216	90084	43.574	31.292m
20)	m-Nitrotoluene	16.64	16.75	141415	143325	45.182m	35.830m
21)	PETN	0.00	18.45	0	60287	N.D.	45.440m#

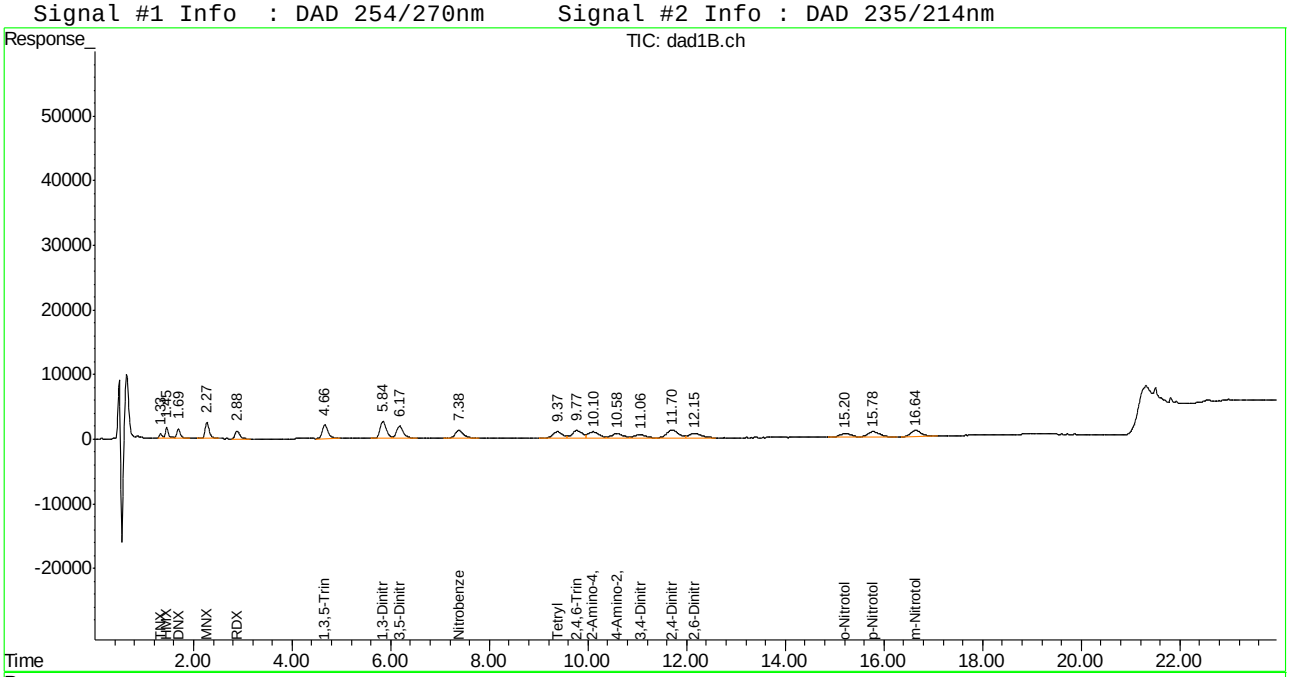
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070755.D BBB2118_103021.M Mon Nov 01 11:46:12 2021 Page 1

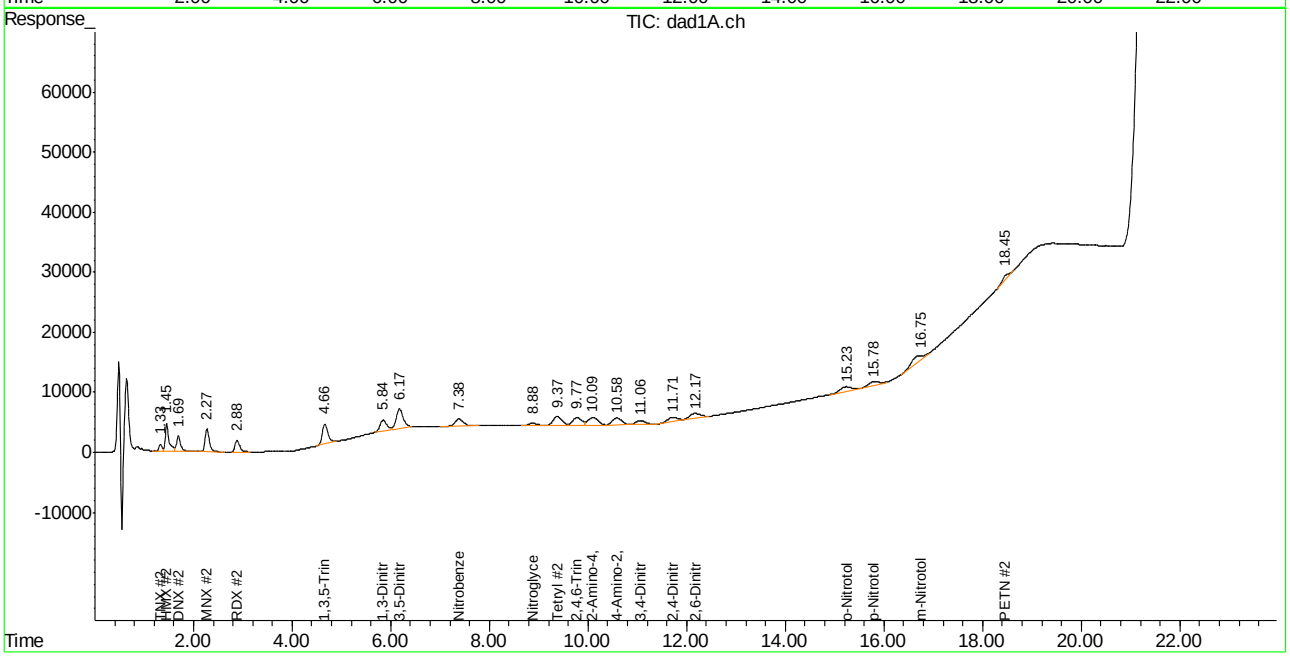
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:38 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

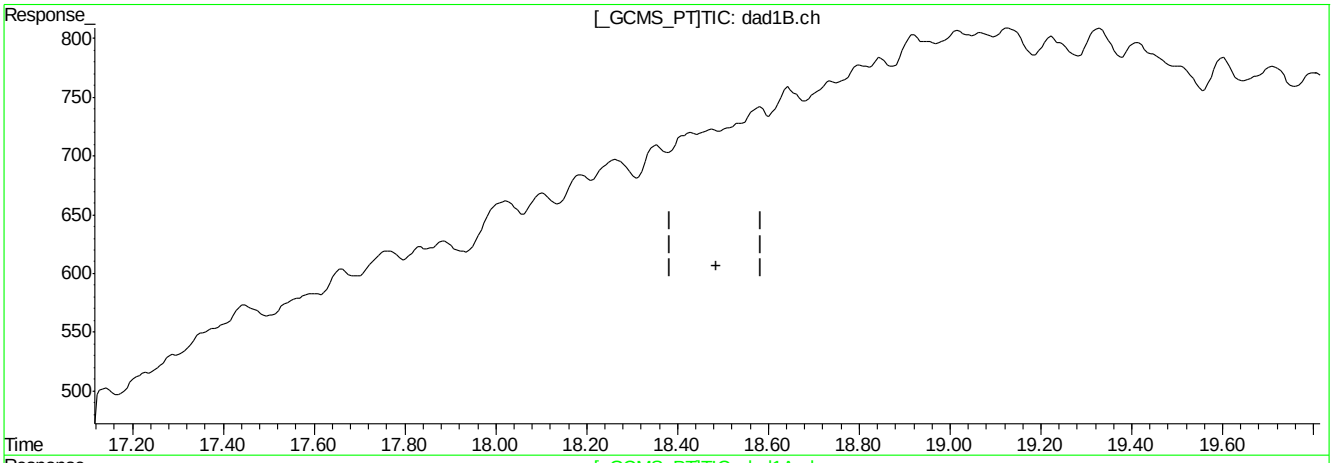
Sample Number: GBB2118-IC2118
Lab FileID: BB070755.D
Injection Time: 10/30/21 13:59
Method: SW846 8330A
Analyst approved: 11/01/21 12:47 James Boone
Supervisor approved: 11/01/21 13:51 Naresh Jiawan

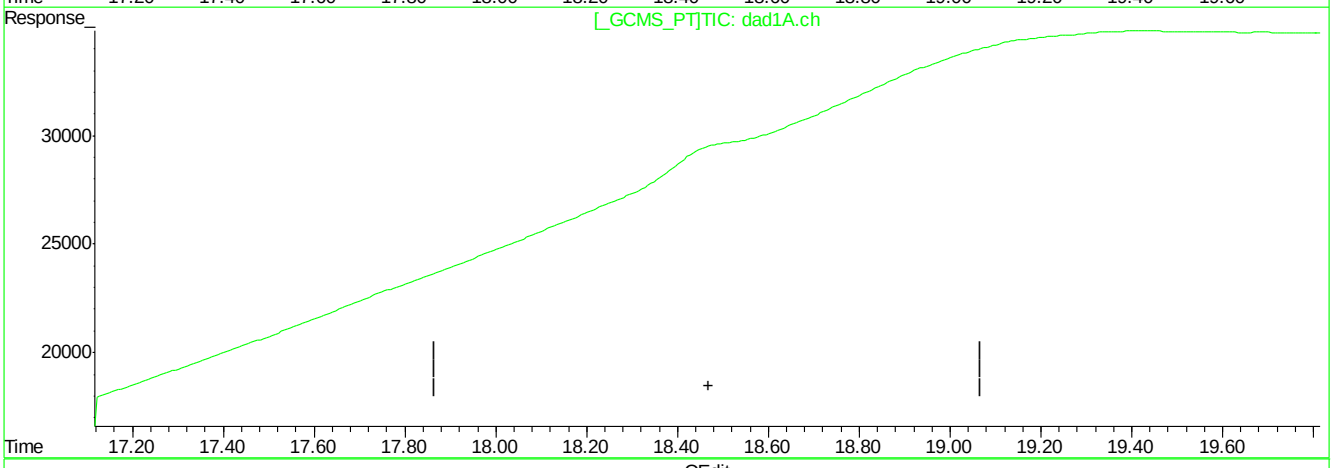
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.33	Poor instrument integration
RDX	121-82-4	2	2.88	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.66	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.84	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.17	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.20	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.23	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.78	Poor instrument integration
m-Nitrotoluene	99-08-1	1	16.64	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.75	Poor instrument integration
PETN	78-11-5	2	18.45	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

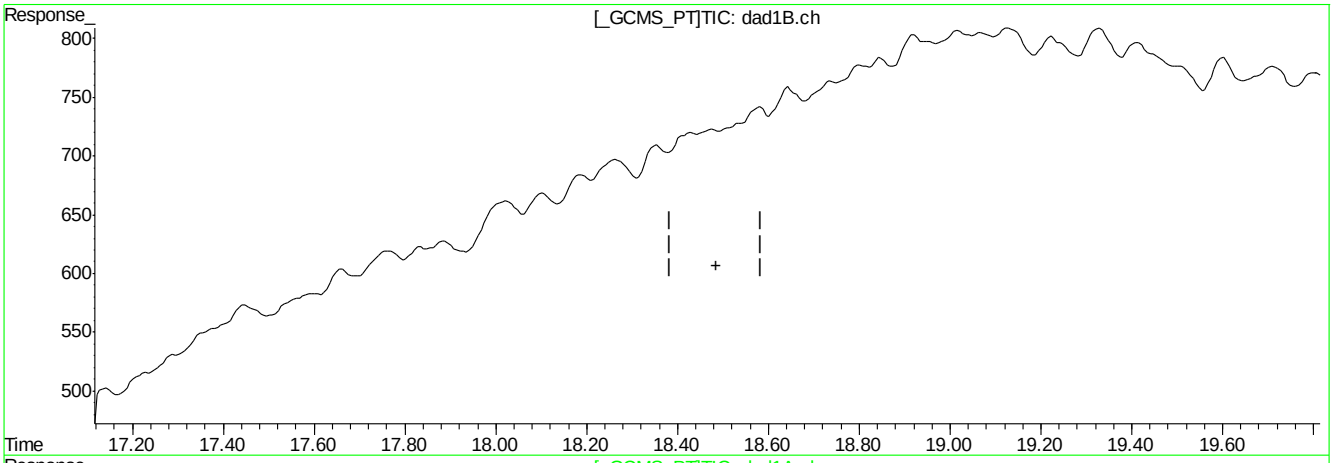
response 0

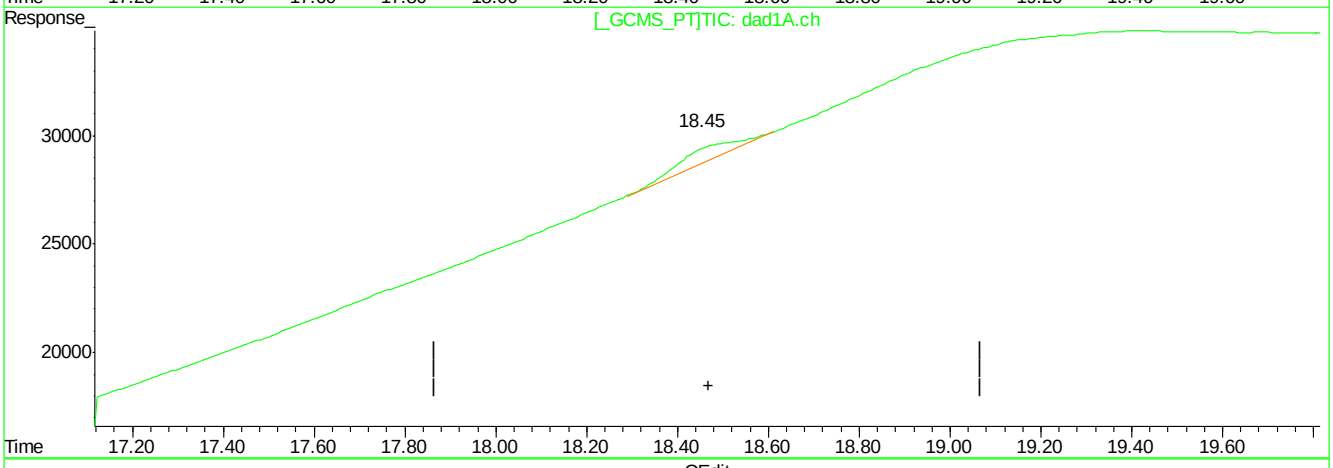
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:35:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.45min 45.440ppb m

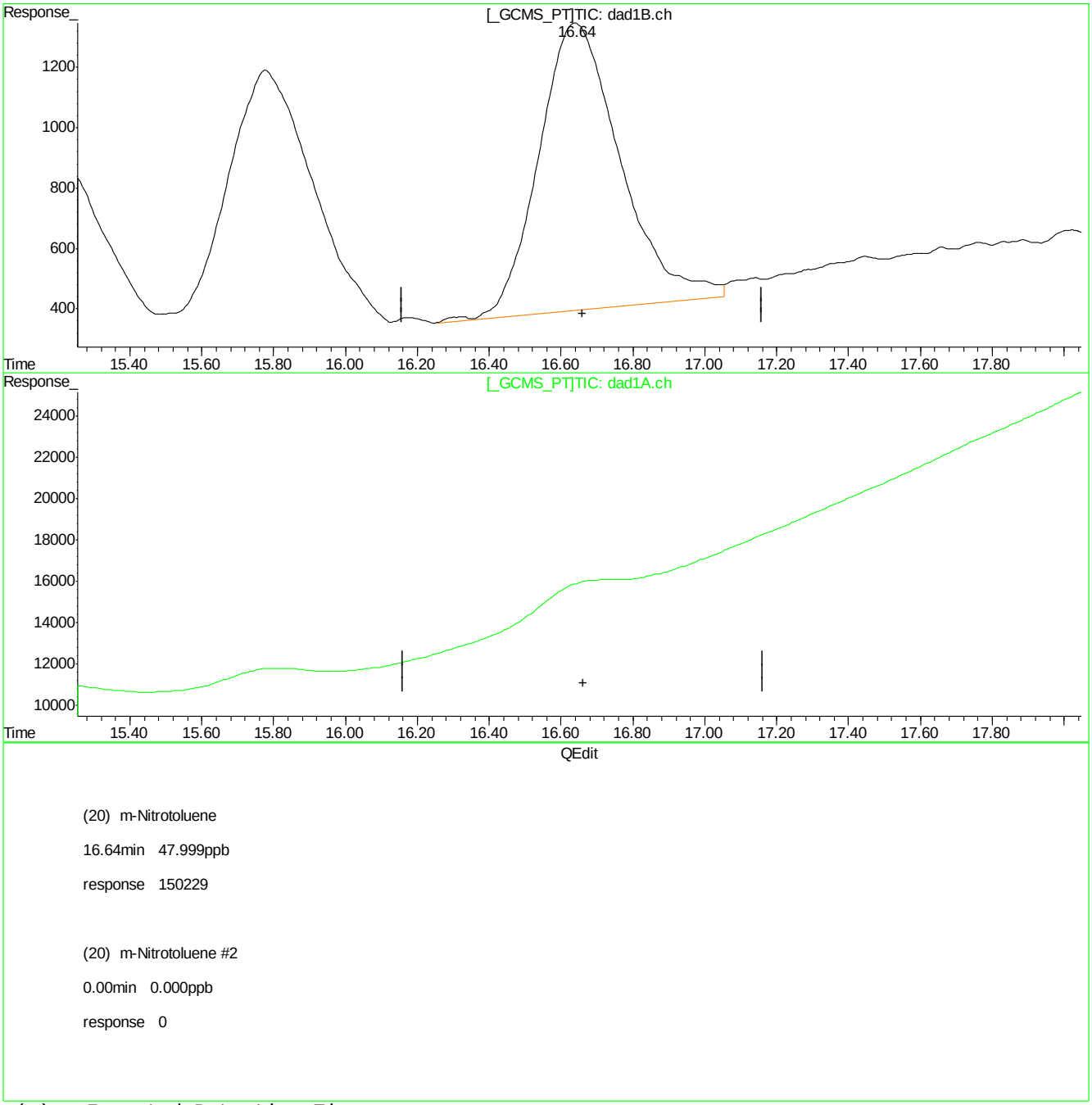
response 60287

(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:35:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration

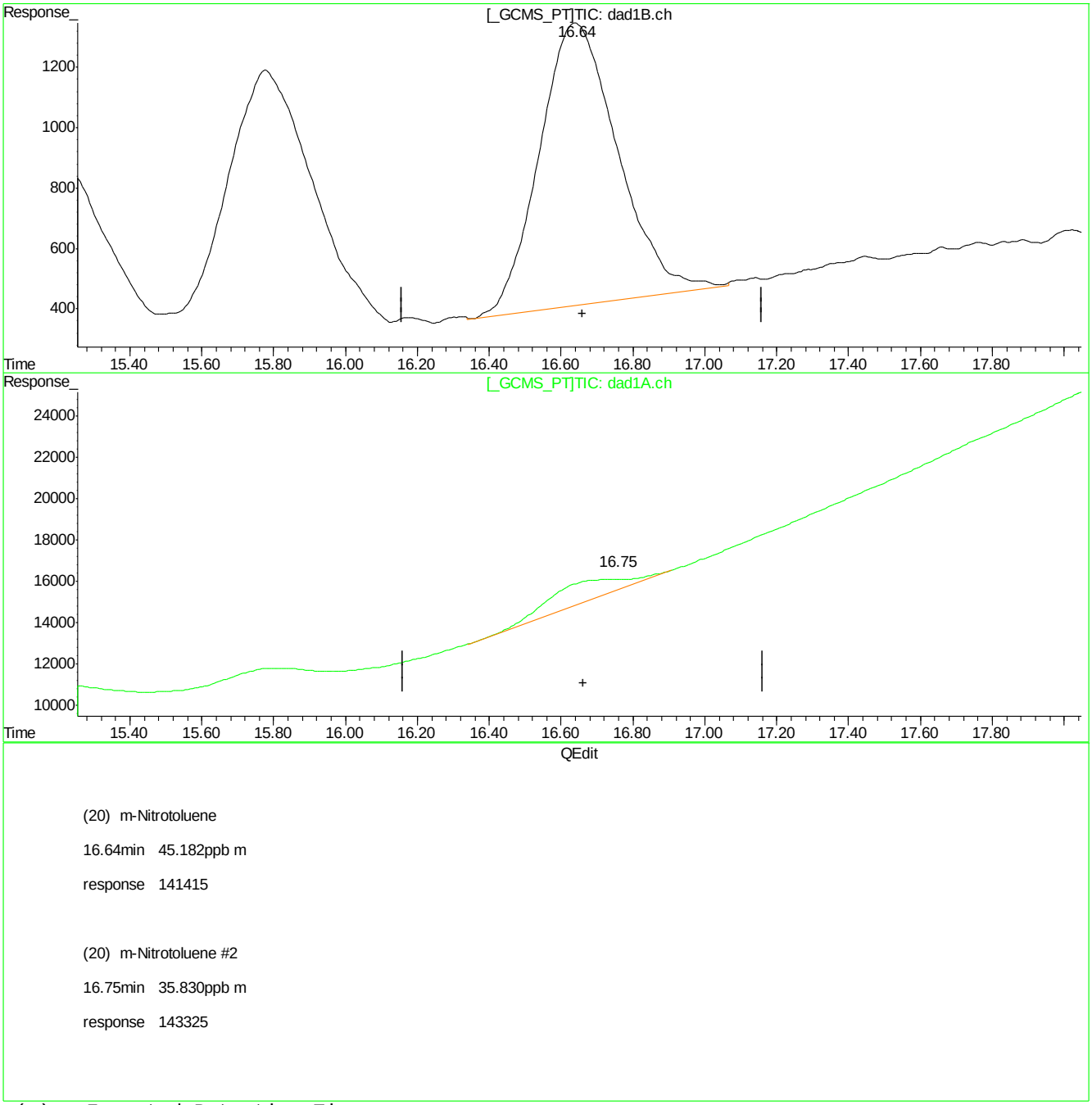


(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:35:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.64min 45.182ppb m

response 141415

(20) m-Nitrotoluene #2

16.75min 35.830ppb m

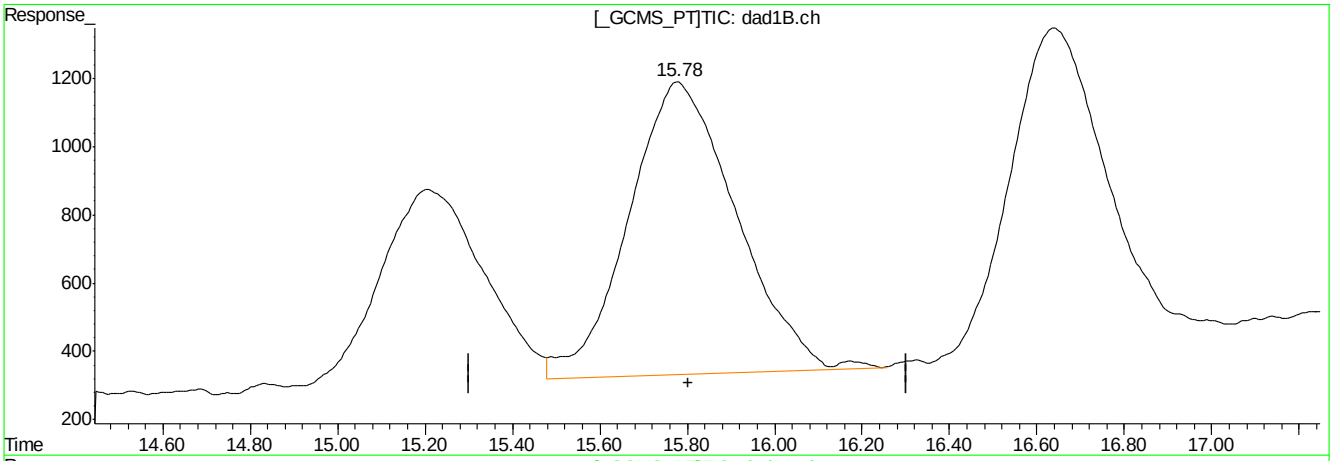
response 143325

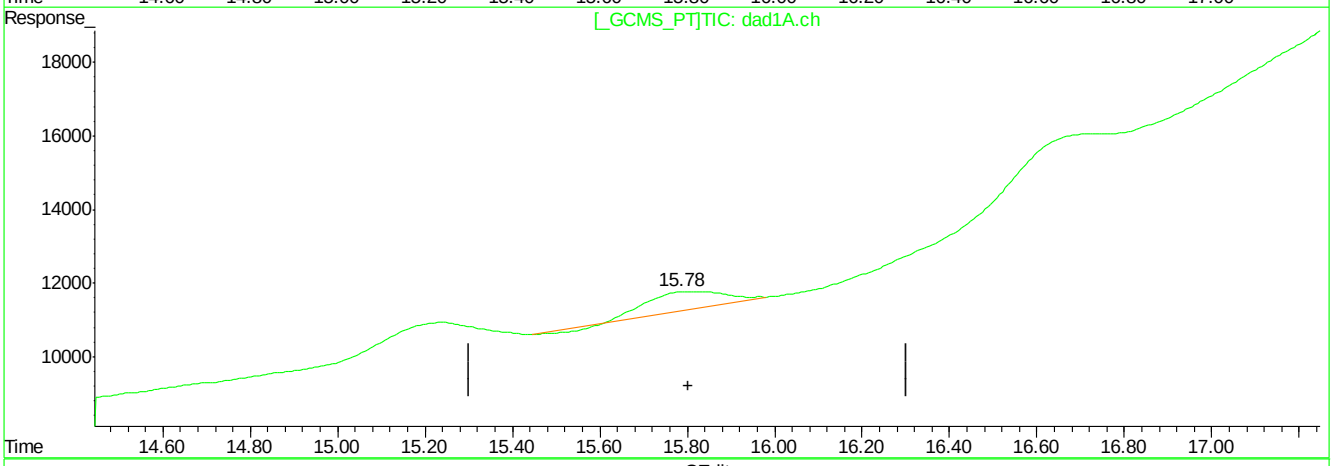
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.78min 43.574ppb

response 146216

(19) p-Nitrotoluene #2

15.81min 18.648ppb

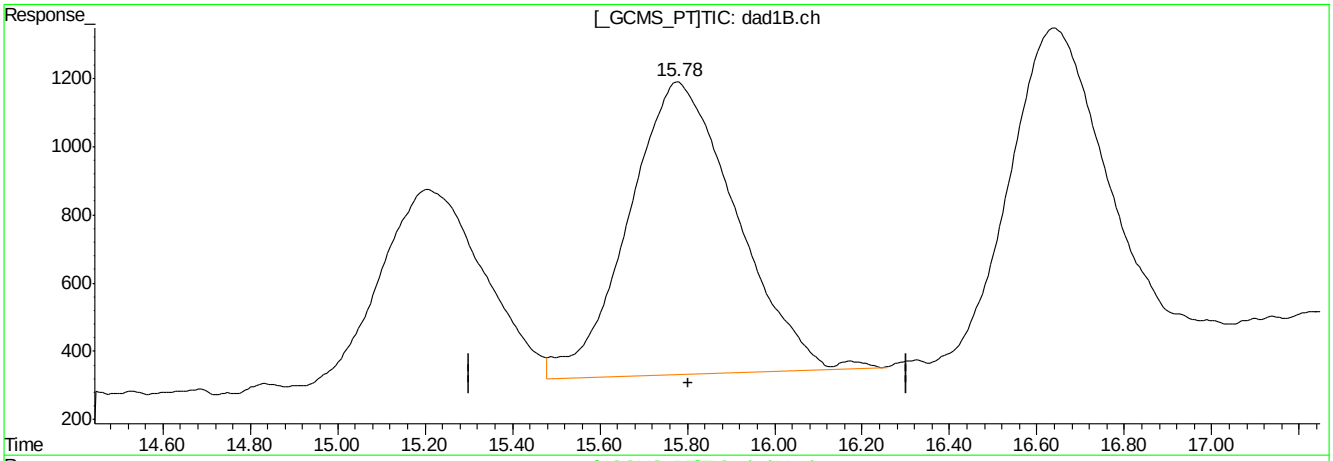
response 53685

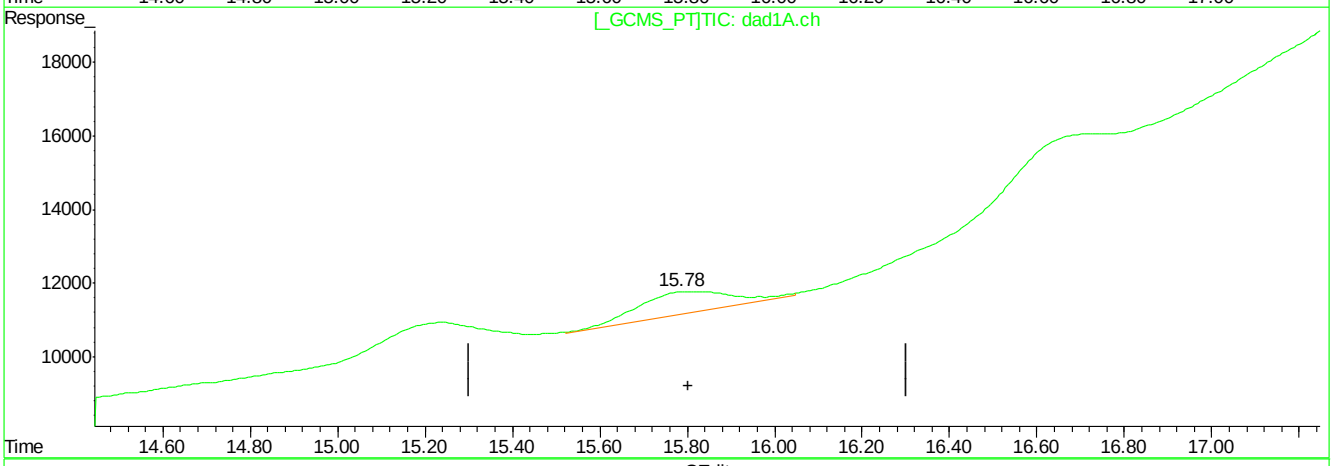
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.78min 43.574ppb

response 146216

(19) p-Nitrotoluene #2

15.78min 31.292ppb m

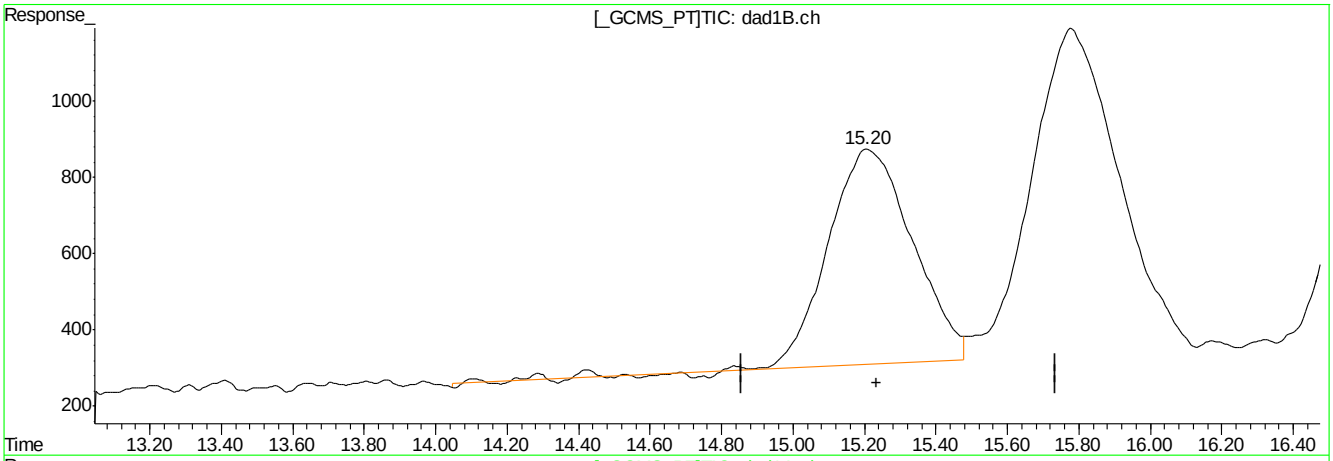
response 90084

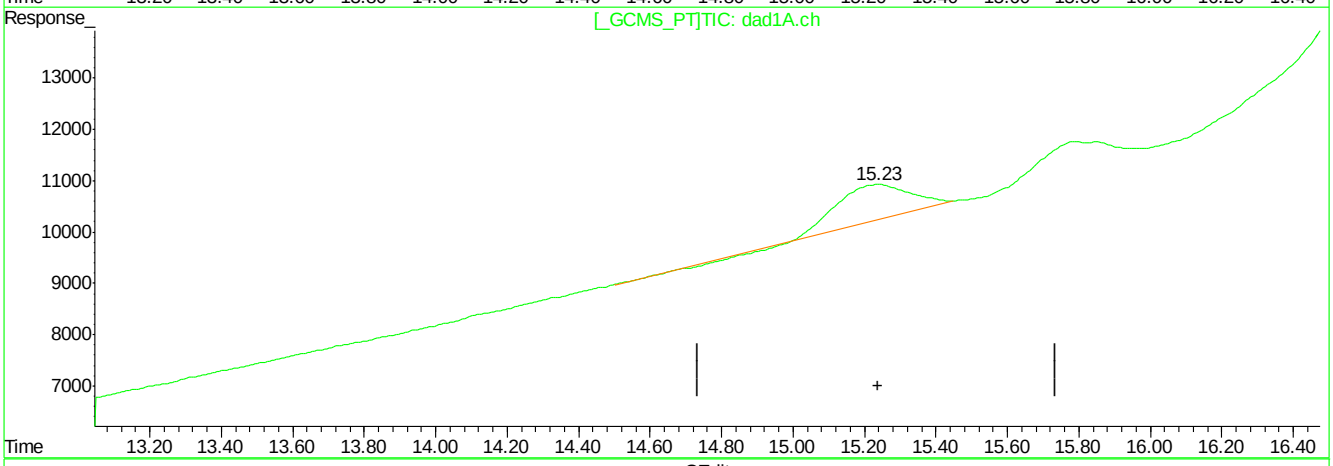
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.21min 42.279ppb

response 92076

(18) o-Nitrotoluene #2

15.24min 29.520ppb

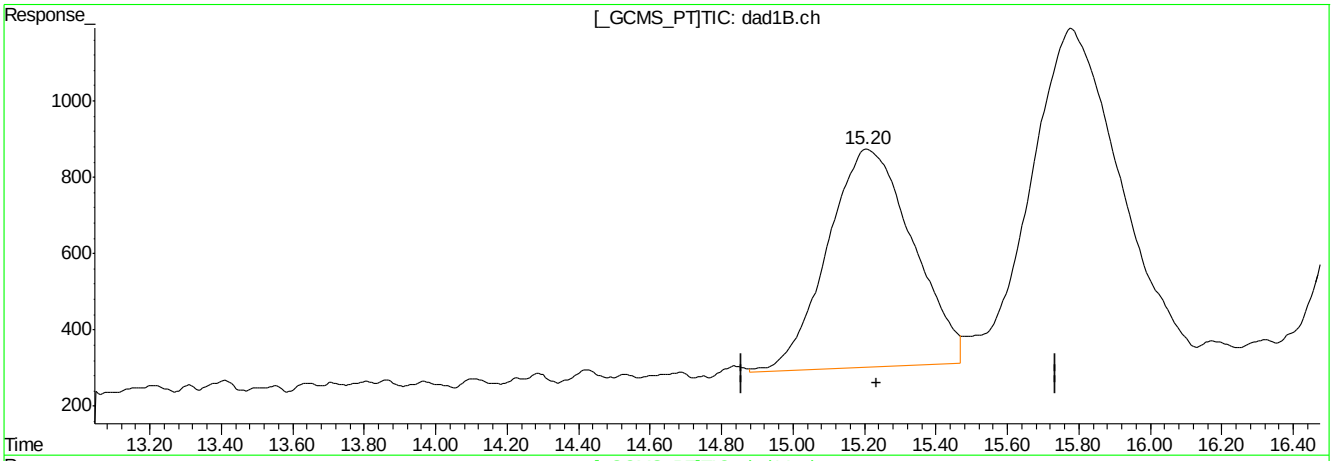
response 89182

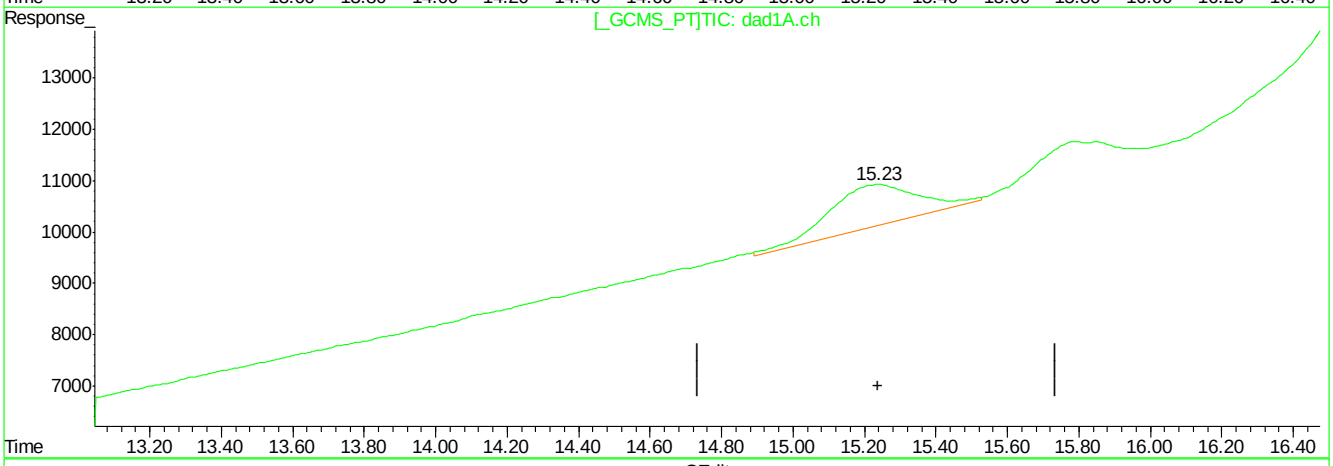
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.20min 43.261ppb m

response 94215

(18) o-Nitrotoluene #2

15.23min 45.884ppb m

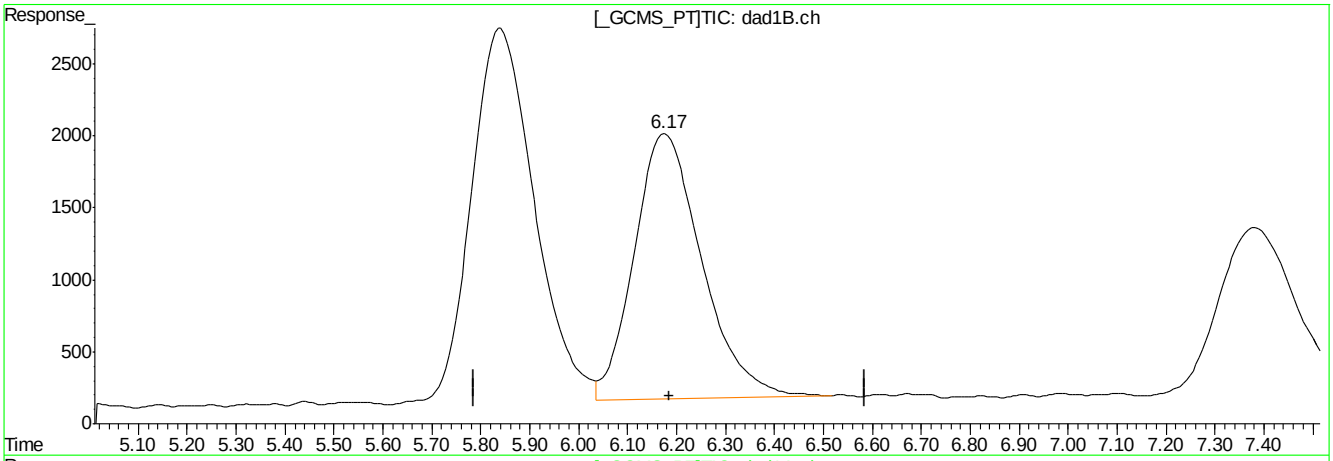
response 138619

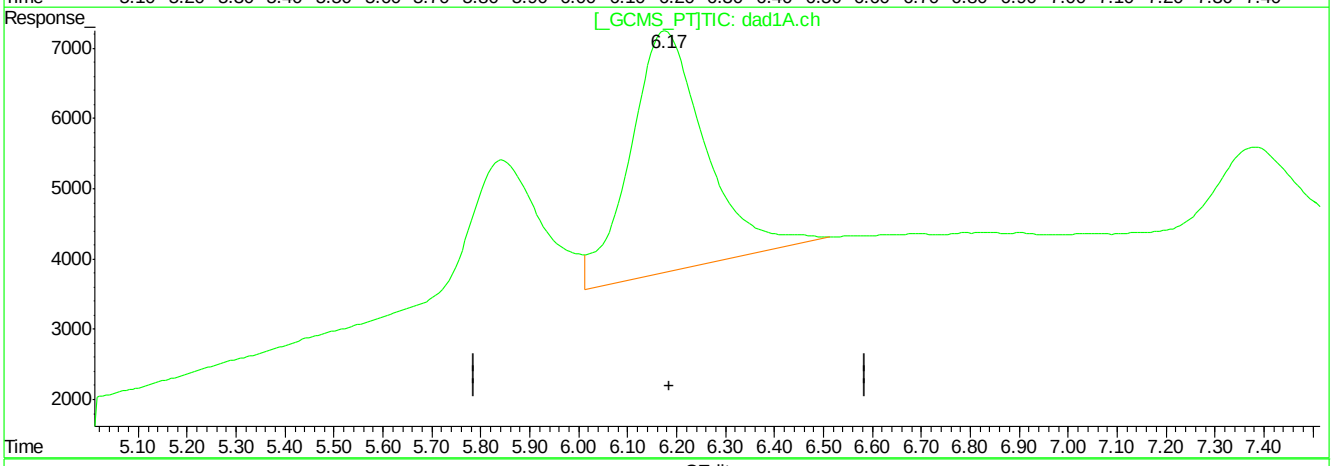
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.18min 44.476ppb

response 176847

(8) 3,5-Dinitroaniline #2

6.18min 53.297ppb

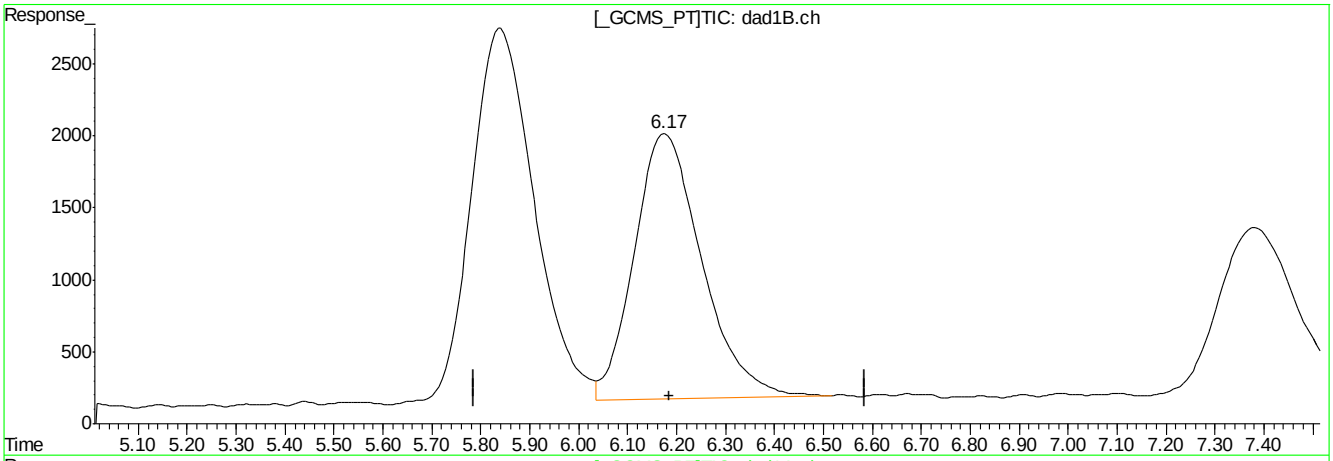
response 368828

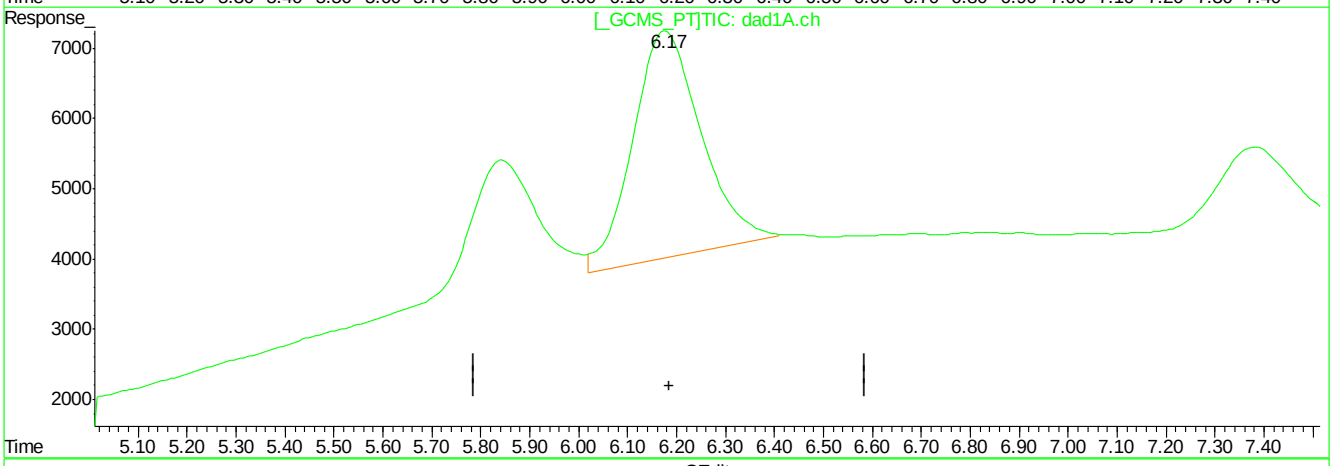
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.18min 44.476ppb

response 176847

(8) 3,5-Dinitroaniline #2

6.17min 45.456ppb m

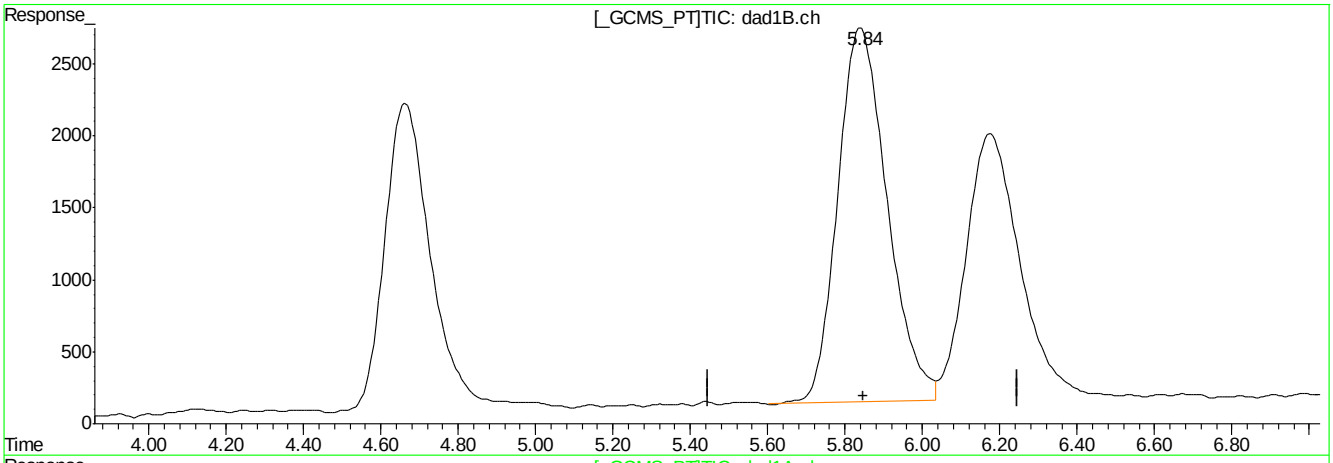
response 314569

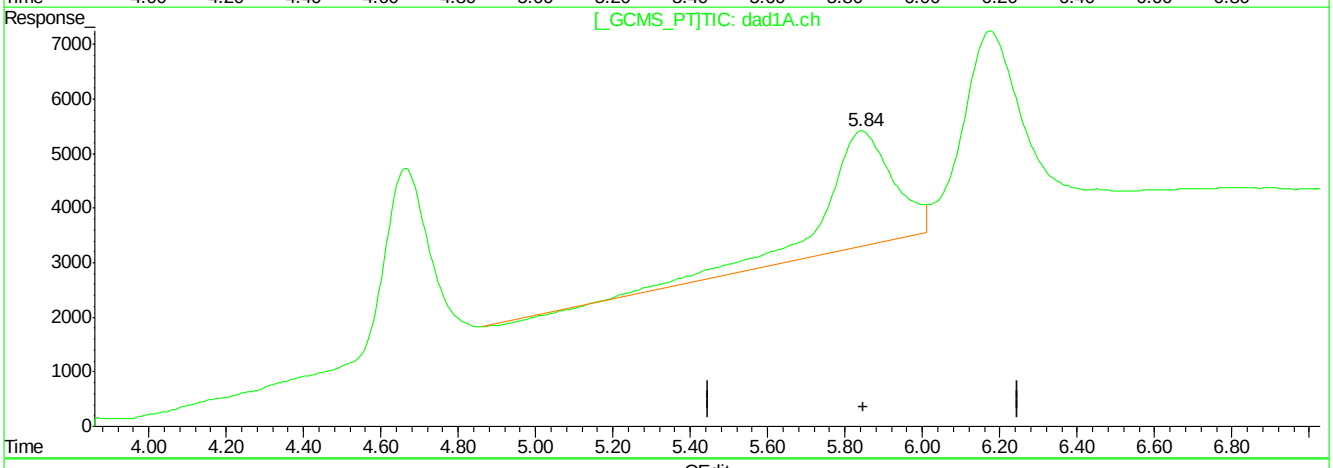
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.84min 44.091ppb

response 229732

(7) 1,3-Dinitrobenzene #2

5.84min 73.262ppb

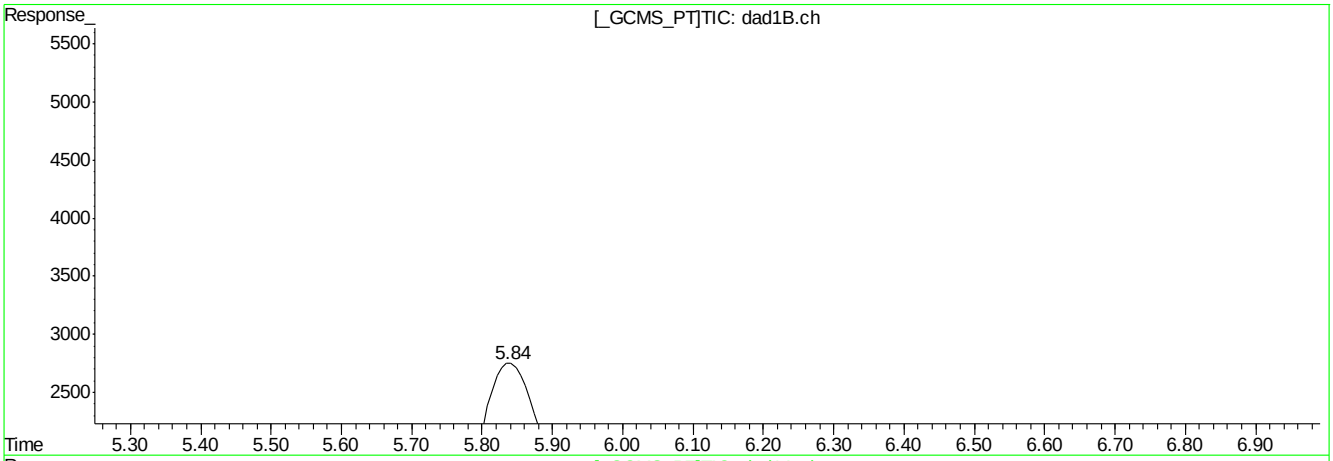
response 261994

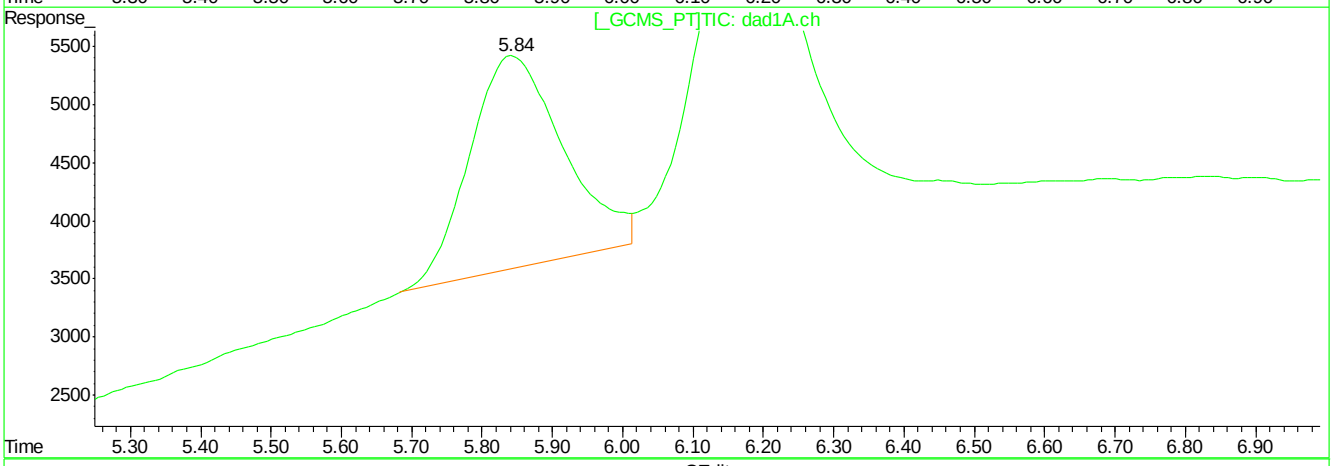
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.84min 44.091ppb

response 229732

(7) 1,3-Dinitrobenzene #2

5.84min 47.008ppb m

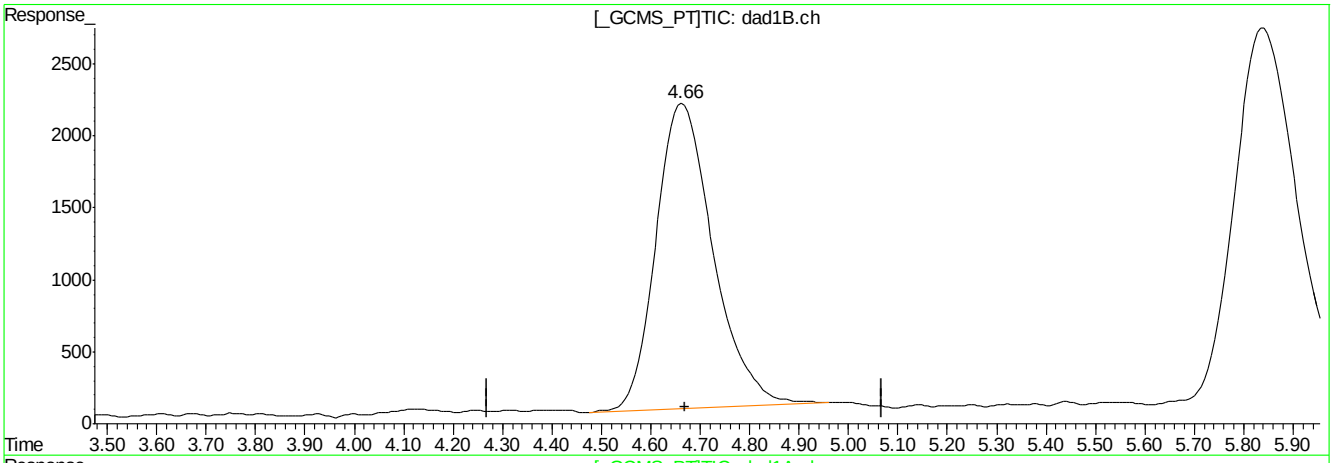
response 168108

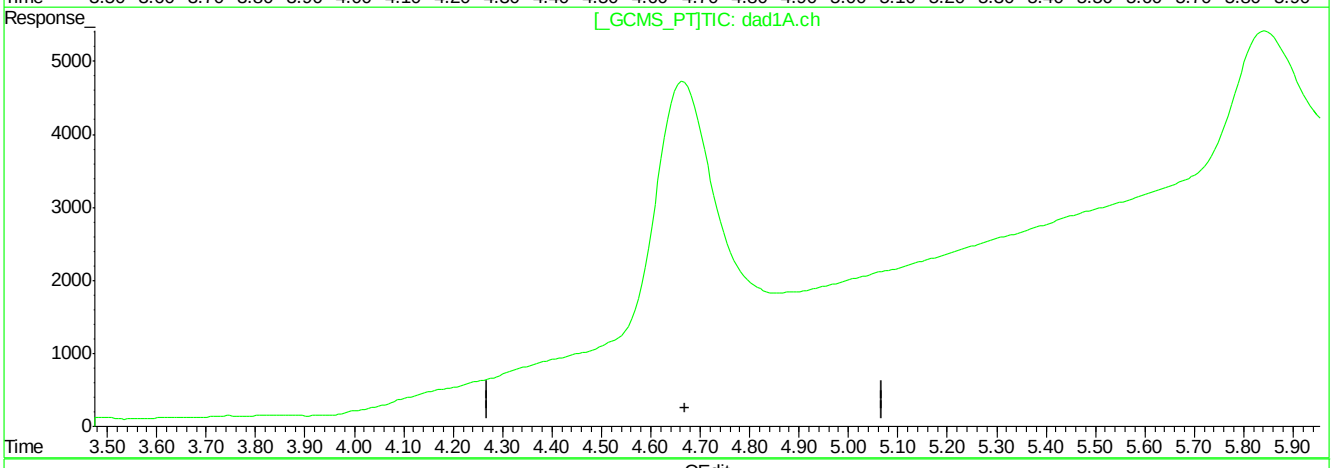
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.66min 42.984ppb

response 170757

(6) 1,3,5-Trinitrobenzene #2

0.00min 0.000ppb

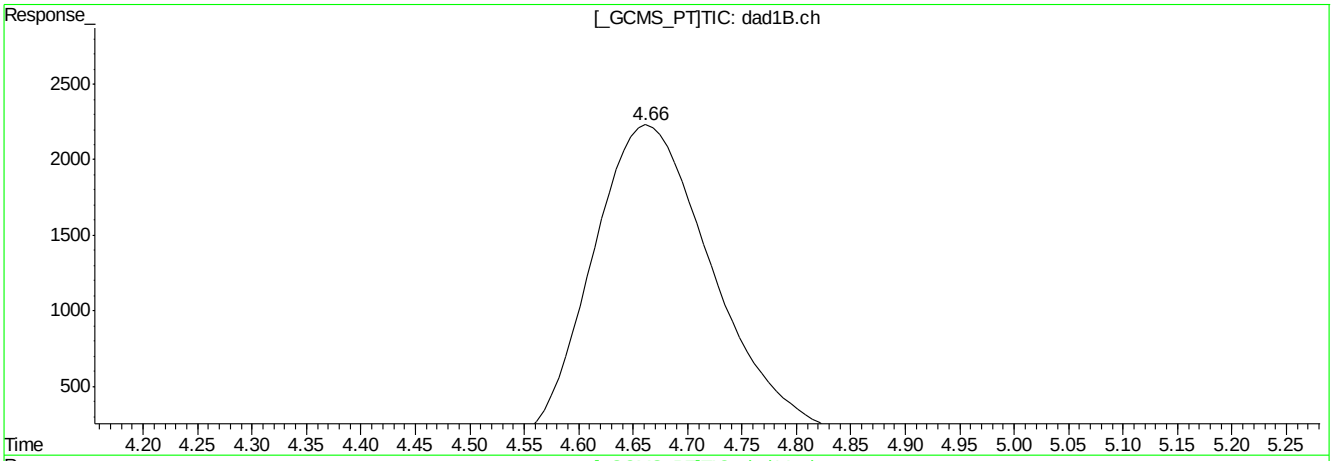
response 0

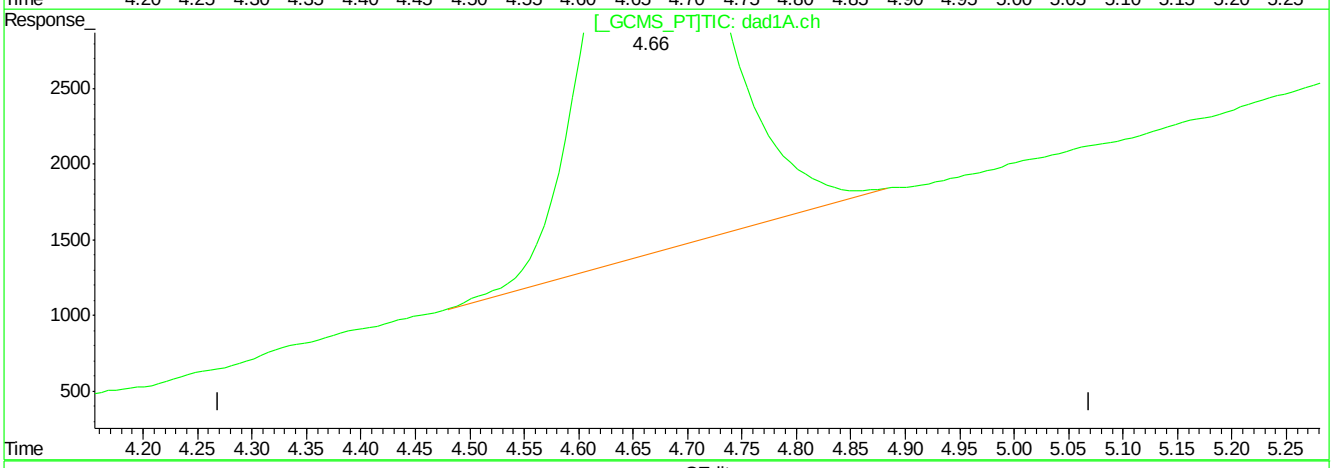
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:36:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.66min 42.984ppb

response 170757

(6) 1,3,5-Trinitrobenzene #2

4.66min 42.128ppb m

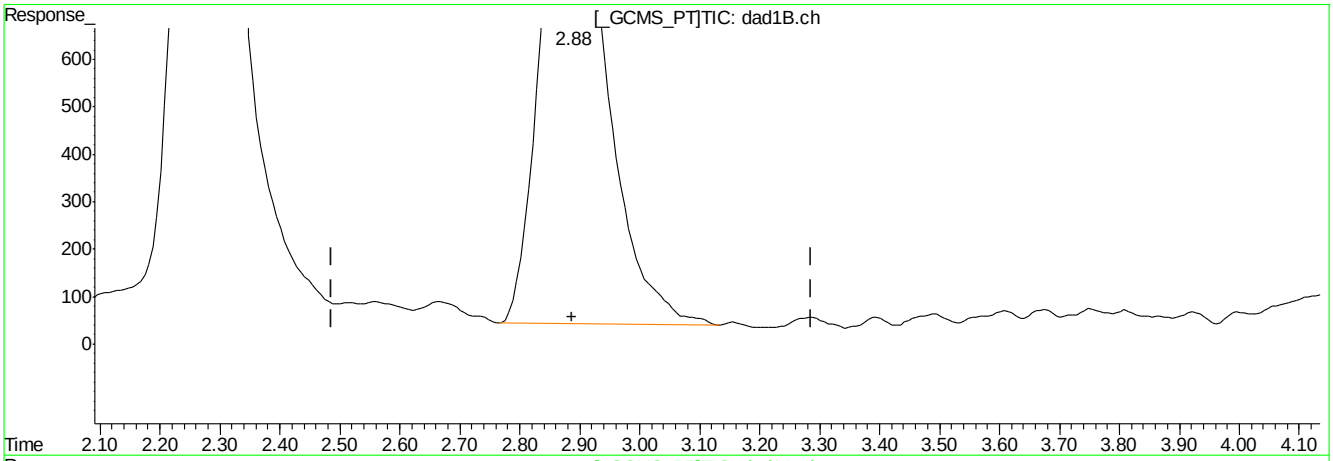
response 261450

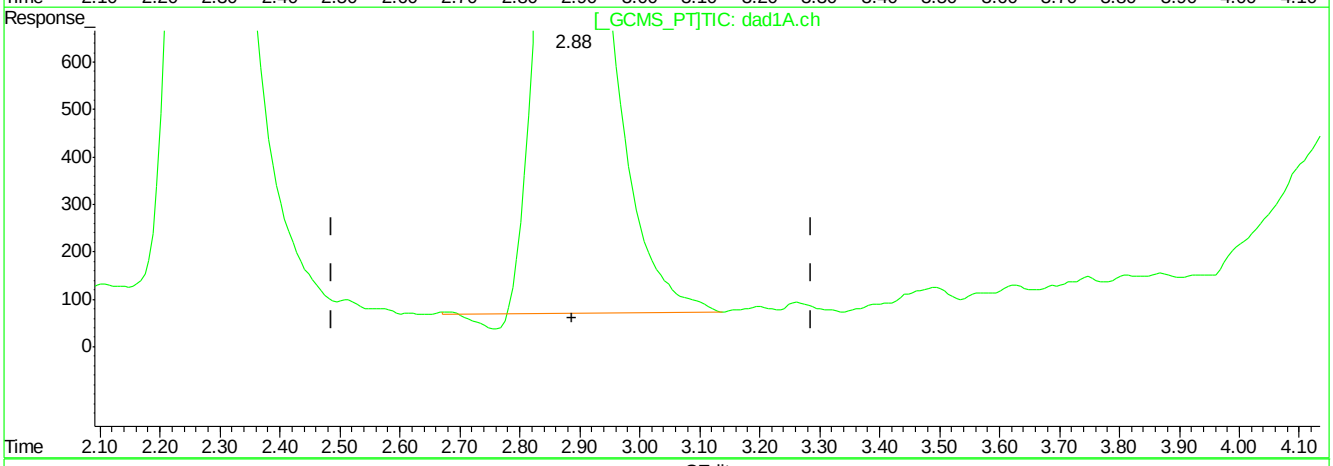
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:37:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.88min 44.937ppb

response 83436

(5) RDX #2

2.88min 42.933ppb

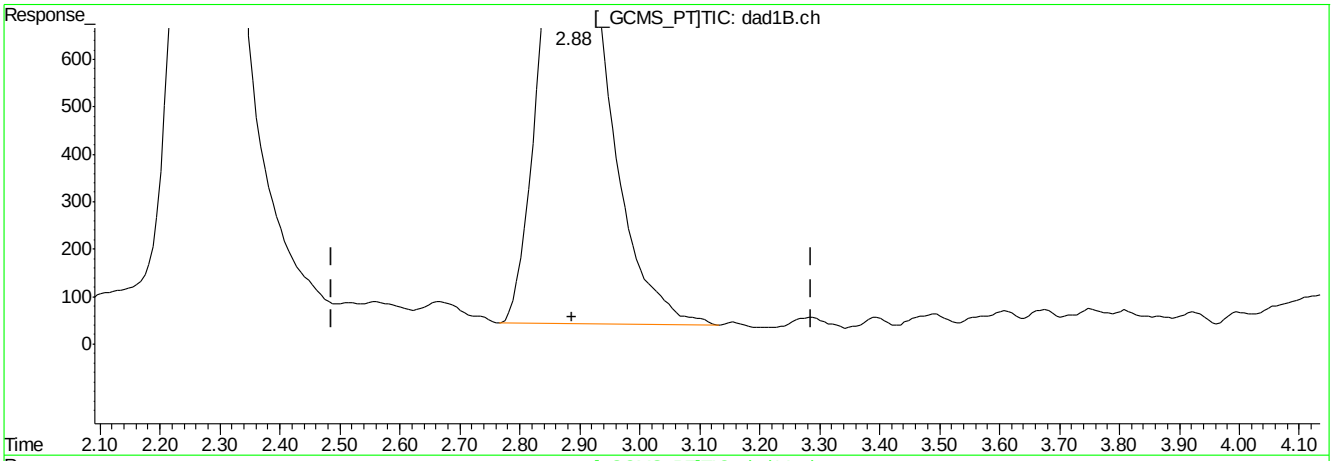
response 126491

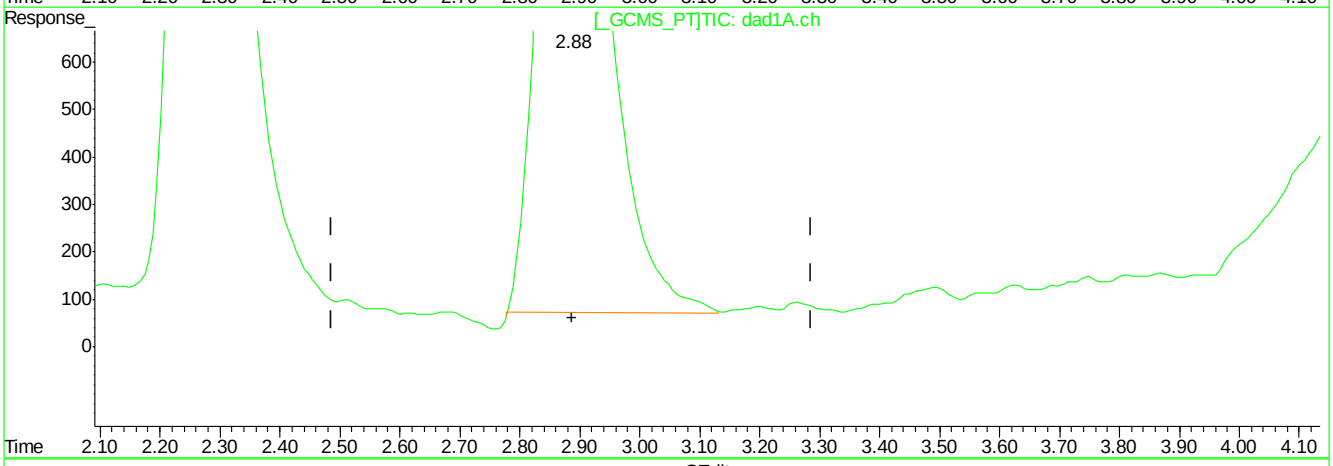
(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:37:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070755.D\dad1A.ch
Acq On : 30-Oct-2021, 13:59:41 Operator: jamesb
Sample : ic2118-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.88min 44.937ppb

response 83436

(5) RDX #2

2.88min 43.207ppb m

response 127297

(+) = Expected Retention Time
BB070755.D BBB2118_103021.M Mon Nov 01 08:37:17 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 13:51

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 01 08:23:56 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.06	11.07	185863	272876	86.332	73.037
Spiked Amount	500.000	Range	70 - 136	Recovery	=	17.27%#	14.61%#
	Target Compounds						
1)	TNX	1.33	1.33	62371	106810	51.801	57.676
2)	HMX	1.46	1.46	165202	539658	104.118	127.748
3)	DNX	1.70	1.69	176340	323289	97.072	115.407
4)	MNX	2.28	2.28	334867	514224	142.507	140.454
5)	RDX	2.89	2.89	183953	293375	99.072	99.576
6)	1,3,5-Trinitrobe	4.67	4.67	386457	598264	97.281	96.401m
7)	1,3-Dinitrobenze	5.85	5.85	511849	366877	98.235	102.590m
8)	3,5-Dinitroanili	6.18	6.18	394656	690920	99.253	99.840m
9)	Nitrobenzene	7.39	7.39	296987	294211	97.309	96.693
10)	Nitroglycerin	0.00	8.89	0	108531	N.D.	87.510 #
11)	Tetryl	9.39	9.38	291772	442285	96.760	90.942
12)	2,4,6-Trinitroto	9.79	9.79	356356	394308	98.270	92.801
13)	2-Amino-4,6-Dini	10.11	10.11	331375	452067	95.951	87.624
14)	4-Amino-2,6-Dini	10.60	10.60	238980	411065	95.757	83.733
16)	2,4-Dinitrotolue	11.72	11.73	442262	263816	96.956	83.581
17)	2,6-Dinitrotolue	12.17	12.18	269416	315332	97.943	93.653
18)	o-Nitrotoluene	15.22	15.23	211934	267953	97.315m	88.695m
19)	p-Nitrotoluene	15.79	15.80	320223	225529	95.431	78.342m
20)	m-Nitrotoluene	16.65	16.67	309916	362738	99.019m	90.683m
21)	PETN	0.00	18.48	0	134613	N.D.	101.461m#

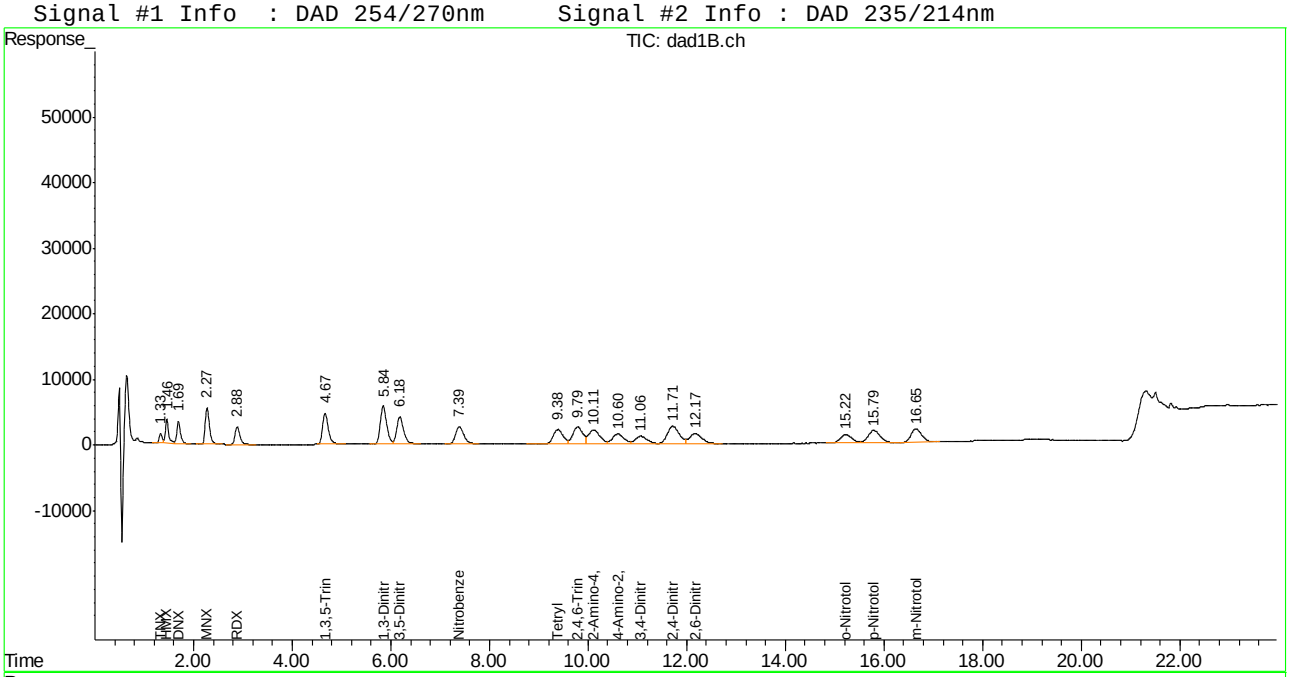
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070756.D BBB2118_103021.M Mon Nov 01 11:46:13 2021 Page 1

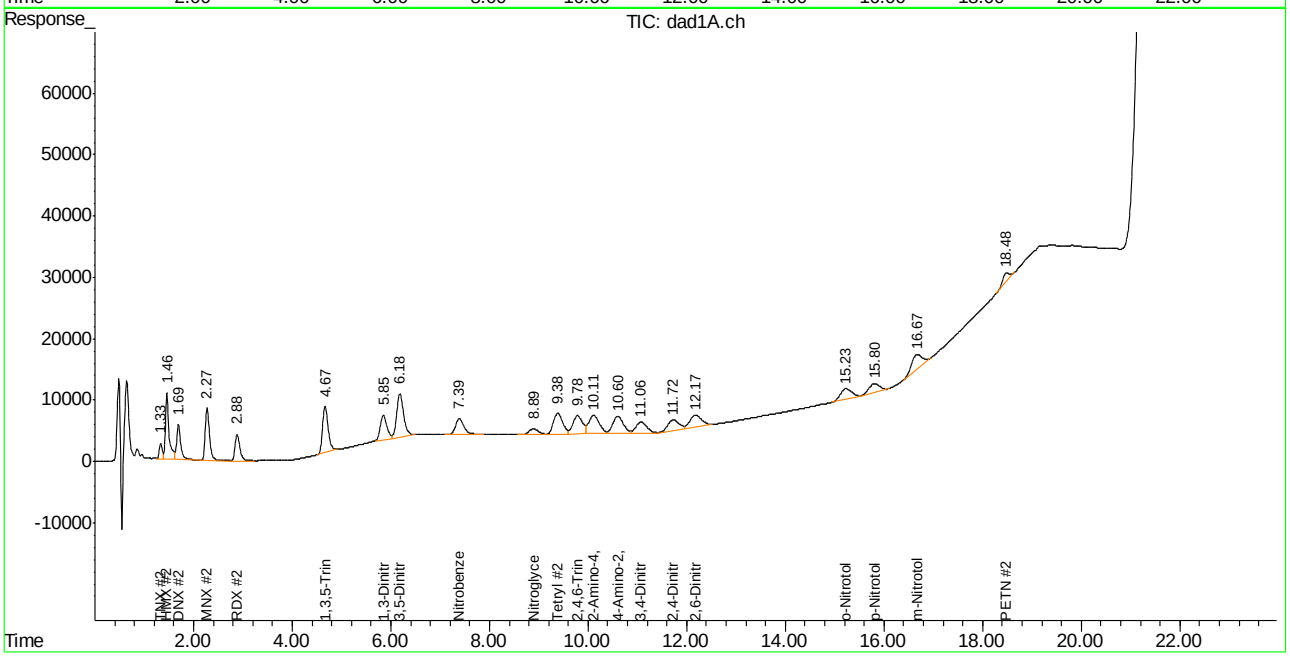
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:35 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

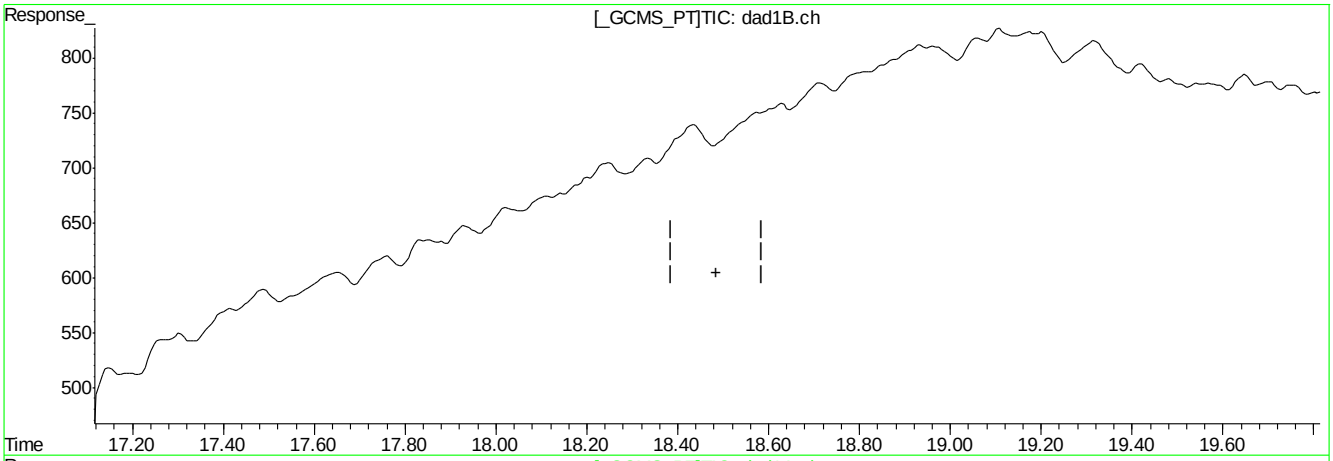
Sample Number: GBB2118-IC2118
Lab FileID: BB070756.D
Injection Time: 10/30/21 14:30
Method: SW846 8330A
Analyst approved: 11/01/21 12:47 James Boone
Supervisor approved: 11/01/21 13:51 Naresh Jiawan

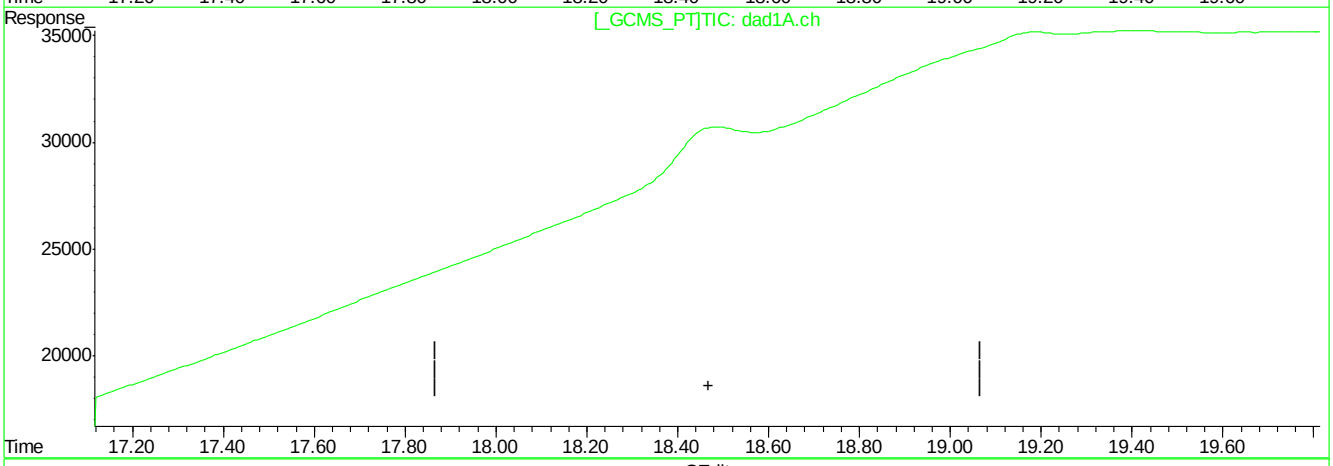
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.67	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.18	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.22	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.23	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.80	Poor instrument integration
m-Nitrotoluene	99-08-1	1	16.65	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.67	Poor instrument integration
PETN	78-11-5	2	18.48	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

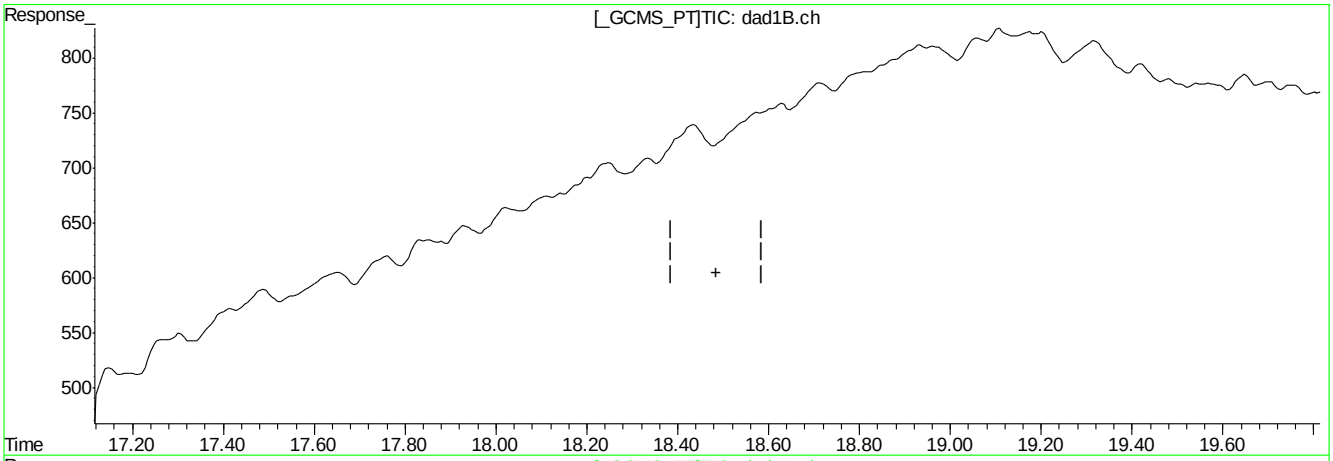
response 0

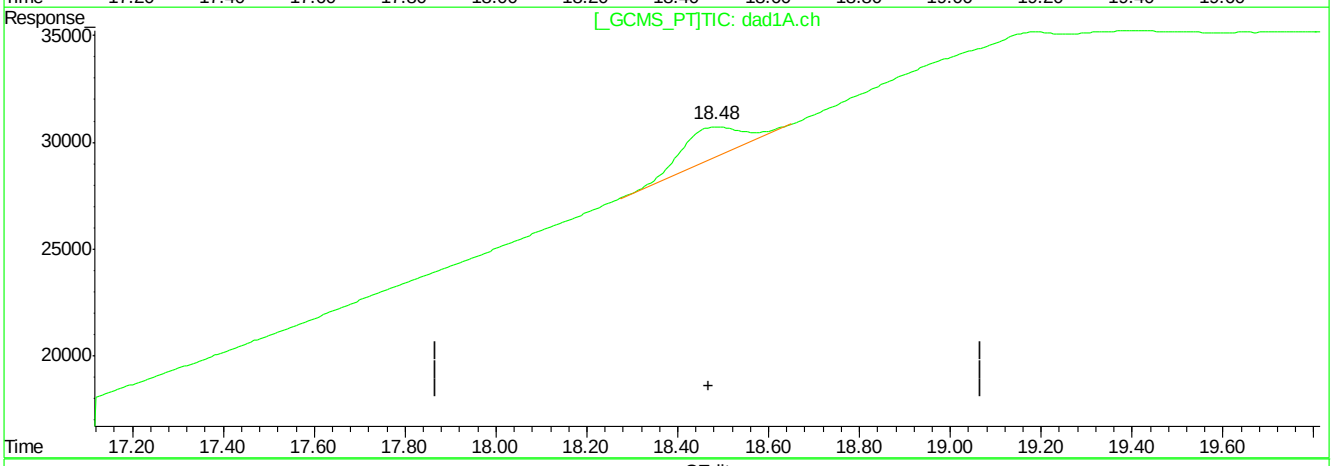
(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:33:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.48min 101.461ppb m

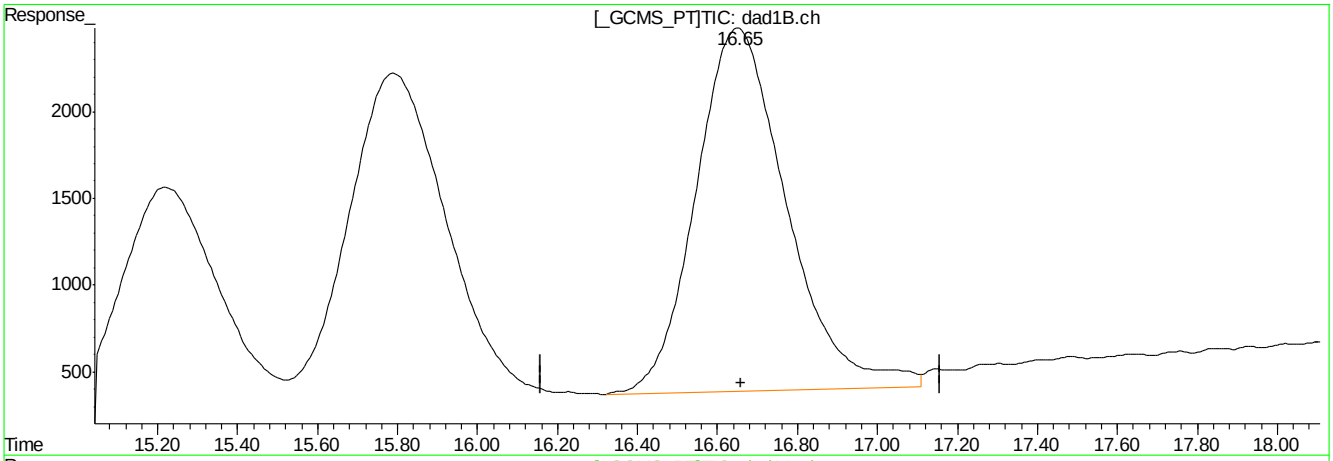
response 134613

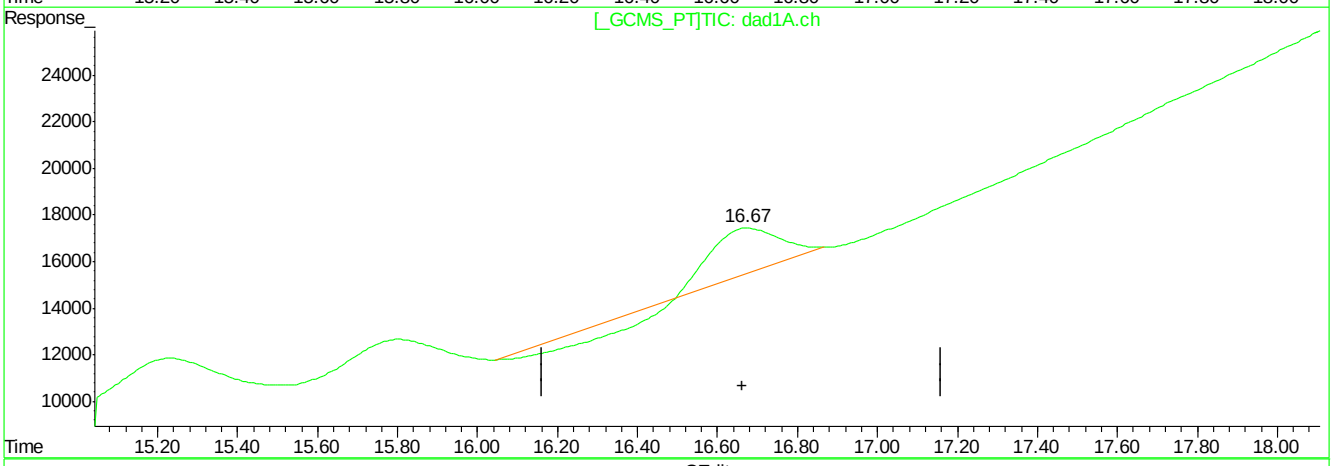
(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:33:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.65min 105.397ppb

response 329878

(20) m-Nitrotoluene #2

16.68min 30.166ppb

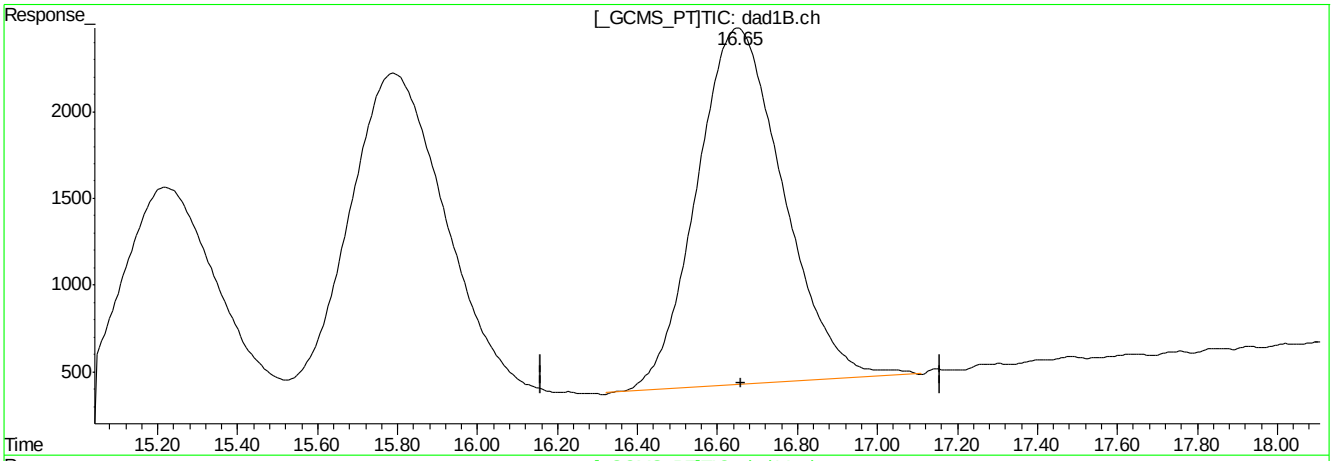
response 120668

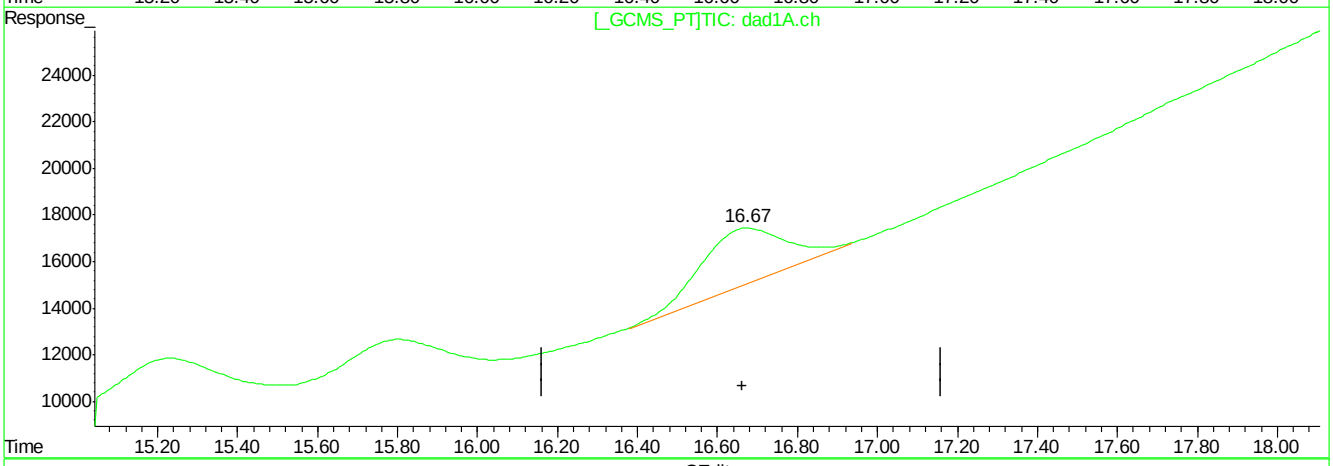
(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:33:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.65min 99.019ppb m

response 309916

(20) m-Nitrotoluene #2

16.67min 90.683ppb m

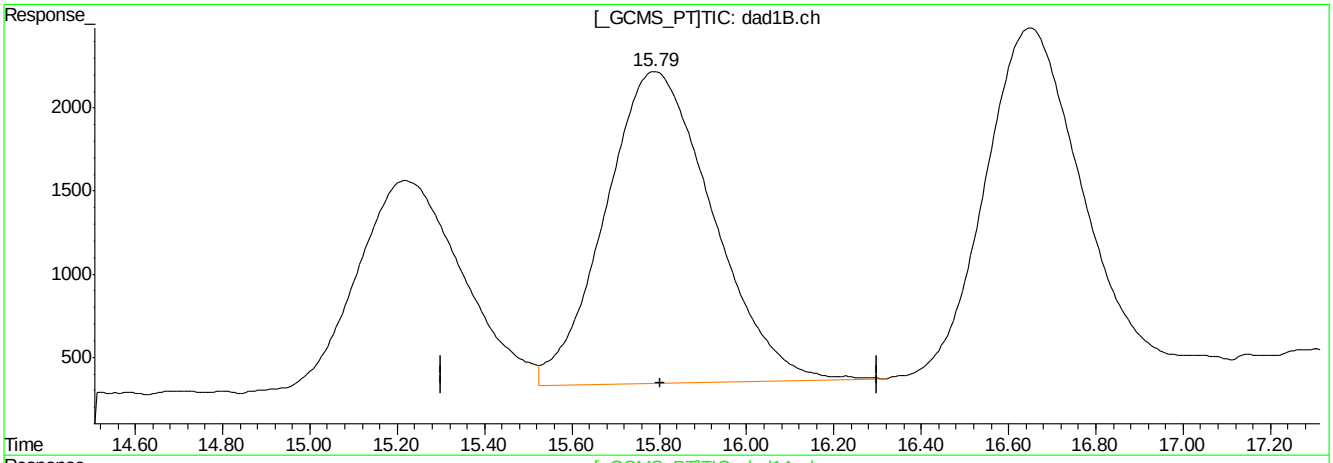
response 362738

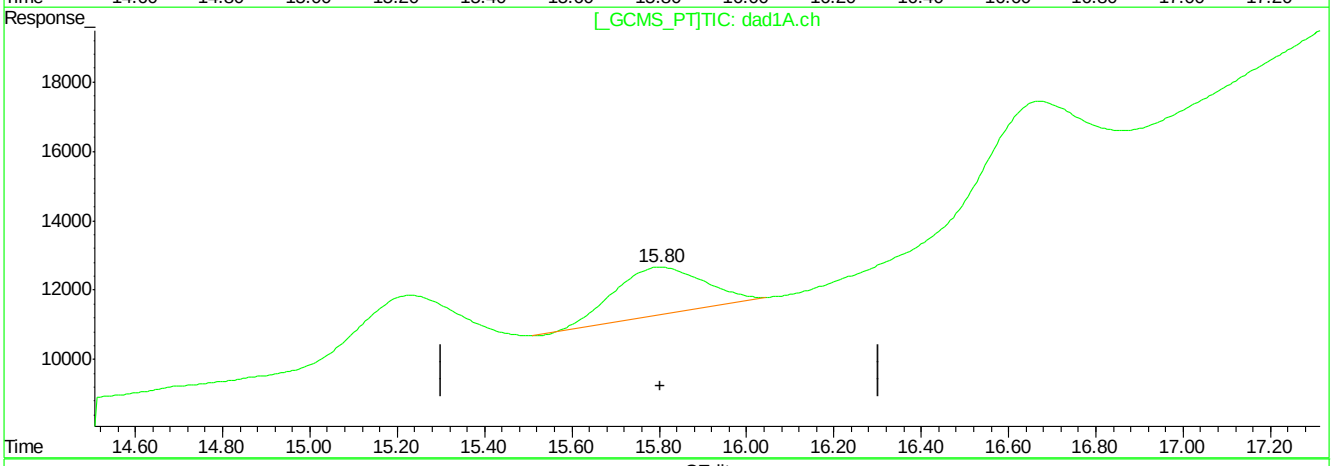
(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.79min 95.431ppb

response 320223

(19) p-Nitrotoluene #2

15.81min 67.690ppb

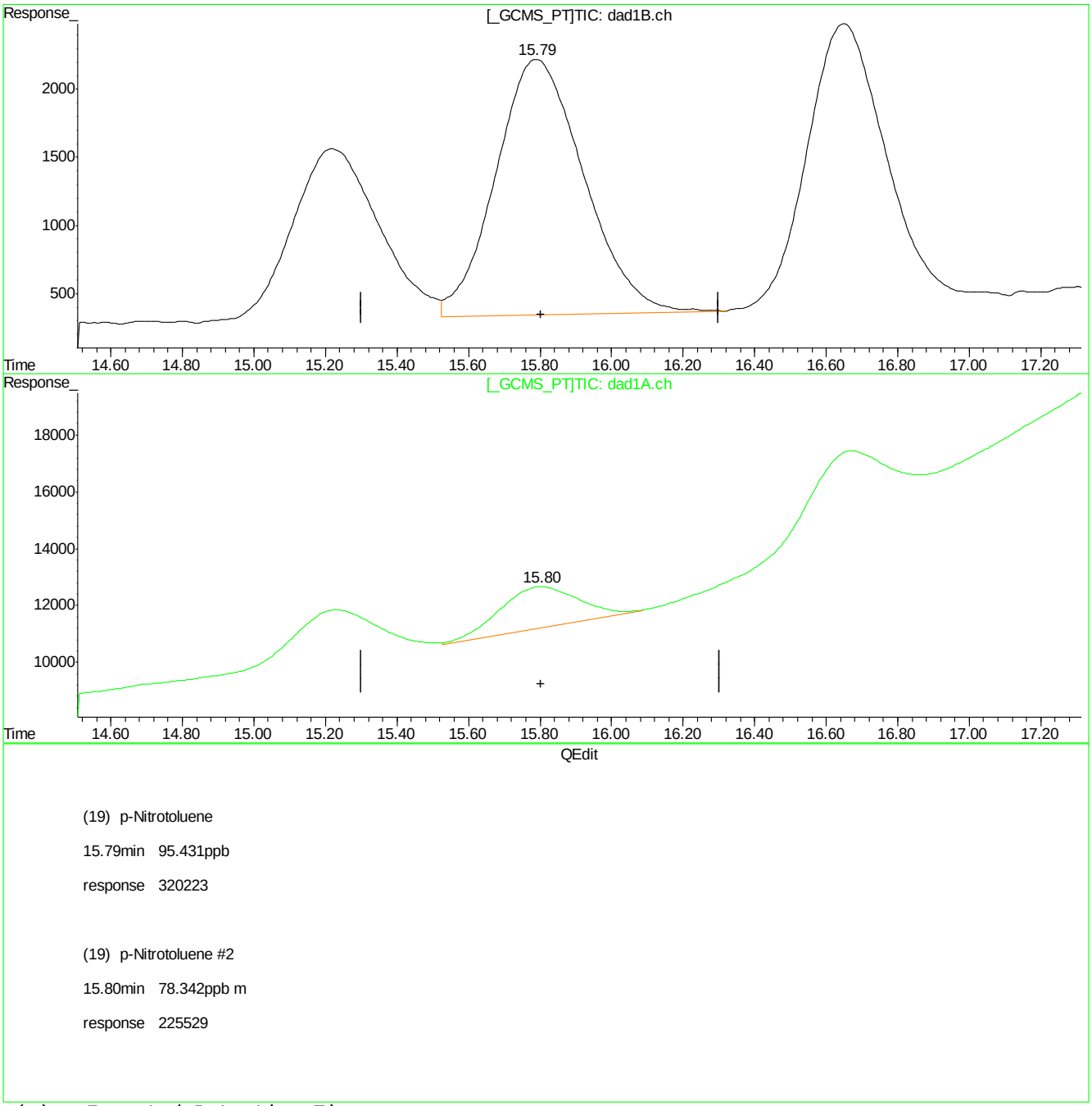
response 194866

(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.79min 95.431ppb

response 320223

(19) p-Nitrotoluene #2

15.80min 78.342ppb m

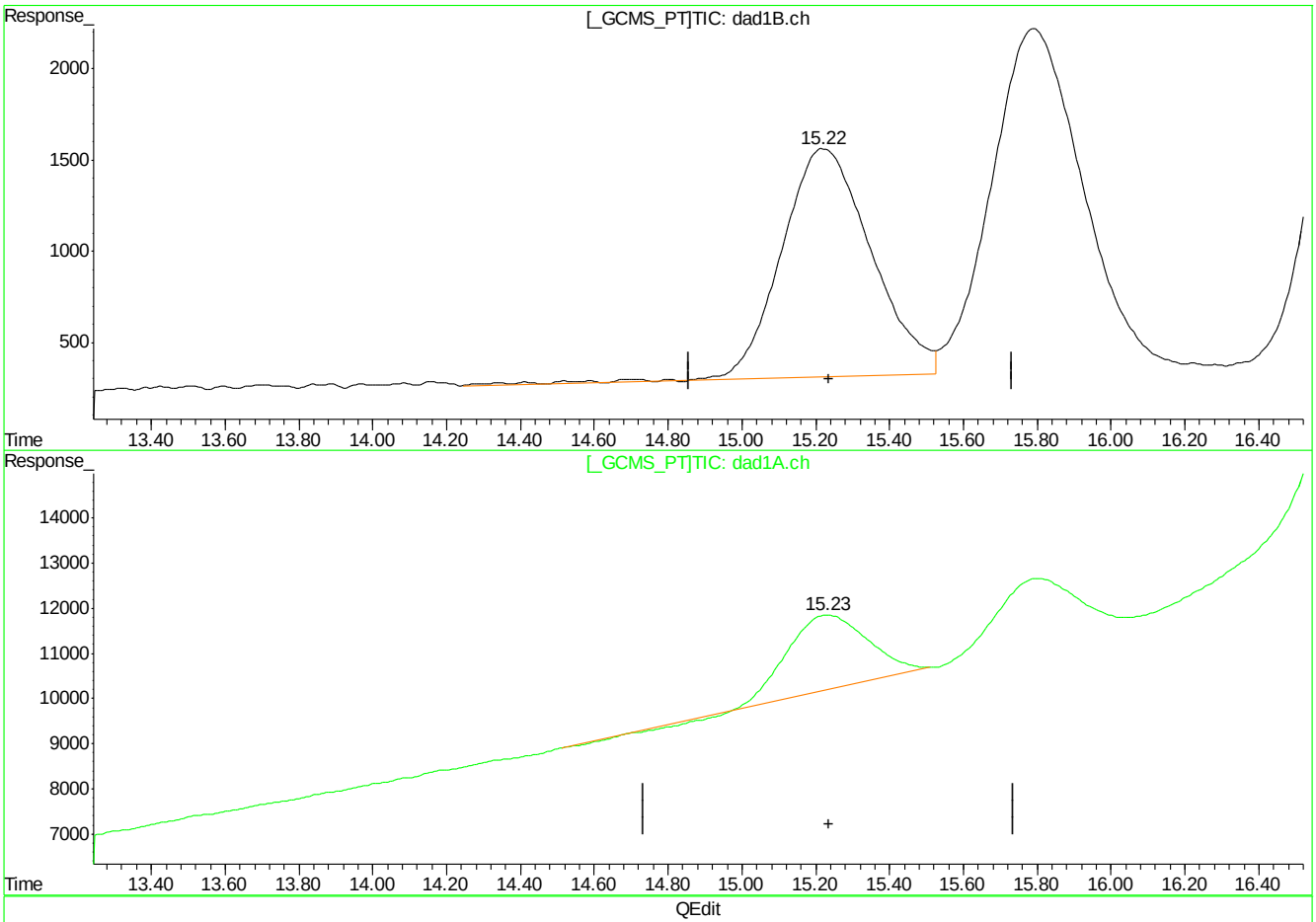
response 225529

(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.22min 96.574ppb

response 210321

(18) o-Nitrotoluene #2

15.23min 79.665ppb

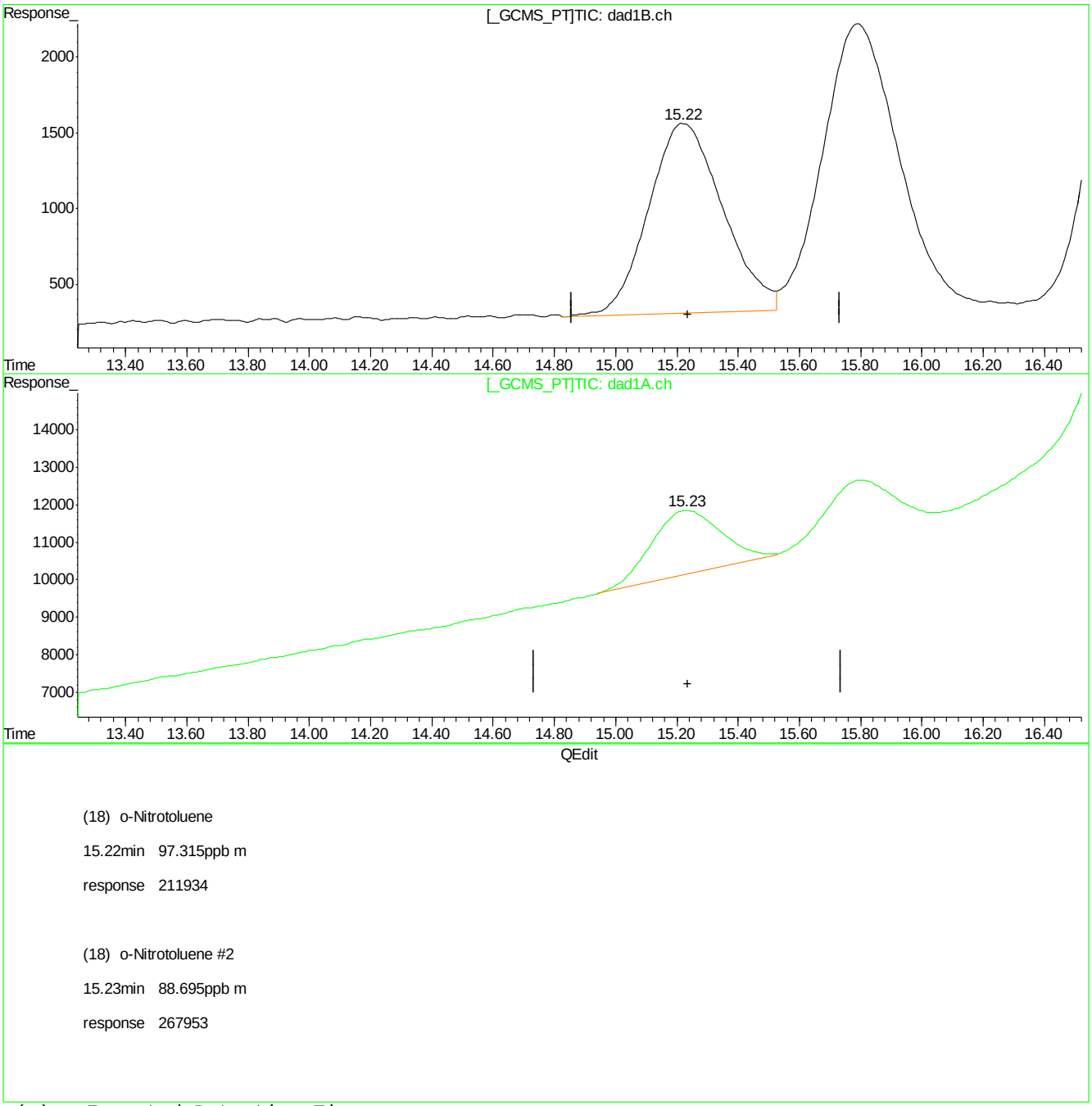
response 240673

(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.22min 97.315ppb m

response 211934

(18) o-Nitrotoluene #2

15.23min 88.695ppb m

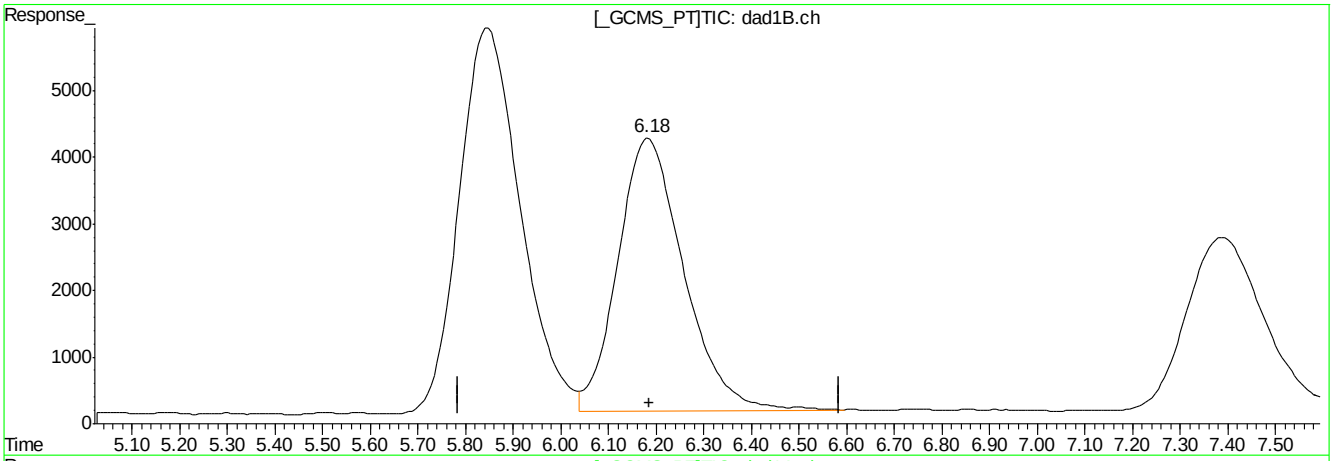
response 267953

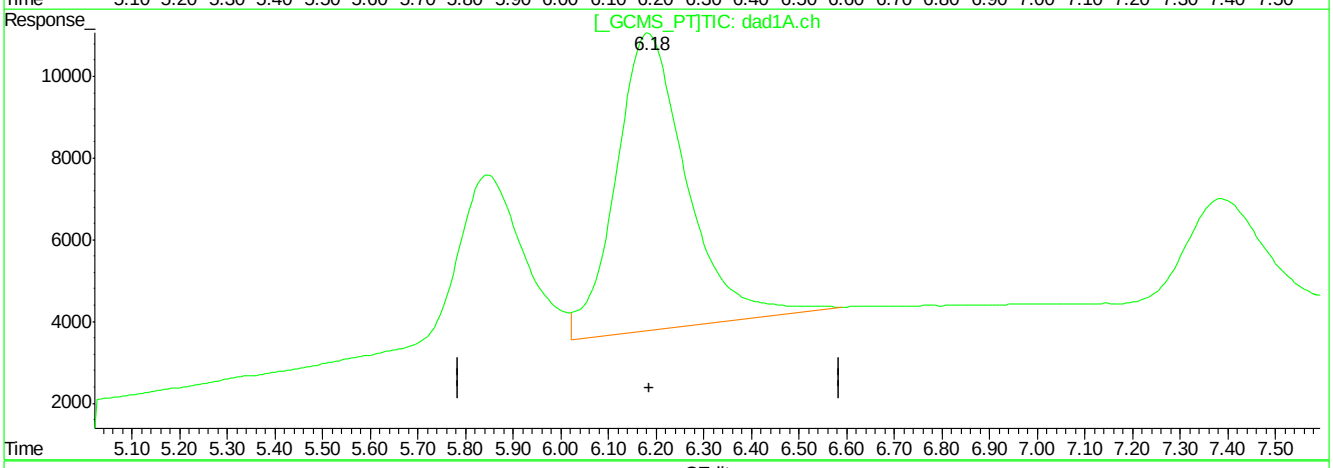
(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.18min 99.253ppb

response 394656

(8) 3,5-Dinitroaniline #2

6.18min 108.565ppb

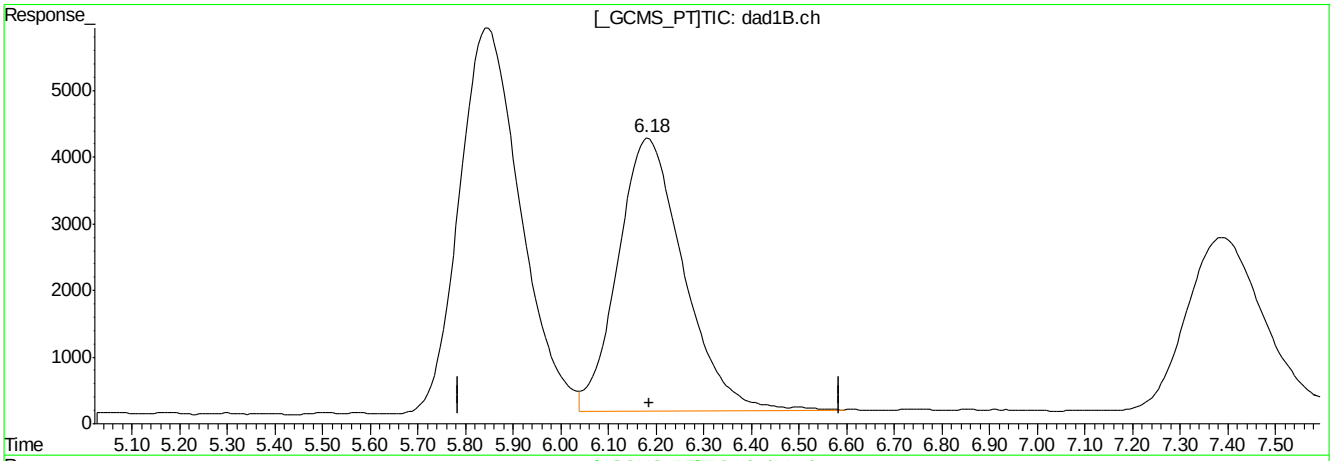
response 751301

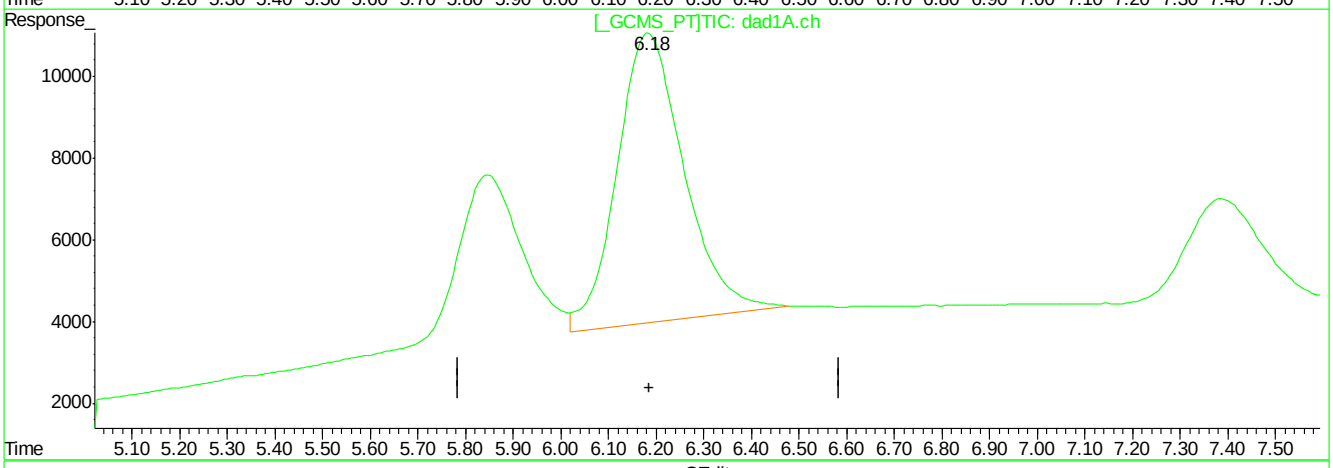
(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.18min 99.253ppb

response 394656

(8) 3,5-Dinitroaniline #2

6.18min 99.840ppb m

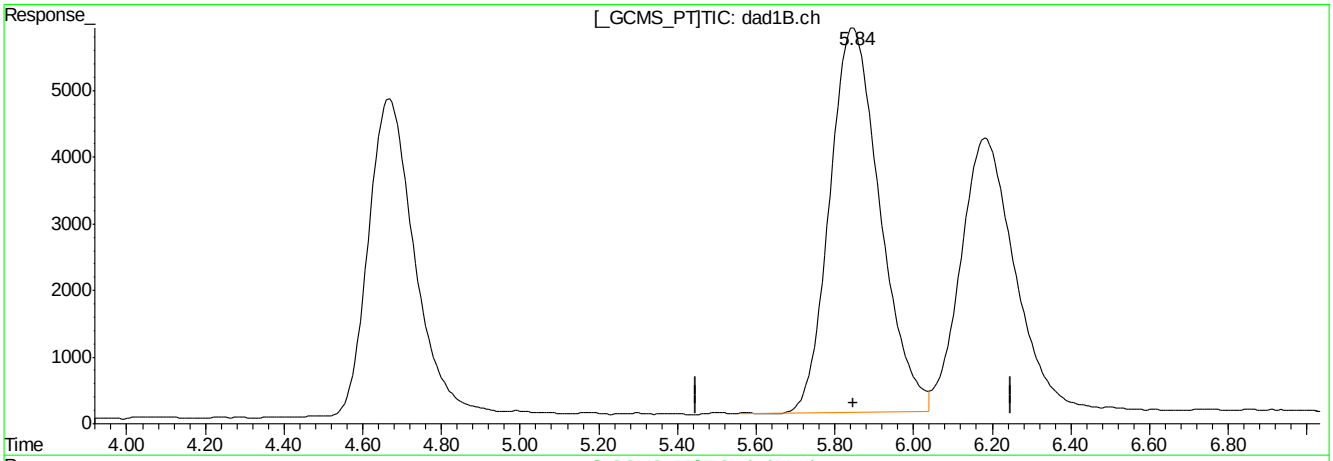
response 690920

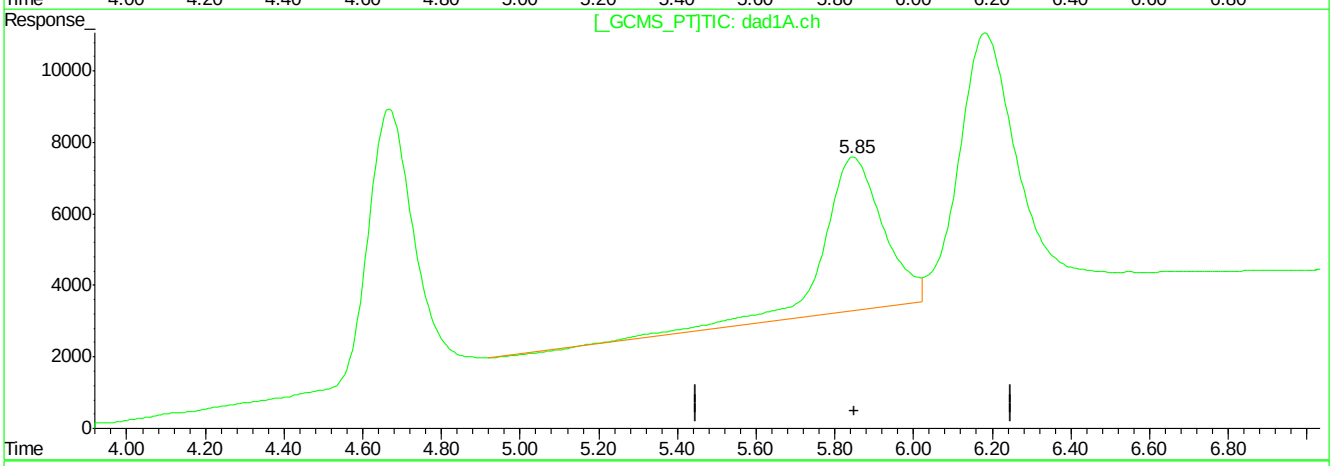
(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 98.235ppb

response 511849

(7) 1,3-Dinitrobenzene #2

5.85min 129.041ppb

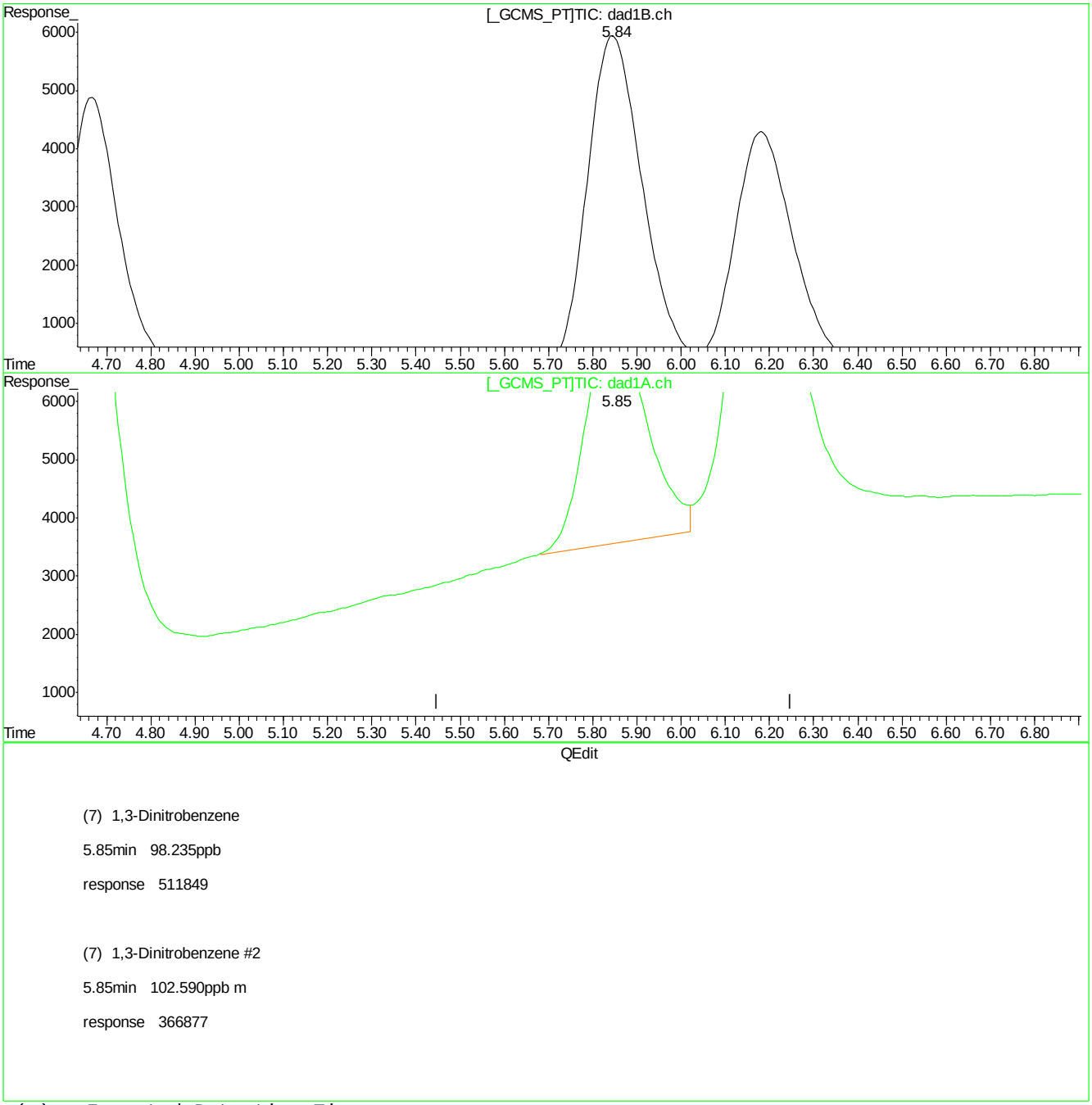
response 461468

(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.85min 98.235ppb

response 511849

(7) 1,3-Dinitrobenzene #2

5.85min 102.590ppb m

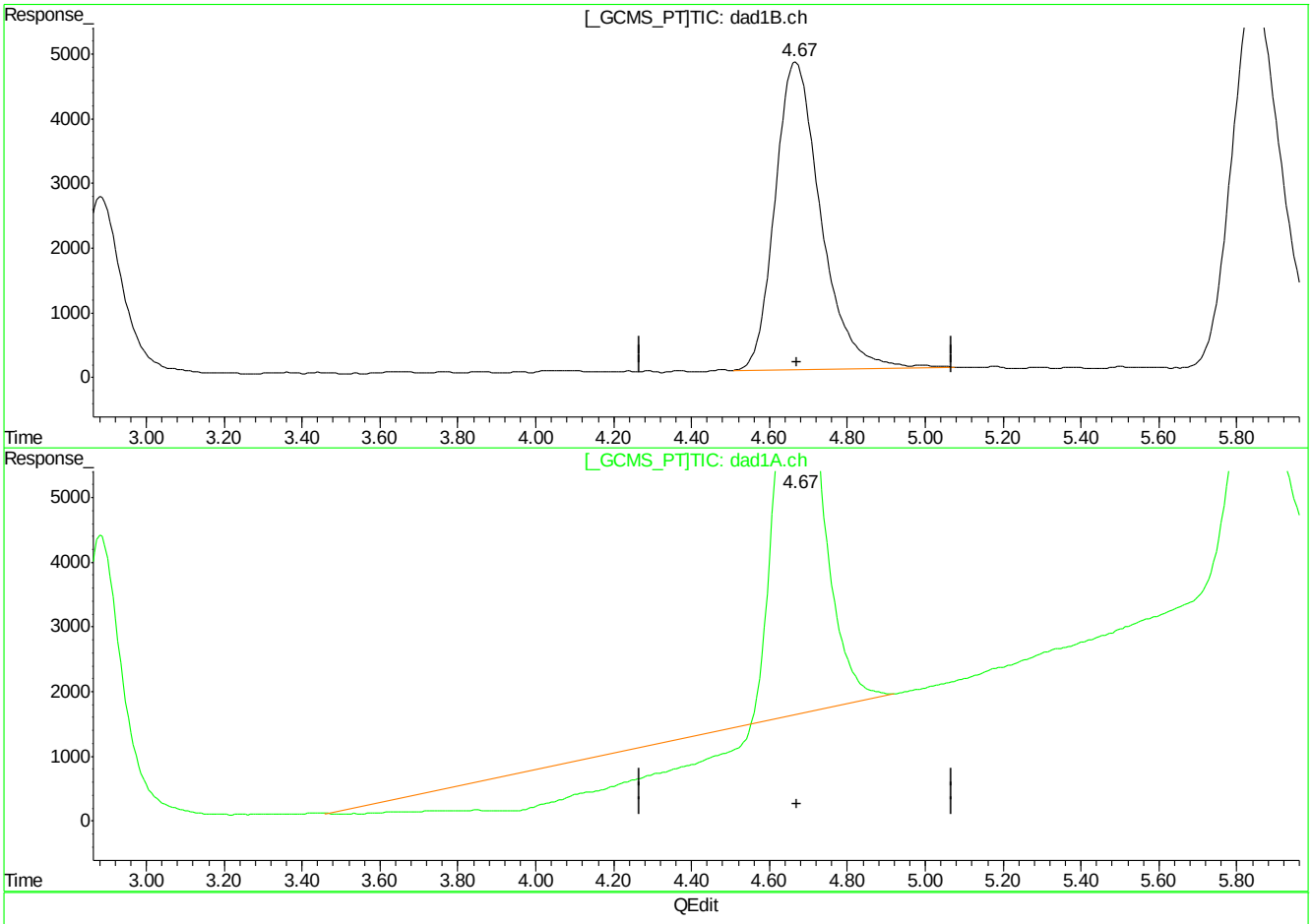
response 366877

(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(6) 1,3,5-Trinitrobenzene

4.67min 97.281ppb

response 386457

(6) 1,3,5-Trinitrobenzene #2

4.67min 48.848ppb

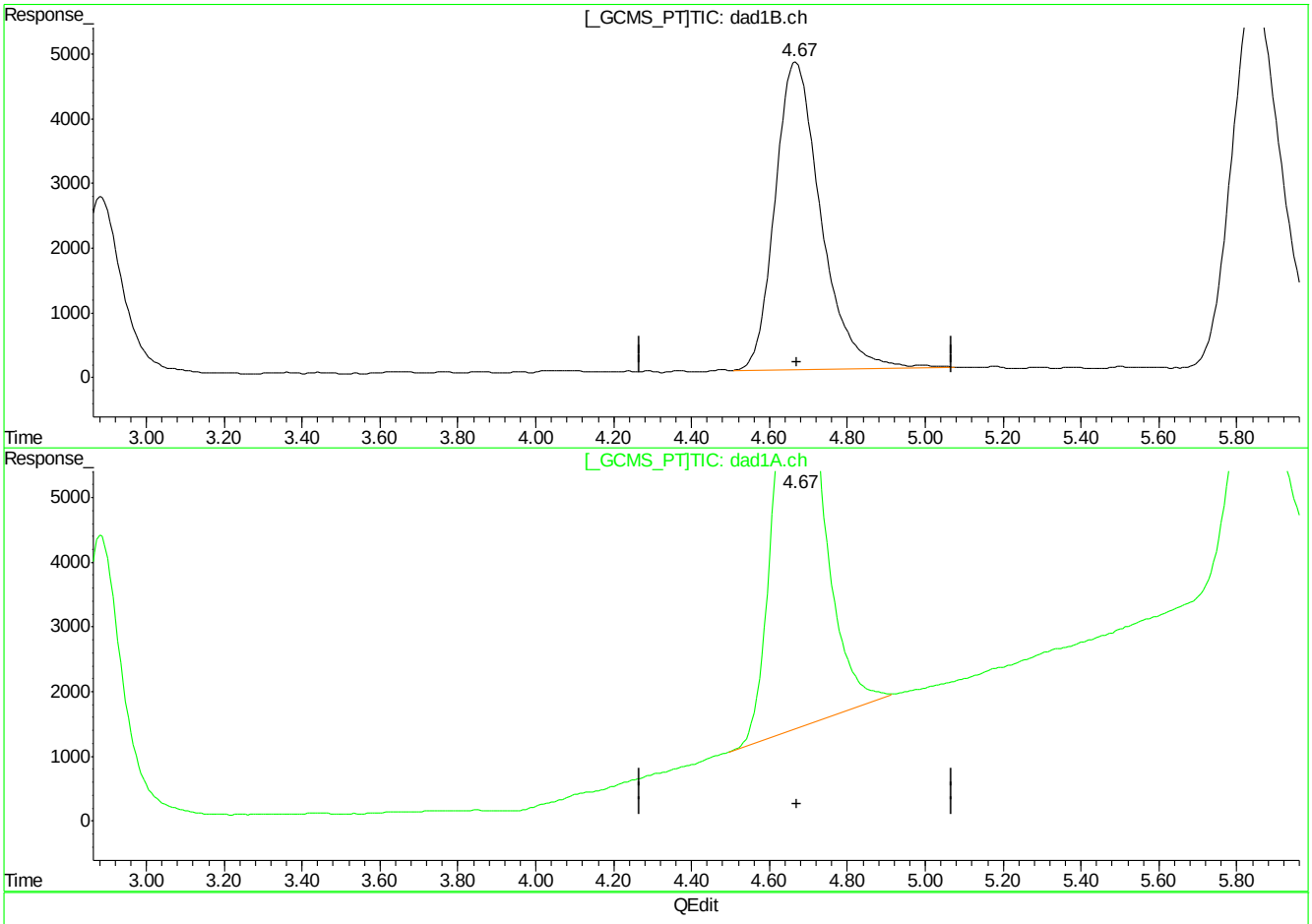
response 303151

(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:34:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070756.D\dad1A.ch
Acq On : 30-Oct-2021, 14:30:47 Operator: jamesb
Sample : ic2118-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(6) 1,3,5-Trinitrobenzene

4.67min 97.281ppb

response 386457

(6) 1,3,5-Trinitrobenzene #2

4.67min 96.401ppb m

response 598264

(+) = Expected Retention Time
BB070756.D BBB2118_103021.M Mon Nov 01 08:35:04 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 13:51

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 01 08:23:57 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.08	11.08	373255	582905	173.375	156.018
	Spiked Amount 500.000	Range 70 - 136		Recovery =		34.67%#	31.20%#
	Target Compounds						
1)	TNX	1.34	1.34	135420	232773	112.470	125.694
2)	HMX	1.46	1.46	302955	862877	190.936	204.260
3)	DNX	1.70	1.70	344199	573997	189.476	204.903
4)	MNX	2.28	2.28	656218	1010627	279.262	276.040
5)	RDX	2.89	2.89	360601	573531	194.210	194.665
6)	1,3,5-Trinitrobe	4.67	4.67	757792	1193417	190.755	192.300m
7)	1,3-Dinitrobenze	5.85	5.85	1008169	713734	193.490	199.582m
8)	3,5-Dinitroanili	6.19	6.19	773883	1330754	194.625	192.298m
9)	Nitrobenzene	7.39	7.39	590469	594750	193.469	195.465
10)	Nitroglycerin	0.00	8.90	0	237901	N.D.	191.824 #
11)	Tetryl	9.39	9.39	568924	893040	188.672	183.625
12)	2,4,6-Trinitroto	9.79	9.79	694273	799396	191.456	188.138
13)	2-Amino-4,6-Dini	10.12	10.12	658526	939760	190.679	182.153
14)	4-Amino-2,6-Dini	10.61	10.61	473563	871250	189.752	177.473
16)	2,4-Dinitrotolue	11.73	11.73	878560	543679	192.604	172.245
17)	2,6-Dinitrotolue	12.18	12.19	531996	660883	193.400	196.281
18)	o-Nitrotoluene	15.23	15.24	418944	560283	192.369m	185.460m
19)	p-Nitrotoluene	15.81	15.81	637226	461280	189.902	160.234m
20)	m-Nitrotoluene	16.66	16.67	609117	705056	194.615	176.260m
21)	PETN	0.00	18.47	0	249386	N.D.	187.969m#

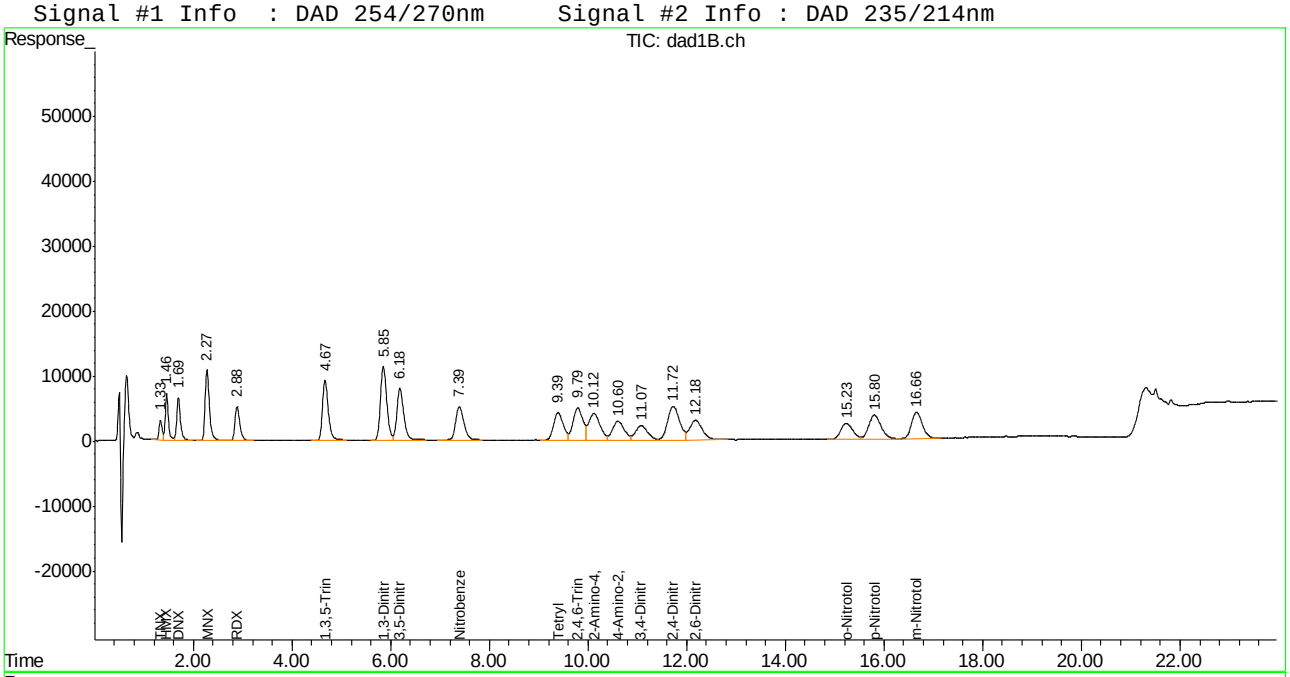
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070757.D BBB2118_103021.M Mon Nov 01 11:46:14 2021 Page 1

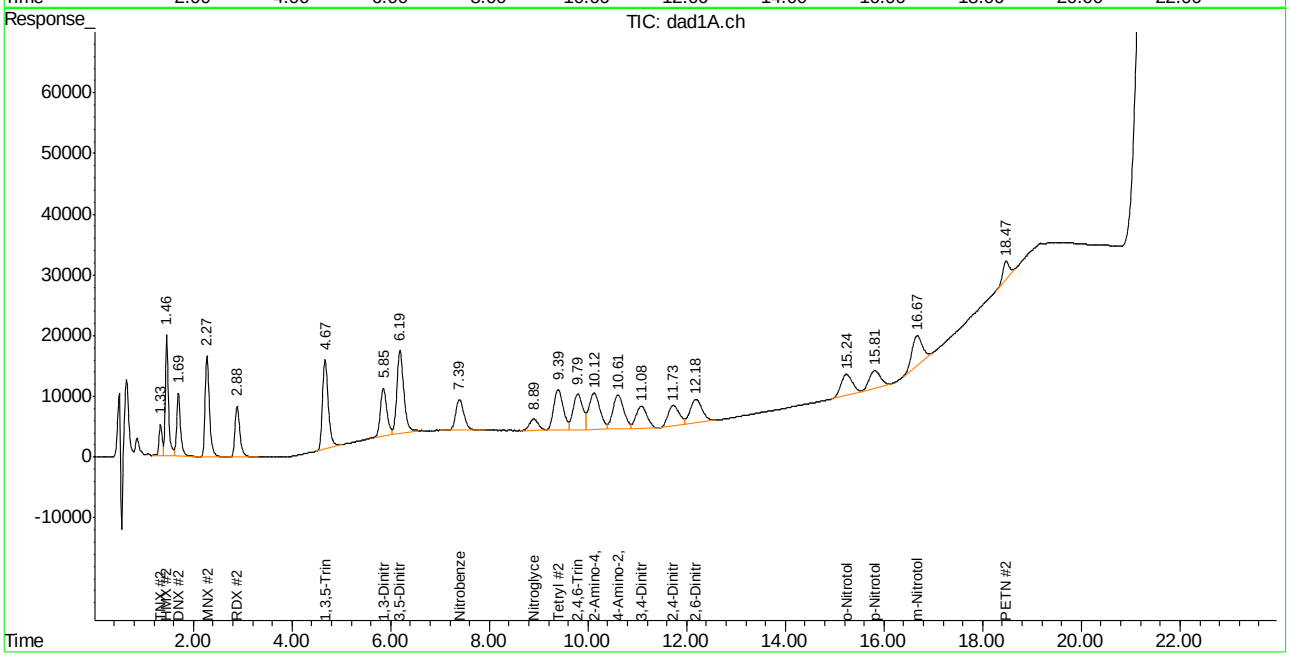
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:33 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

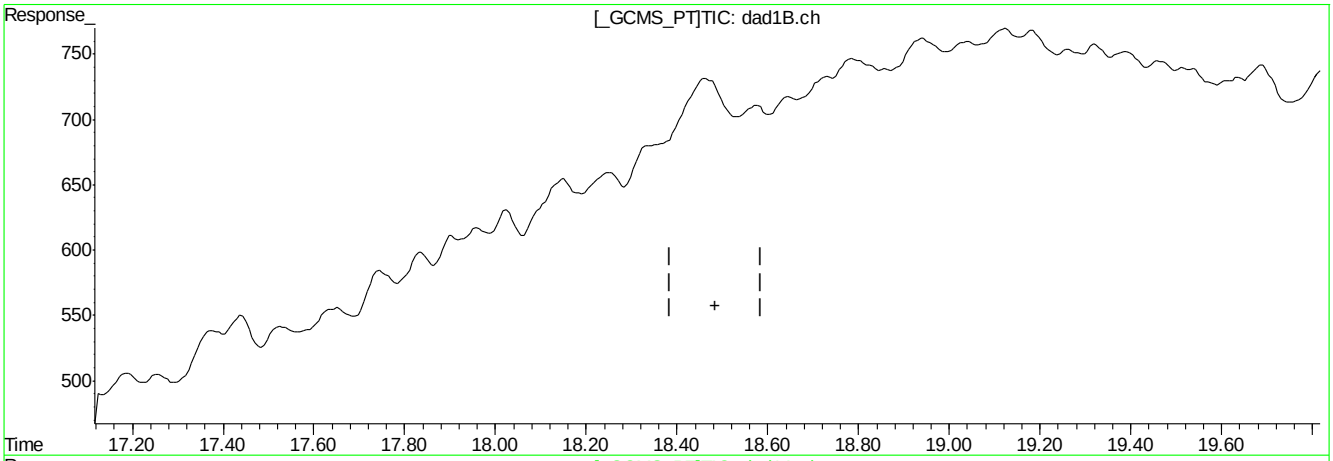
Sample Number: GBB2118-IC2118 **Method:** SW846 8330A
Lab FileID: BB070757.D **Analyst approved:** 11/01/21 12:47 James Boone
Injection Time: 10/30/21 15:01 **Supervisor approved:** 11/01/21 13:51 Naresh Jiawan

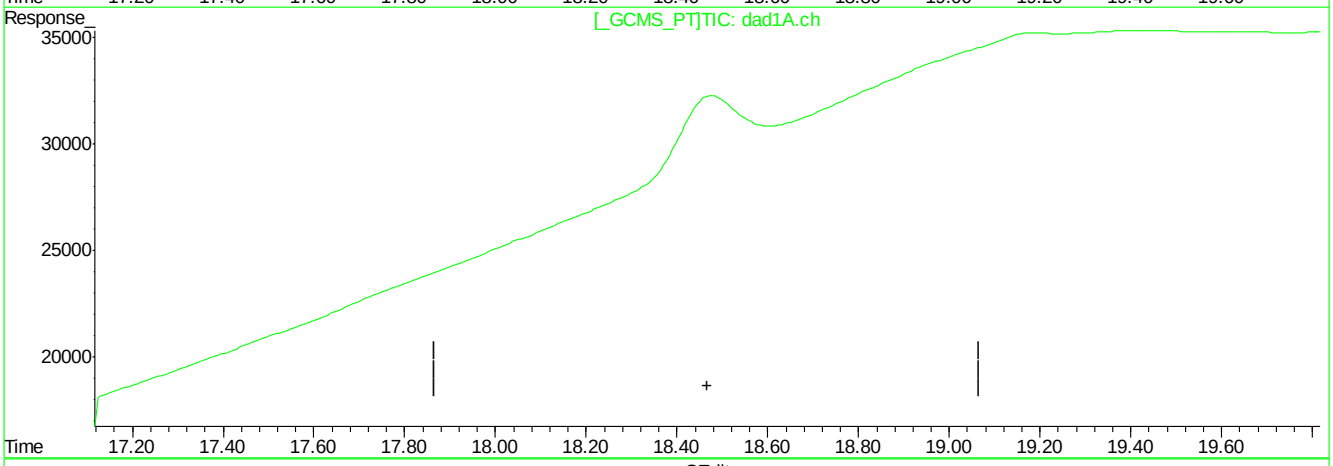
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.67	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.19	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.23	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.24	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.81	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.67	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

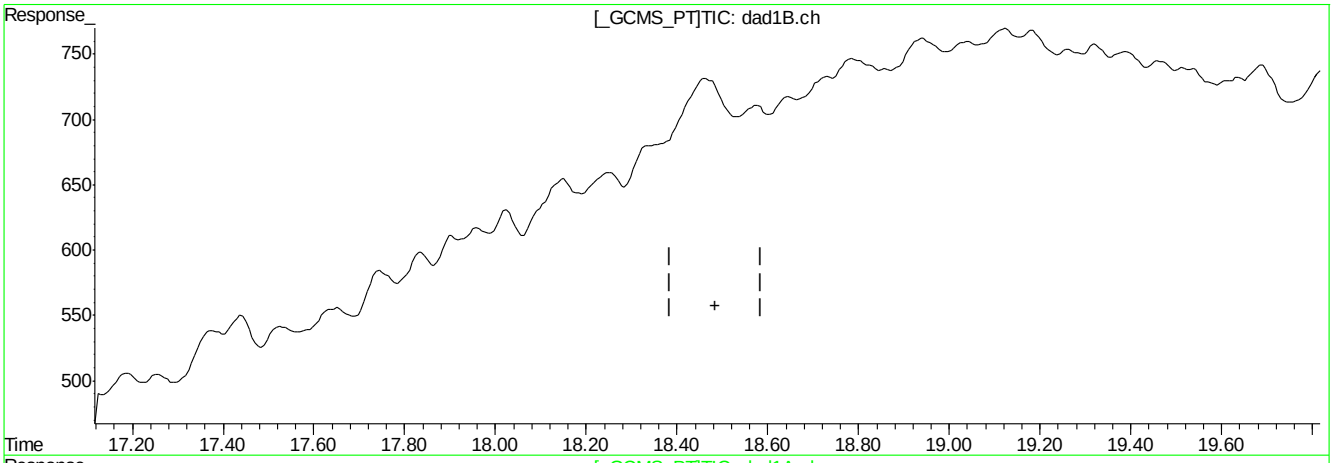
response 0

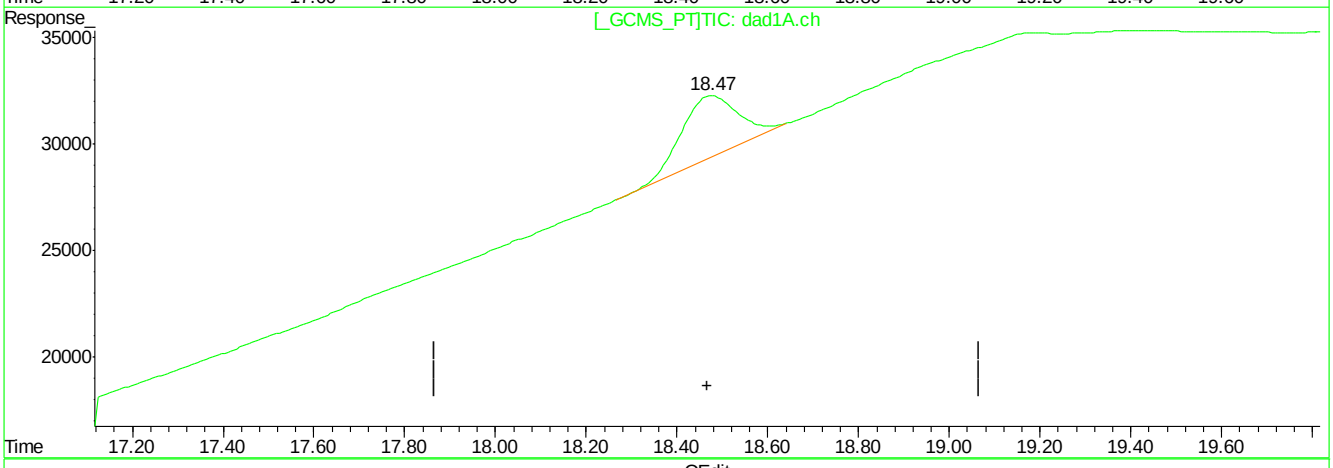
(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:31:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.47min 187.969ppb m

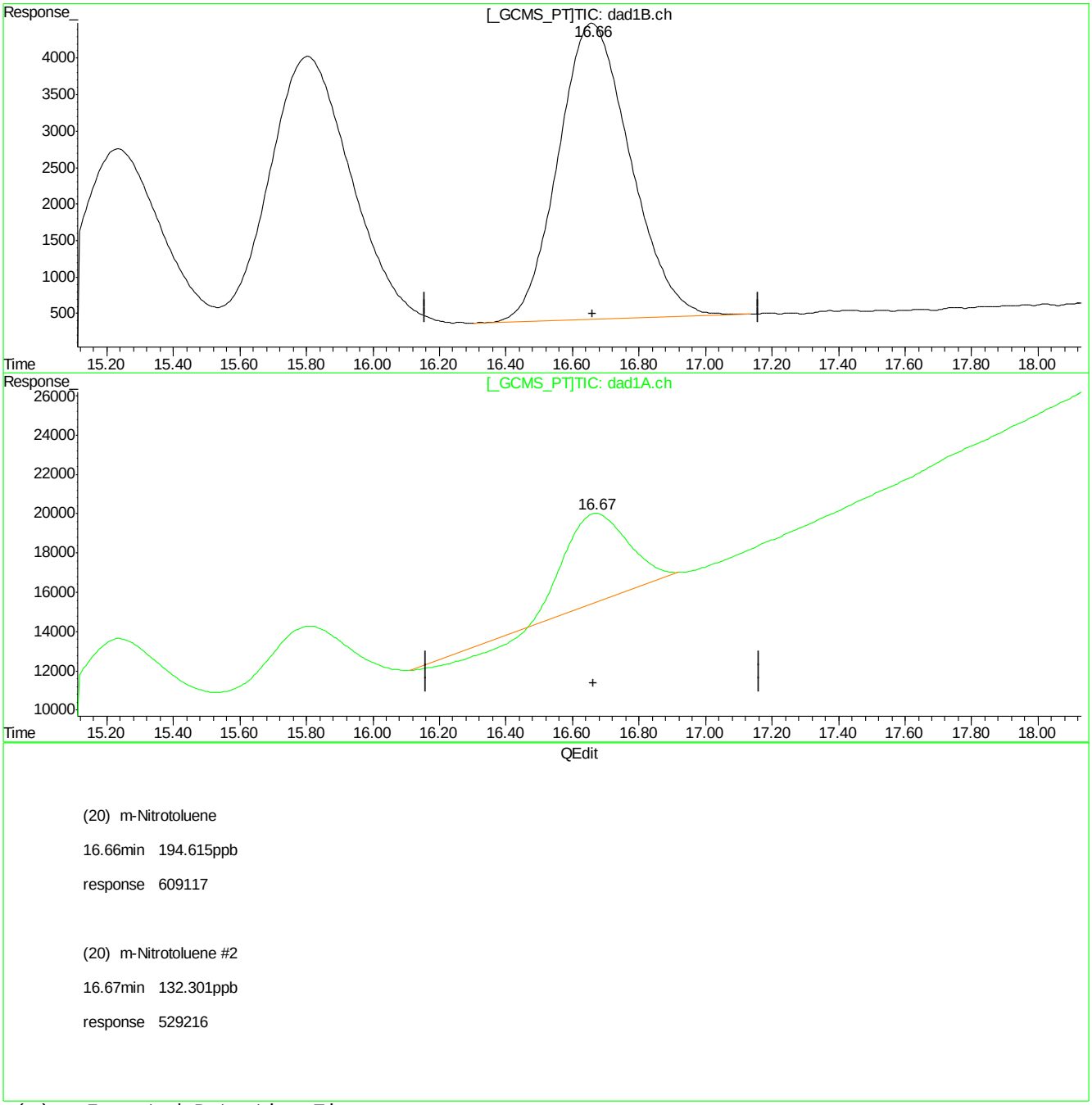
response 249386

(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:31:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.66min 194.615ppb

response 609117

(20) m-Nitrotoluene #2

16.67min 132.301ppb

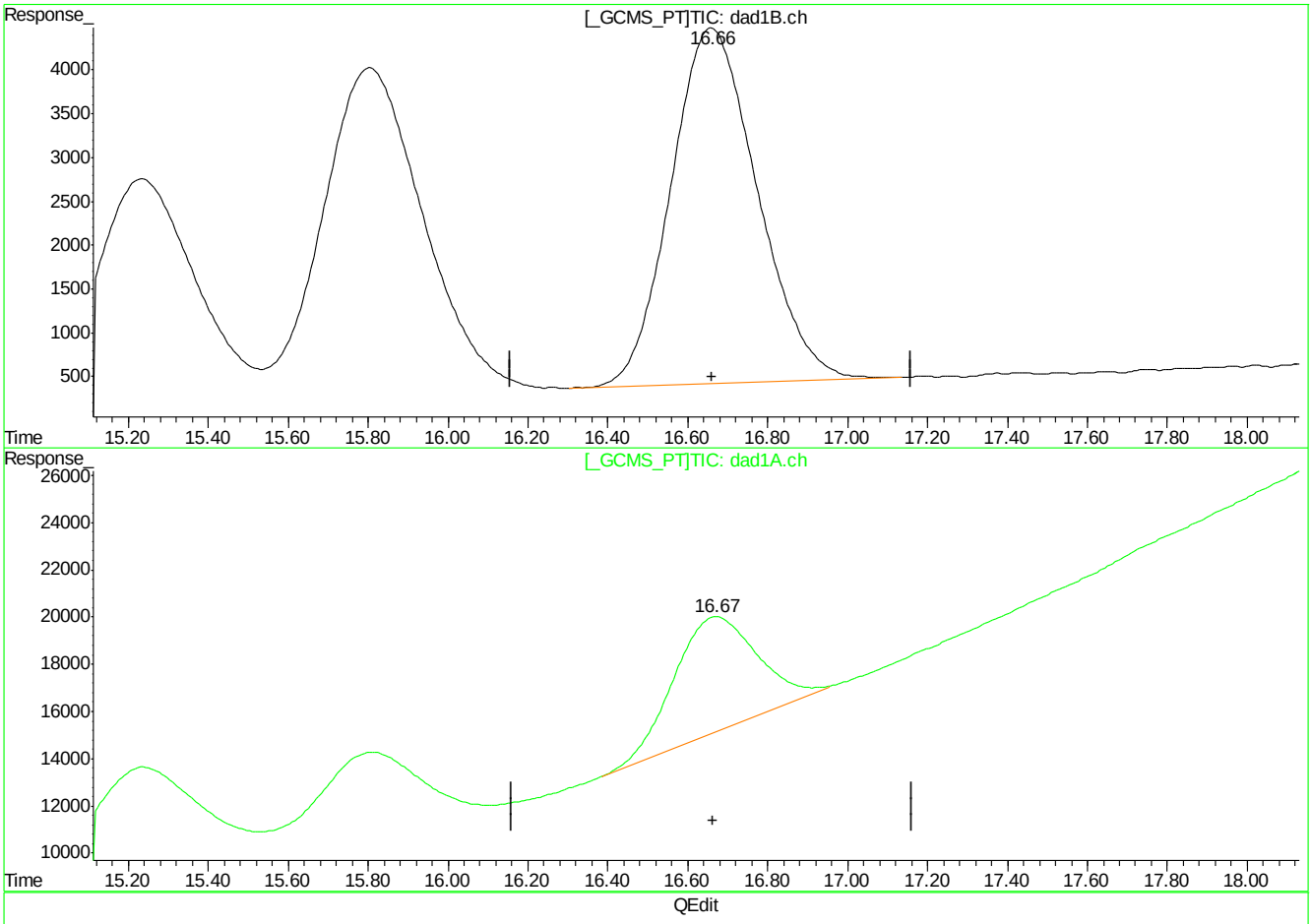
response 529216

(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:32:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.66min 194.615ppb

response 609117

(20) m-Nitrotoluene #2

16.67min 176.260ppb m

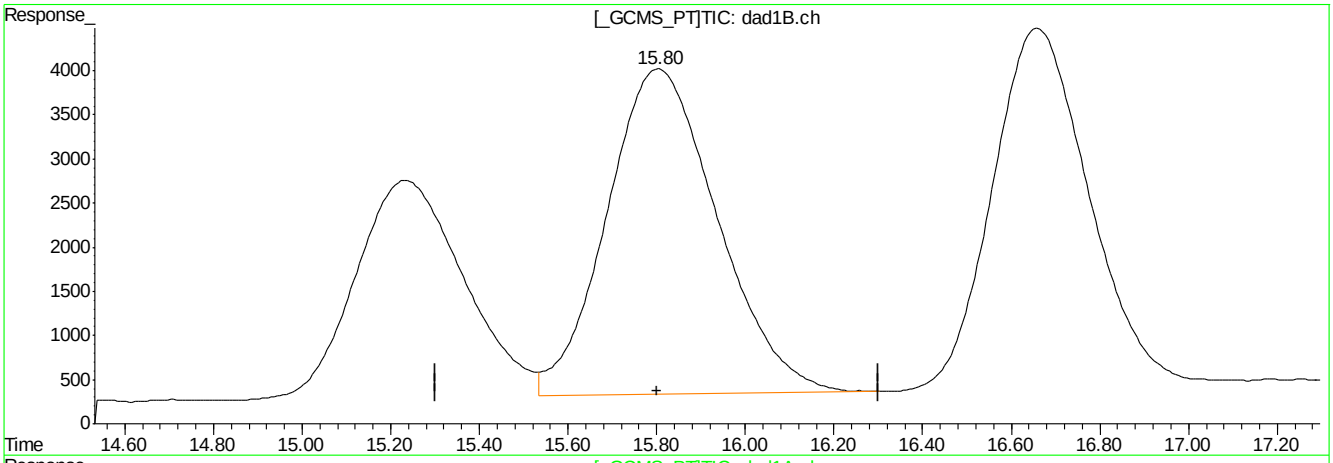
response 705056

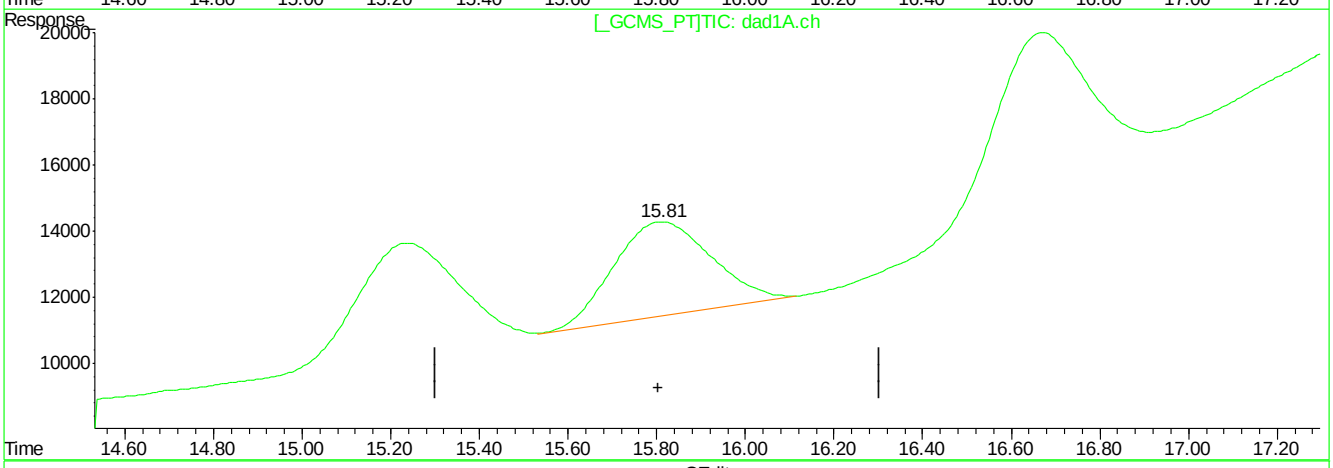
(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:32:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.81min 189.902ppb

response 637226

(19) p-Nitrotoluene #2

15.81min 150.201ppb

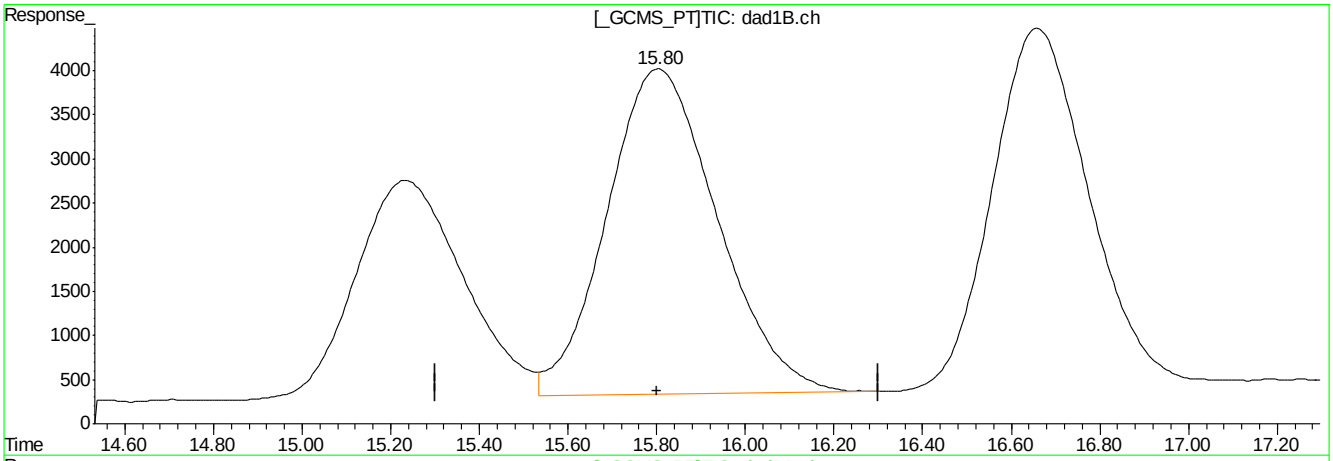
response 432396

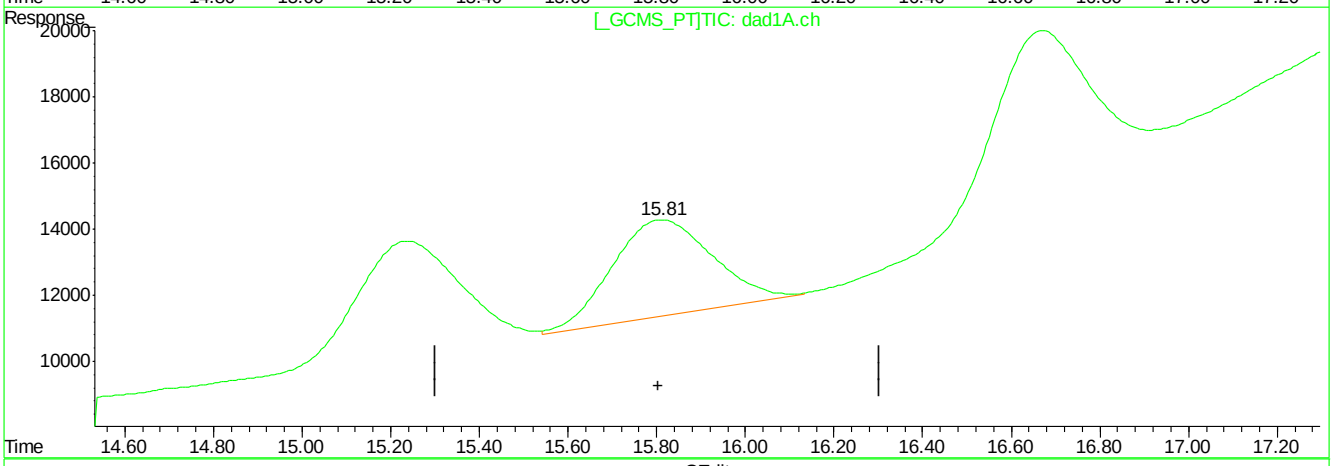
(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:32:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.81min 189.902ppb

response 637226

(19) p-Nitrotoluene #2

15.81min 160.234ppb m

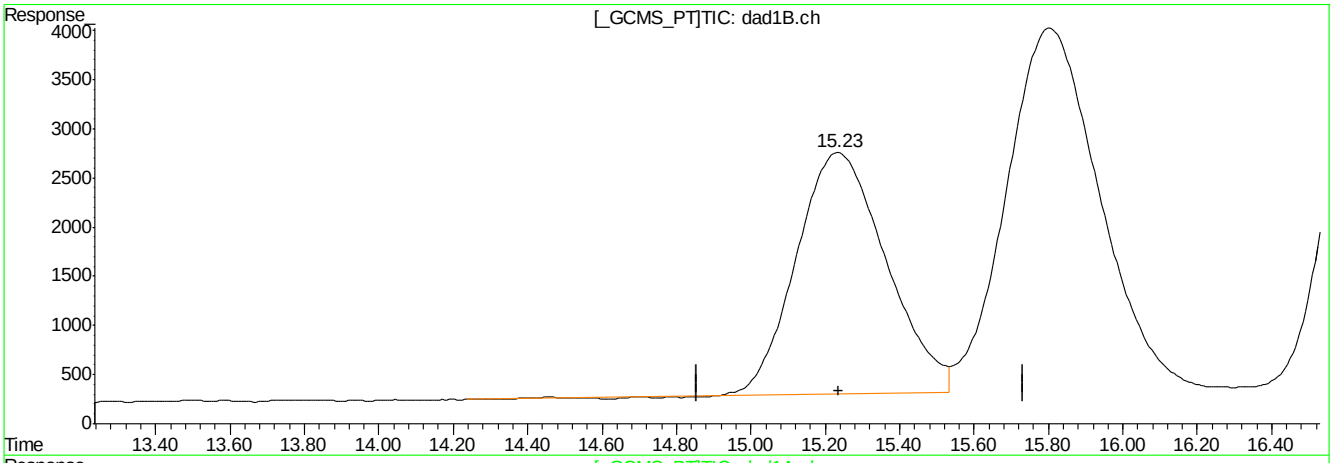
response 461280

(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:32:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.24min 187.534ppb

response 408413

(18) o-Nitrotoluene #2

15.24min 161.969ppb

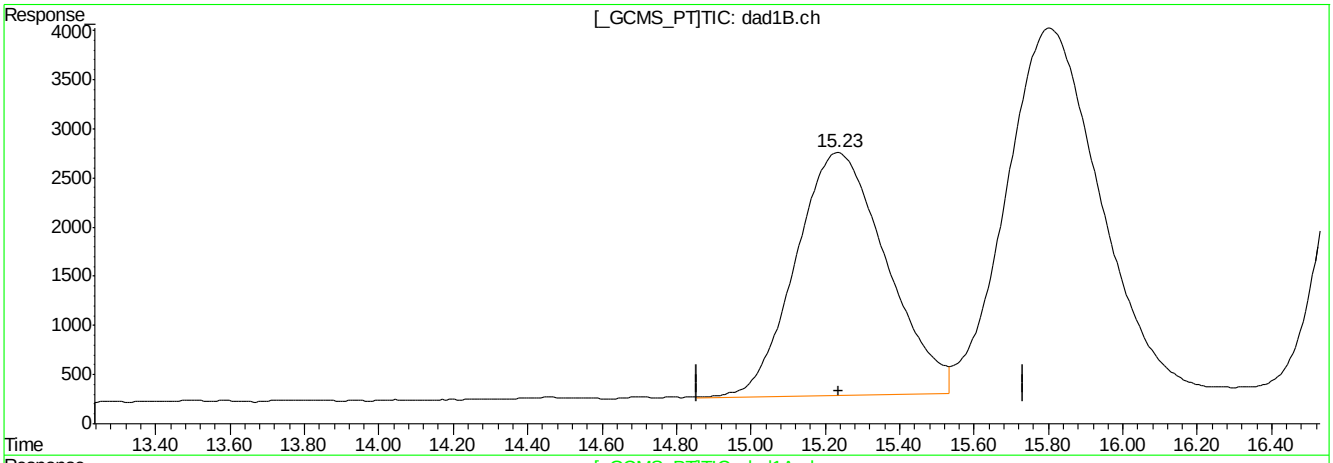
response 489317

(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:32:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.23min 192.369ppb m

response 418944

(18) o-Nitrotoluene #2

15.24min 185.460ppb m

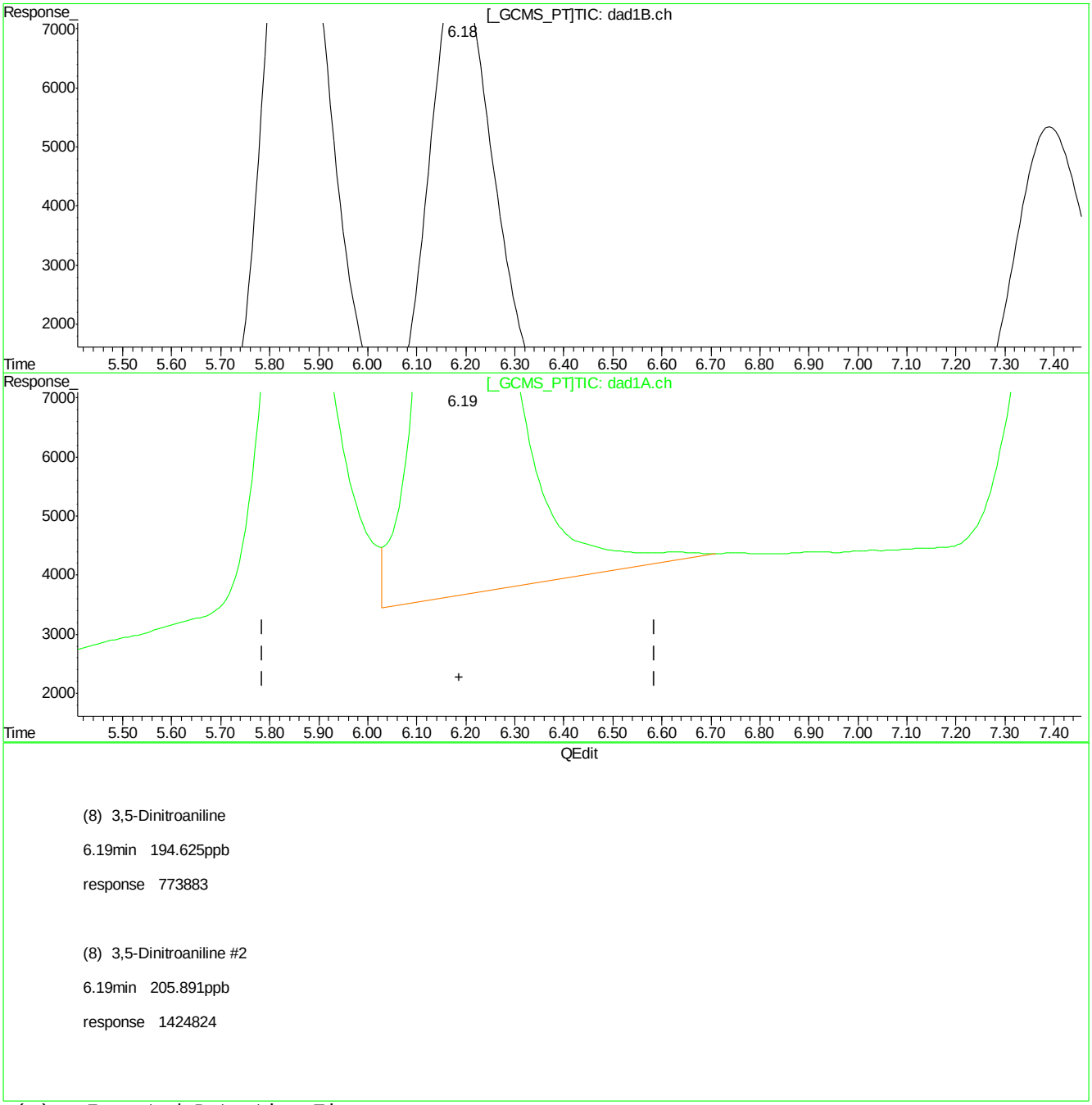
response 560283

(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:32:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.19min 194.625ppb

response 773883

(8) 3,5-Dinitroaniline #2

6.19min 205.891ppb

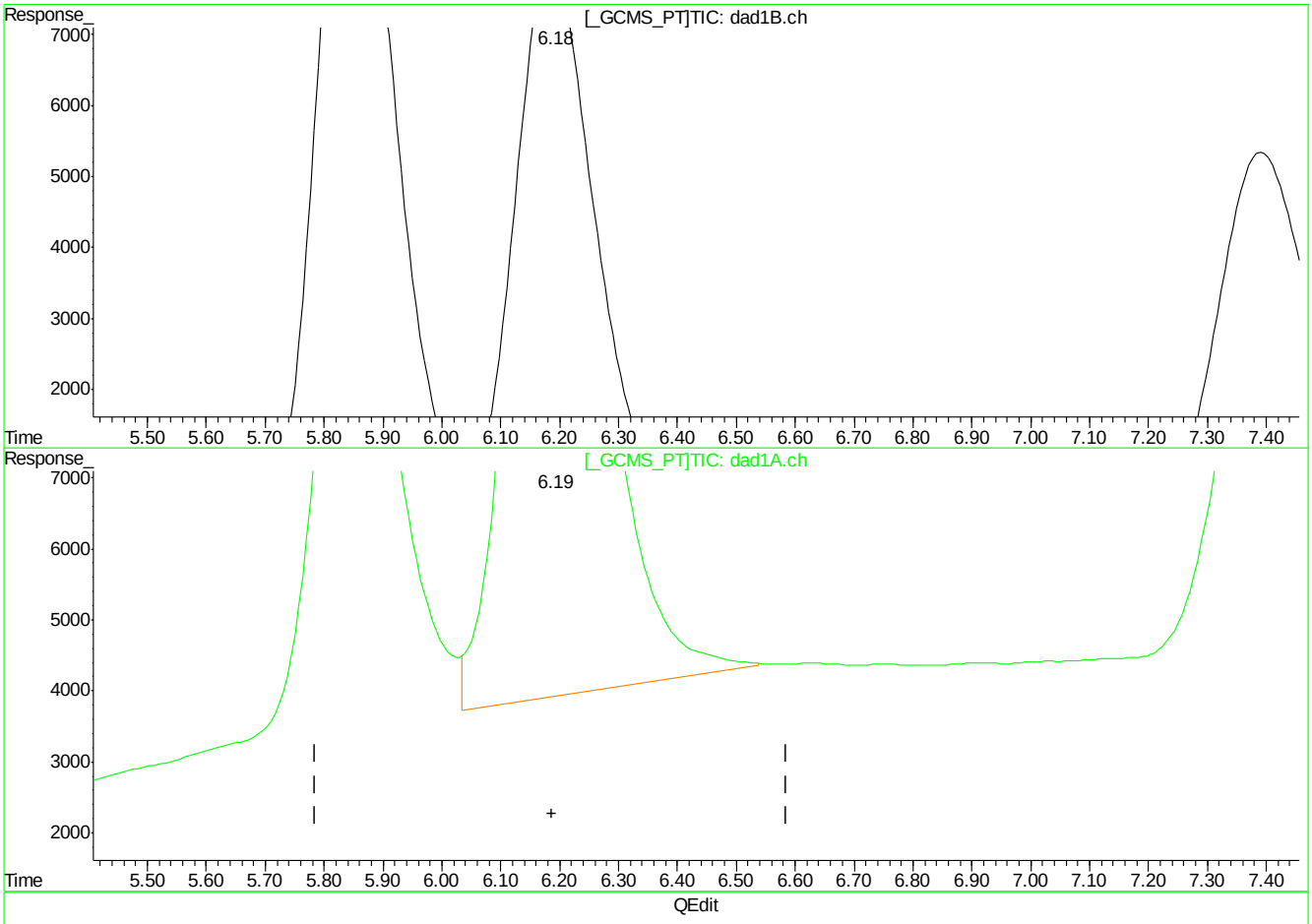
response 1424824

(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:32:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.19min 194.625ppb

response 773883

(8) 3,5-Dinitroaniline #2

6.19min 192.298ppb m

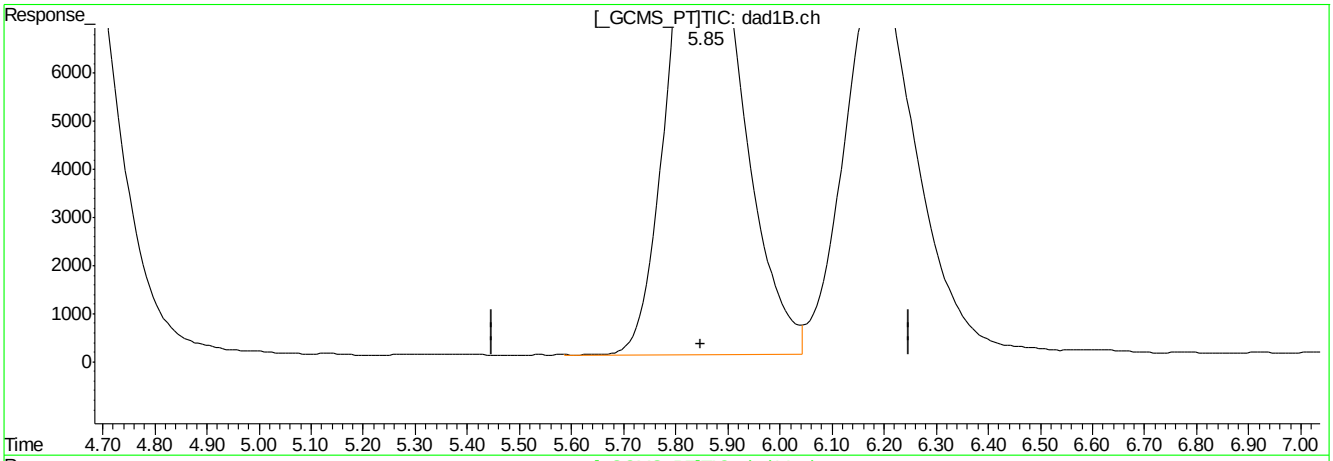
response 1330754

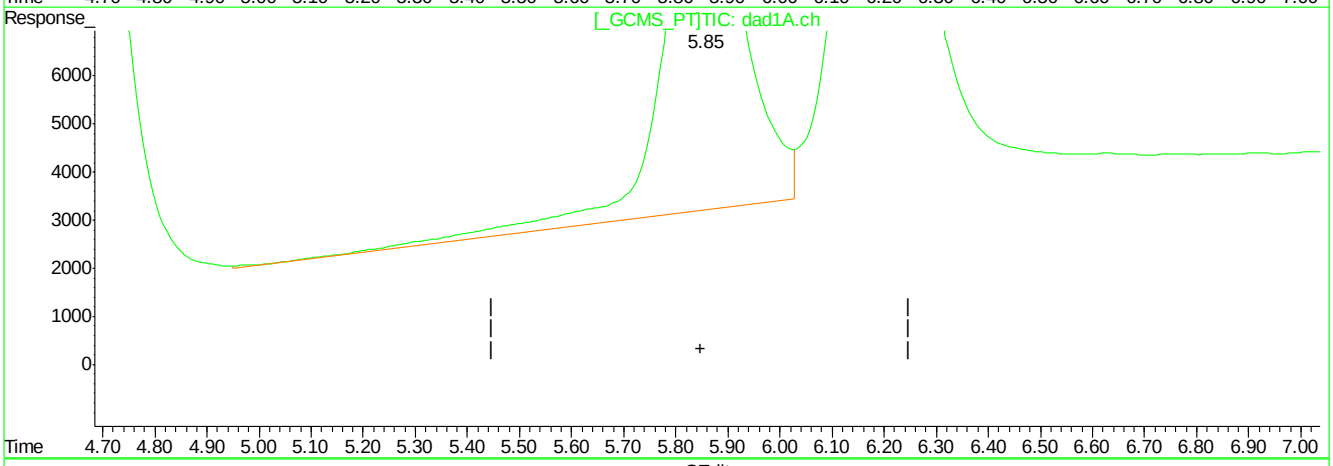
(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:32:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 193.490ppb

response 1008169

(7) 1,3-Dinitrobenzene #2

5.85min 228.766ppb

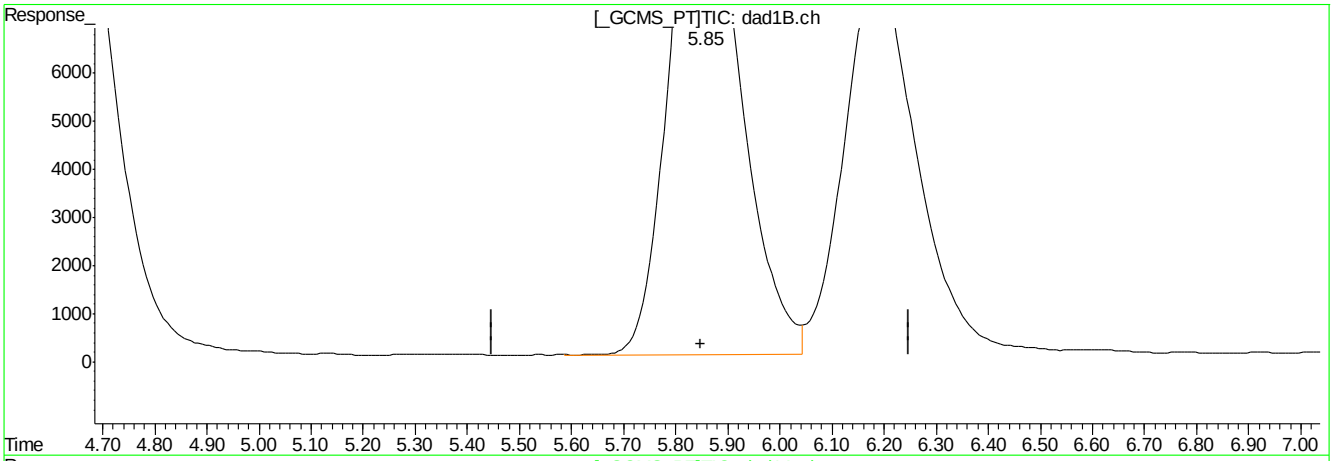
response 818100

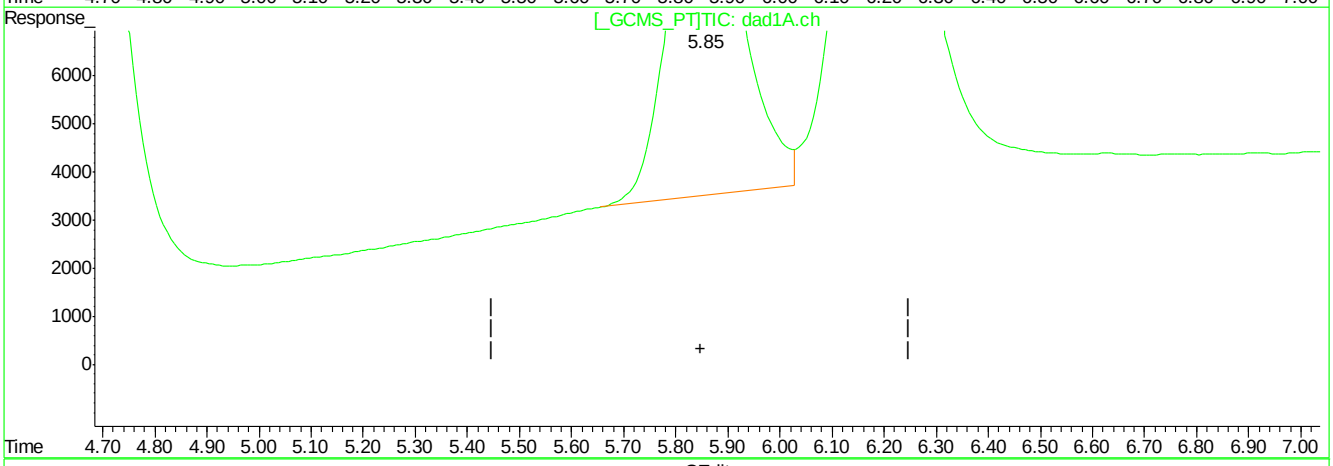
(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:33:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 193.490ppb

response 1008169

(7) 1,3-Dinitrobenzene #2

5.85min 199.582ppb m

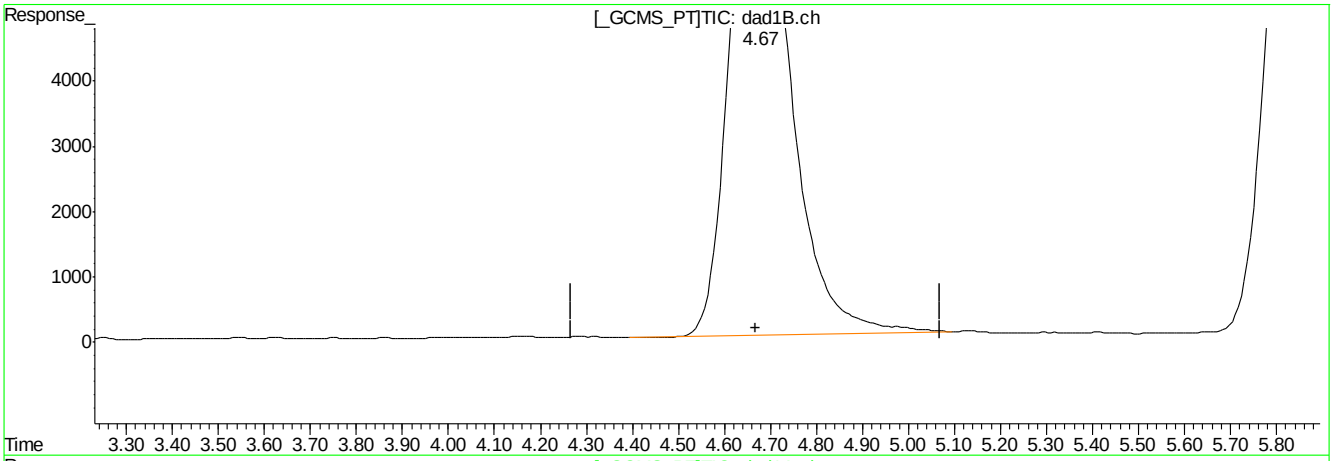
response 713734

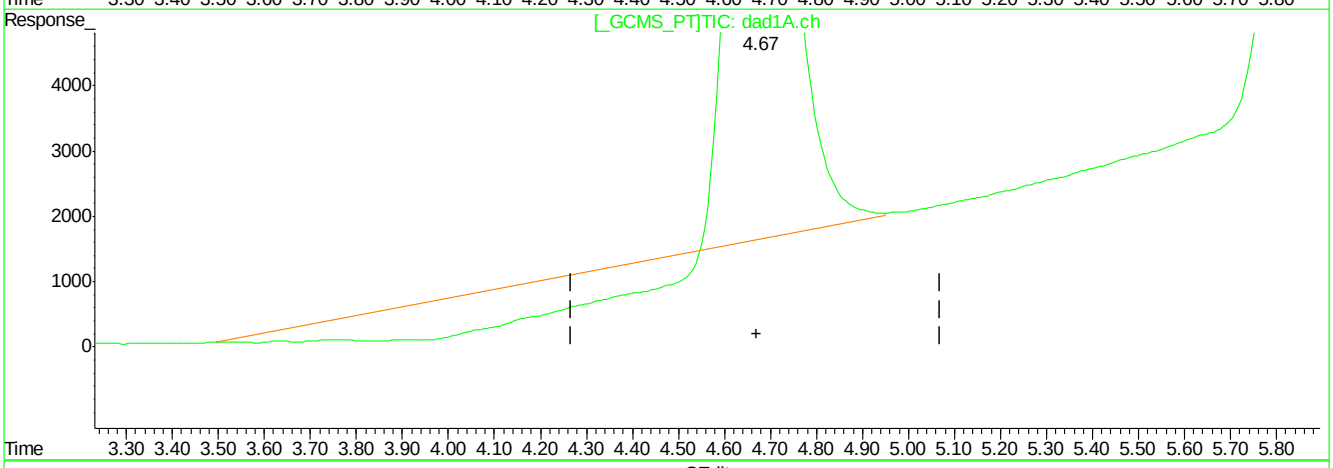
(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:33:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.67min 190.755ppb

response 757792

(6) 1,3,5-Trinitrobenzene #2

4.67min 141.297ppb

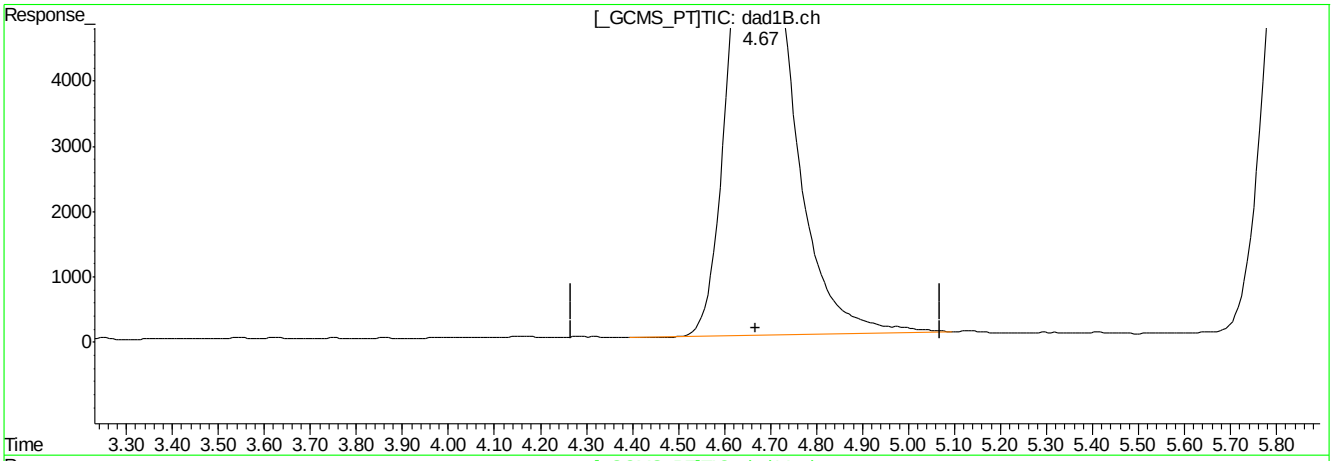
response 876895

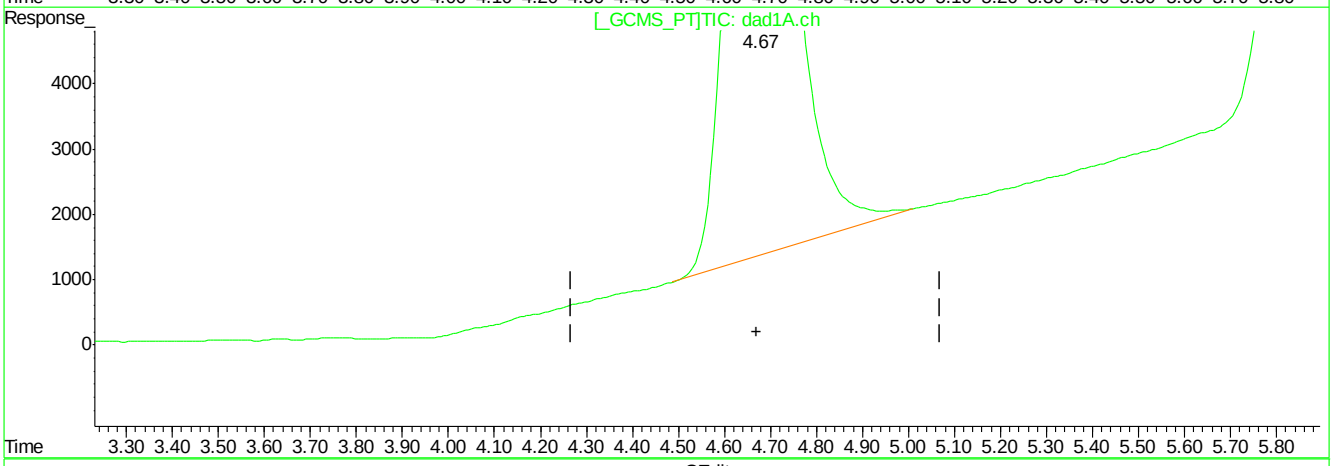
(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:33:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070757.D\dad1A.ch
Acq On : 30-Oct-2021, 15:01:51 Operator: jamesb
Sample : ic2118-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.67min 190.755ppb

response 757792

(6) 1,3,5-Trinitrobenzene #2

4.67min 192.300ppb m

response 1193417

(+) = Expected Retention Time
BB070757.D BBB2118_103021.M Mon Nov 01 08:33:20 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 13:51

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 01 08:23:58 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.08	11.08	919745	1525121	427.216	408.208
Spiked Amount	500.000	Range	70 - 136	Recovery	=	85.44%	81.64%
	Target Compounds						
1)	TNX	1.34	1.34	341364	569566	283.513	307.557
2)	HMX	1.46	1.46	741252	2115011	467.171	500.666
3)	DNX	1.70	1.70	841628	1394751	463.304	497.893
4)	MNX	2.28	2.28	1605363	2464782	683.182	673.225
5)	RDX	2.89	2.89	884271	1402207	476.244	475.930
6)	1,3,5-Trinitrobe	4.67	4.67	1877939	2921694	472.725	470.784m
7)	1,3-Dinitrobenze	5.85	5.85	2461945	1702602	472.502	476.101m
8)	3,5-Dinitroanili	6.19	6.18	1873248	3247222	471.107	469.233m
9)	Nitrobenzene	7.39	7.39	1436642	1420397	470.720	466.815
10)	Nitroglycerin	0.00	8.90	0	586822	N.D.	473.164 #
11)	Tetryl	9.39	9.39	1381070	2207223	458.003	453.844
12)	2,4,6-Trinitroto	9.80	9.80	1698478	1998897	468.380	470.441
13)	2-Amino-4,6-Dini	10.12	10.12	1604121	2347178	464.479	454.951
14)	4-Amino-2,6-Dini	10.61	10.61	1157004	2218850	463.599	451.977
16)	2,4-Dinitrotolue	11.73	11.73	2159884	1351629	473.504	428.216
17)	2,6-Dinitrotolue	12.18	12.19	1300309	1654995	472.711	491.530
18)	o-Nitrotoluene	15.23	15.23	1012666	1402233	464.992	464.154m
19)	p-Nitrotoluene	15.80	15.80	1561374	1230798	465.310	427.540m
20)	m-Nitrotoluene	16.66	16.66	1493095	1825426	477.048	456.346m
21)	PETN	0.00	18.47	0	658144	N.D. d	496.061m

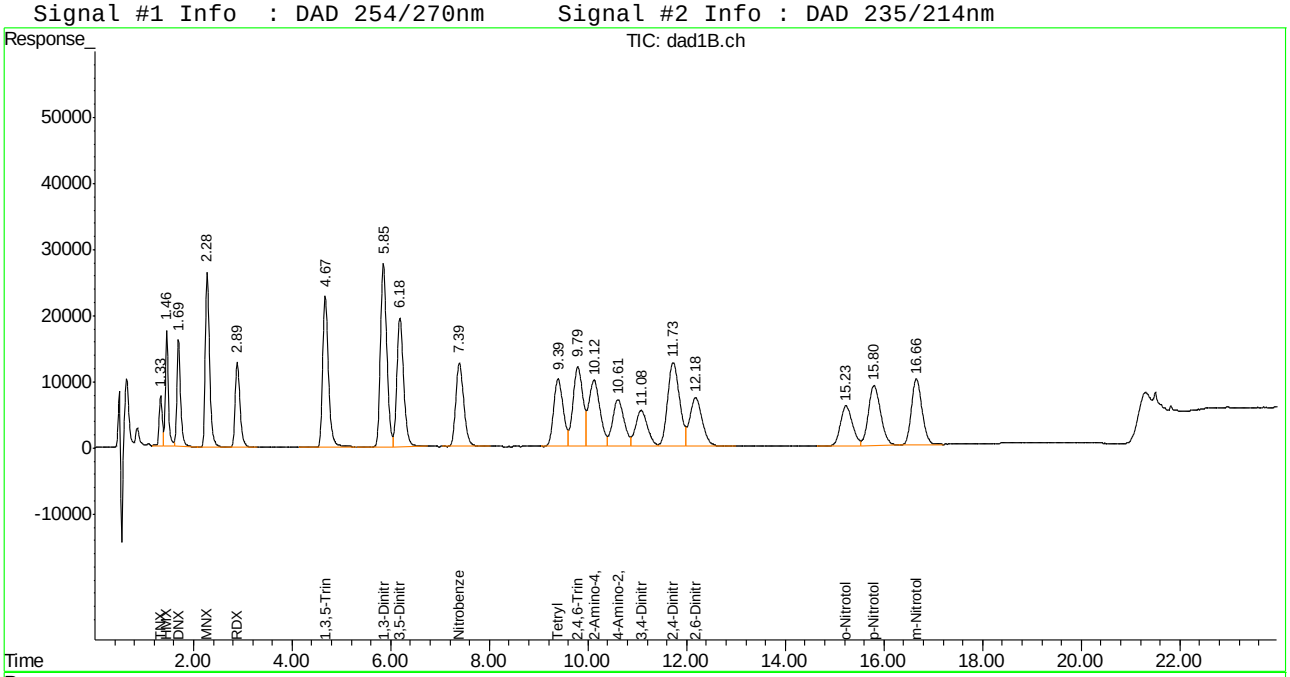
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070758.D BBB2118_103021.M Mon Nov 01 11:46:15 2021 Page 1

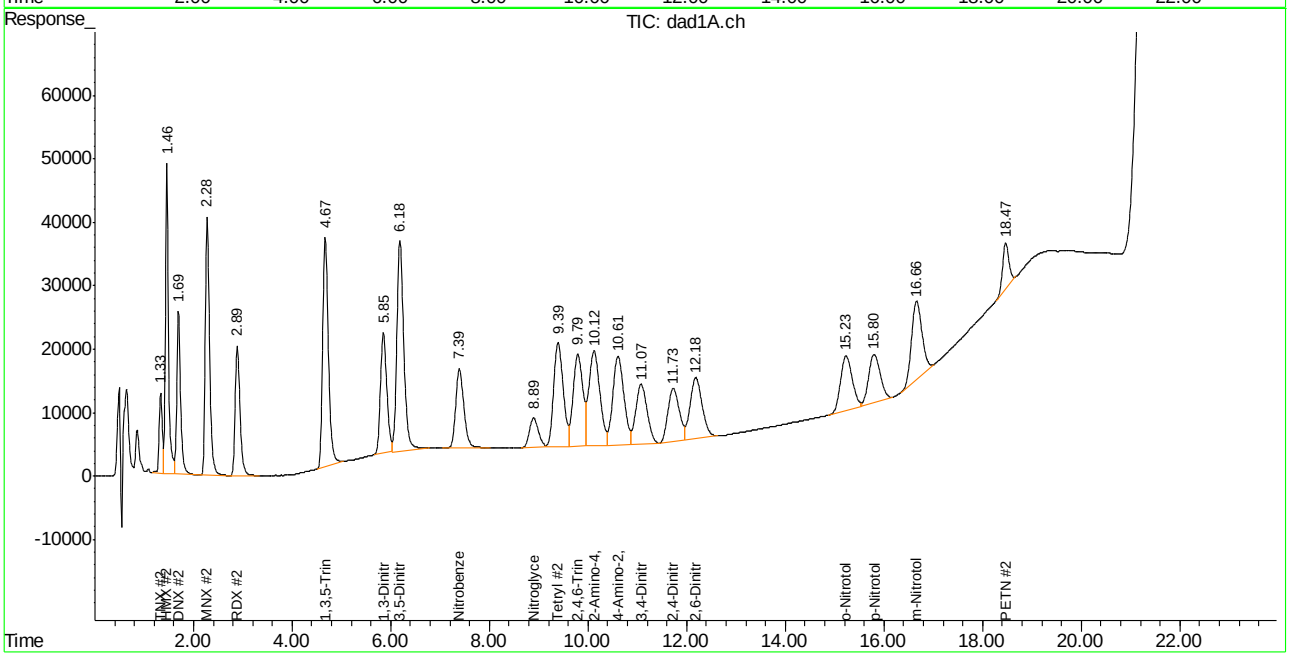
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:31 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

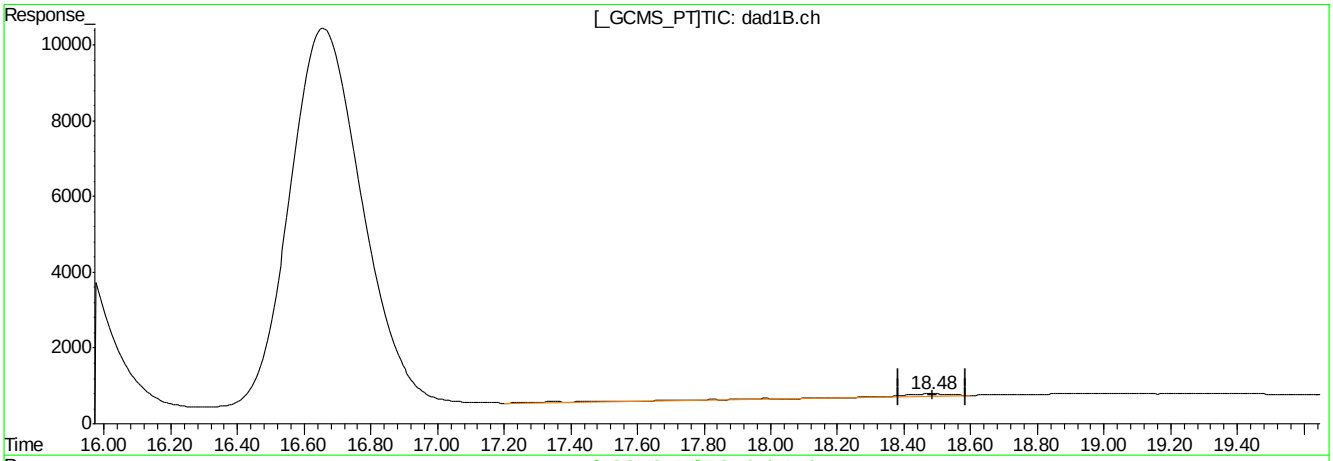
Sample Number: GBB2118-IC2118
Lab FileID: BB070758.D
Injection Time: 10/30/21 15:32
Method: SW846 8330A
Analyst approved: 11/01/21 12:47 James Boone
Supervisor approved: 11/01/21 13:51 Naresh Jiawan

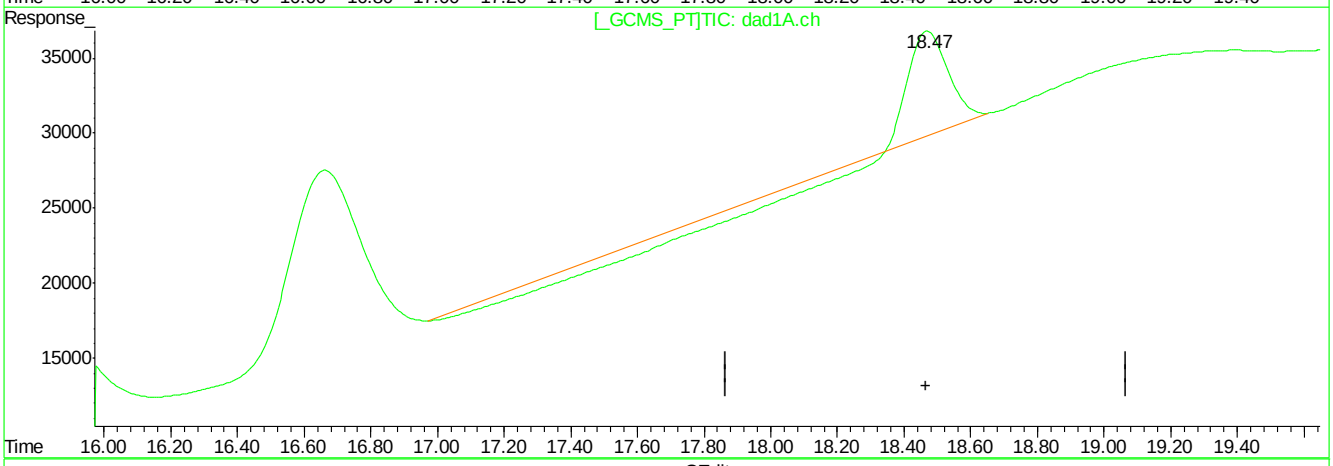
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.67	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.18	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.23	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.80	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.66	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.48min 0.000ppb

response 3191

(21) PETN #2

18.47min 34.386ppb

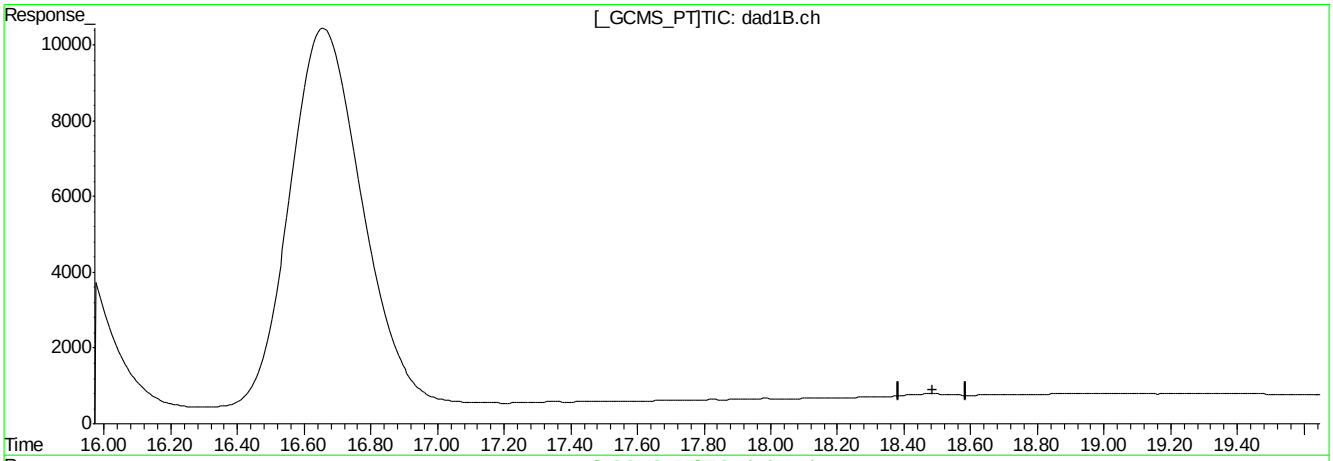
response 45621

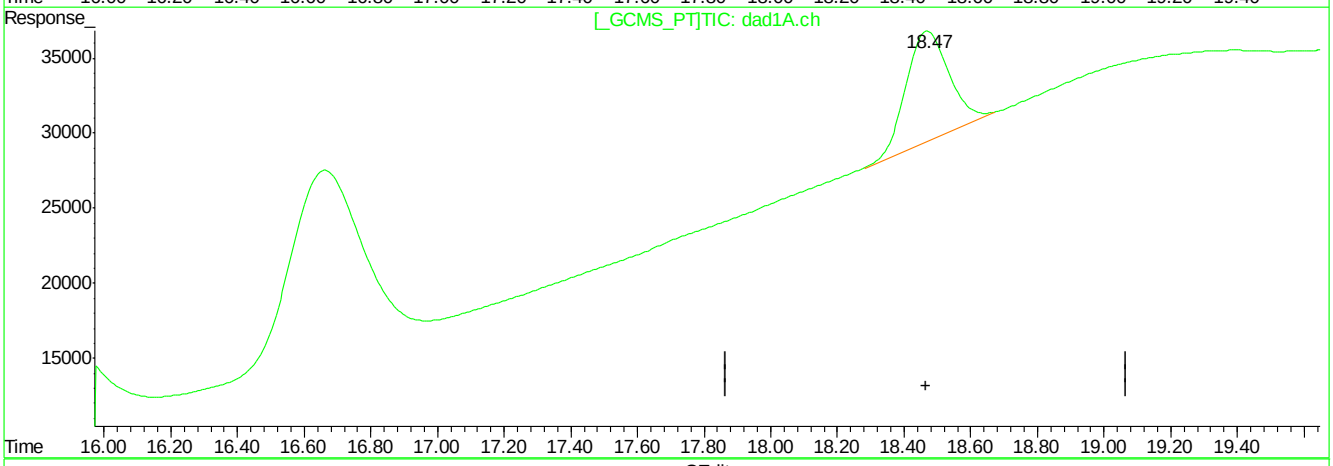
(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:29:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.47min 496.061ppb m

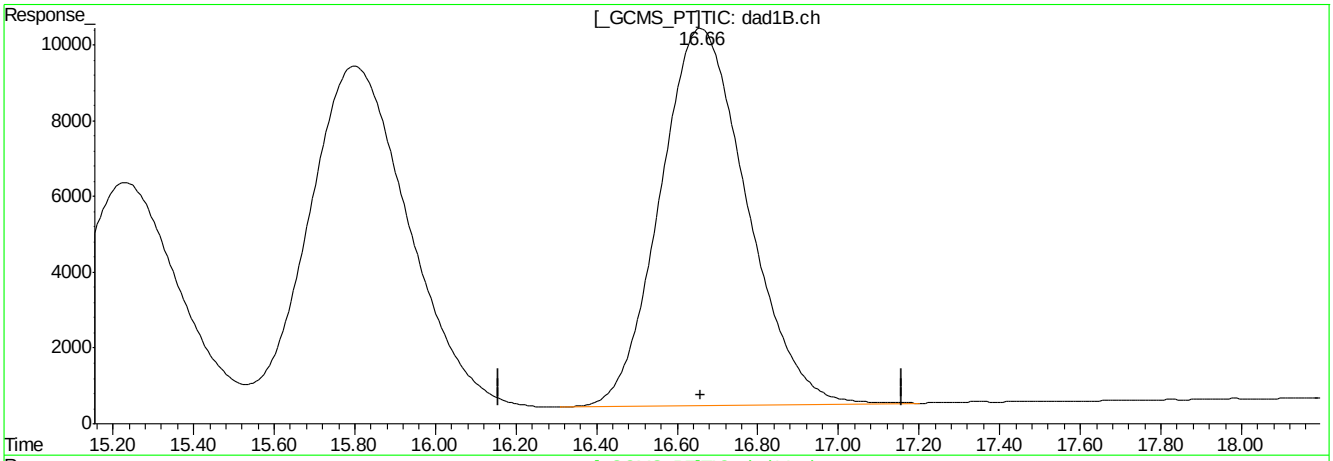
response 658144

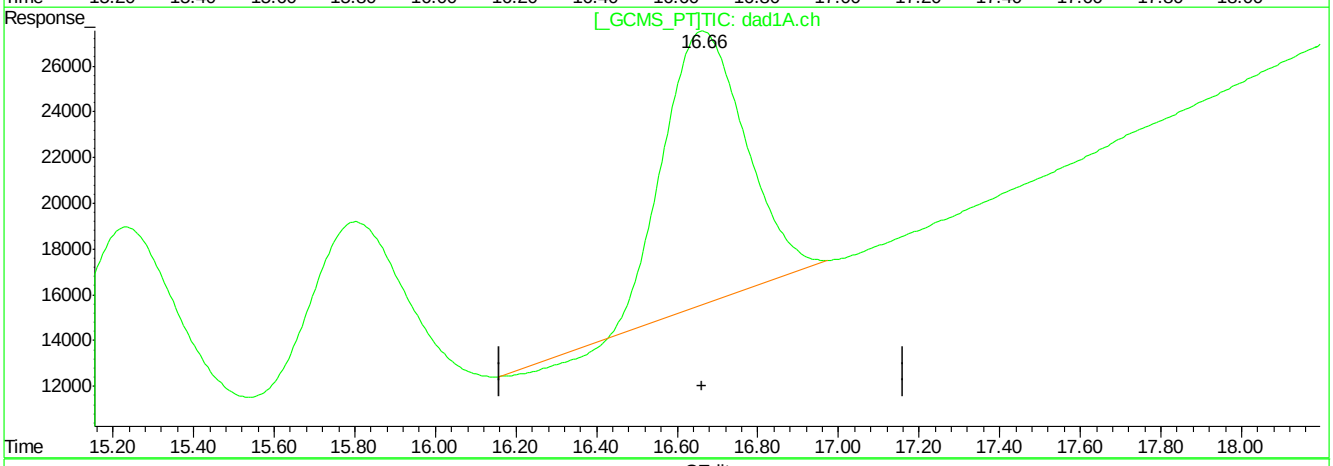
(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:30:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.66min 477.048ppb

response 1493095

(20) m-Nitrotoluene #2

16.67min 412.850ppb

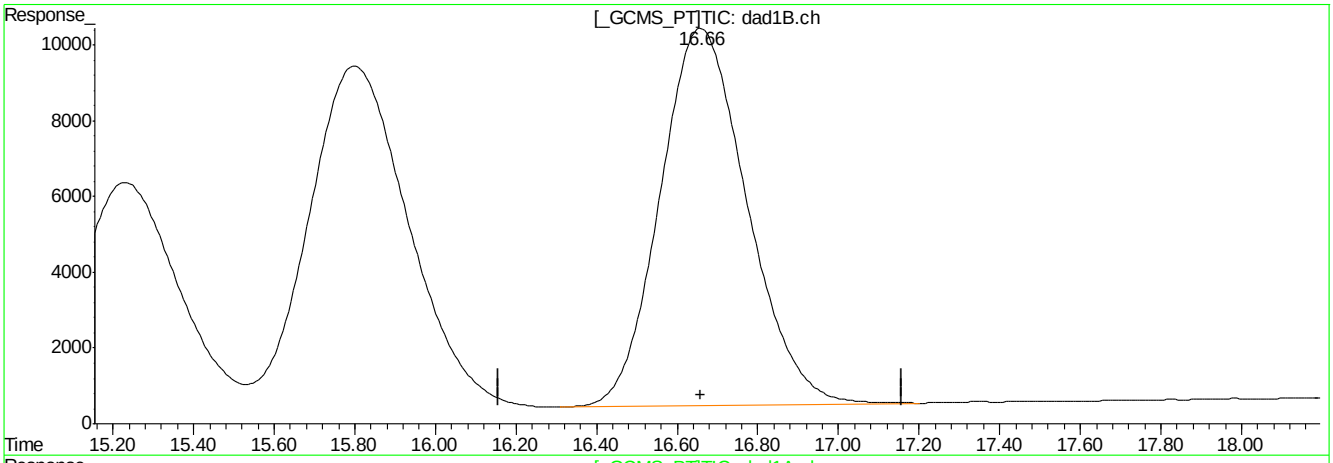
response 1651438

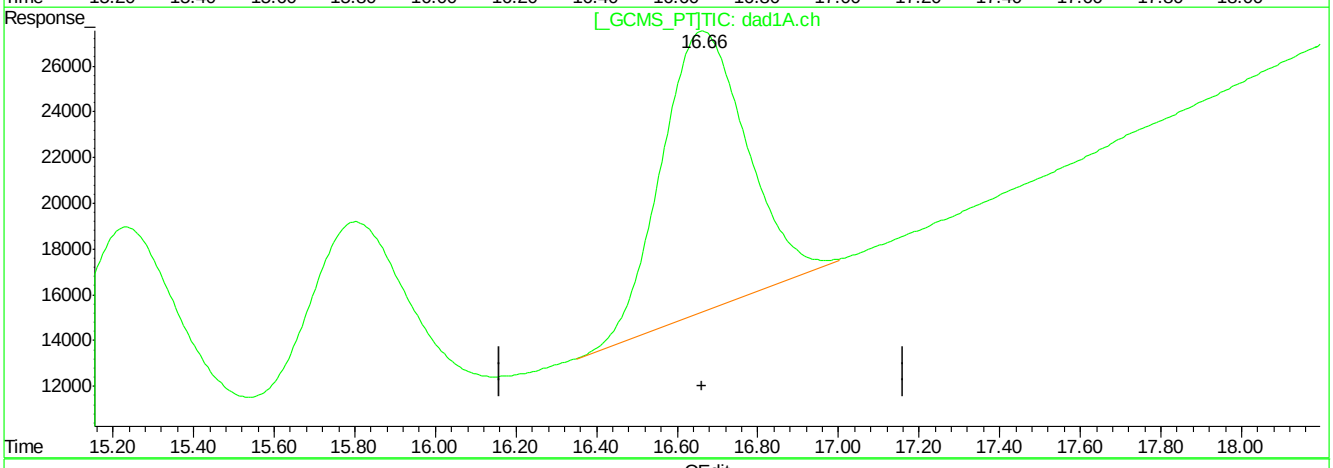
(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:30:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.66min 477.048ppb

response 1493095

(20) m-Nitrotoluene #2

16.66min 456.346ppb m

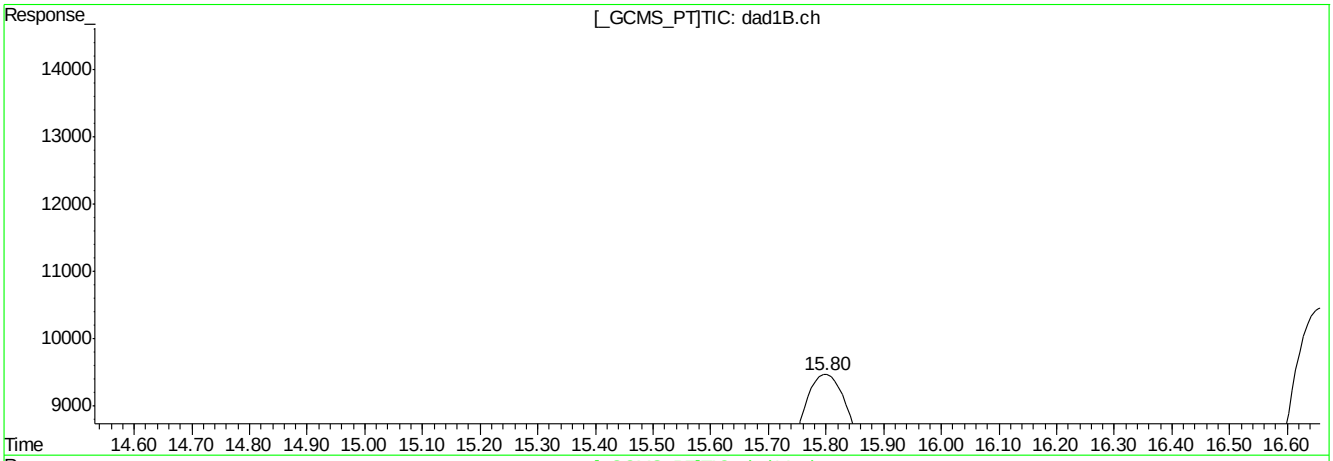
response 1825426

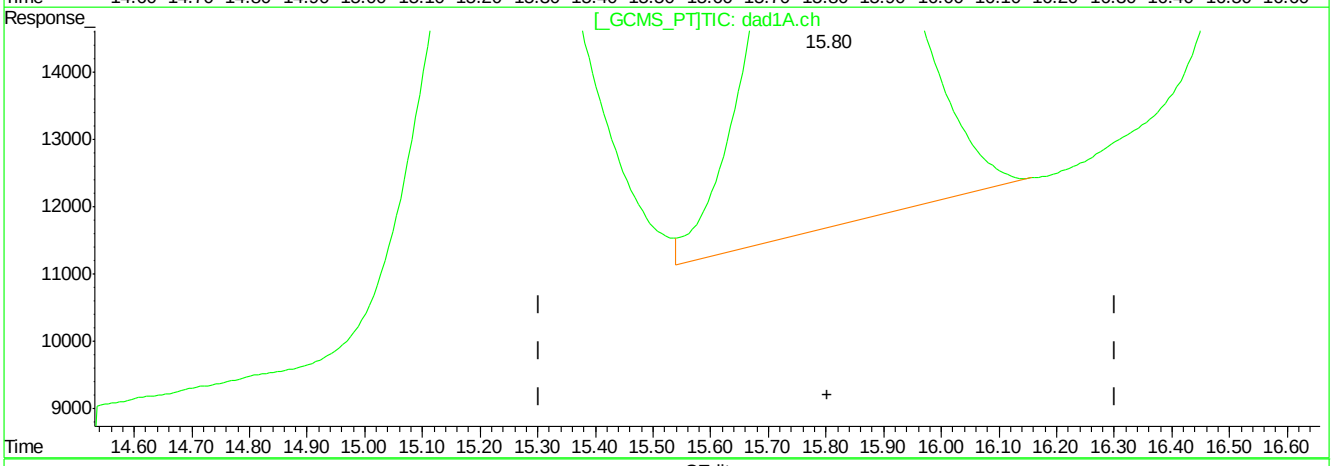
(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:30:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.80min 465.310ppb

response 1561374

(19) p-Nitrotoluene #2

15.80min 420.589ppb

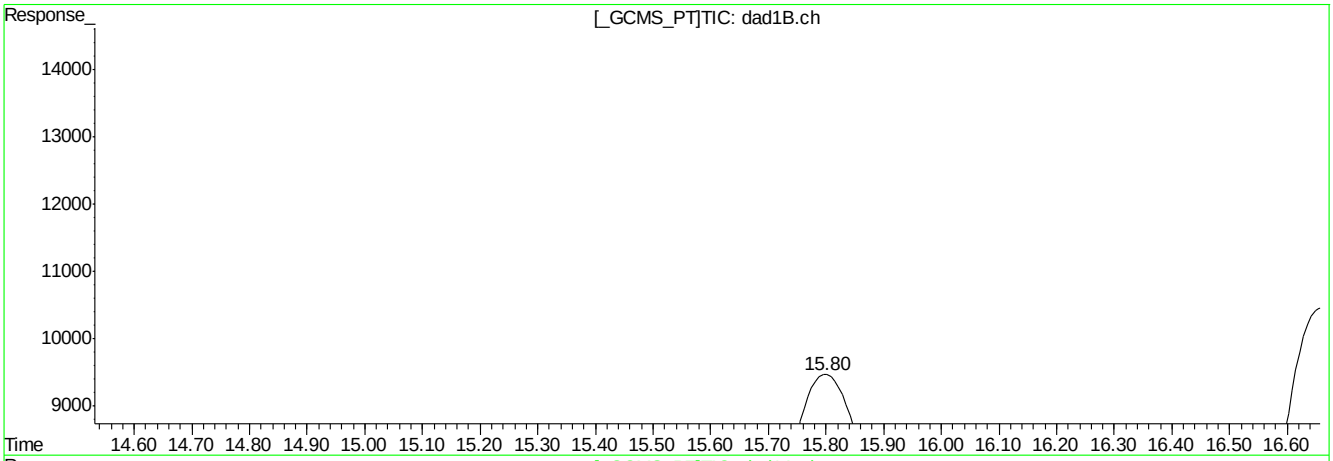
response 1210788

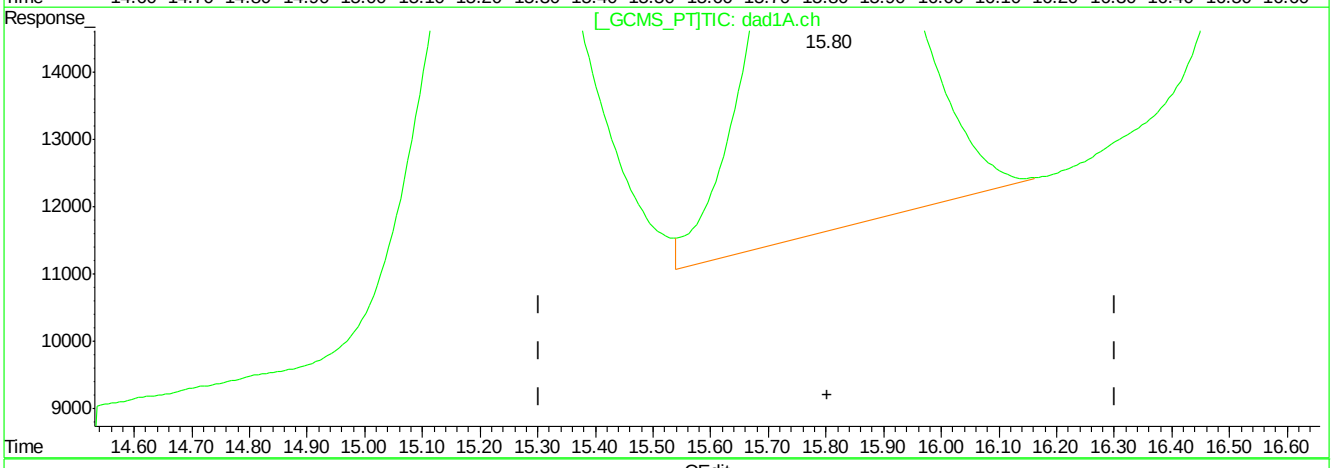
(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:30:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.80min 465.310ppb

response 1561374

(19) p-Nitrotoluene #2

15.80min 427.540ppb m

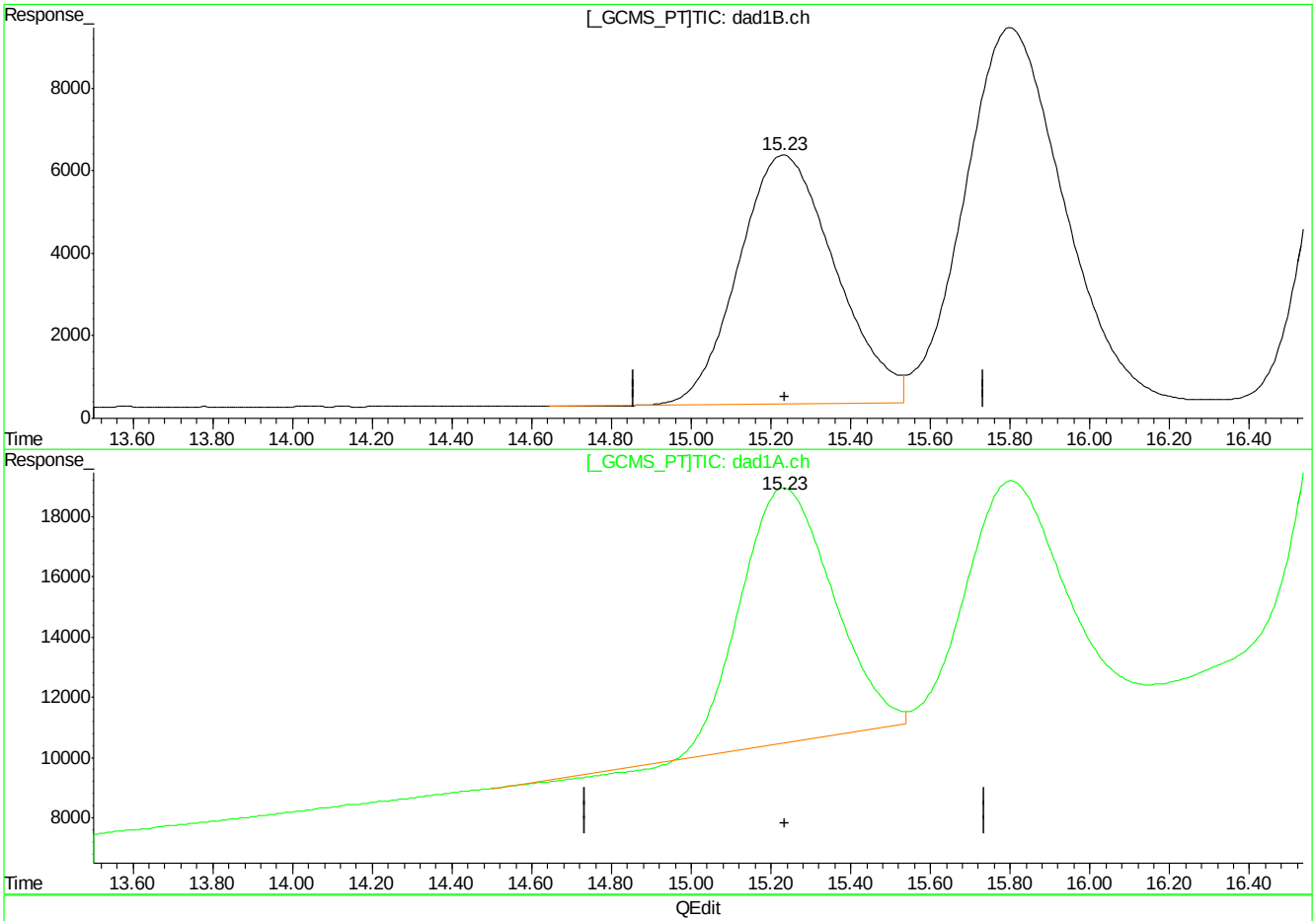
response 1230798

(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:30:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.23min 464.992ppb

response 1012666

(18) o-Nitrotoluene #2

15.24min 442.864ppb

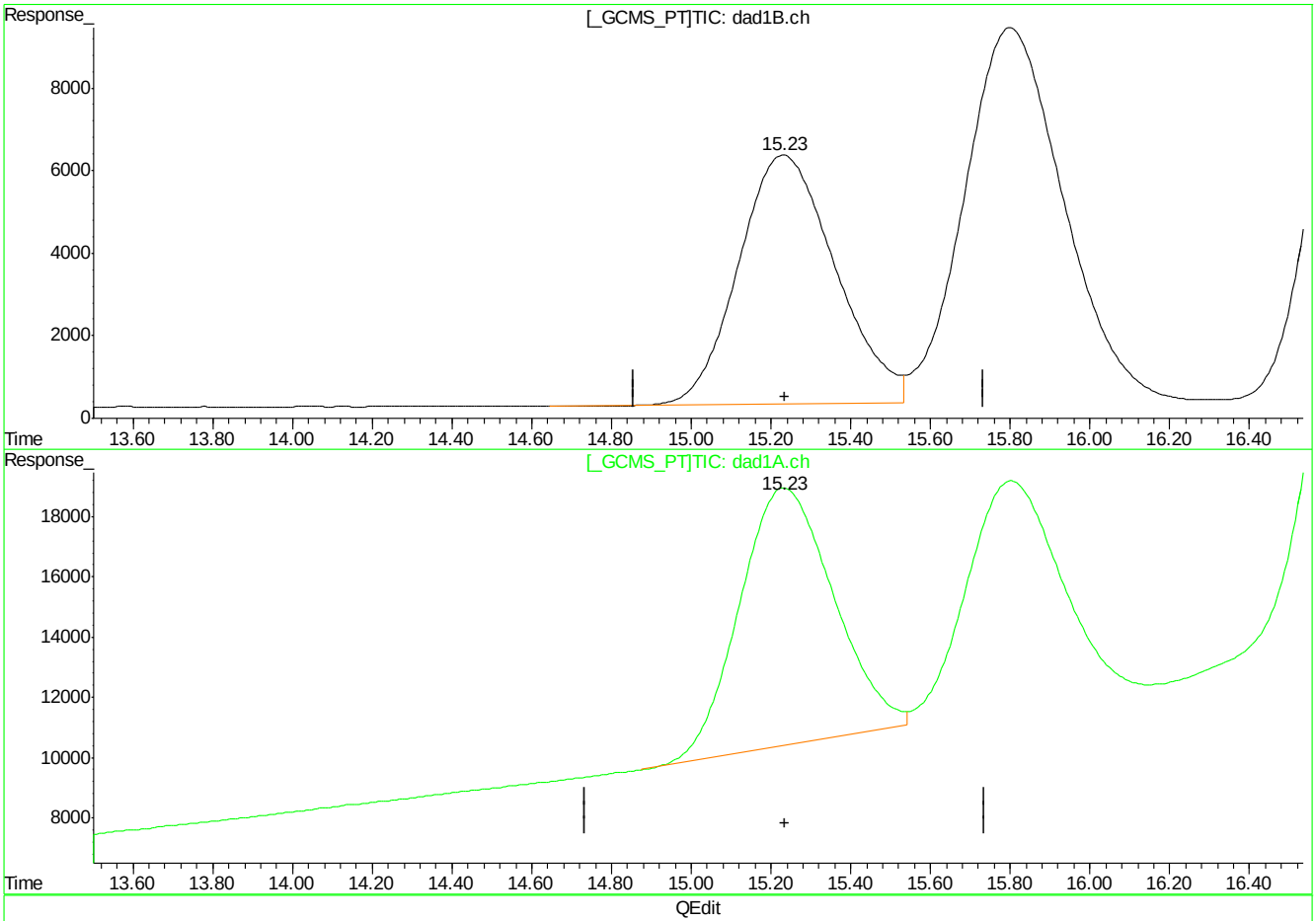
response 1337916

(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:30:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.23min 464.992ppb

response 1012666

(18) o-Nitrotoluene #2

15.23min 464.154ppb m

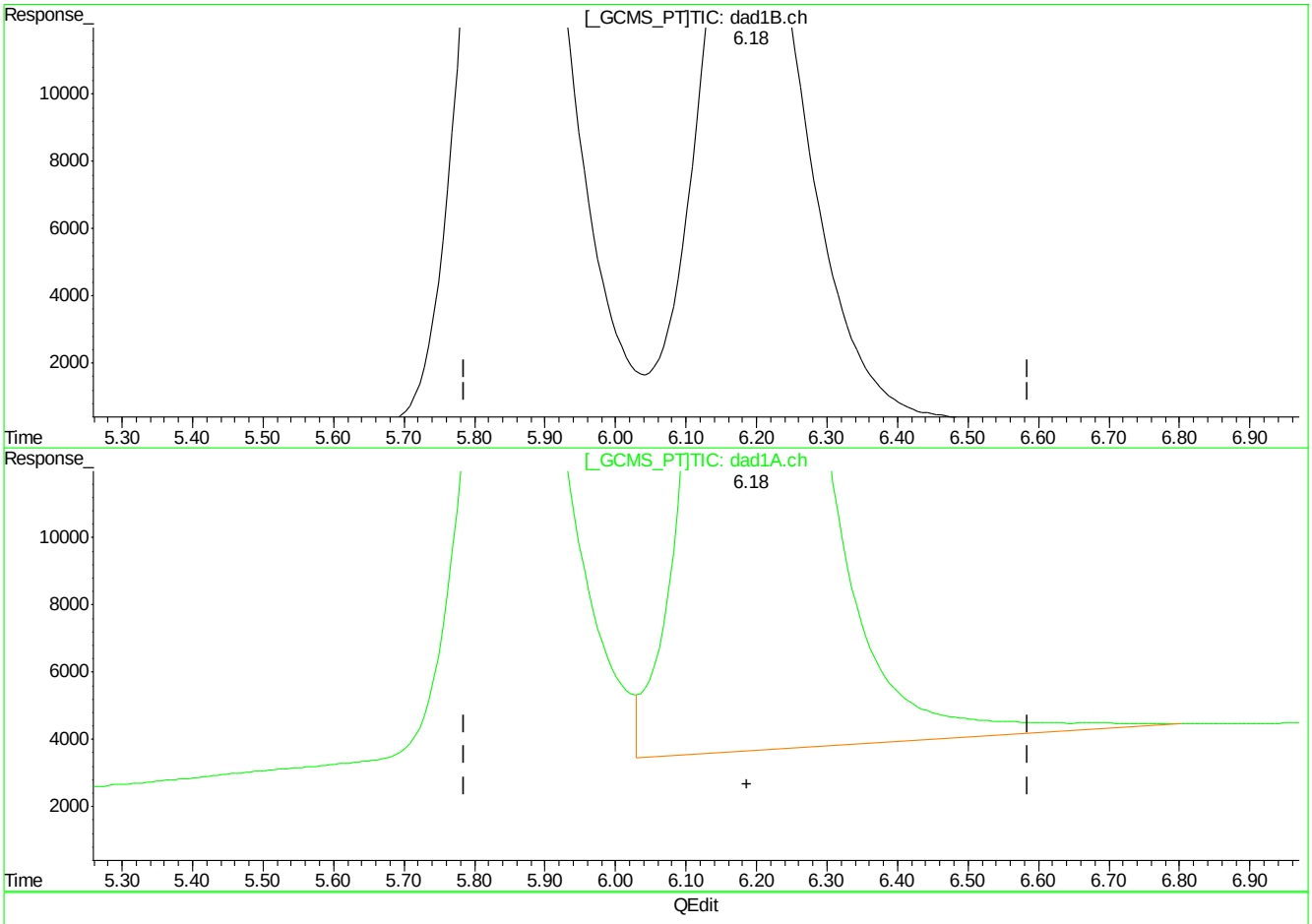
response 1402233

(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:30:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.19min 471.107ppb

response 1873248

(8) 3,5-Dinitroaniline #2

6.19min 478.874ppb

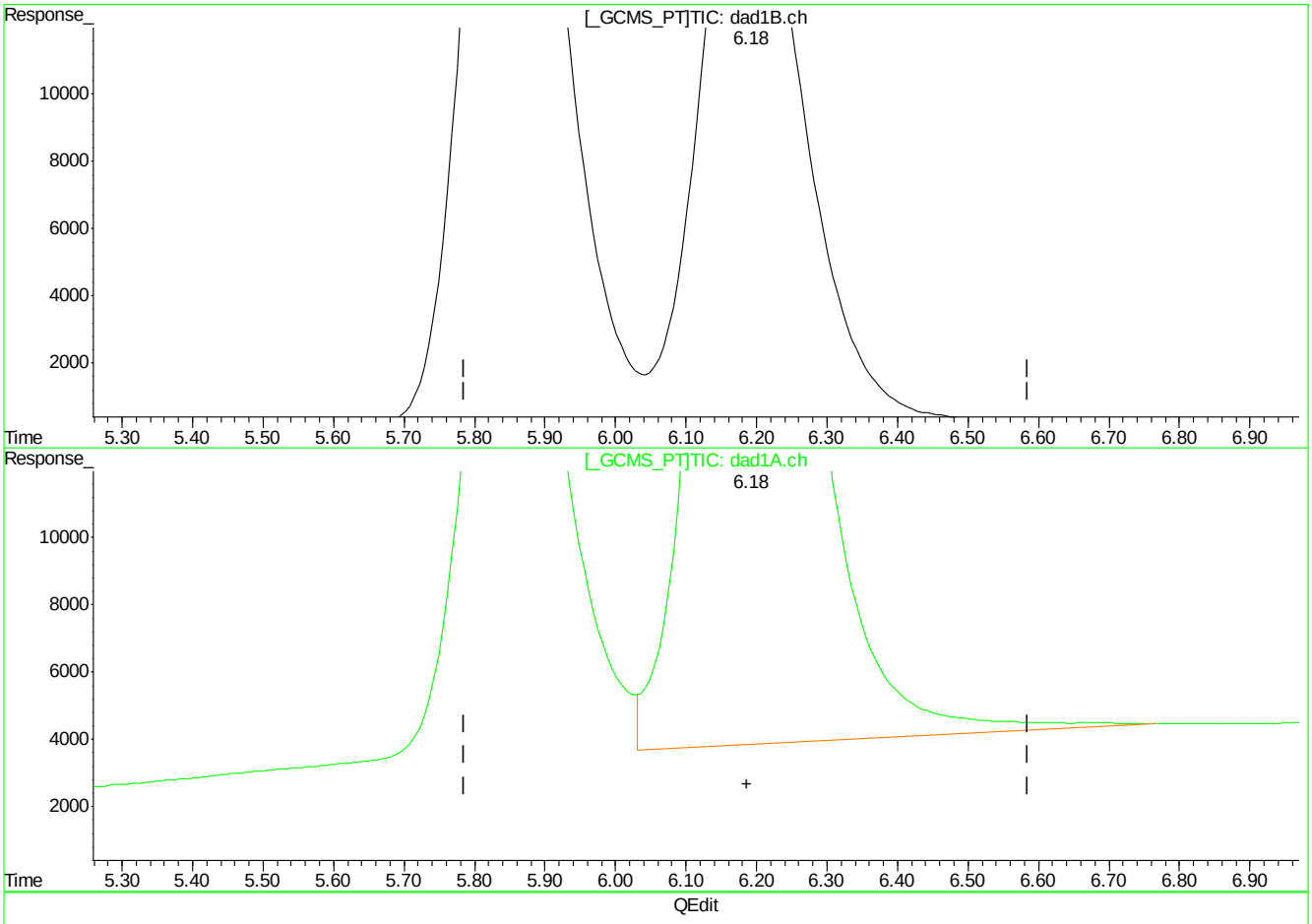
response 3313940

(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:30:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.19min 471.107ppb

response 1873248

(8) 3,5-Dinitroaniline #2

6.18min 469.233ppb m

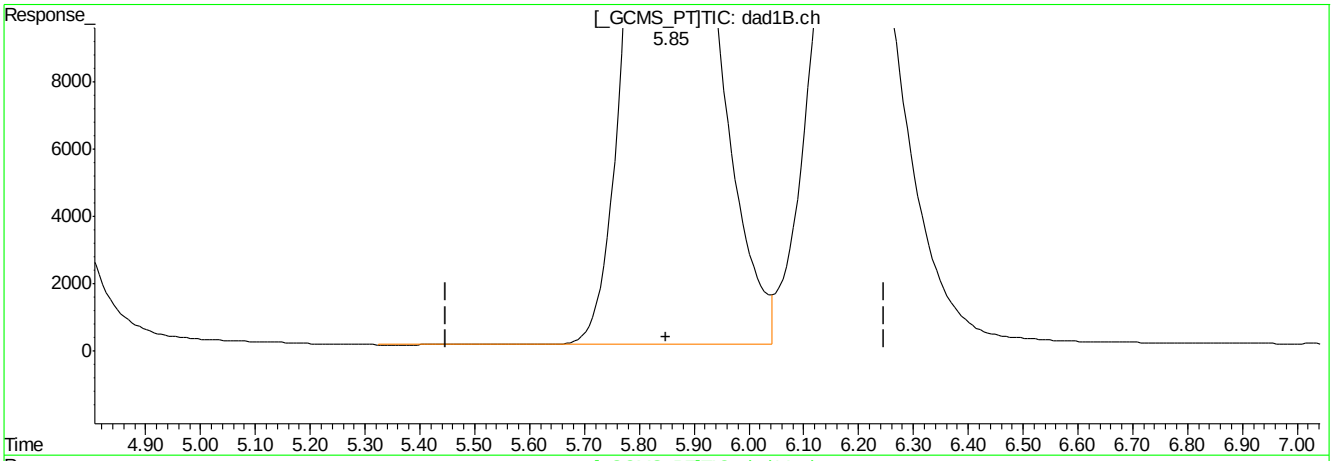
response 3247222

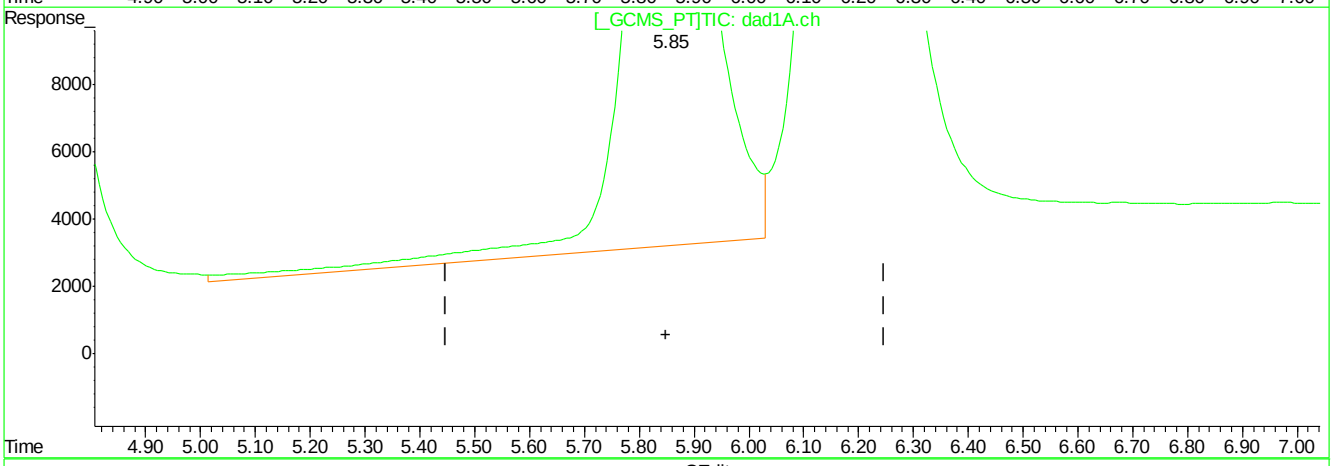
(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:31:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 472.502ppb

response 2461945

(7) 1,3-Dinitrobenzene #2

5.85min 524.081ppb

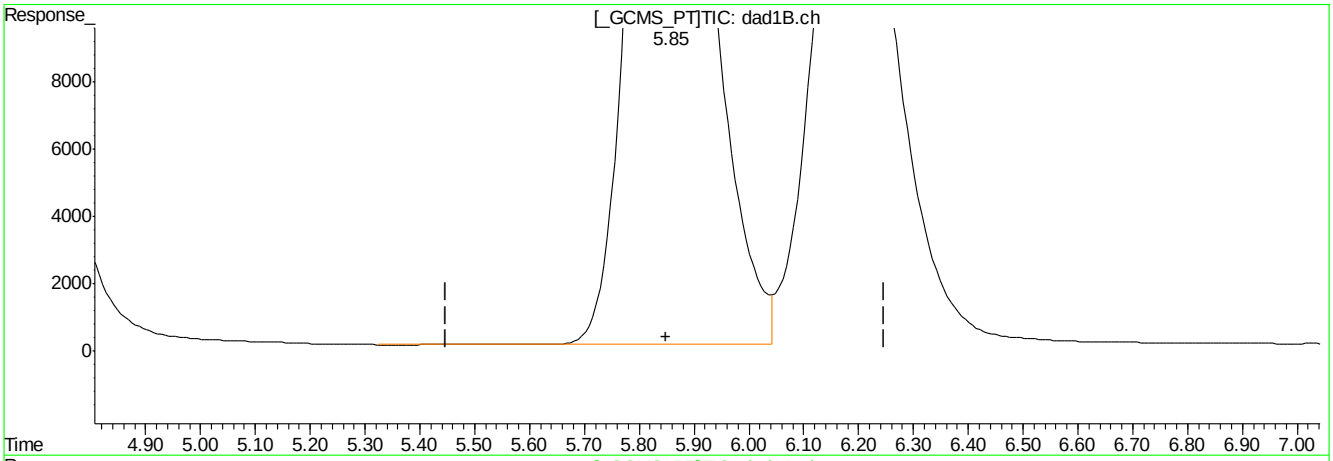
response 1874187

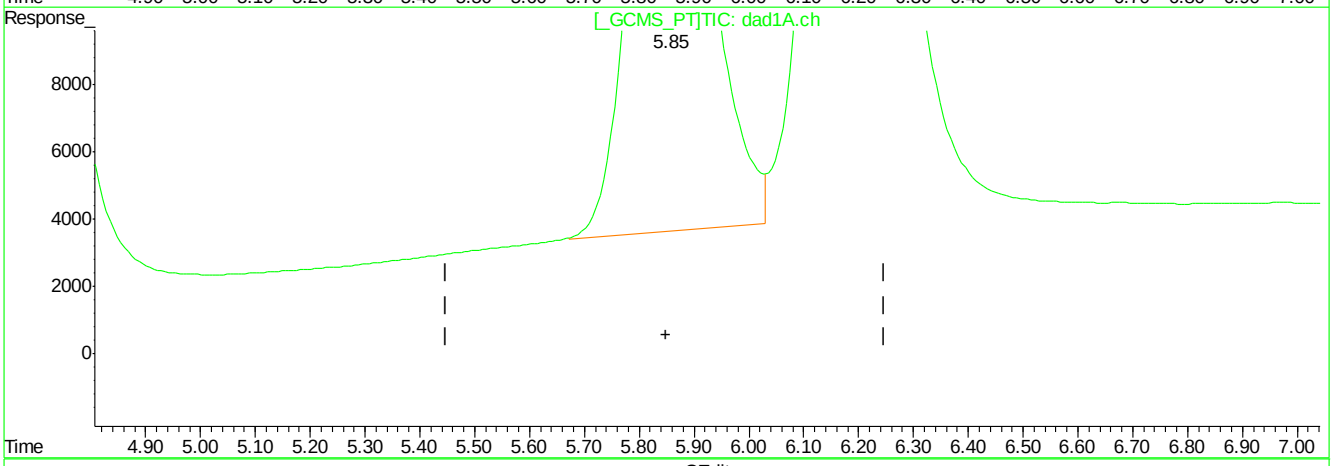
(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:31:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 472.502ppb

response 2461945

(7) 1,3-Dinitrobenzene #2

5.85min 476.101ppb m

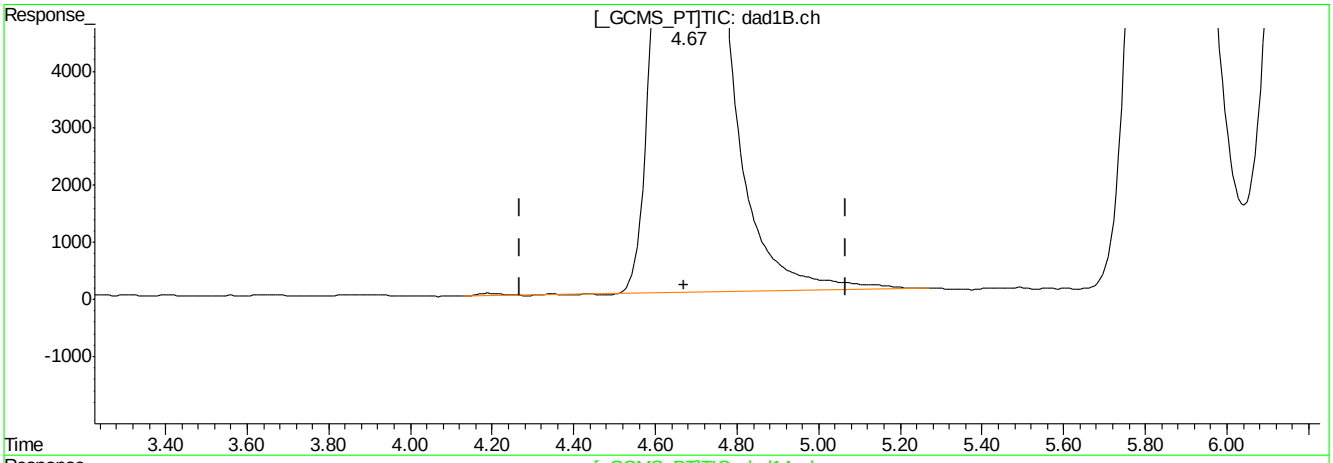
response 1702602

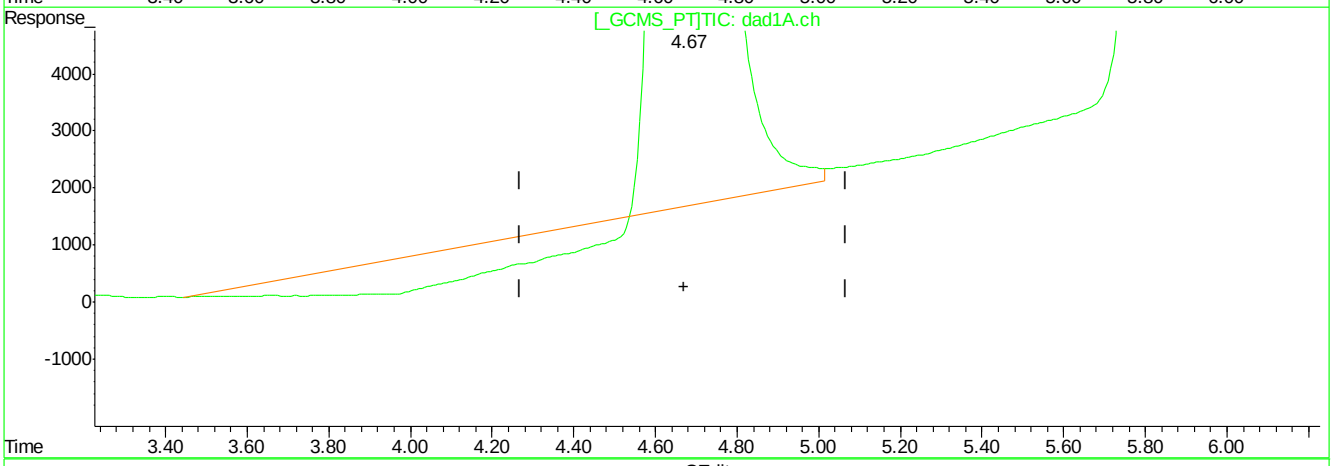
(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:31:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.67min 472.725ppb

response 1877939

(6) 1,3,5-Trinitrobenzene #2

4.67min 422.307ppb

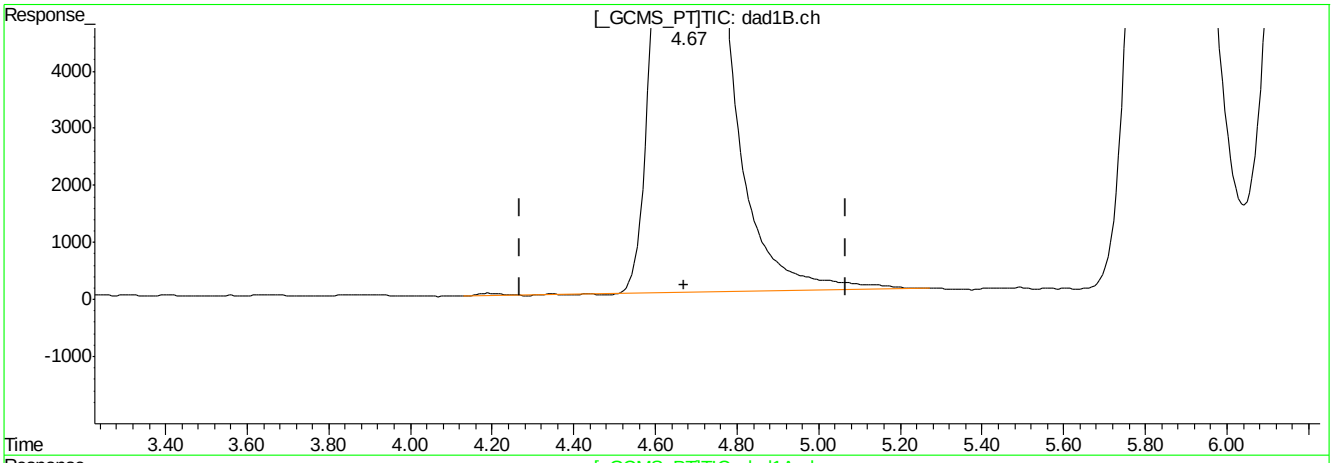
response 2620844

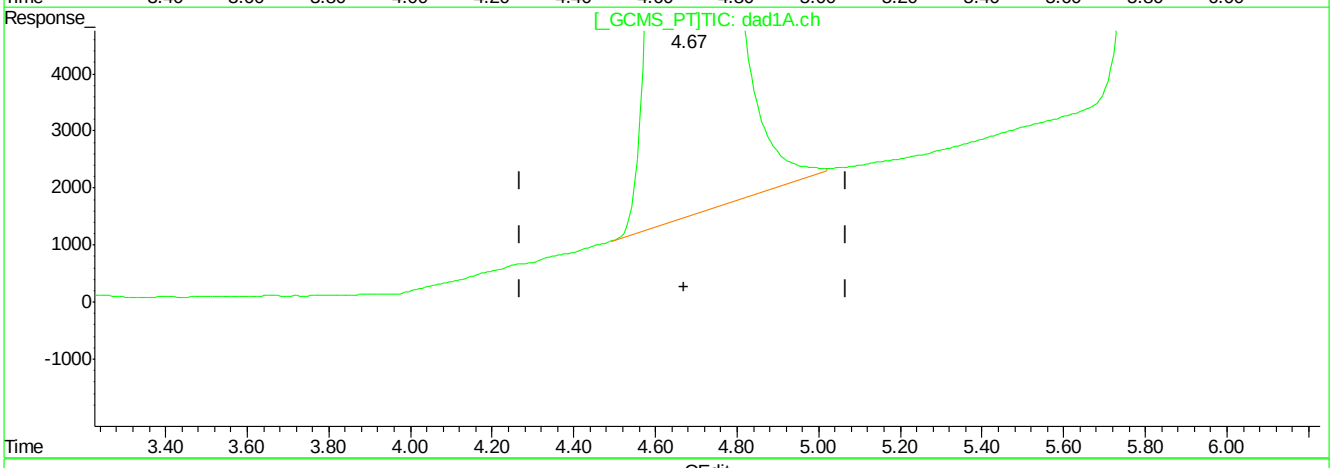
(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:31:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070758.D\dad1A.ch
Acq On : 30-Oct-2021, 15:32:59 Operator: jamesb
Sample : ic2118-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.67min 472.725ppb

response 1877939

(6) 1,3,5-Trinitrobenzene #2

4.67min 470.784ppb m

response 2921694

(+) = Expected Retention Time
BB070758.D BBB2118_103021.M Mon Nov 01 08:31:27 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 13:51

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 01 08:23:59 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.08	11.08	1864182	3125889	865.902	836.663
	Spiked Amount 500.000	Range 70 - 136		Recovery =		173.18%#	167.33%#
	Target Compounds						
1)	TNX	1.34	1.34	693549	1145842	576.012	618.738
2)	HMX	1.46	1.46	1457784	4042994	918.762	957.059
3)	DNX	1.70	1.70	1681287	2681436	925.524	957.210
4)	MNX	2.28	2.28	3219238	4941029	1369.986	1349.581
5)	RDX	2.89	2.89	1766706	2808510	951.499	953.251
6)	1,3,5-Trinitrobe	4.67	4.67	3780284	5960247	951.593	960.397m
7)	1,3-Dinitrobenze	5.85	5.85	4948425	3393896	949.713	949.039m
8)	3,5-Dinitroanili	6.19	6.19	3778035	6402362	950.145	925.161m
9)	Nitrobenzene	7.39	7.39	2883289	2852360	944.719	937.431m
10)	Nitroglycerin	0.00	8.90	0	1185972	N.D.	956.267m#
11)	Tetryl	9.40	9.40	2791339	4431783	925.690	911.253
12)	2,4,6-Trinitroto	9.80	9.80	3423481	4019356	944.075	945.957
13)	2-Amino-4,6-Dini	10.13	10.13	3244480	4769232	939.452	924.414
14)	4-Amino-2,6-Dini	10.61	10.61	2340228	4526994	937.705	922.143
16)	2,4-Dinitrotolue	11.73	11.73	4358979	2735924	955.605	866.780
17)	2,6-Dinitrotolue	12.19	12.19	2613886	3337815	950.245	991.323
18)	o-Nitrotoluene	15.24	15.24	2035703	2901424	934.747	960.402m
19)	p-Nitrotoluene	15.81	15.81	3161358	2584451	942.126	897.757
20)	m-Nitrotoluene	16.66	16.66	3020541	3672260	965.071	918.045m
21)	PETN	0.00	18.47	0	1328782	N.D. d	1001.539m

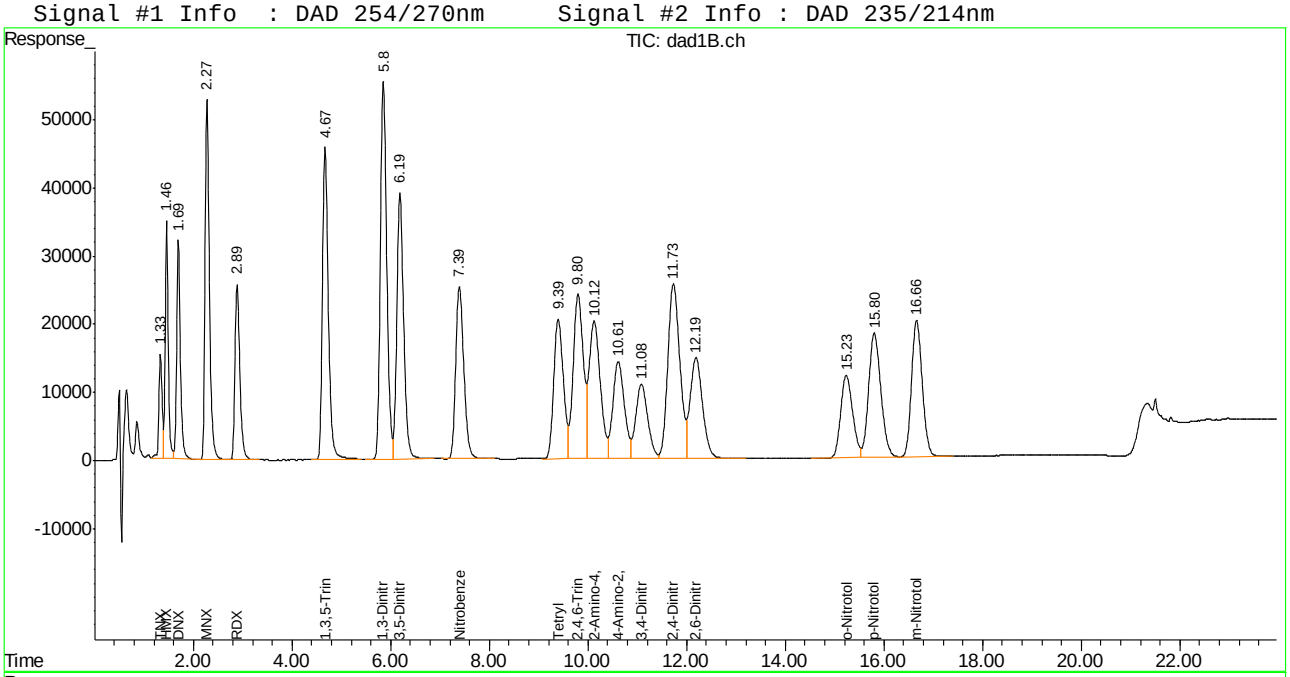
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070759.D BBB2118_103021.M Mon Nov 01 11:46:16 2021 Page 1

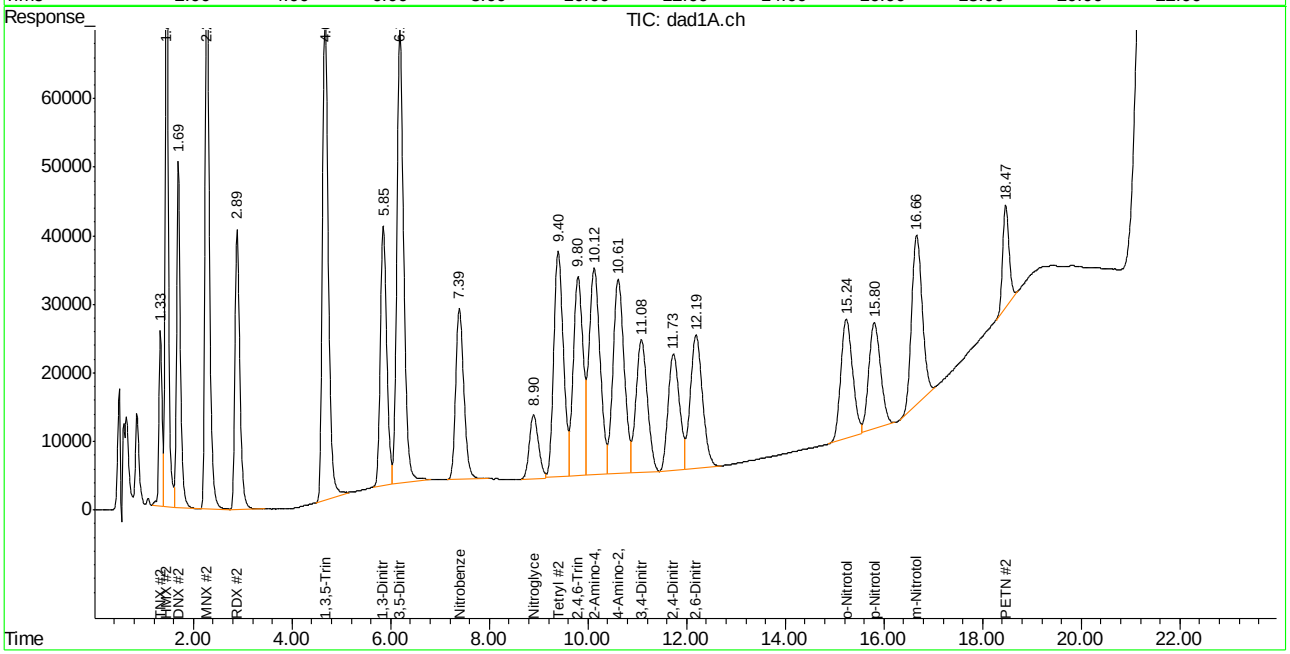
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:29 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

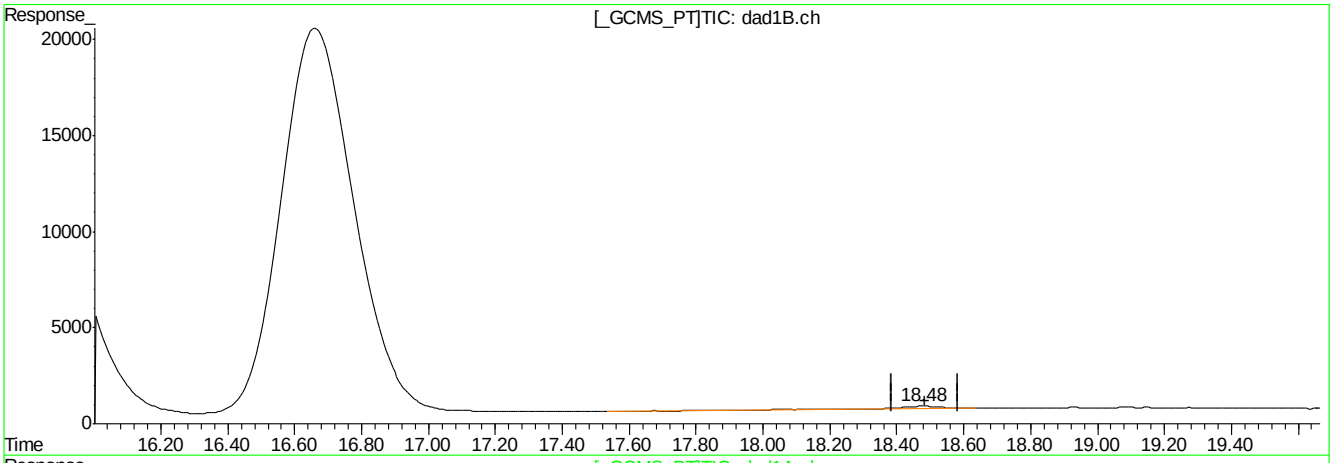
Sample Number: GBB2118-ICC2118 **Method:** SW846 8330A
Lab FileID: BB070759.D **Analyst approved:** 11/01/21 12:47 James Boone
Injection Time: 10/30/21 16:04 **Supervisor approved:** 11/01/21 13:51 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.67	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.19	Poor instrument integration
Nitrobenzene	98-95-3	2	7.39	Poor instrument integration
Nitroglycerine	55-63-0	2	8.90	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.24	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.66	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(21) PETN

18.48min 0.000ppb

response 9810

(21) PETN #2

18.47min 506.806ppb

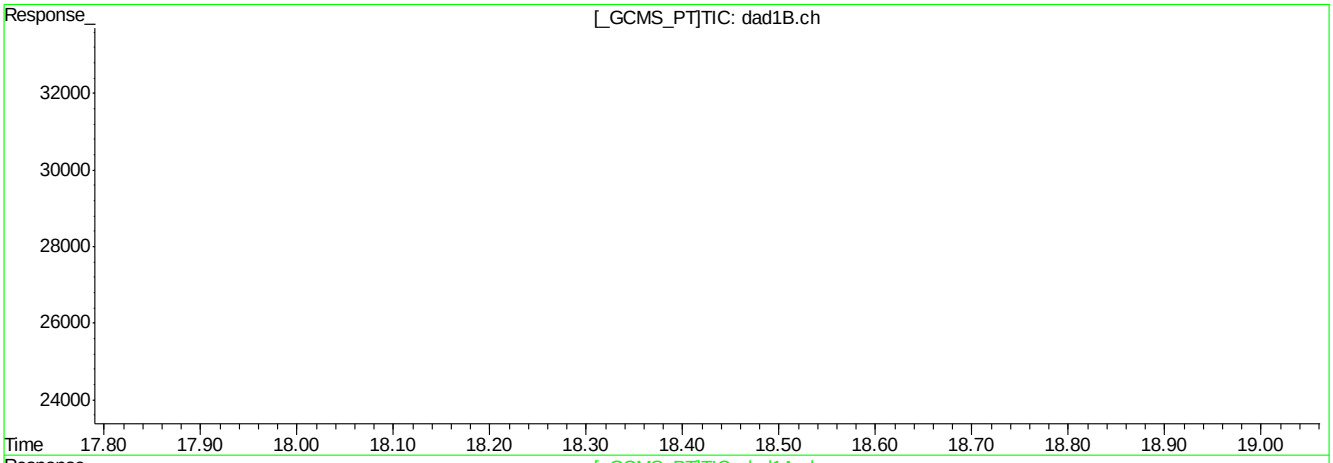
response 672399

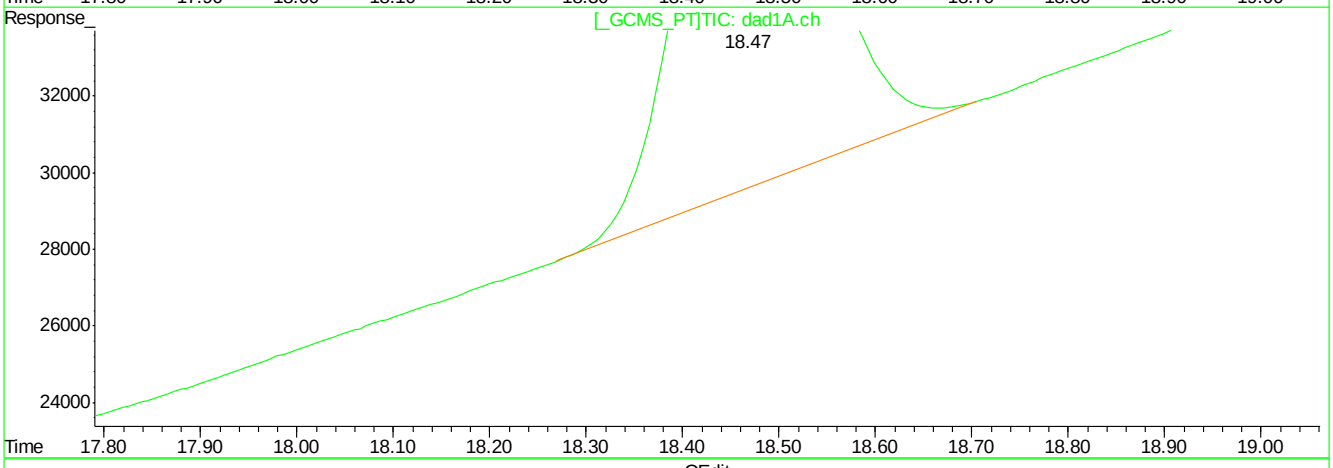
(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:27:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.47min 1001.539ppb m

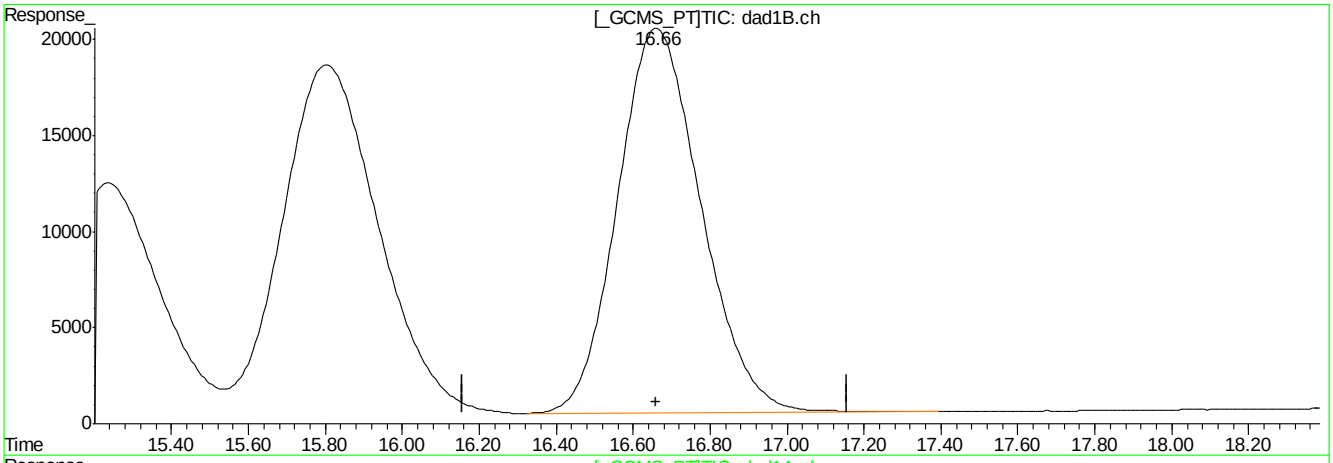
response 1328782

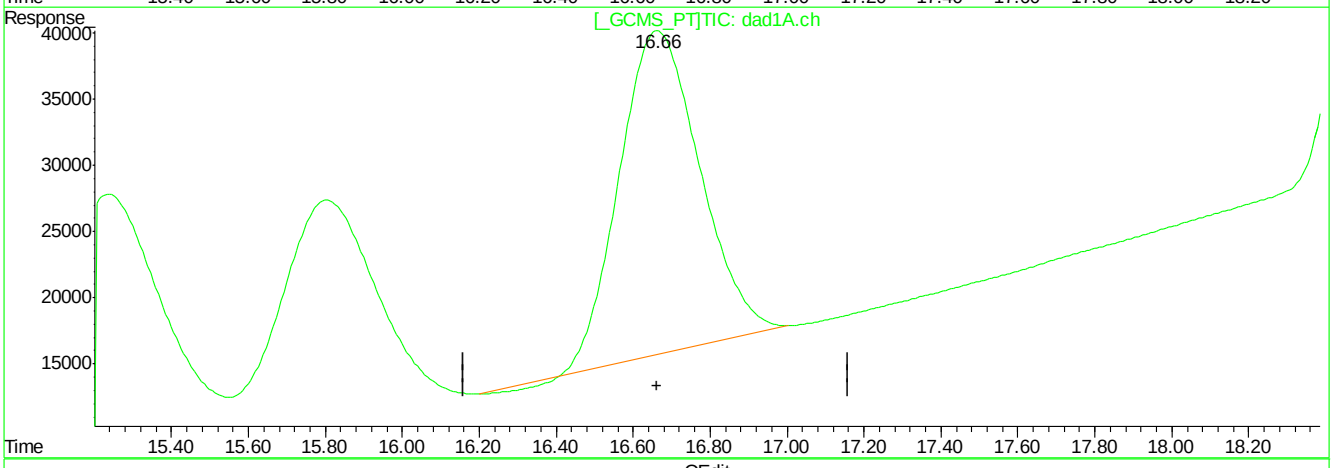
(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.66min 965.071ppb

response 3020541

(20) m-Nitrotoluene #2

16.66min 884.397ppb

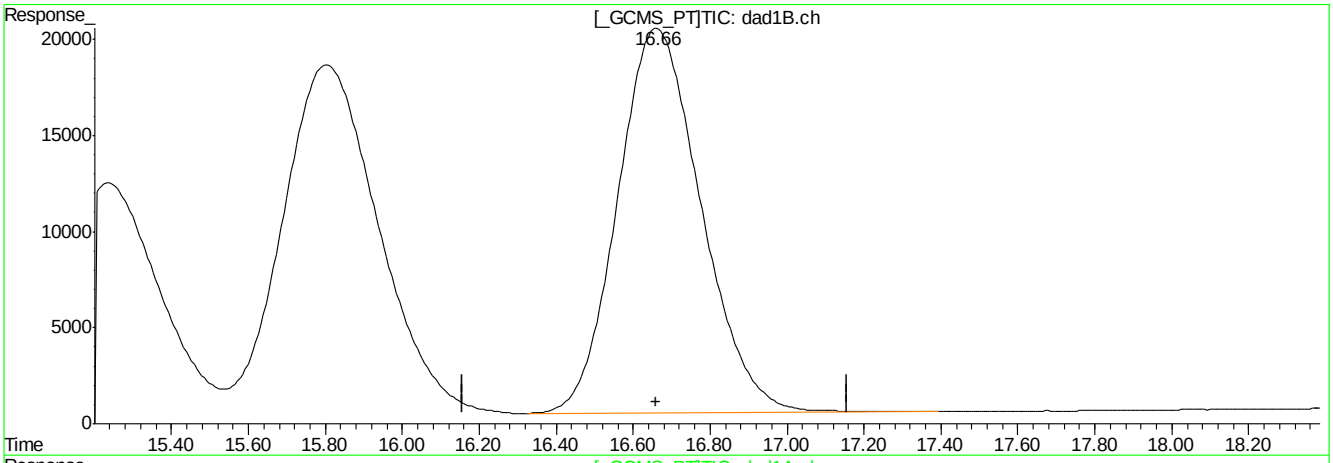
response 3537669

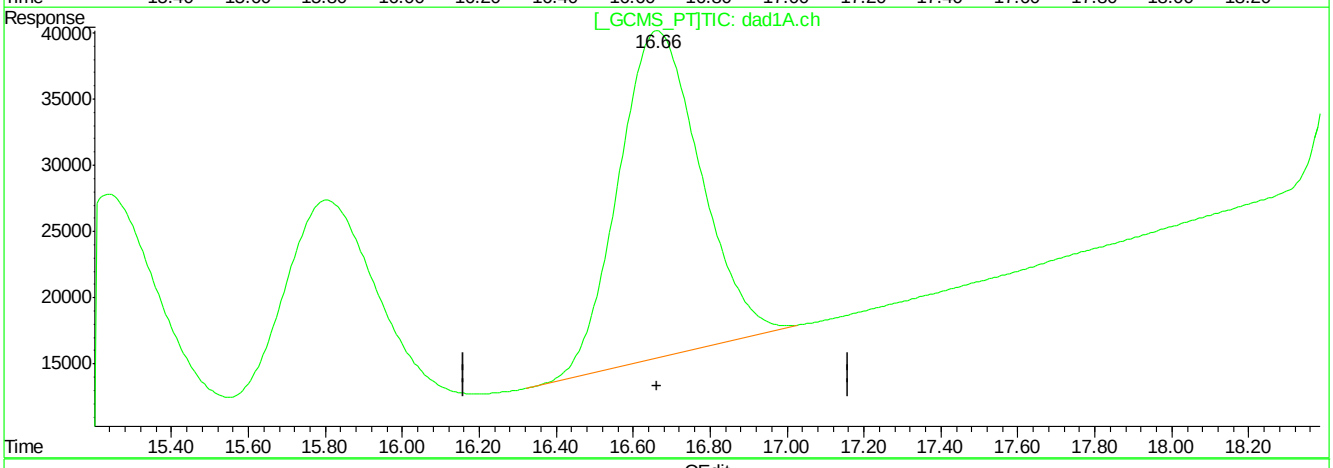
(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.66min 965.071ppb

response 3020541

(20) m-Nitrotoluene #2

16.66min 918.045ppb m

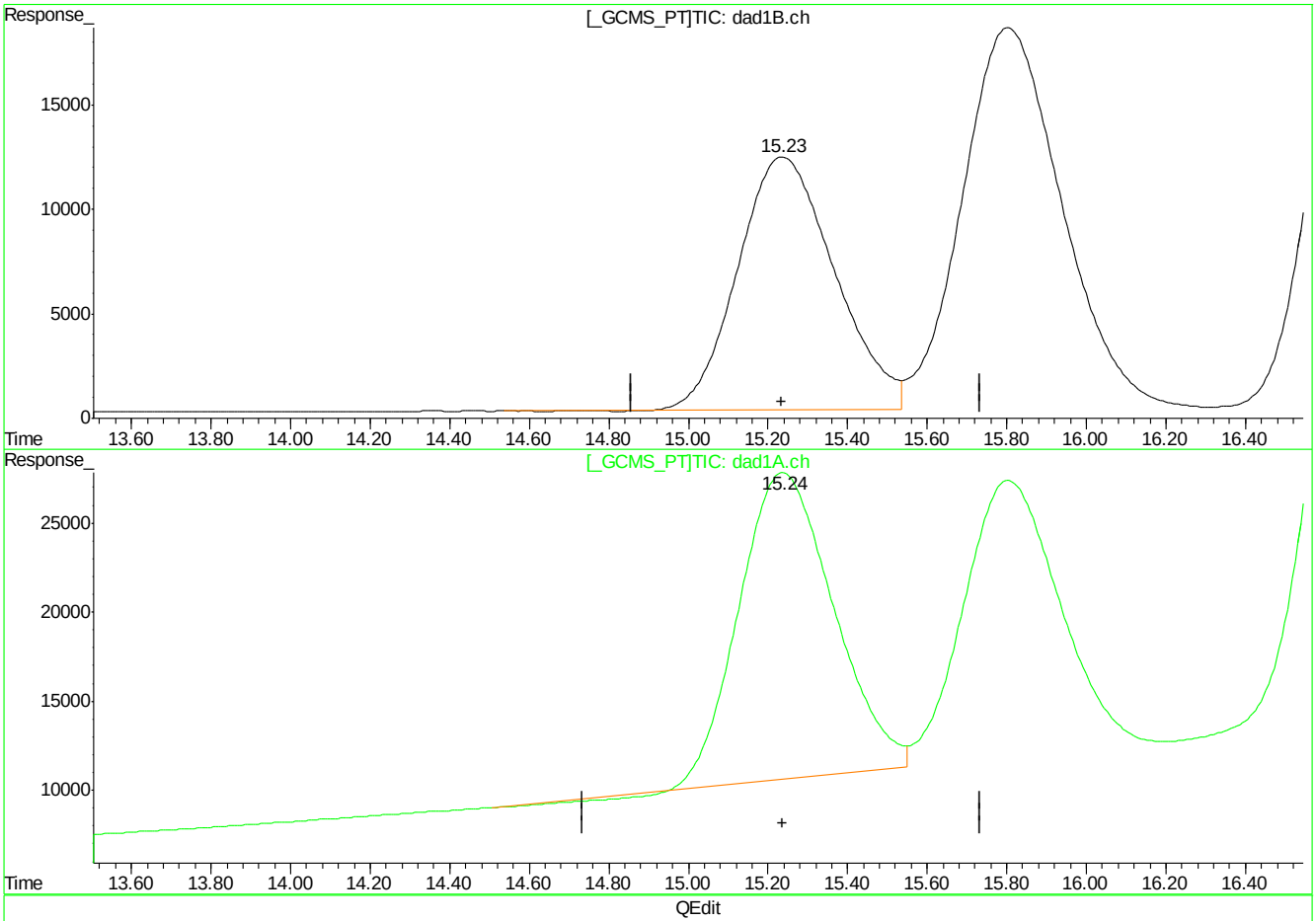
response 3672260

(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.24min 934.747ppb

response 2035703

(18) o-Nitrotoluene #2

15.24min 930.415ppb

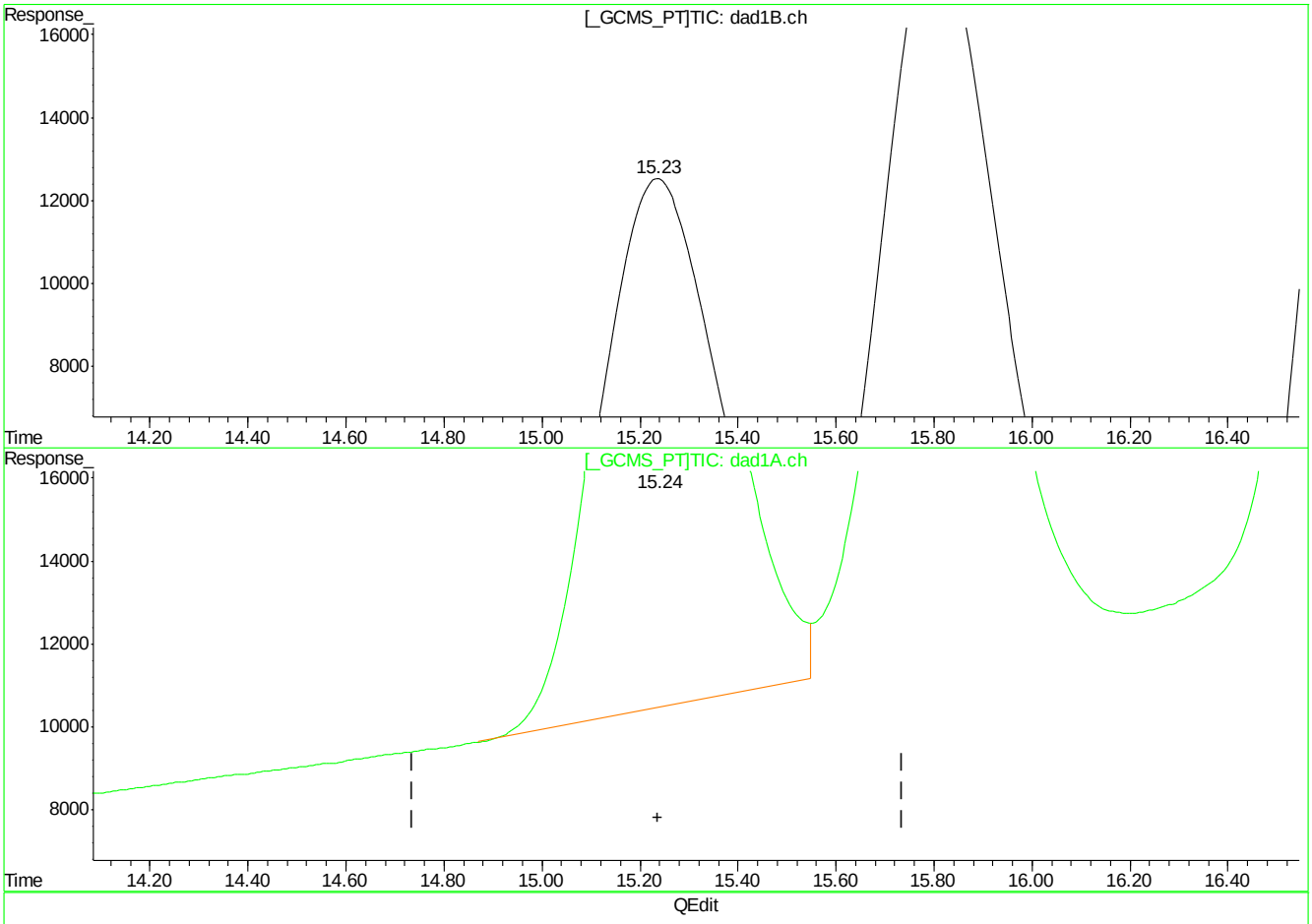
response 2810832

(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.24min 934.747ppb

response 2035703

(18) o-Nitrotoluene #2

15.24min 960.402ppb m

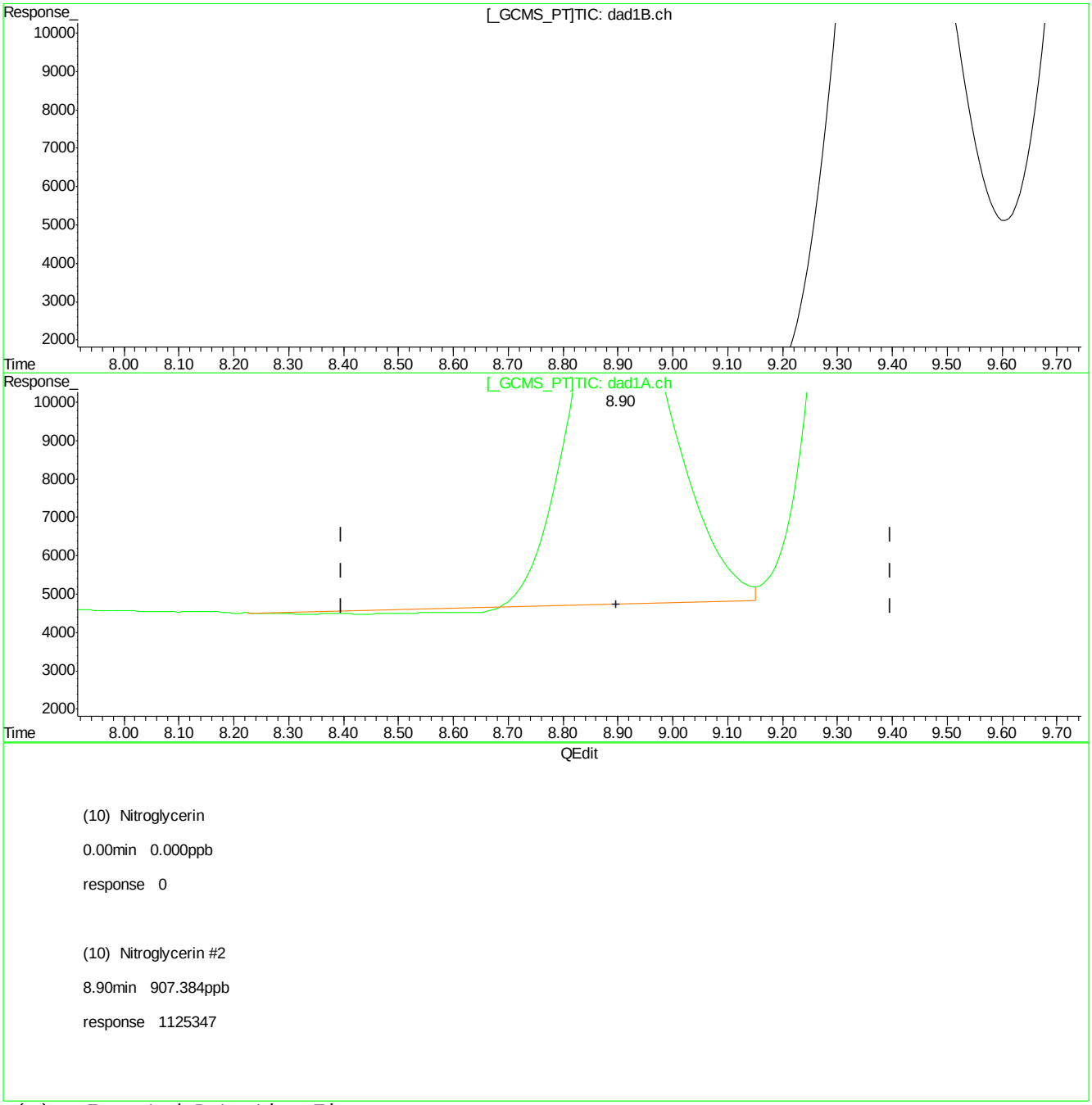
response 2901424

(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration

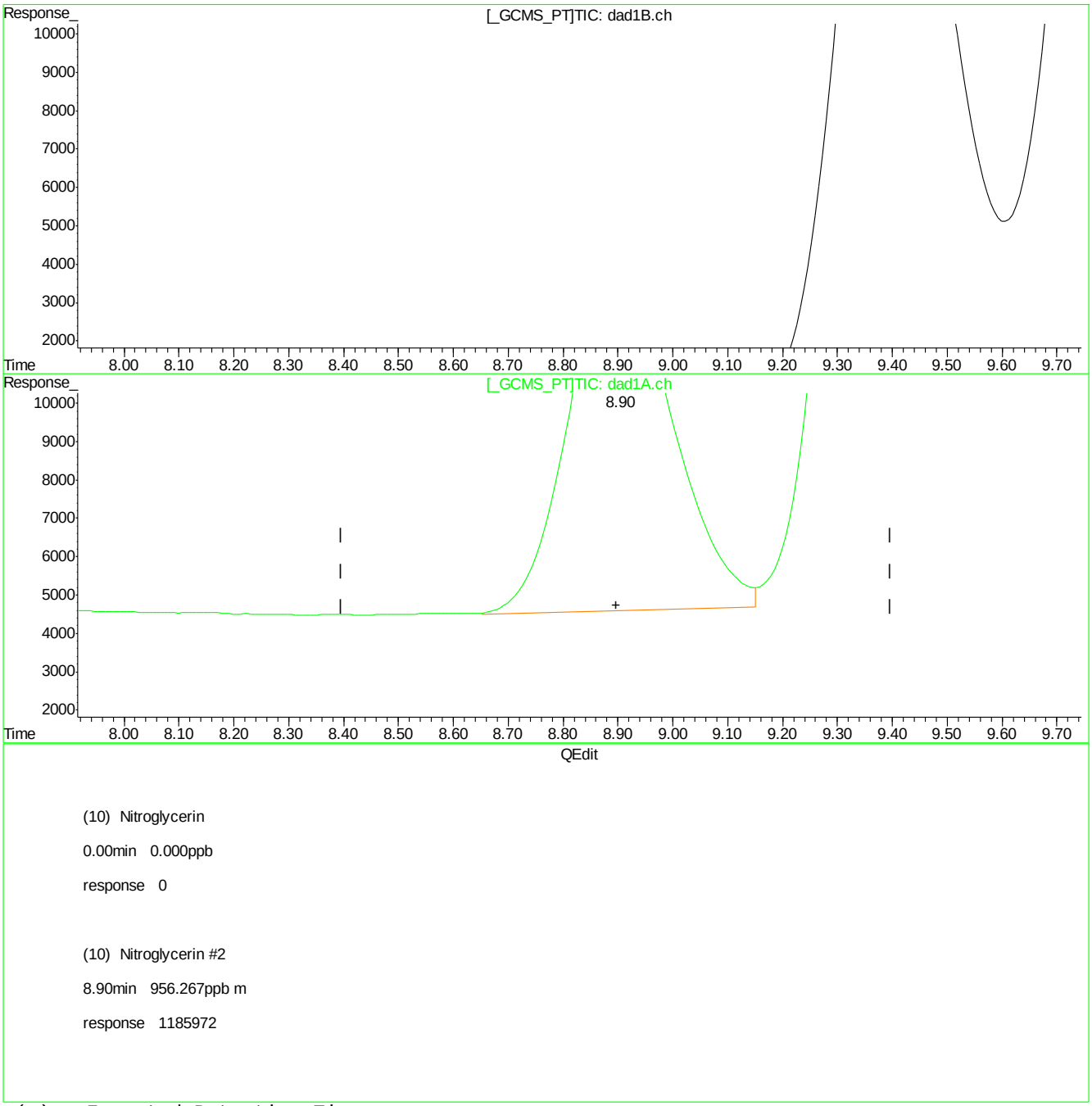


(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration

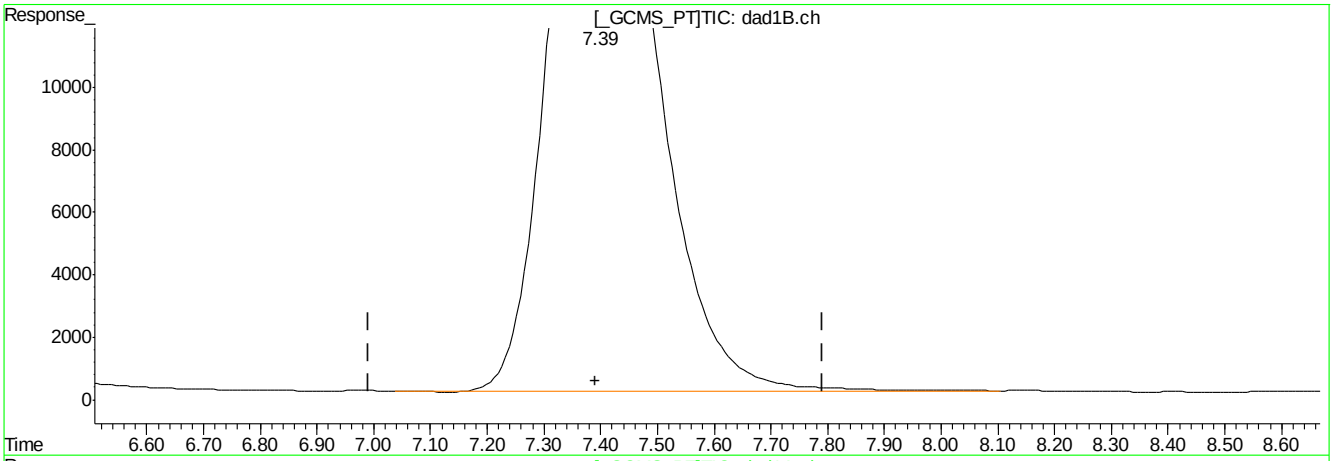


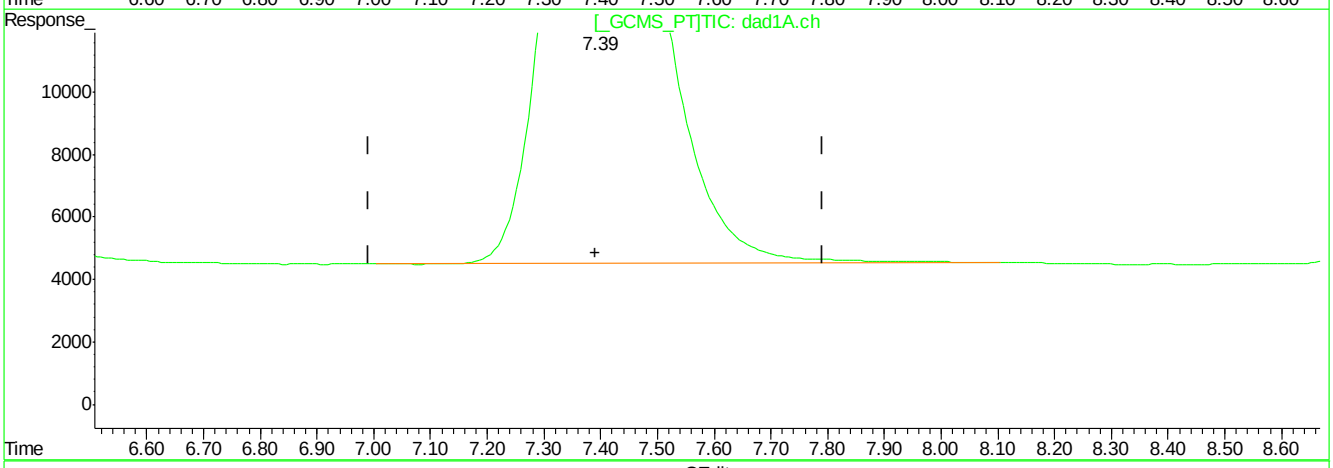
(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.39min 944.719ppb

response 2883289

(9) Nitrobenzene #2

7.39min 935.505ppb

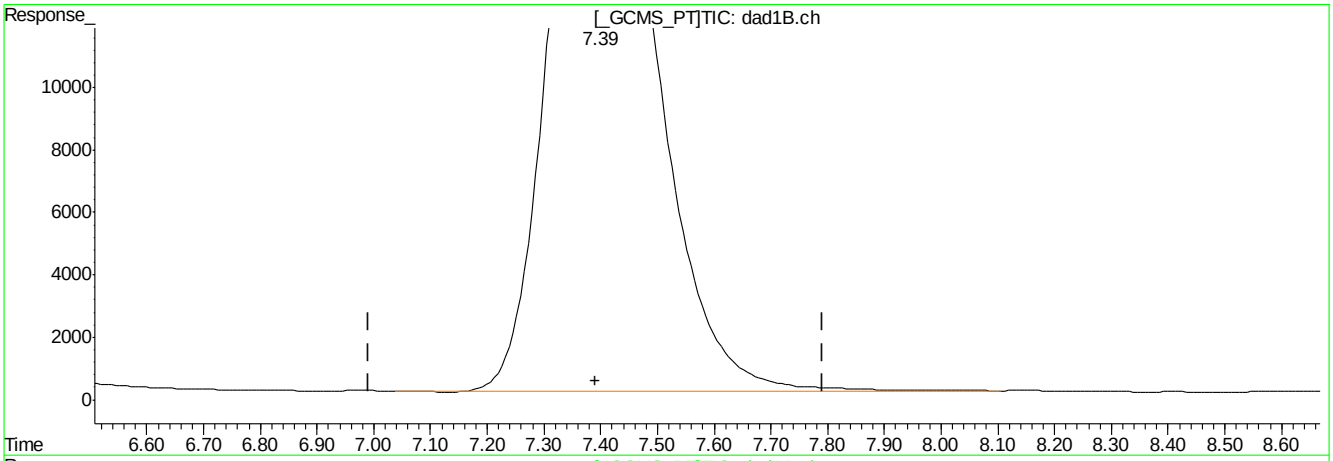
response 2846499

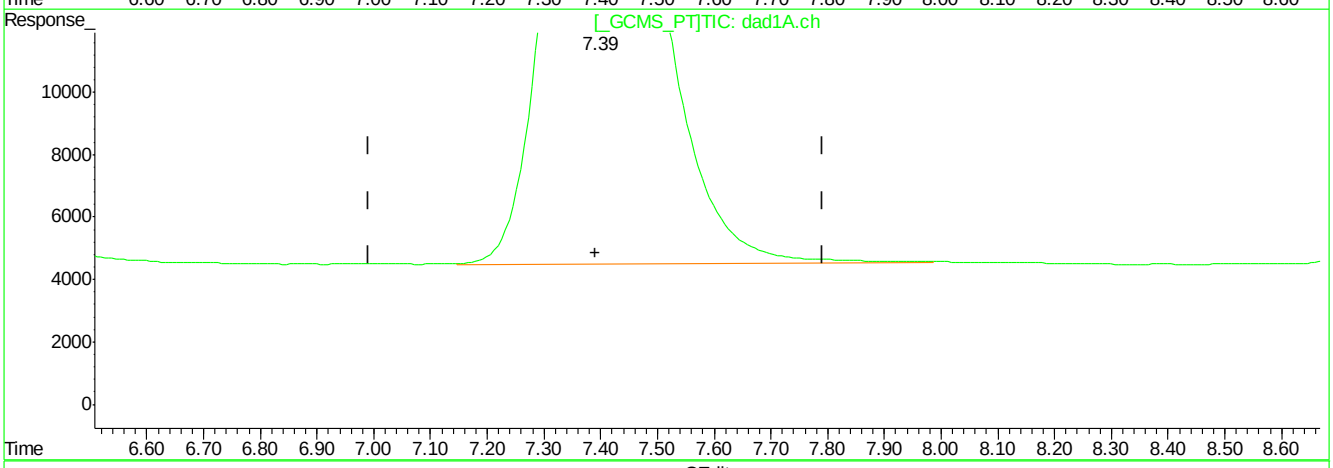
(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.39min 944.719ppb

response 2883289

(9) Nitrobenzene #2

7.39min 937.431ppb m

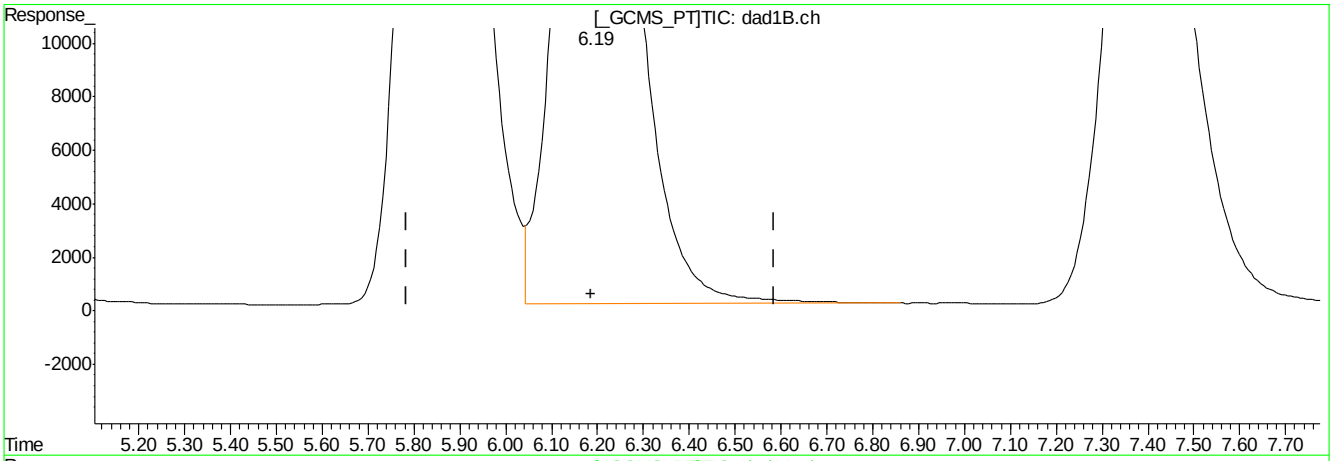
response 2852360

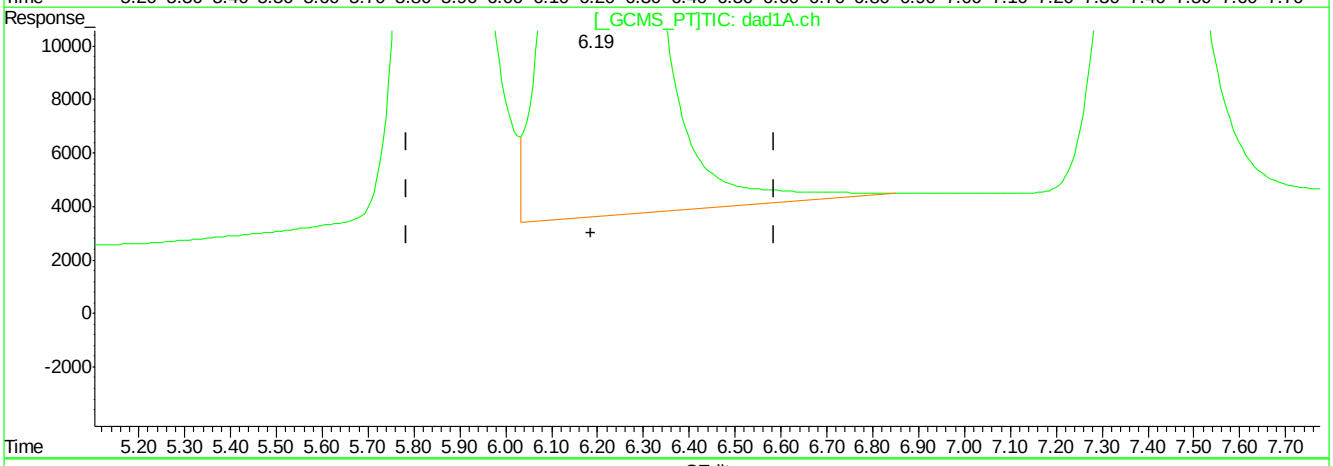
(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.19min 950.145ppb

response 3778035

(8) 3,5-Dinitroaniline #2

6.19min 941.170ppb

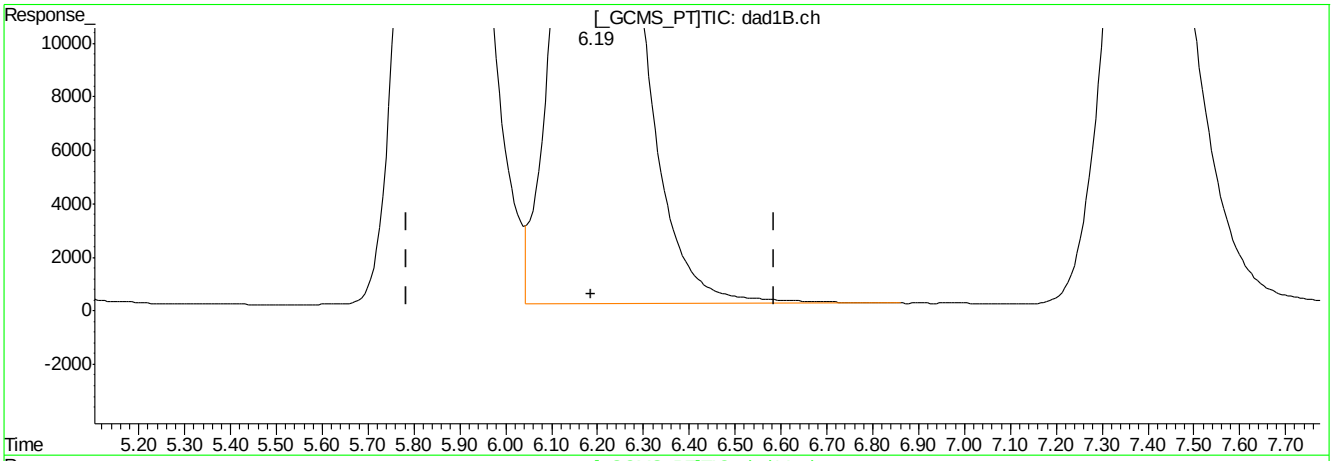
response 6513152

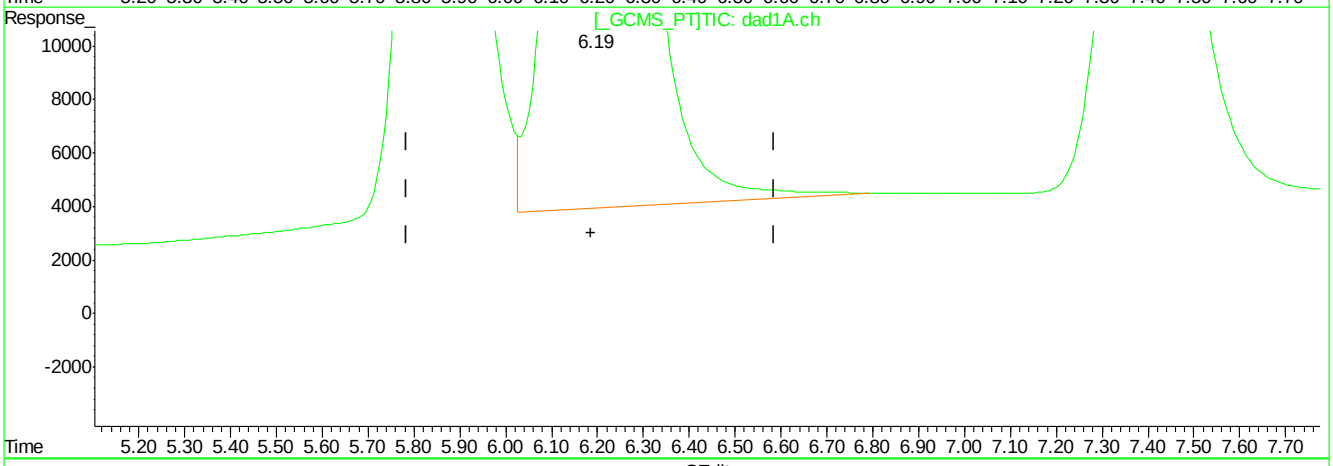
(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:28:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.19min 950.145ppb

response 3778035

(8) 3,5-Dinitroaniline #2

6.19min 925.161ppb m

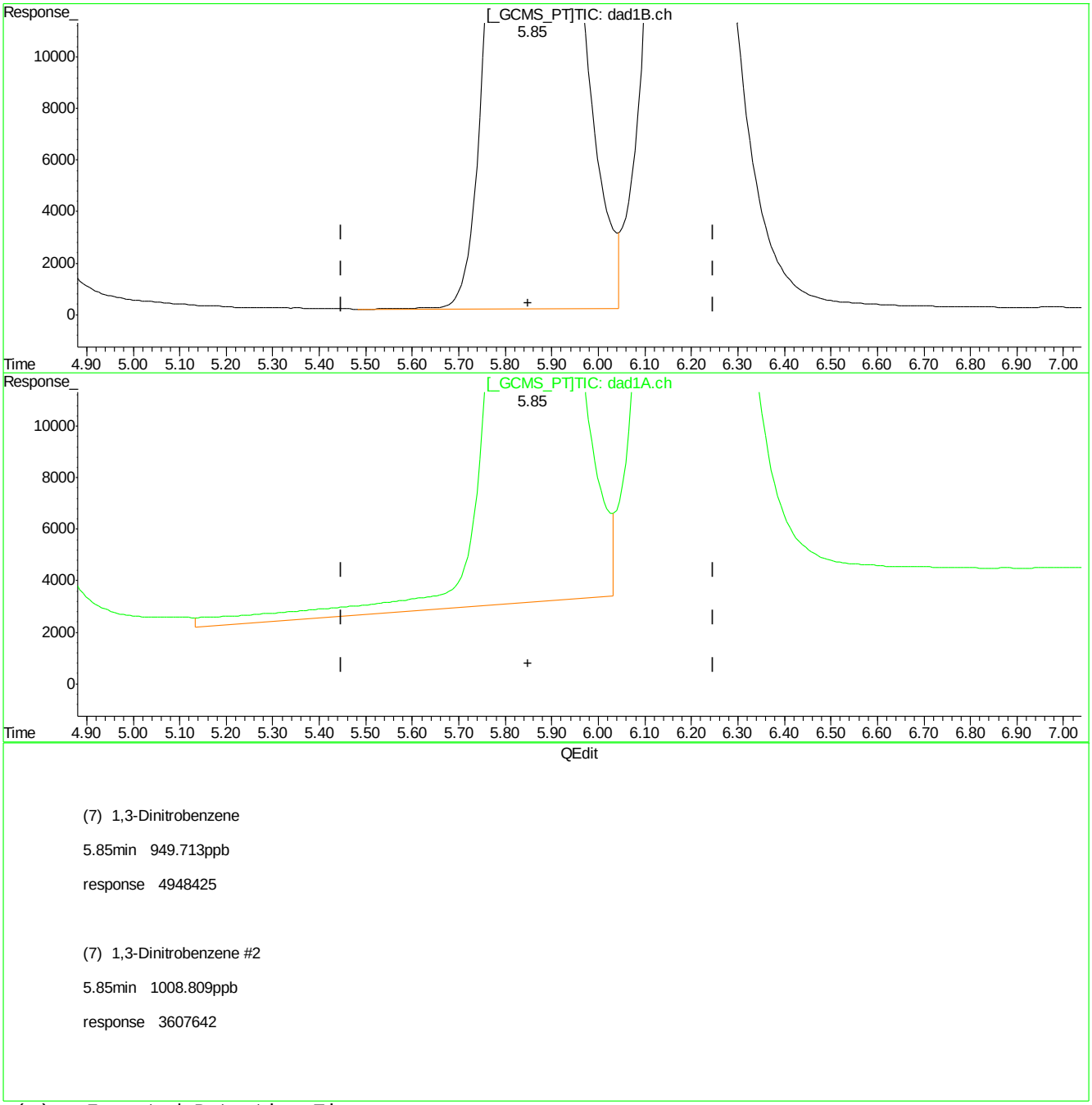
response 6402362

(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:29:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.85min 949.713ppb

response 4948425

(7) 1,3-Dinitrobenzene #2

5.85min 1008.809ppb

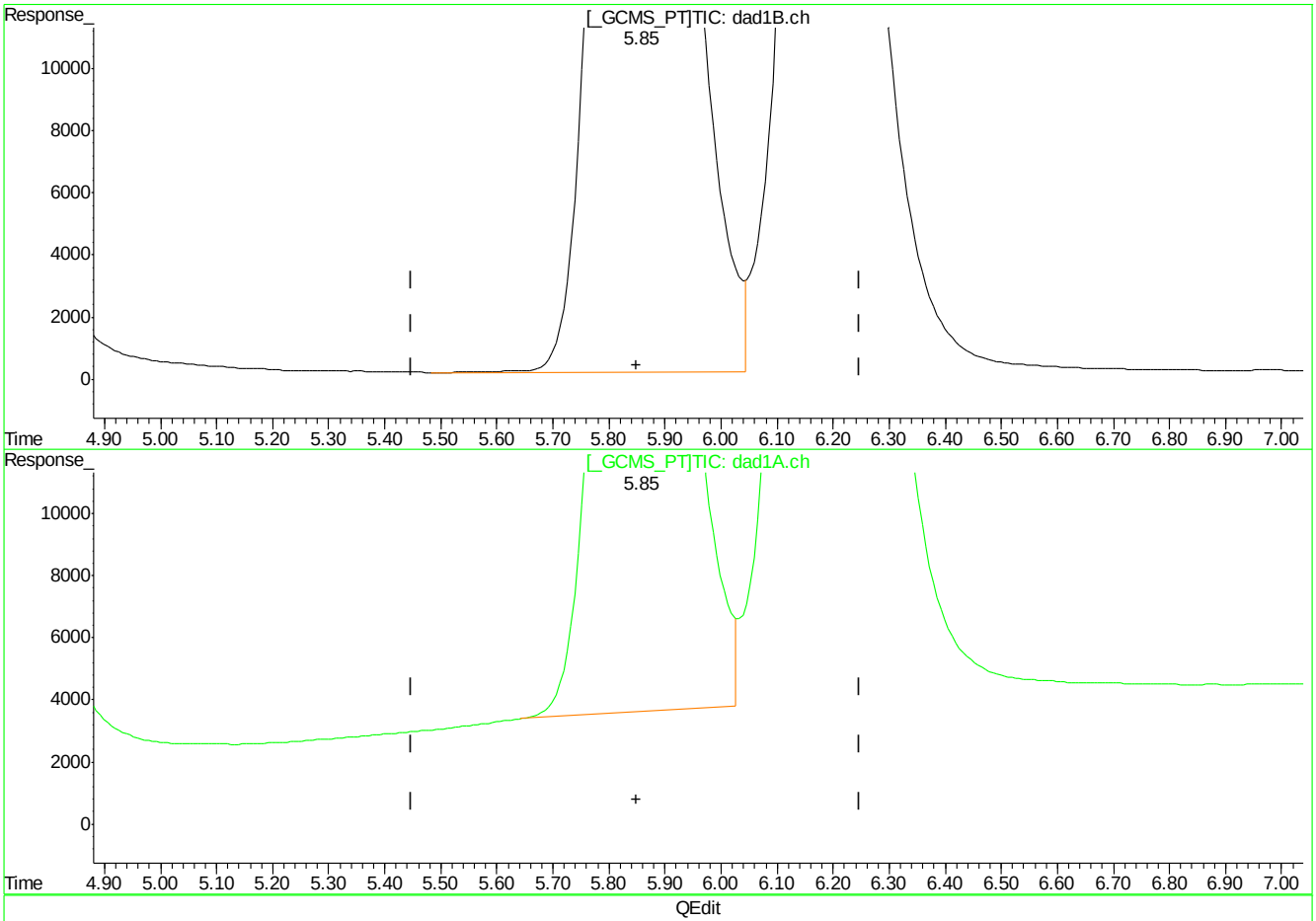
response 3607642

(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:29:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.85min 949.713ppb

response 4948425

(7) 1,3-Dinitrobenzene #2

5.85min 949.039ppb m

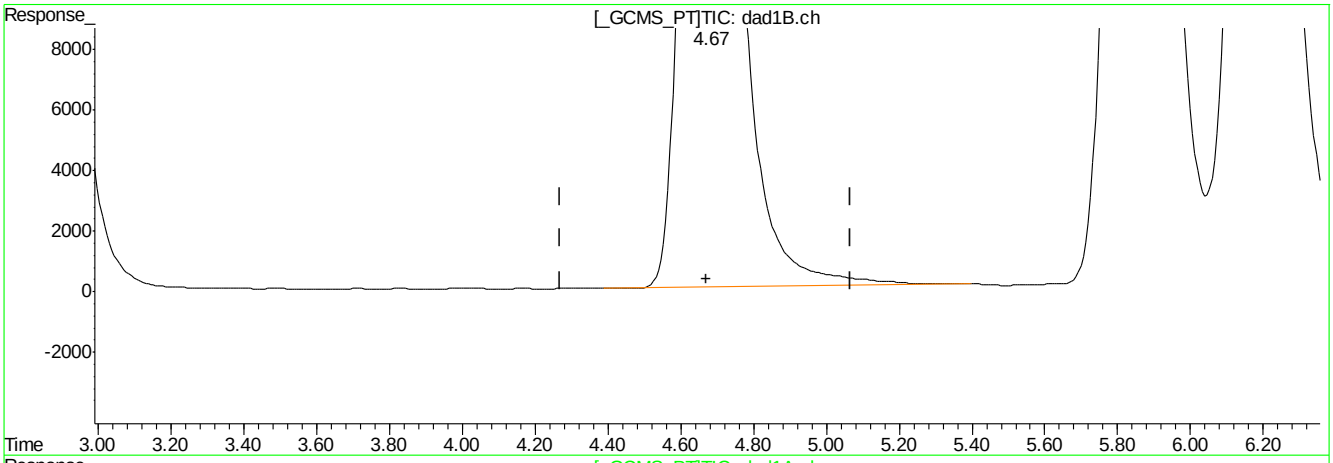
response 3393896

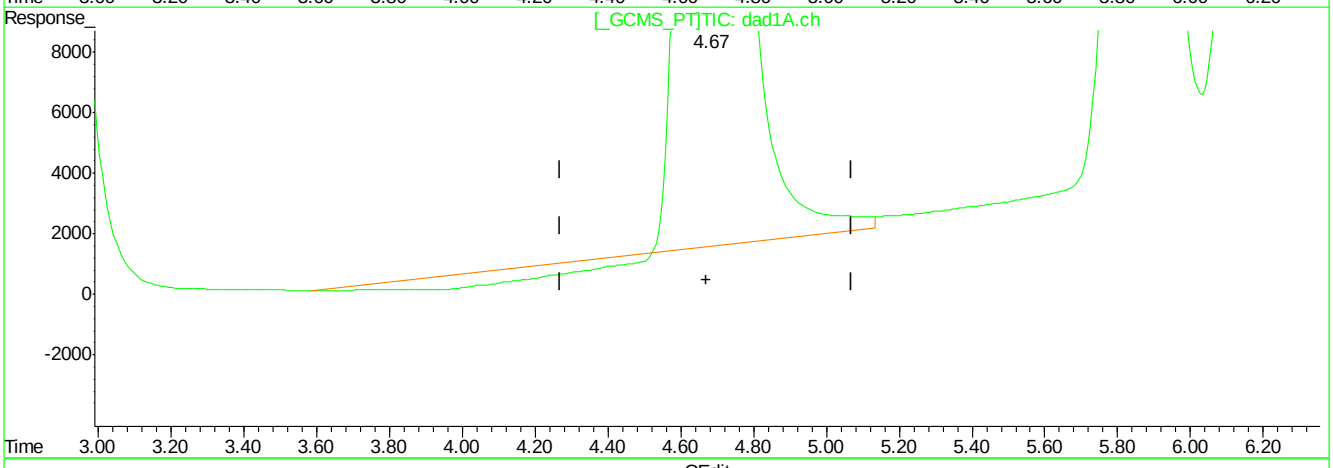
(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:29:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.67min 951.593ppb

response 3780284

(6) 1,3,5-Trinitrobenzene #2

4.67min 930.058ppb

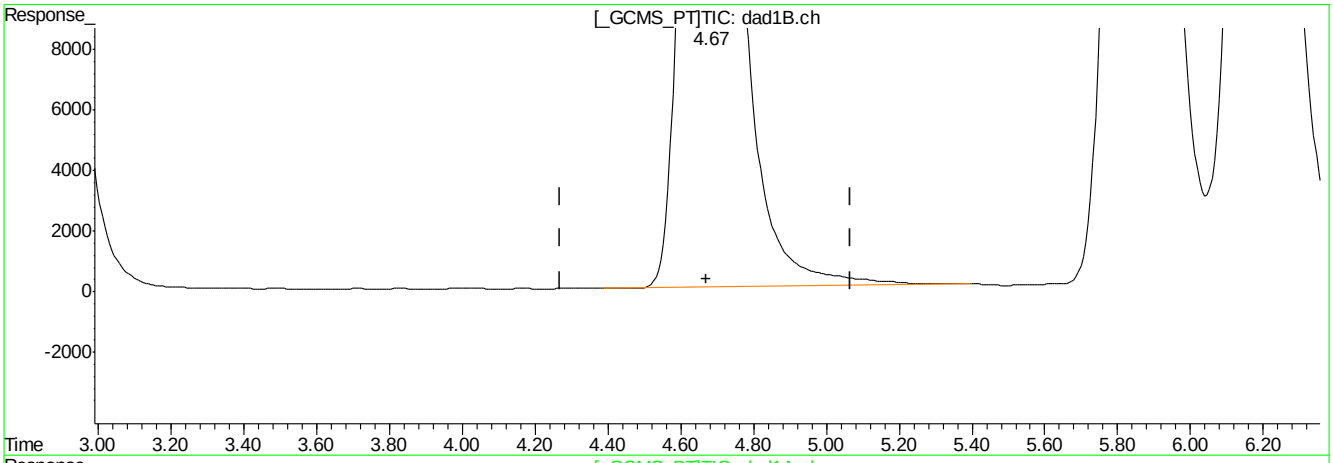
response 5771960

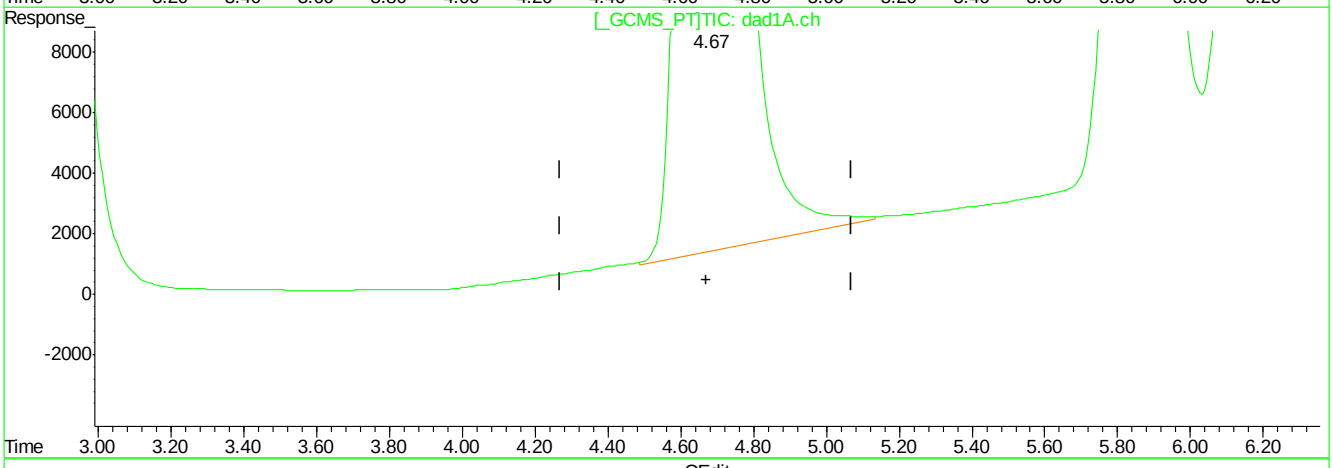
(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:29:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070759.D\dad1A.ch
Acq On : 30-Oct-2021, 16:04:06 Operator: jamesb
Sample : icc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:23 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.67min 951.593ppb

response 3780284

(6) 1,3,5-Trinitrobenzene #2

4.67min 960.397ppb m

response 5960247

(+) = Expected Retention Time
BB070759.D BBB2118_103021.M Mon Nov 01 08:29:26 2021

BB070760.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 11/01/21 13:51

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 01 08:24:00 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.08	11.08	4647862	8202308	2158.904	2195.397
	Spiked Amount 500.000	Range 70 - 136		Recovery =		431.78%#	439.08%#
	Target Compounds						
1)	TNX	1.34	1.34	1721592	2834291	1429.831	1530.475
2)	HMX	1.46	1.46	3622108	10040829	2282.819	2376.868
3)	DNX	1.70	1.70	4156522	6606053	2288.104	2358.206
4)	MNX	2.28	2.28	7982375	12245507	3396.999	3344.709
5)	RDX	2.89	2.89	4411004	6978500	2375.645	2368.608
6)	1,3,5-Trinitrobe	4.67	4.67	9465632	14880229	2382.738	2397.708m
7)	1,3-Dinitrobenze	5.85	5.85	12327108	8344697	2365.847	2333.438m
8)	3,5-Dinitroanili	6.19	6.18	9392316	15901027	2362.090	2297.746m
9)	Nitrobenzene	7.39	7.39	7230618	7135964	2369.135	2345.241
10)	Nitroglycerin	0.00	8.90	0	2956505	N.D. d	2383.875
11)	Tetryl	9.40	9.40	6918619	11171371	2294.417	2297.032
12)	2,4,6-Trinitroto	9.80	9.80	8503644	10159379	2345.003	2391.014
13)	2-Amino-4,6-Dini	10.12	10.12	8077227	12133513	2338.793	2351.824
14)	4-Amino-2,6-Dini	10.61	10.61	5810979	11578517	2328.398	2358.530
16)	2,4-Dinitrotolue	11.73	11.73	10857490	7067493	2380.252	2239.084
17)	2,6-Dinitrotolue	12.19	12.19	6490219	8462795	2359.436	2513.431
18)	o-Nitrotoluene	15.23	15.23	5138426	7368081	2359.444	2438.911m
19)	p-Nitrotoluene	15.80	15.80	7961600	6742018	2372.662	2341.964
20)	m-Nitrotoluene	16.66	16.66	7605142	9175282	2429.864	2293.770
21)	PETN	0.00	18.46	0	3345326	N.D. d	2521.464m

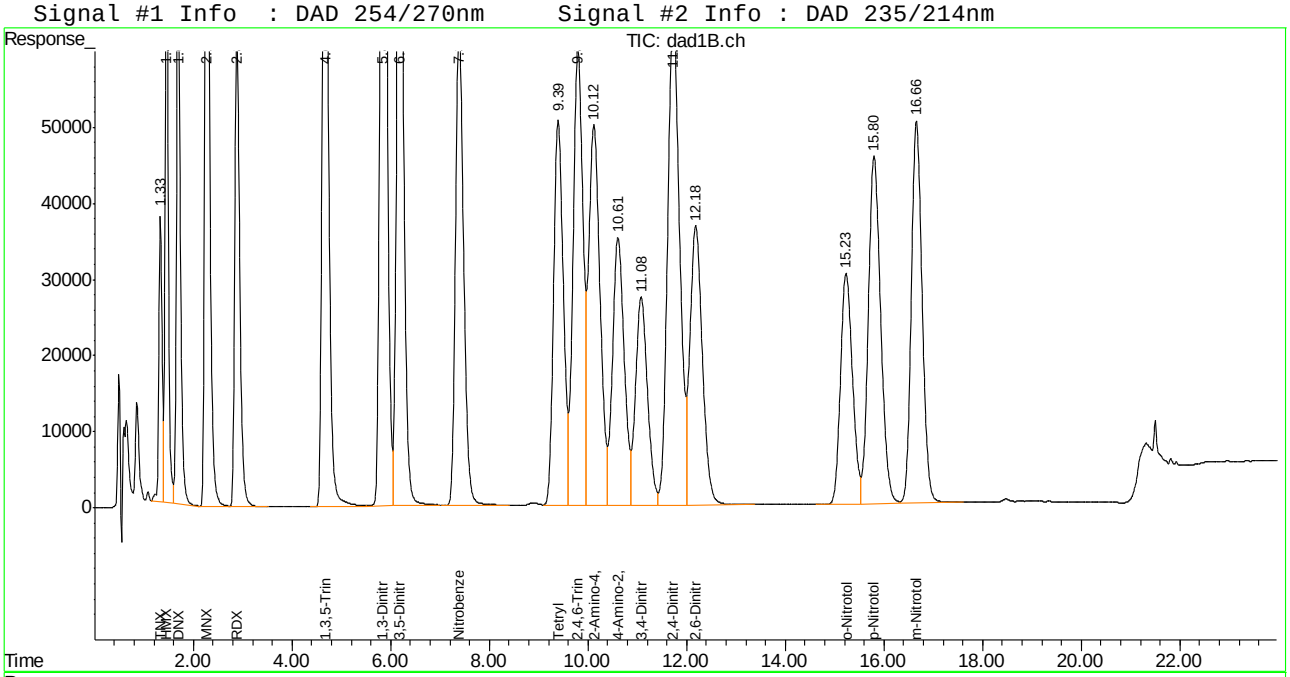
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070760.D BBB2118_103021.M Mon Nov 01 11:46:17 2021 Page 1

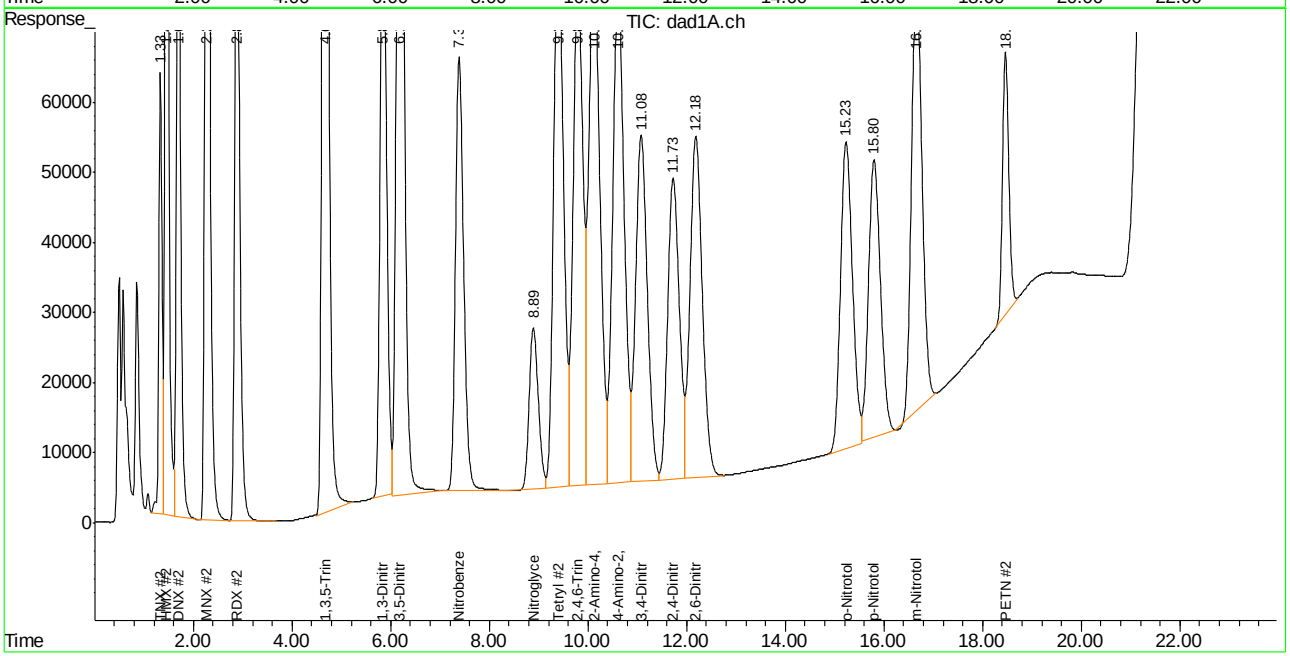
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:27 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

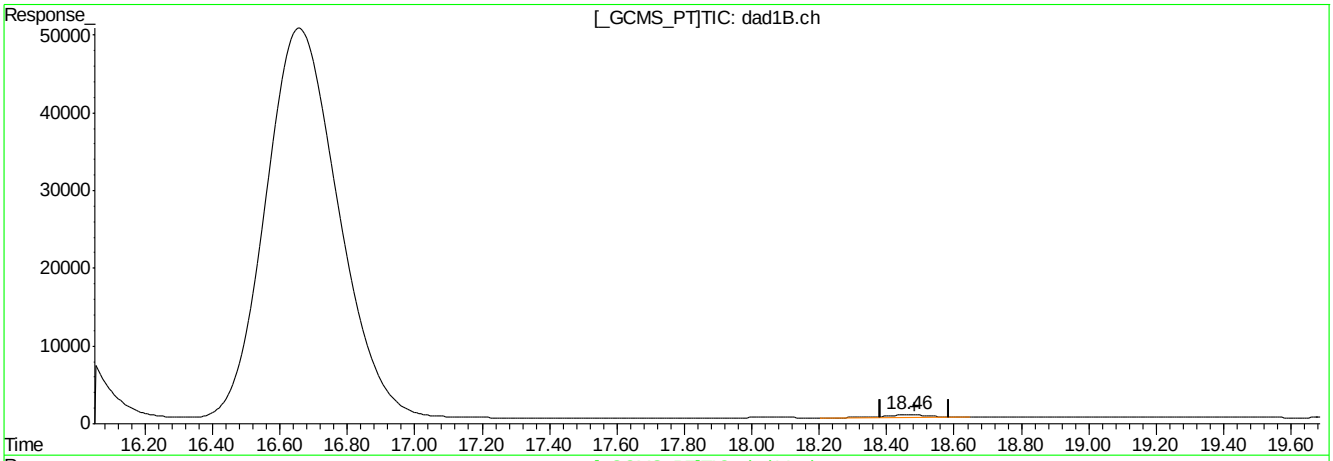
Sample Number: GBB2118-IC2118
Lab FileID: BB070760.D
Injection Time: 10/30/21 16:35
Method: SW846 8330A
Analyst approved: 11/01/21 12:47 James Boone
Supervisor approved: 11/01/21 13:51 Naresh Jiawan

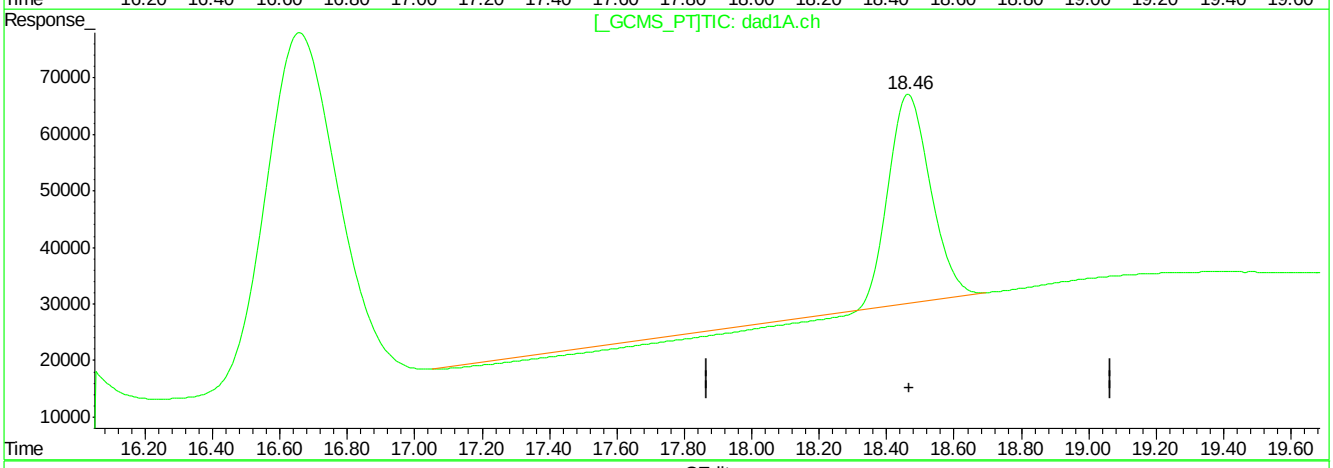
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.67	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.18	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.23	Poor instrument integration
PETN	78-11-5	2	18.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.47min 0.000ppb

response 28734

(21) PETN #2

18.47min 2036.224ppb

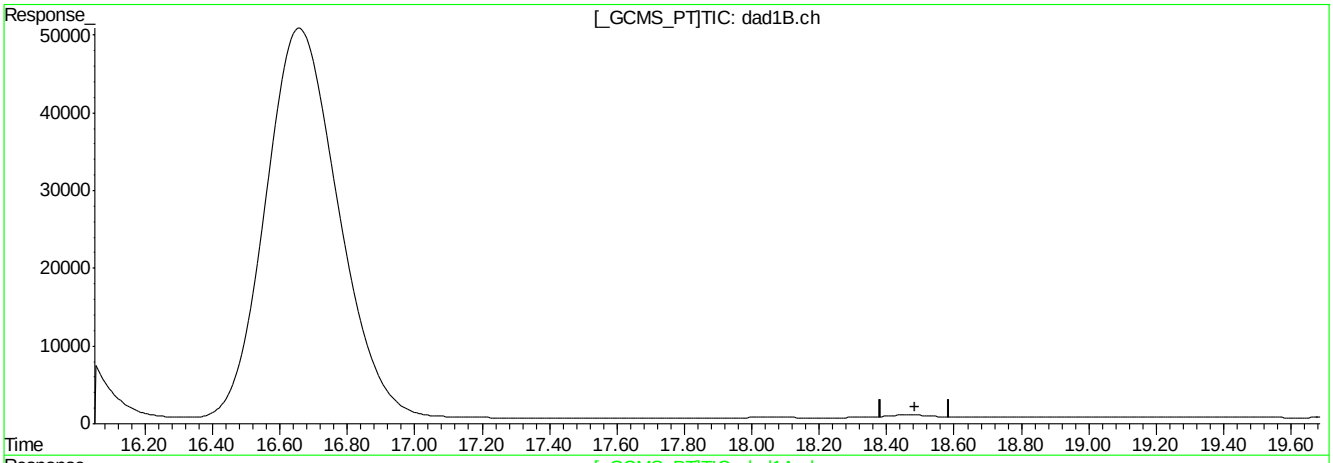
response 2701539

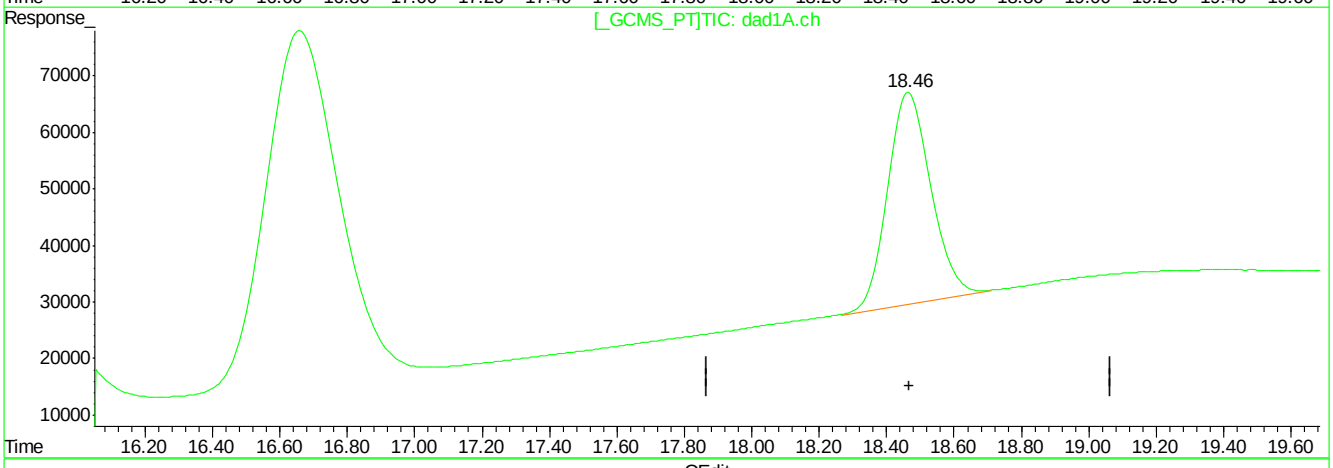
(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:26:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.46min 2521.464ppb m

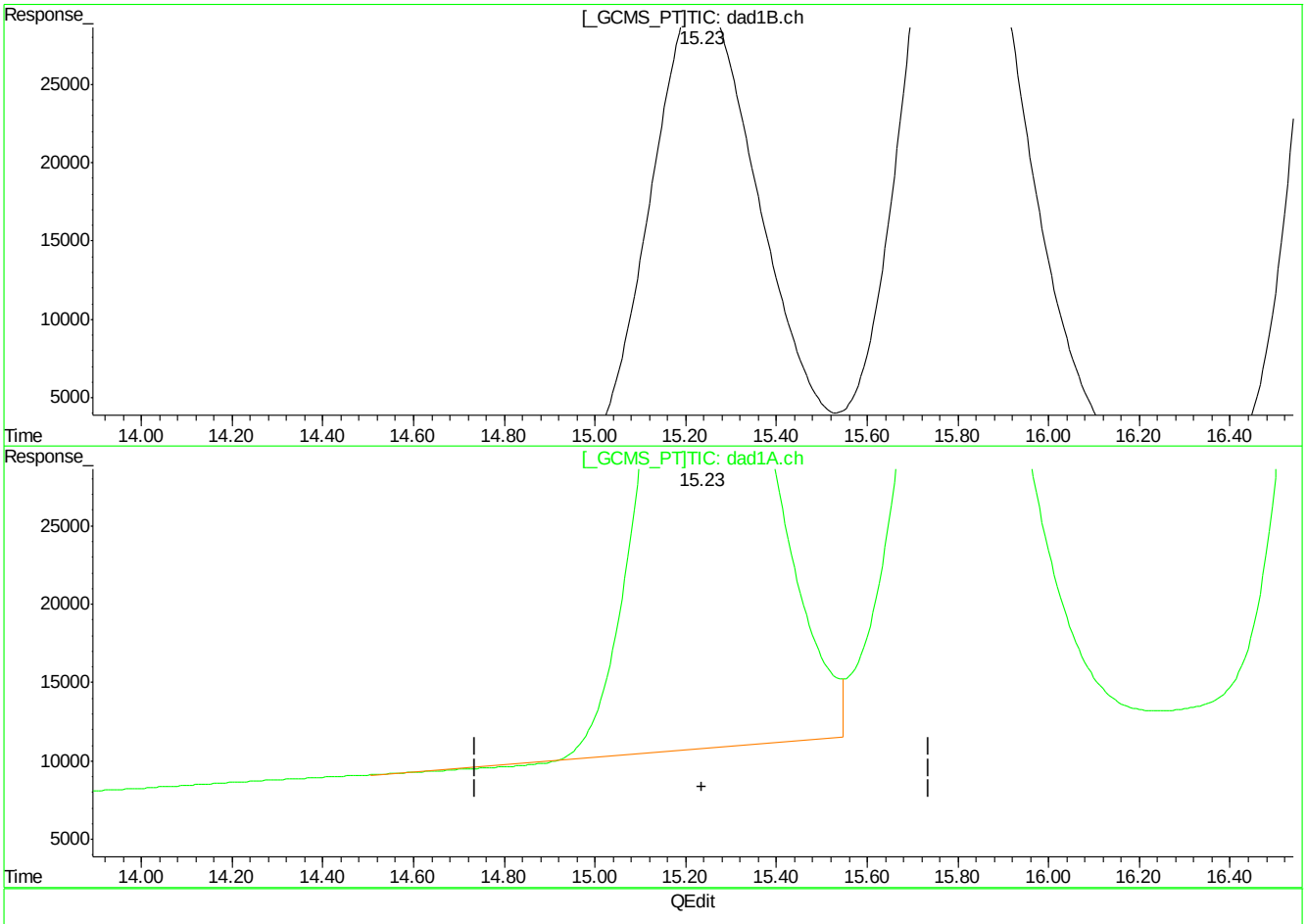
response 3345326

(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:26:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.23min 2359.444ppb

response 5138426

(18) o-Nitrotoluene #2

15.24min 2404.057ppb

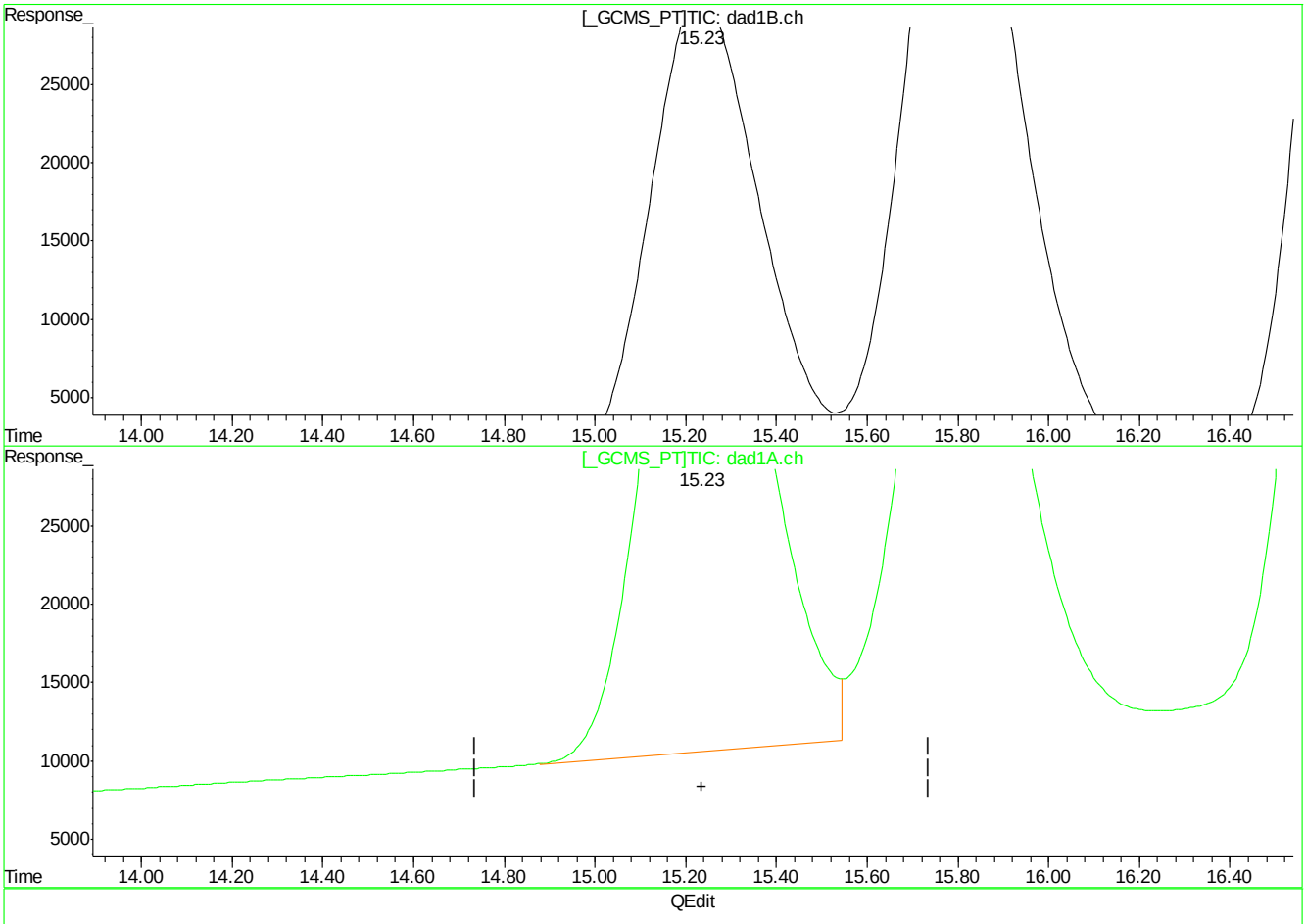
response 7262785

(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:26:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.23min 2359.444ppb

response 5138426

(18) o-Nitrotoluene #2

15.23min 2438.911ppb m

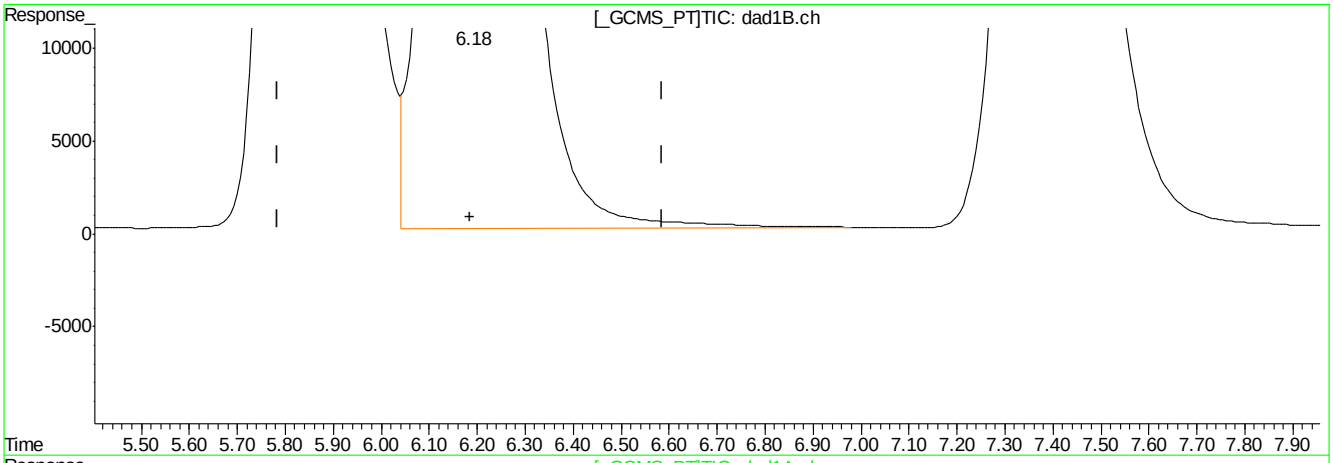
response 7368081

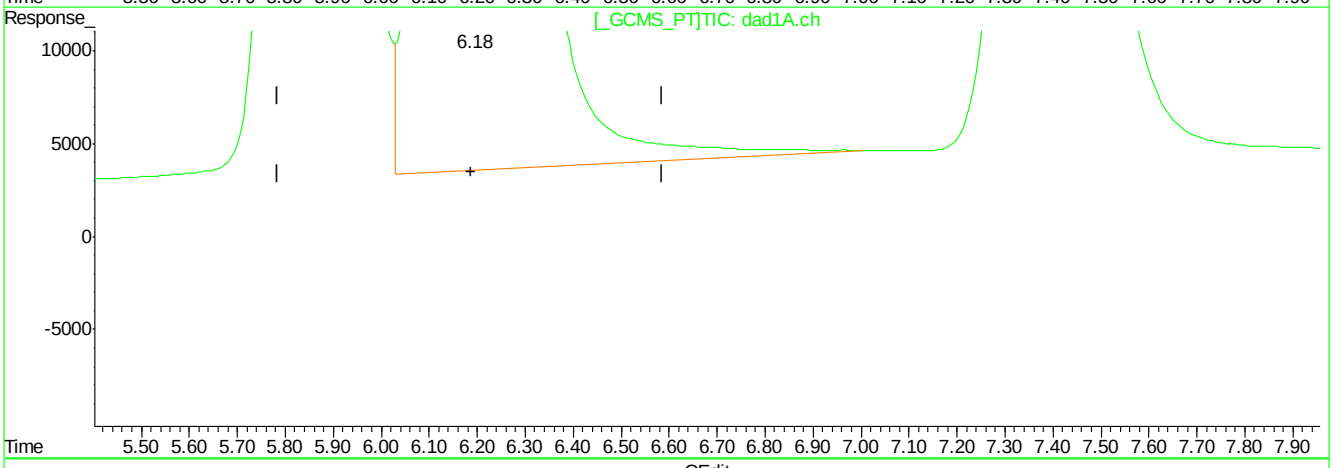
(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:26:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.19min 2362.090ppb

response 9392316

(8) 3,5-Dinitroaniline #2

6.19min 2309.336ppb

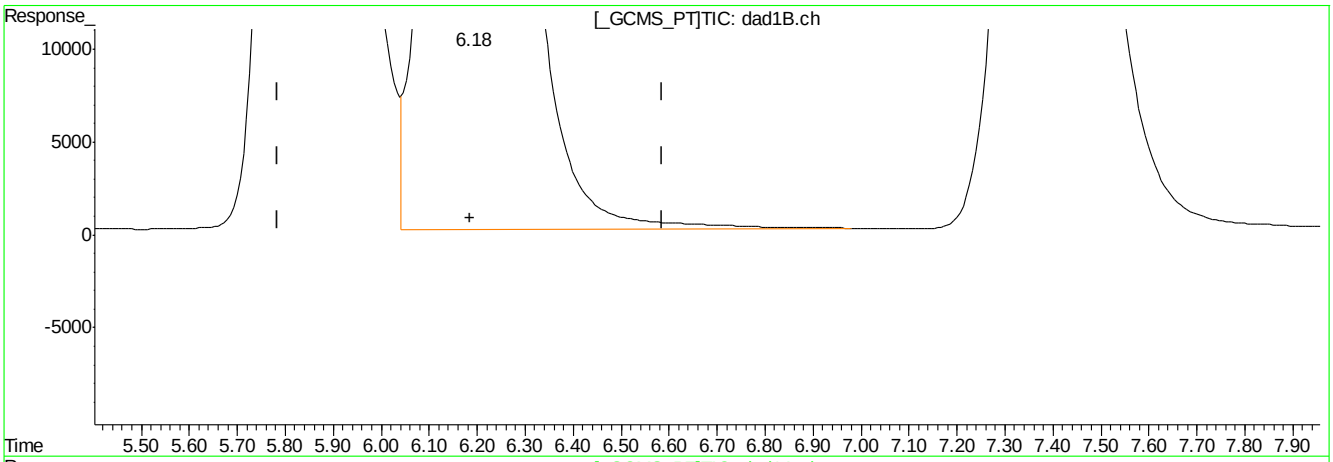
response 15981229

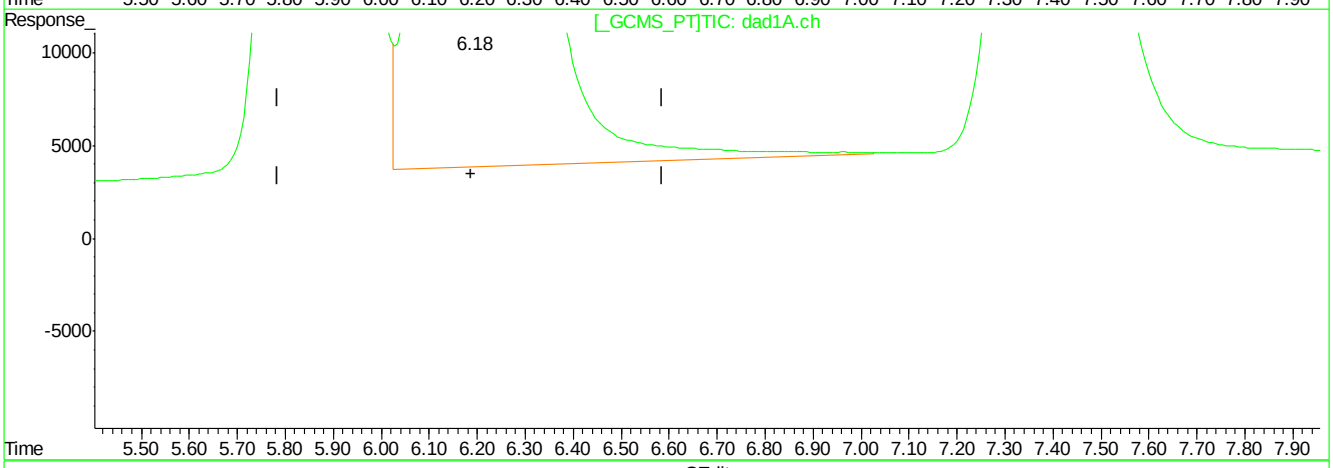
(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:26:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.19min 2362.090ppb

response 9392316

(8) 3,5-Dinitroaniline #2

6.18min 2297.746ppb m

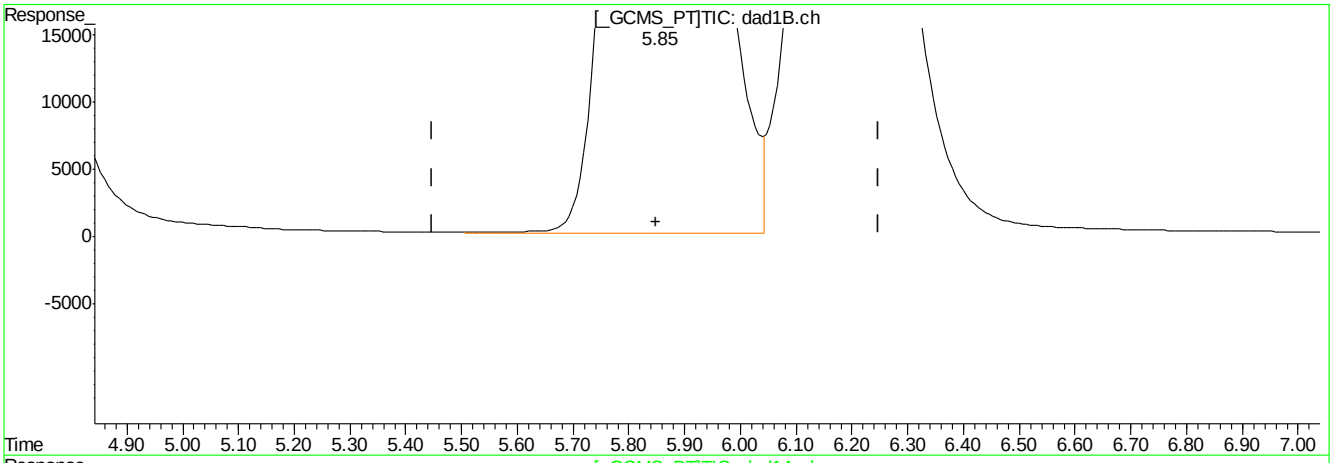
response 15901027

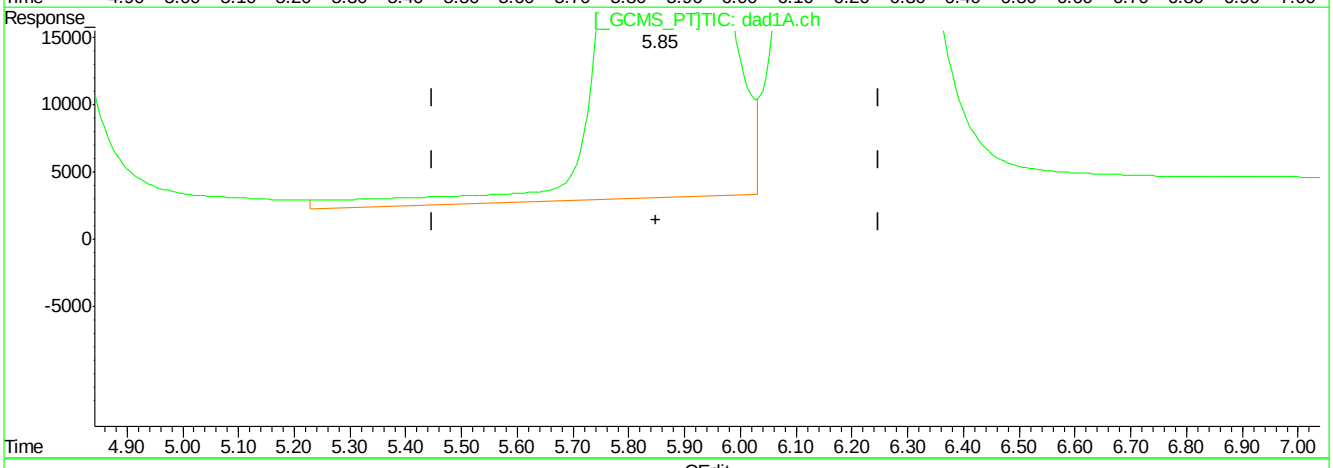
(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:27:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 2365.847ppb

response 12327108

(7) 1,3-Dinitrobenzene #2

5.85min 2426.685ppb

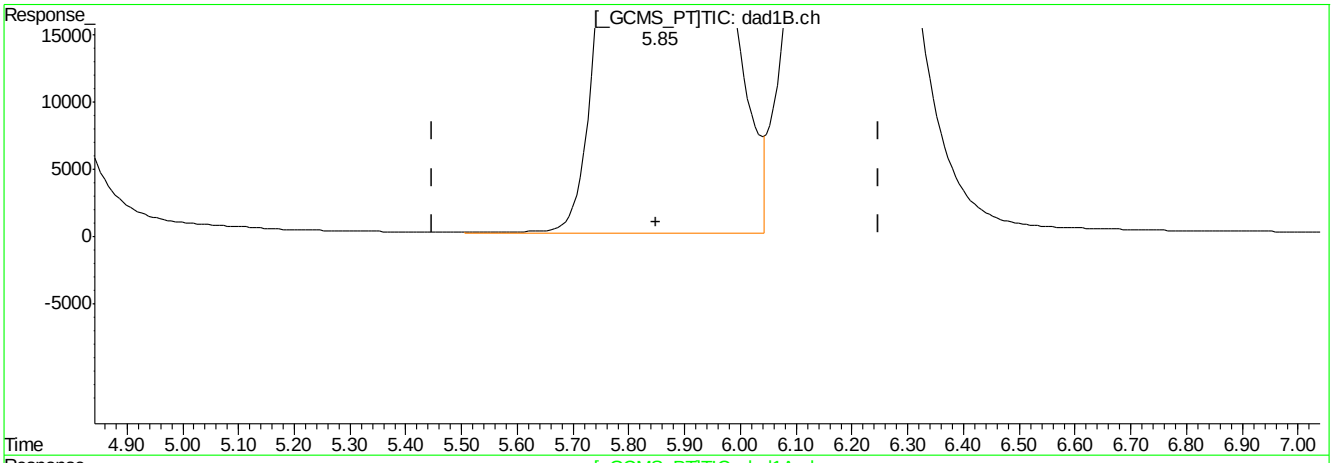
response 8678160

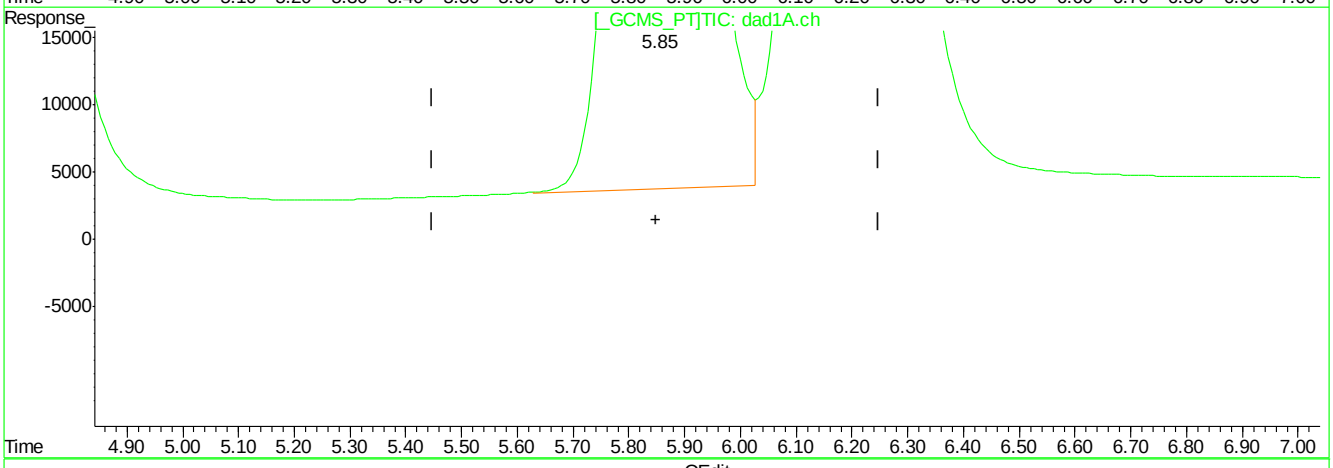
(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:27:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 2365.847ppb

response 12327108

(7) 1,3-Dinitrobenzene #2

5.85min 2333.438ppb m

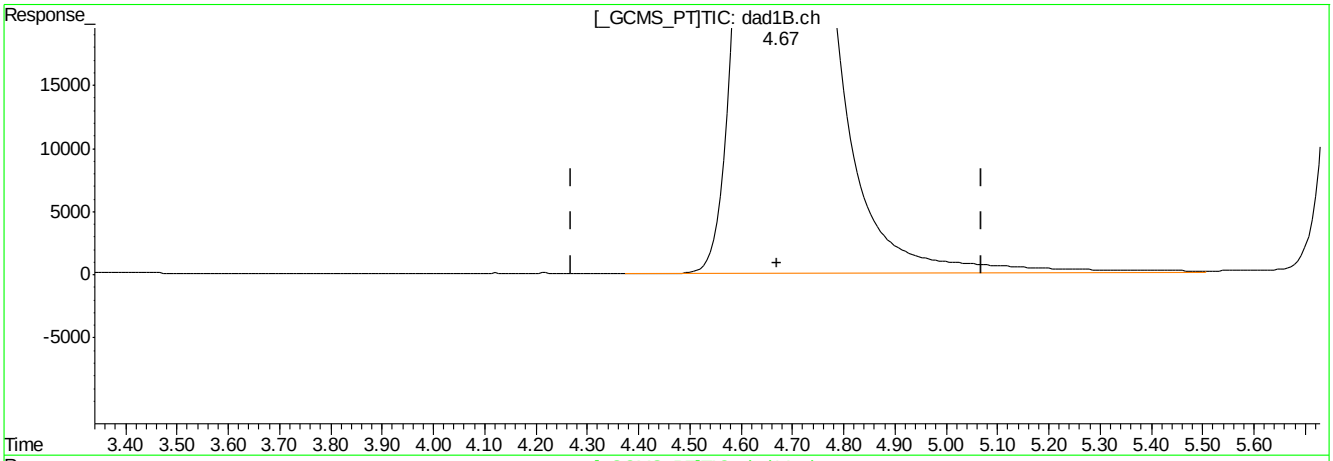
response 8344697

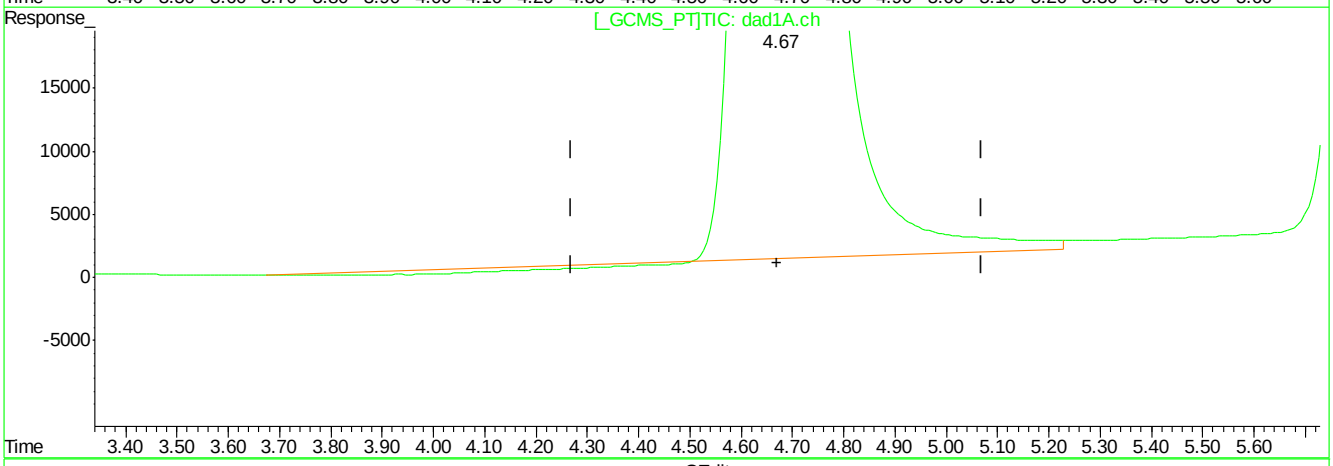
(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:27:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.67min 2382.738ppb

response 9465632

(6) 1,3,5-Trinitrobenzene #2

4.67min 2391.830ppb

response 14843748

(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:27:23 2021

9.5.7.10

9

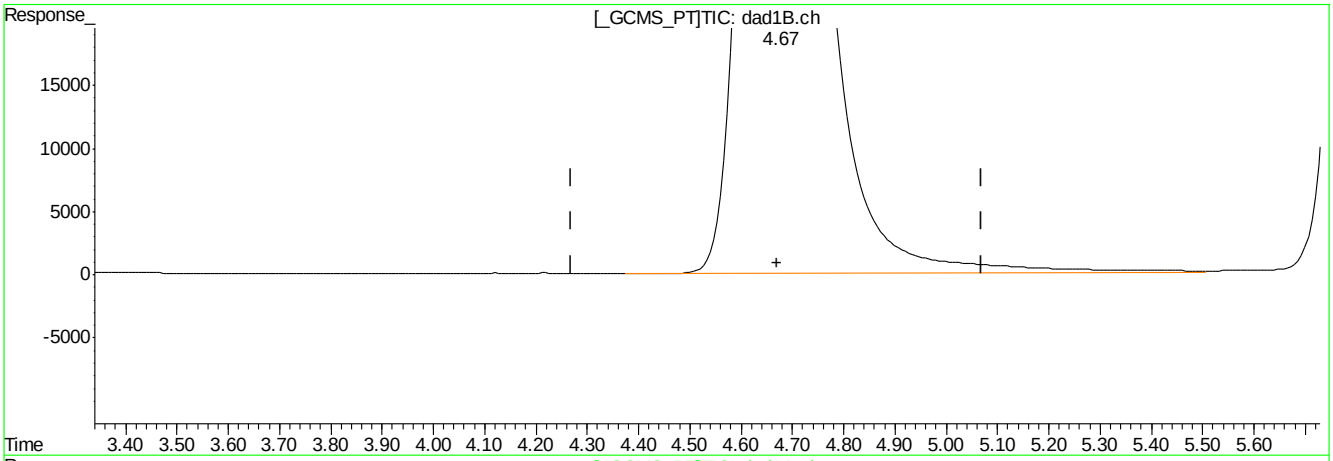
FA90260

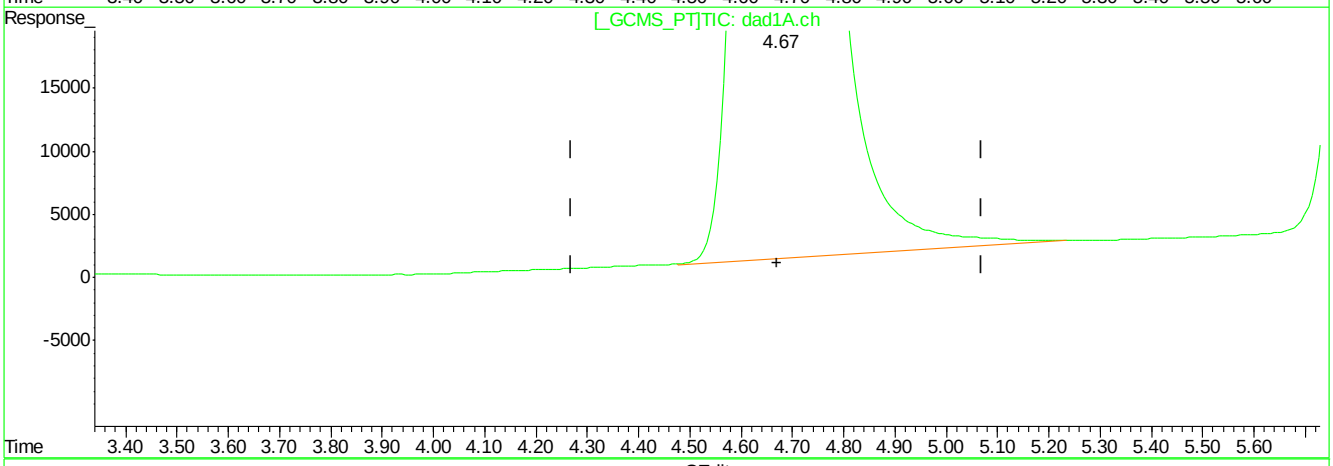
BB070760.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070760.D\dad1A.ch
Acq On : 30-Oct-2021, 16:35:15 Operator: jamesb
Sample : ic2118-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.67min 2382.738ppb

response 9465632

(6) 1,3,5-Trinitrobenzene #2

4.67min 2397.708ppb m

response 14880229

(+) = Expected Retention Time
BB070760.D BBB2118_103021.M Mon Nov 01 08:27:28 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 13:51

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 01 08:24:01 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.08	11.08	9353704	16861718	4344.740	4513.140
	Spiked Amount 500.000	Range 70 - 136		Recovery =		868.95%#	902.63%#
	Target Compounds						
1)	TNX	1.33	1.33	3440558	5639214	2857.480	3045.093
2)	HMX	1.46	1.46	7226137	19865236	4554.243	4702.505
3)	DNX	1.70	1.70	8318693	13177349	4579.318	4704.005
4)	MNX	2.27	2.27	15995467	24550722	6807.069	6705.728
5)	RDX	2.89	2.89	8811680	13957354	4745.727	4737.337
6)	1,3,5-Trinitrobe	4.67	4.67	19013701	29923526	4786.227	4821.692m
7)	1,3-Dinitrobenze	5.85	5.85	24699910	17079888	4740.464	4776.071
8)	3,5-Dinitroanili	6.18	6.18	18957251	31726304	4767.593	4584.546
9)	Nitrobenzene	7.39	7.39	14611137	14233093	4787.385	4677.719
10)	Nitroglycerin	0.00	8.89	0	6023919	N.D. d	4857.178
11)	Tetryl	9.39	9.39	13953498	22611707	4627.389	4649.368
12)	2,4,6-Trinitroto	9.80	9.80	17020611	20412547	4693.681	4804.101
13)	2-Amino-4,6-Dini	10.11	10.11	16295315	24681189	4718.373	4783.925
14)	4-Amino-2,6-Dini	10.60	10.60	11686861	23545445	4682.802	4796.178
16)	2,4-Dinitrotolue	11.72	11.72	21813665	14482369	4782.138	4588.224
17)	2,6-Dinitrotolue	12.18	12.18	12959327	17121658	4711.197m	5085.093
18)	o-Nitrotoluene	15.23	15.23	10316078	14795077	4736.899m	4897.324m
19)	p-Nitrotoluene	15.80	15.80	15930148	13721187	4747.395	4766.307
20)	m-Nitrotoluene	16.66	16.66	15248479	18544814	4871.932	4636.100
21)	PETN	0.00	18.46	0	6710619	N.D. d	5057.978m

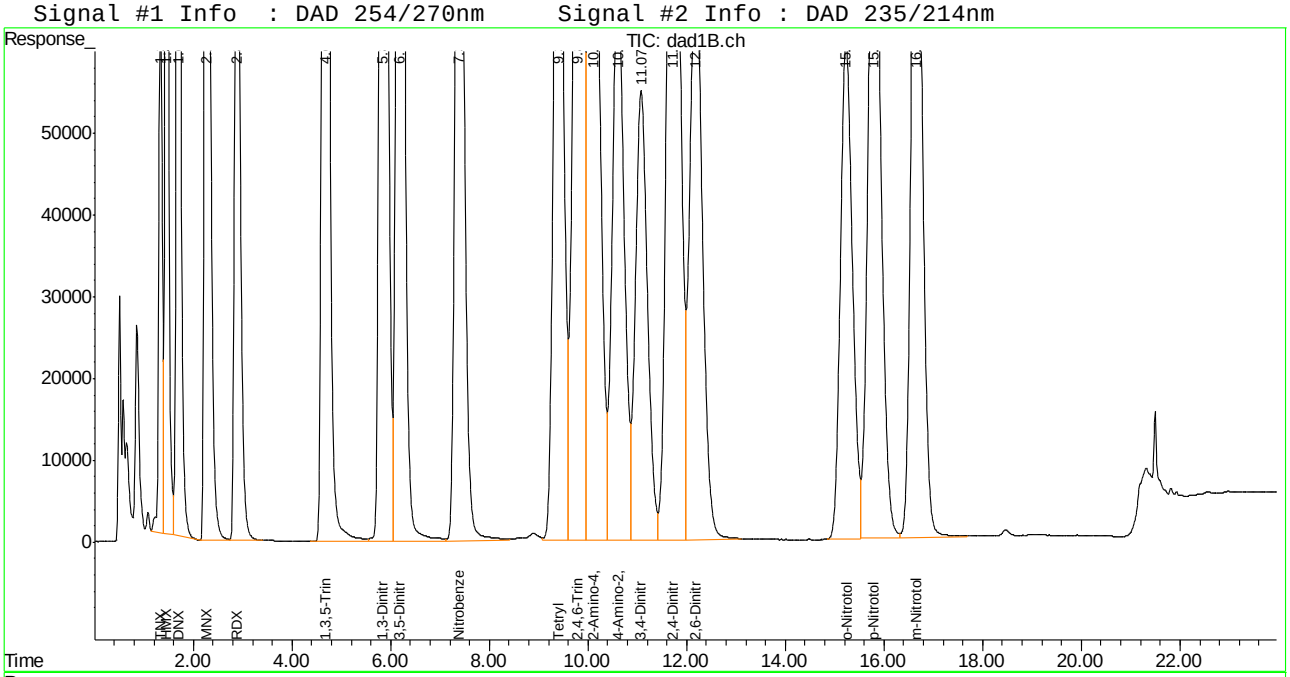
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070761.D BBB2118_103021.M Mon Nov 01 11:46:18 2021 Page 1

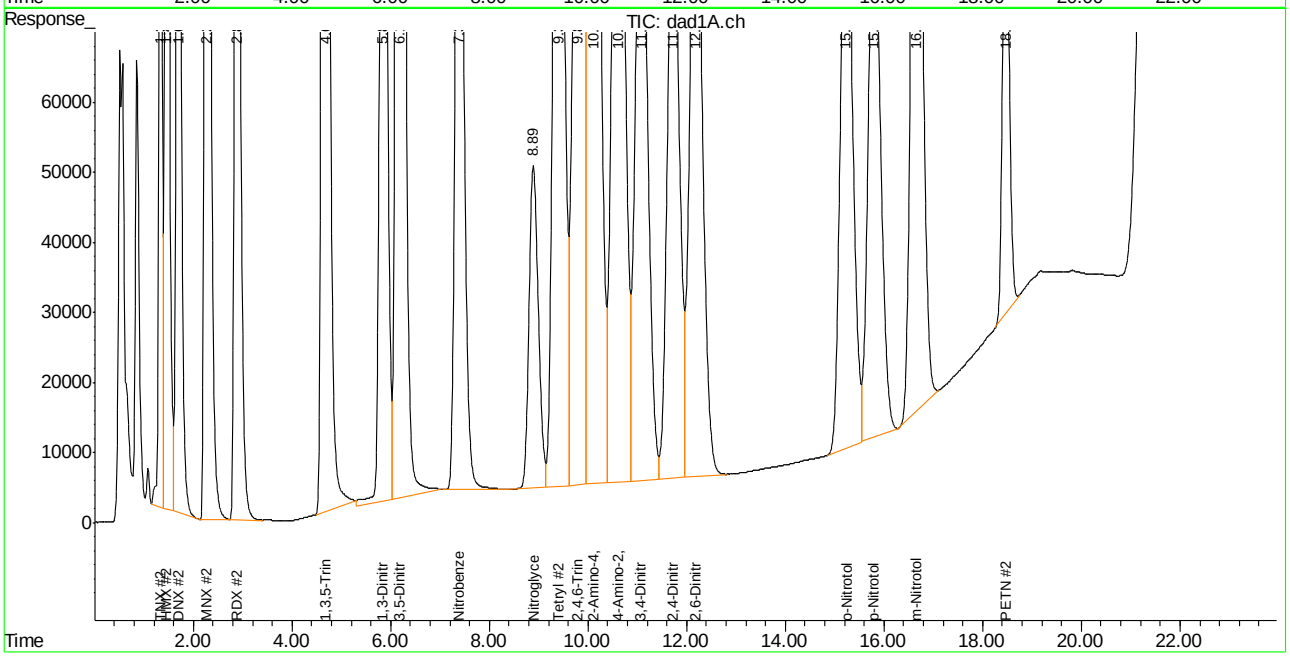
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:25 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

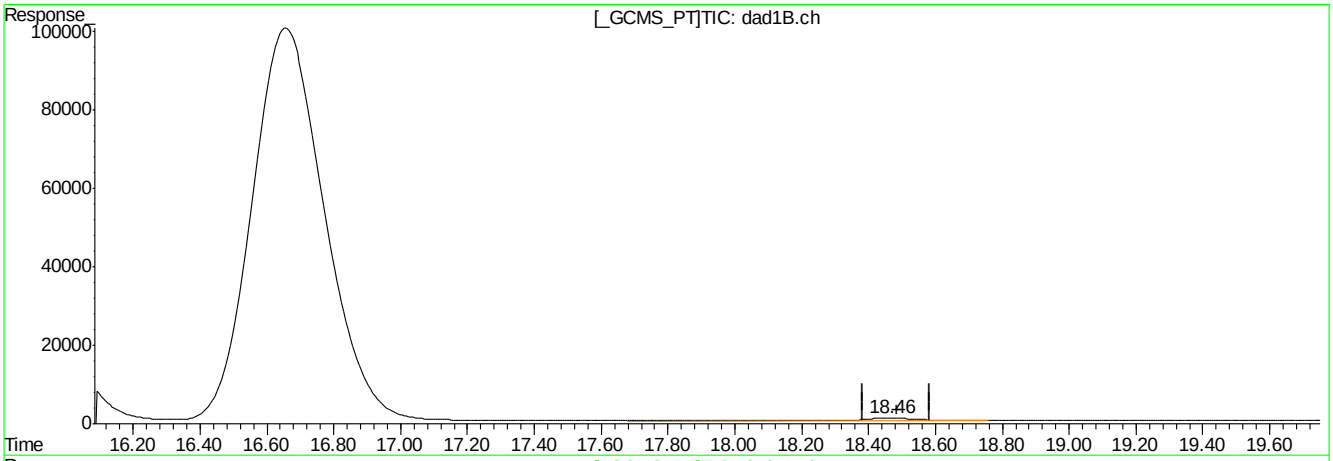
Sample Number: GBB2118-IC2118
Lab FileID: BB070761.D
Injection Time: 10/30/21 17:06
Method: SW846 8330A
Analyst approved: 11/01/21 12:47 James Boone
Supervisor approved: 11/01/21 13:51 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.67	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.18	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.23	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.23	Poor instrument integration
PETN	78-11-5	2	18.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(21) PETN

18.47min 0.000ppb

response 80204

(21) PETN #2

18.47min 4571.769ppb

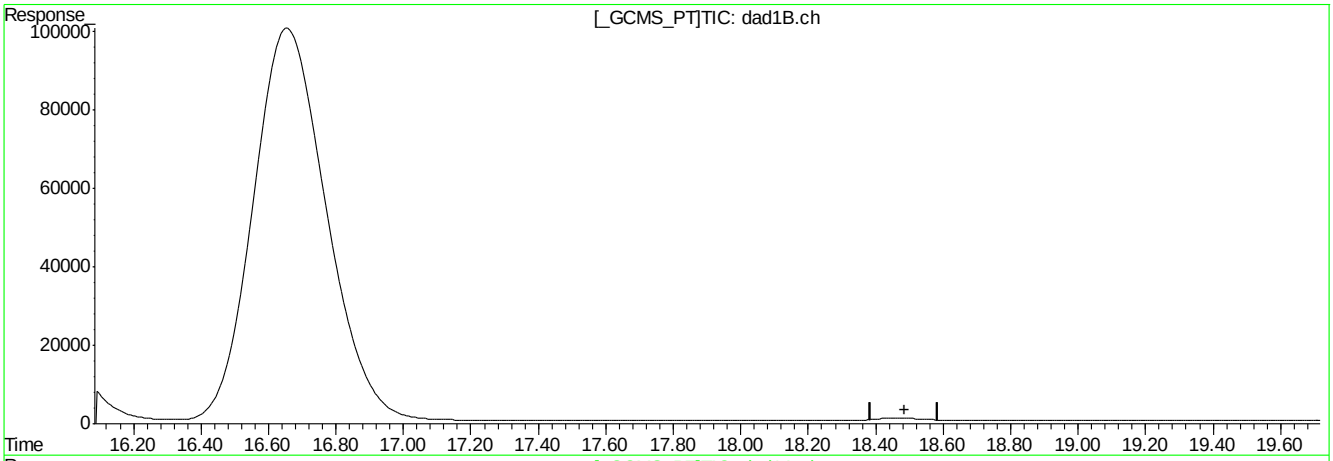
response 6065547

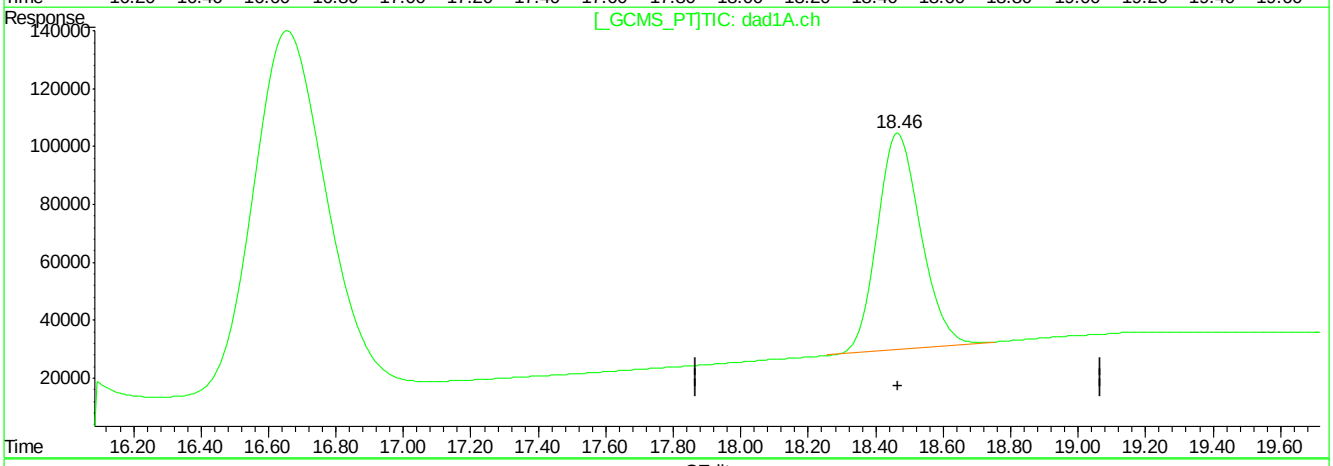
(+) = Expected Retention Time
BB070761.D BBB2118_103021.M Mon Nov 01 08:24:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.46min 5057.978ppb m

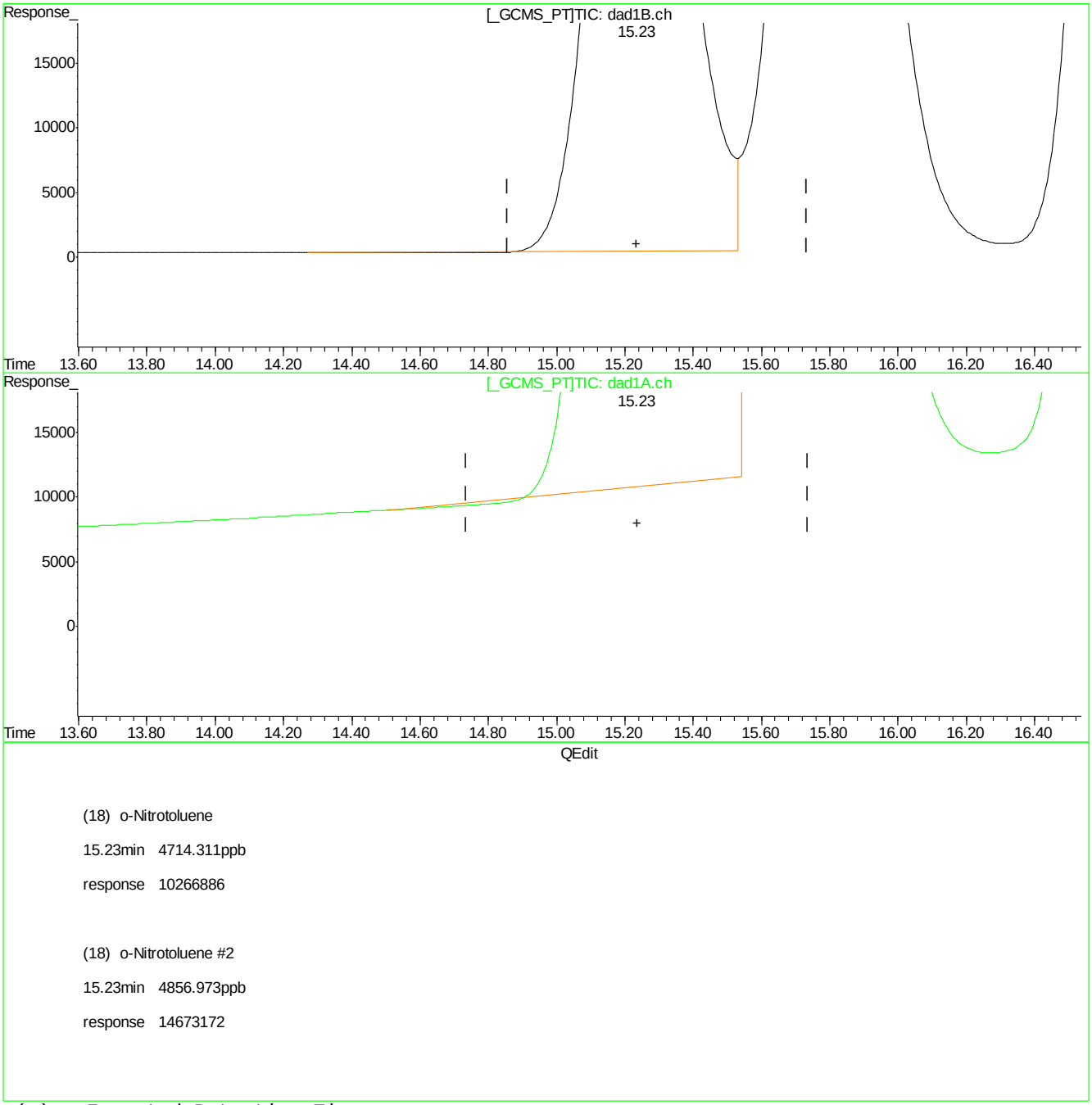
response 6710619

(+) = Expected Retention Time
BB070761.D BBB2118_103021.M Mon Nov 01 08:24:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.23min 4714.311ppb

response 10266886

(18) o-Nitrotoluene #2

15.23min 4856.973ppb

response 14673172

(+) = Expected Retention Time
BB070761.D BBB2118_103021.M Mon Nov 01 08:24:36 2021

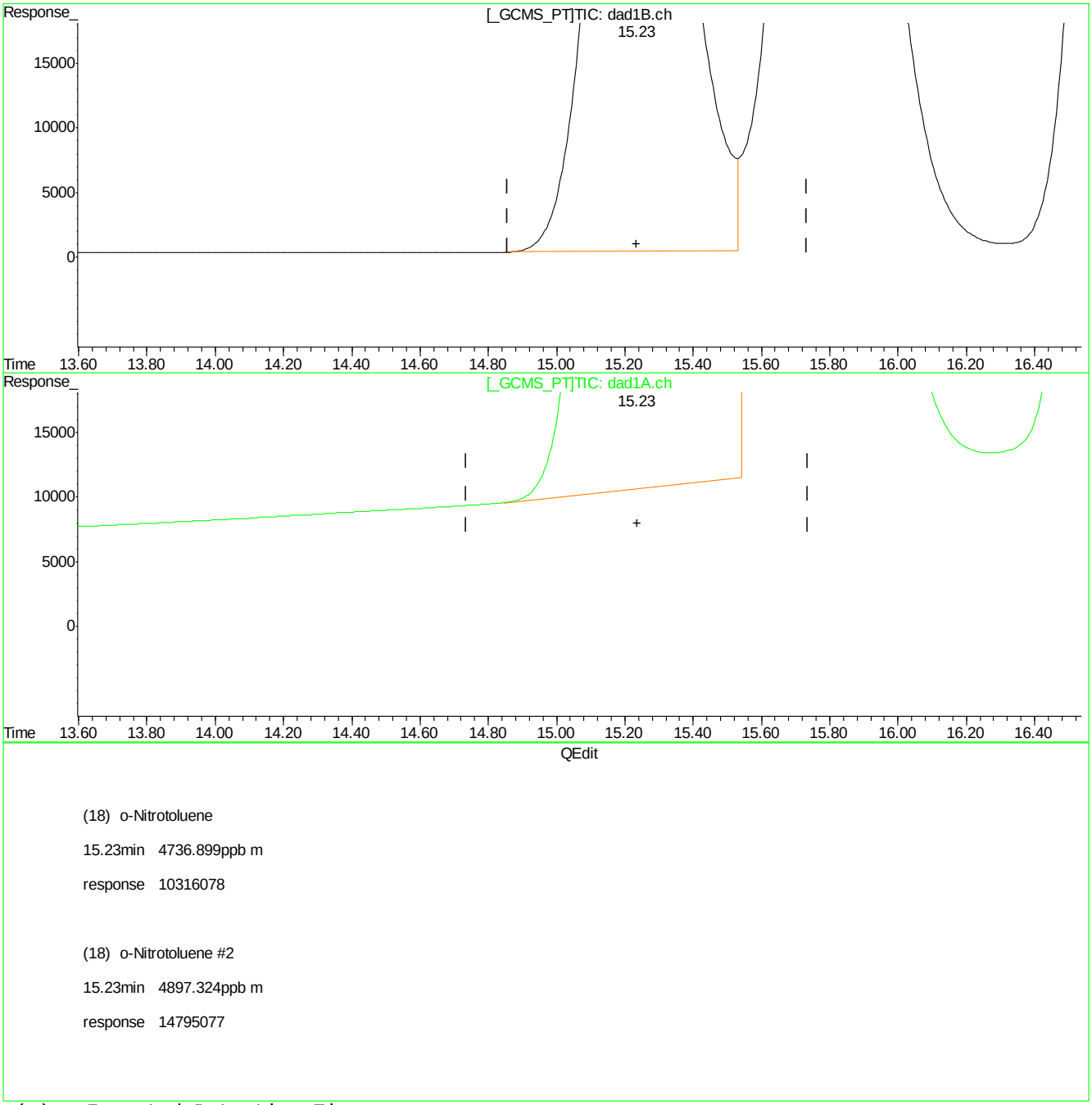
9.5.8.4

9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.23min 4736.899ppb m

response 10316078

(18) o-Nitrotoluene #2

15.23min 4897.324ppb m

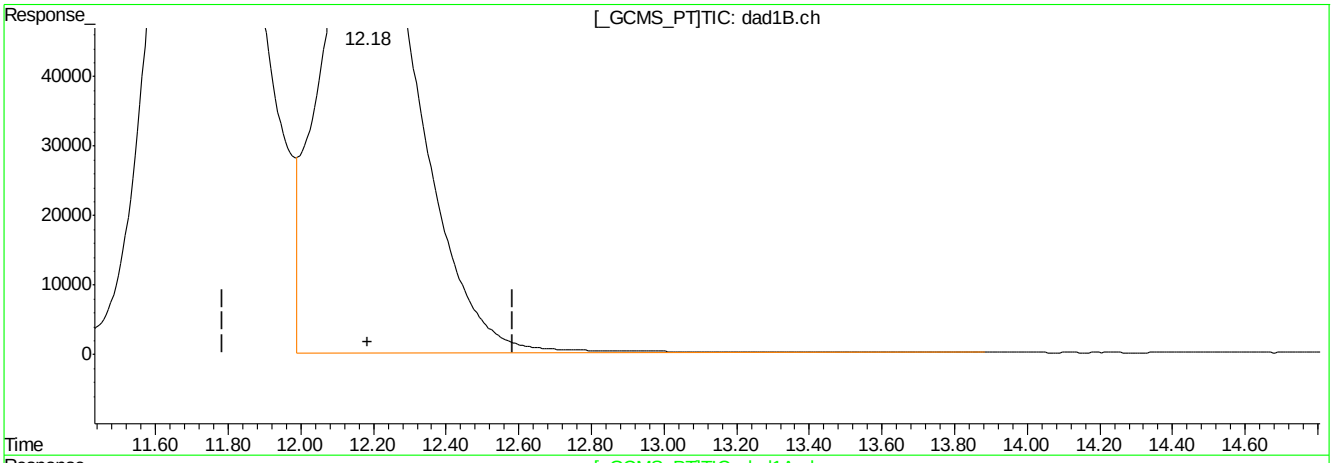
response 14795077

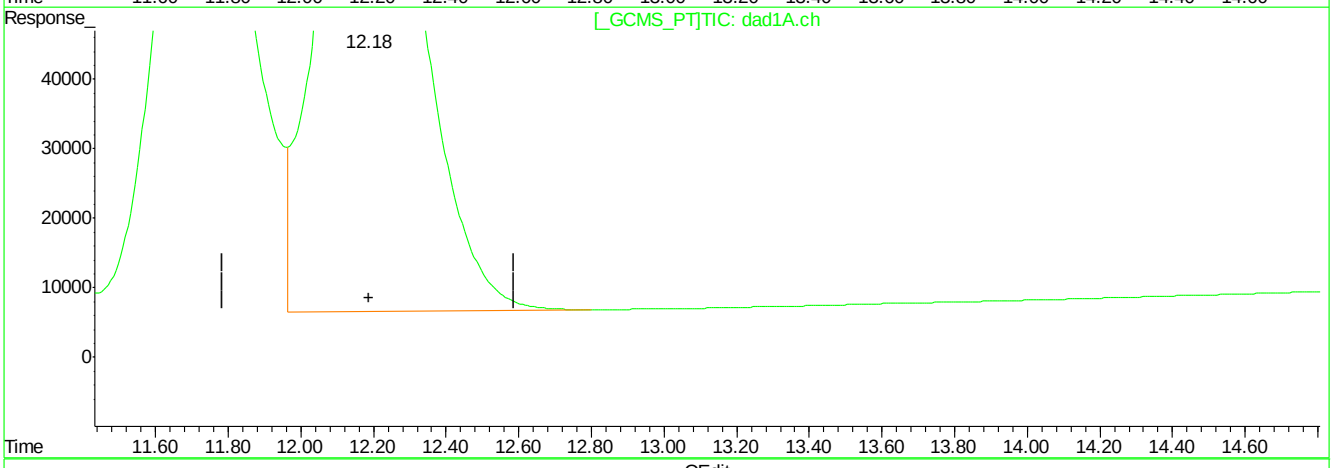
(+) = Expected Retention Time
BB070761.D BBB2118_103021.M Mon Nov 01 08:24:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.18min 4743.839ppb

response 13049117

(17) 2,6-Dinitrotoluene #2

12.18min 5085.093ppb

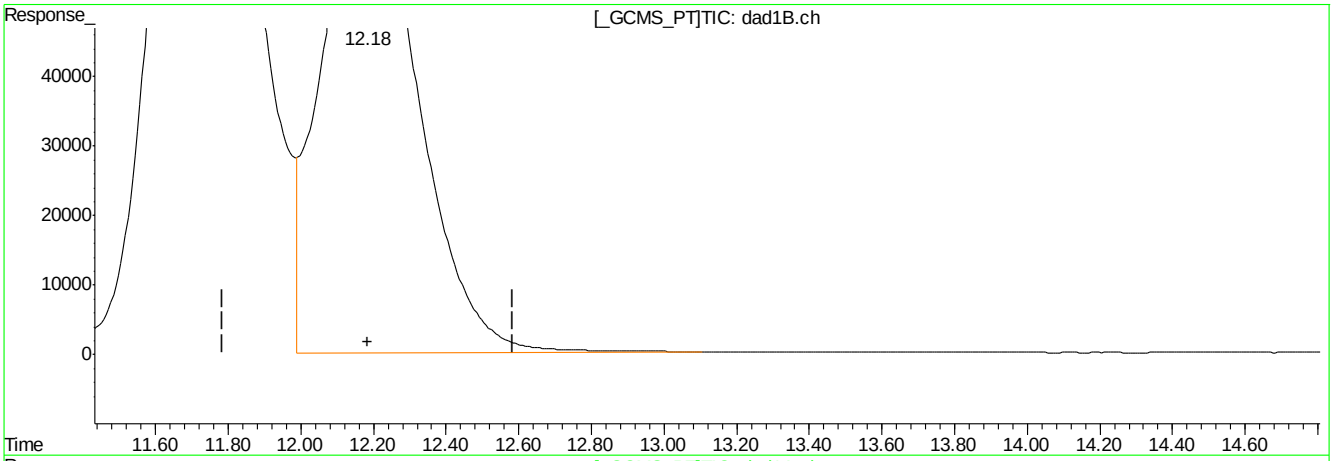
response 17121658

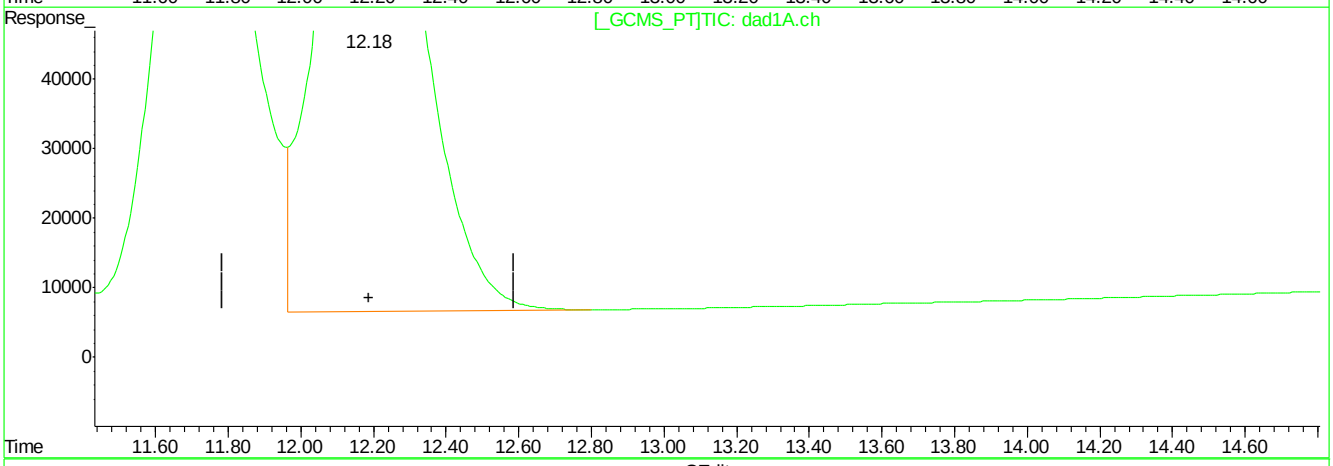
(+) = Expected Retention Time
BB070761.D BBB2118_103021.M Mon Nov 01 08:24:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.18min 4711.197ppb m

response 12959327

(17) 2,6-Dinitrotoluene #2

12.18min 5085.093ppb

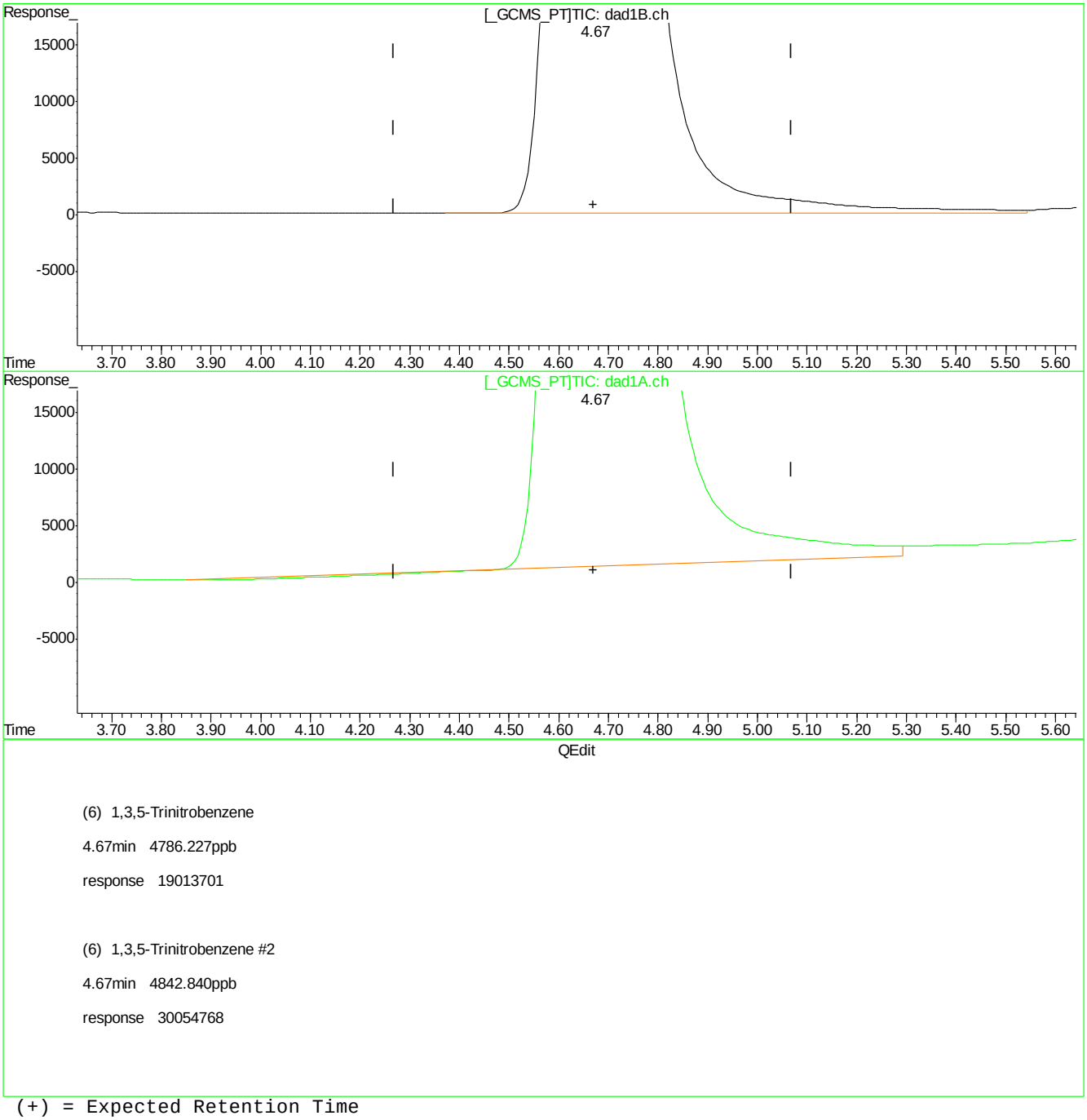
response 17121658

(+) = Expected Retention Time
BB070761.D BBB2118_103021.M Mon Nov 01 08:25:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration



(6) 1,3,5-Trinitrobenzene

4.67min 4786.227ppb

response 19013701

(6) 1,3,5-Trinitrobenzene #2

4.67min 4842.840ppb

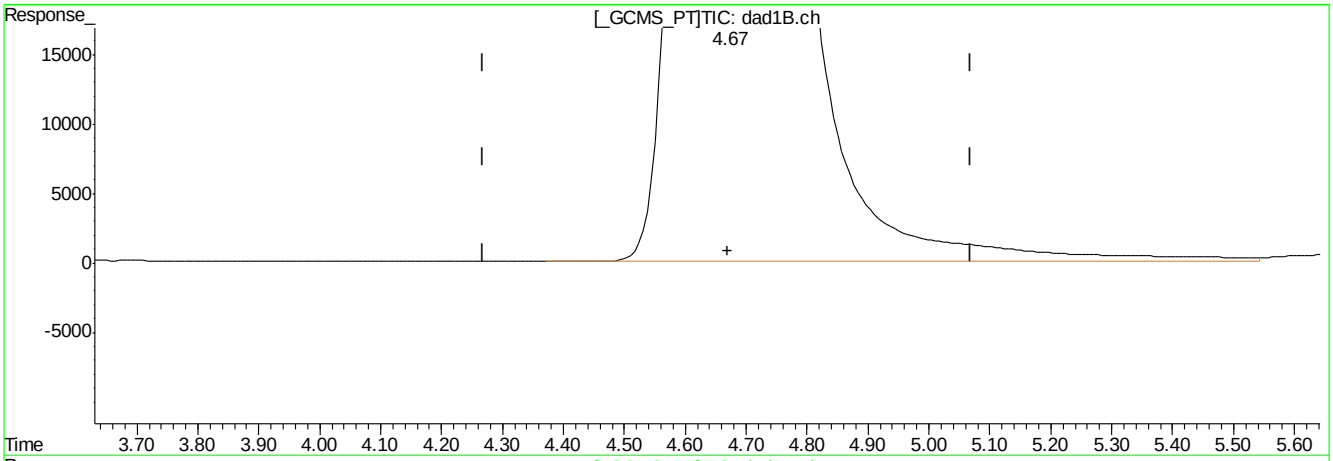
response 30054768

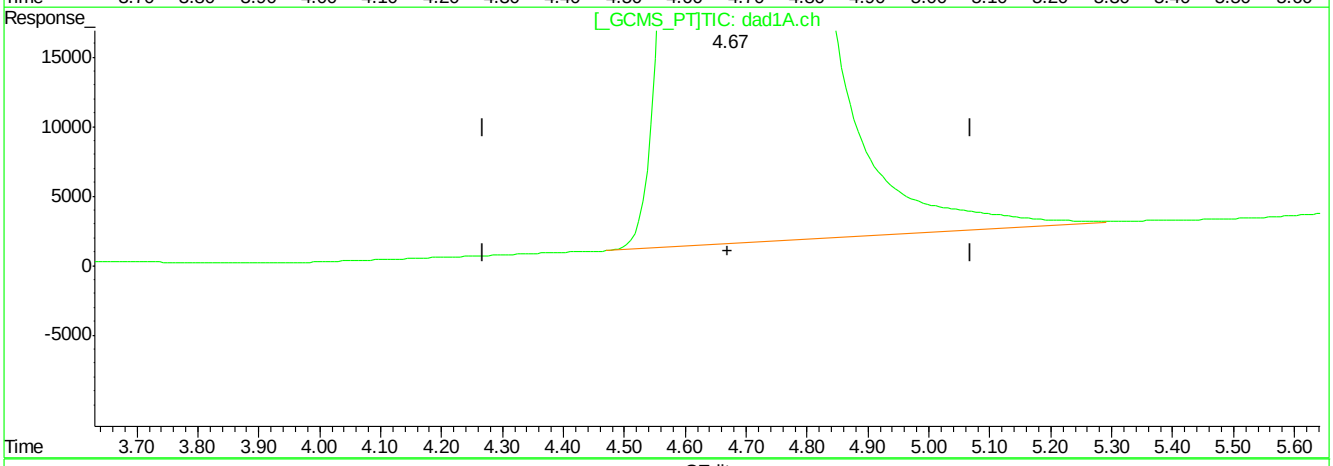
(+) = Expected Retention Time
BB070761.D BBB2118_103021.M Mon Nov 01 08:25:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070761.D\dad1A.ch
Acq On : 30-Oct-2021, 17:06:31 Operator: jamesb
Sample : ic2118-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 8:24 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:23:36 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.67min 4786.227ppb

response 19013701

(6) 1,3,5-Trinitrobenzene #2

4.67min 4821.692ppb m

response 29923526

(+) = Expected Retention Time
BB070761.D BBB2118_103021.M Mon Nov 01 08:25:32 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 13:51

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 11:17:38 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 01 11:43:40 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery =		0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.33	1.33	723982	1209234	496.472	505.263
2)	HMX	1.46	1.46	1501406	4139721	1037.777	1038.444
3)	DNX	1.69	1.69	1759671	2804168	1053.808	957.650
4)	MNX	2.27	2.27	3386119	5193826	1262.161	1264.030
5)	RDX	2.88	2.88	1833663	2909303	1057.717	1071.686
6)	1,3,5-Trinitrobe	4.67	4.67	3931229	6063033	1074.702	1066.965
7)	1,3-Dinitrobenze	5.84	5.84	5110758	3741885	1064.183	1090.268
8)	3,5-Dinitroanili	6.18	6.18	4004763	6903730	1091.169	1076.928
9)	Nitrobenzene	7.38	7.38	3000084	2949376	1062.114	1045.627
10)	Nitroglycerin	0.00	8.88	0	1268172	N.D.	1146.705m#
11)	Tetryl	9.38	9.38	2888393	4705760	1058.437	1111.417
12)	2,4,6-Trinitroto	9.78	9.78	3521105	4254314	1056.843	1128.765
13)	2-Amino-4,6-Dini	10.10	10.10	3426206	5209615	1073.556	1060.416
14)	4-Amino-2,6-Dini	10.59	10.59	2488761	5029530	1092.592	1073.371
16)	2,4-Dinitrotolue	11.71	11.71	4489115	2991263	1066.285	1143.685
17)	2,6-Dinitrotolue	12.16	12.16	2704333	3580949	1057.283	1147.892
18)	o-Nitrotoluene	15.21	15.21	2138650	2959649	1077.237	1057.773
19)	p-Nitrotoluene	15.78	15.78	3357216	2768364	1095.309	1015.064
20)	m-Nitrotoluene	16.64	16.64	3141730	3702079	1065.446	1063.565
21)	PETN	0.00	18.45	0	1414715	N.D. d	1109.626m

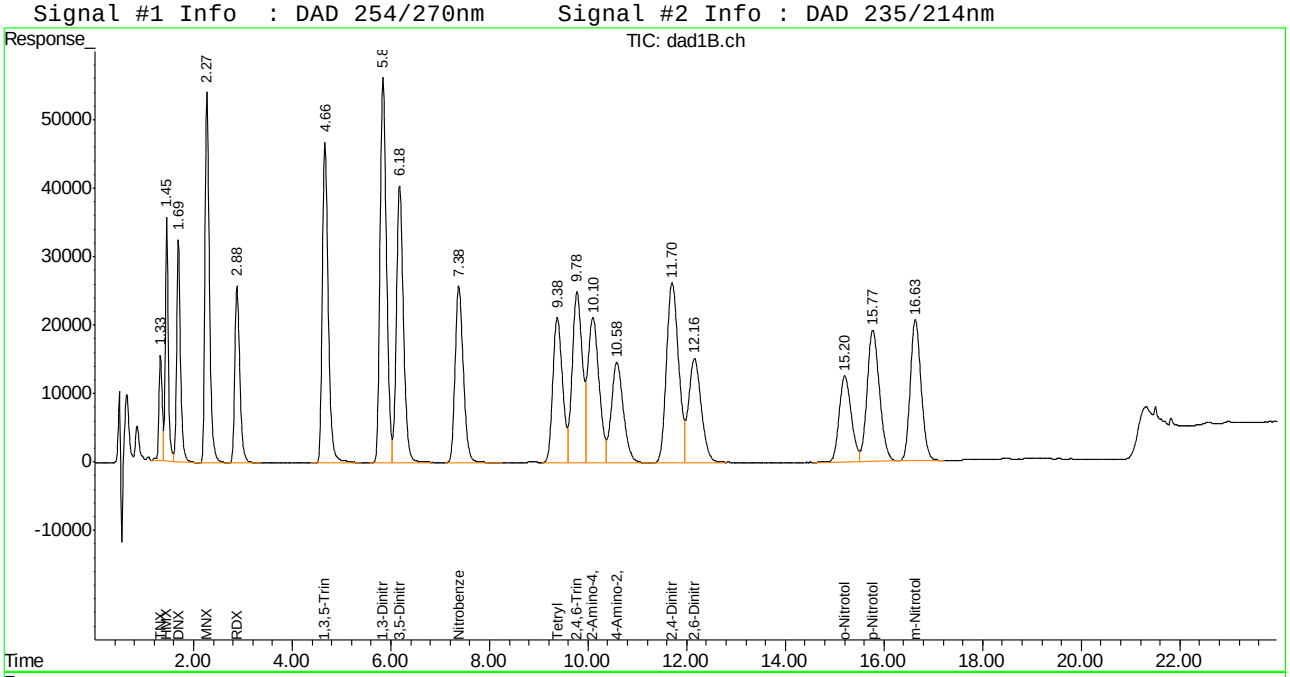
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070763.D BBB2118_103021.M Mon Nov 01 11:46:19 2021 Page 1

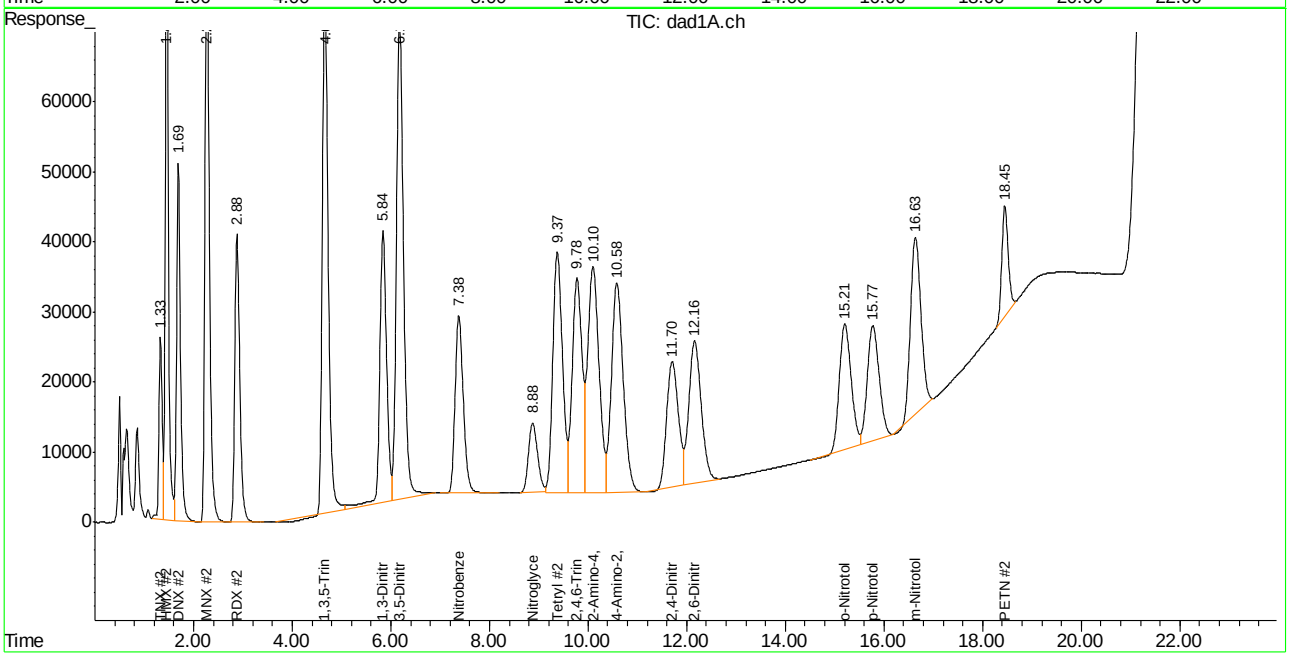
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 11:17:38 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : op88045,GBB2118,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 11:44 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

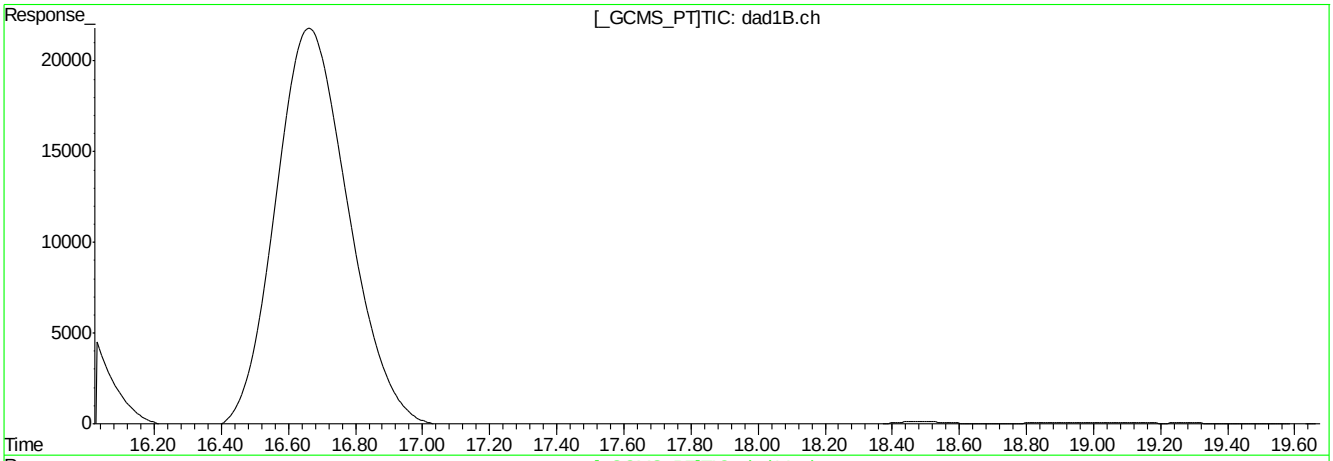
Sample Number: GBB2118-ICV2118 **Method:** SW846 8330A
Lab FileID: BB070763.D **Analyst approved:** 11/01/21 12:47 James Boone
Injection Time: 11/01/21 11:17 **Supervisor approved:** 11/01/21 13:51 Naresh Jiawan

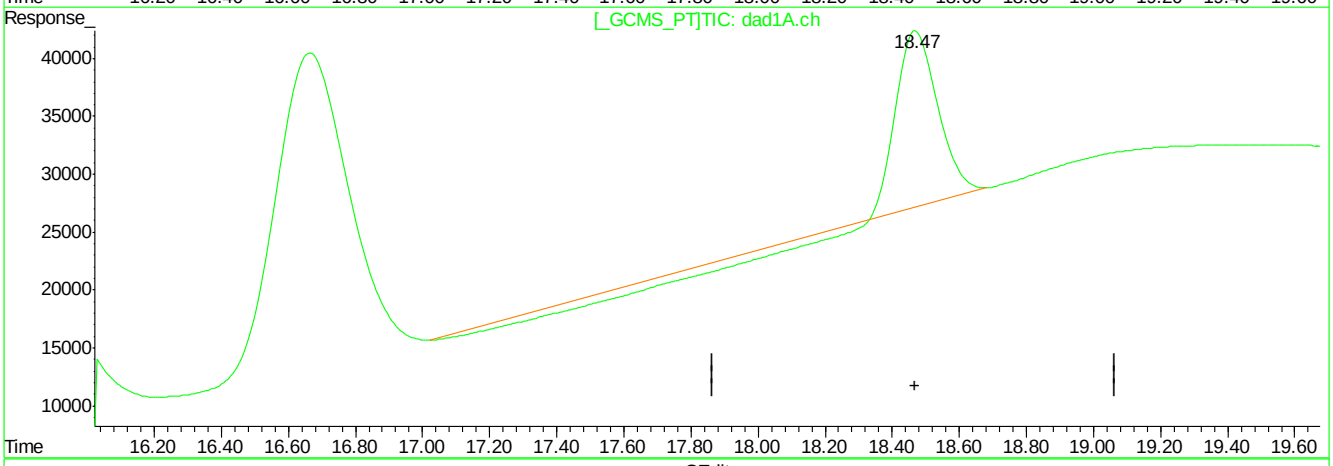
Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitroglycerine	55-63-0	2	8.88	Poor instrument integration
PETN	78-11-5	2	18.45	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 09:21:12 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 9:52 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.47min 642.898ppb

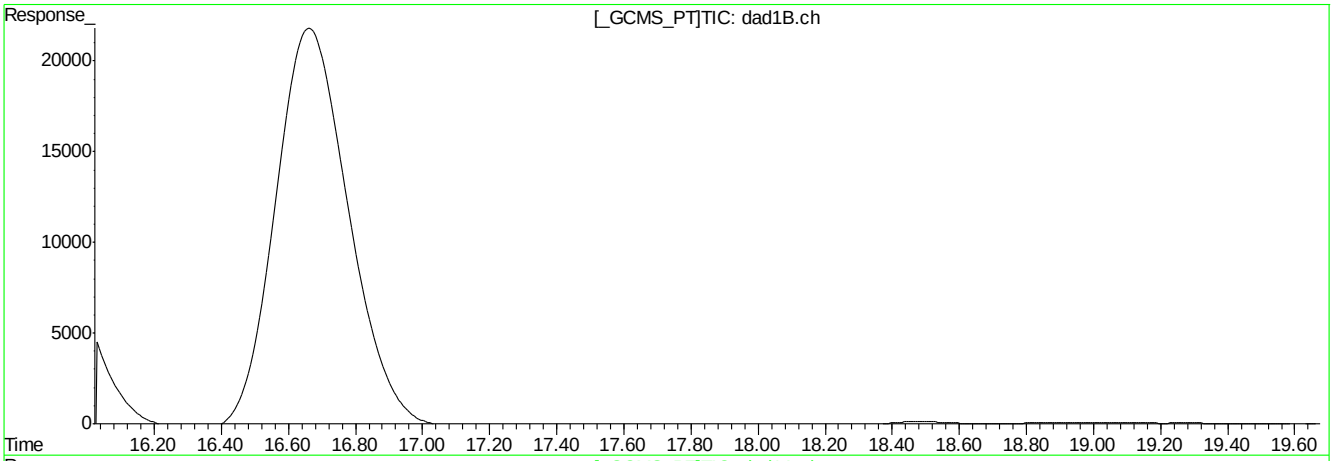
response 819661

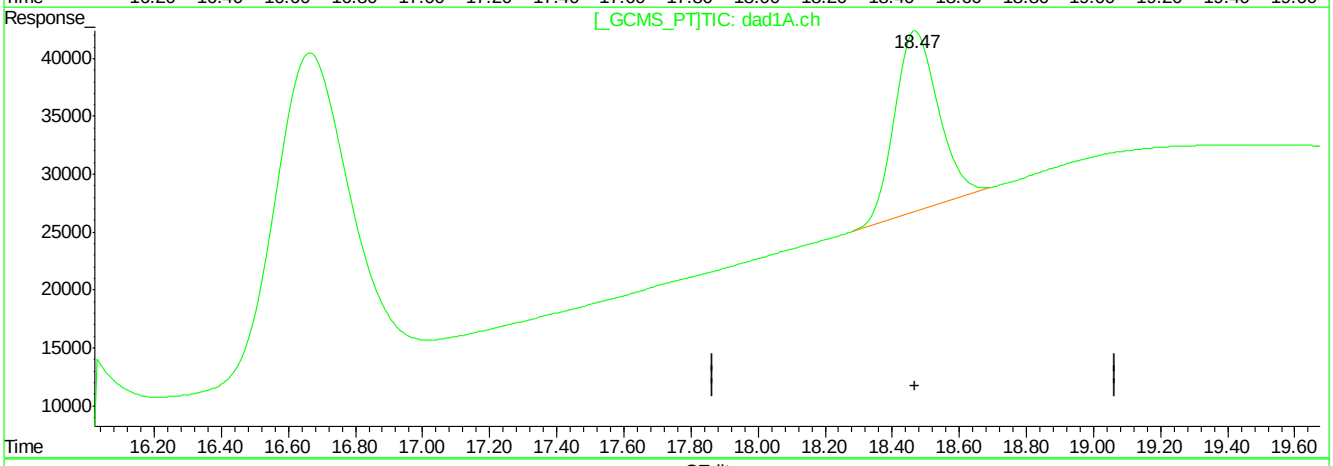
(+) = Expected Retention Time
BB070763.D BBB2118_103021.M Mon Nov 01 09:52:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 09:21:12 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 9:52 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.47min 1105.222ppb m

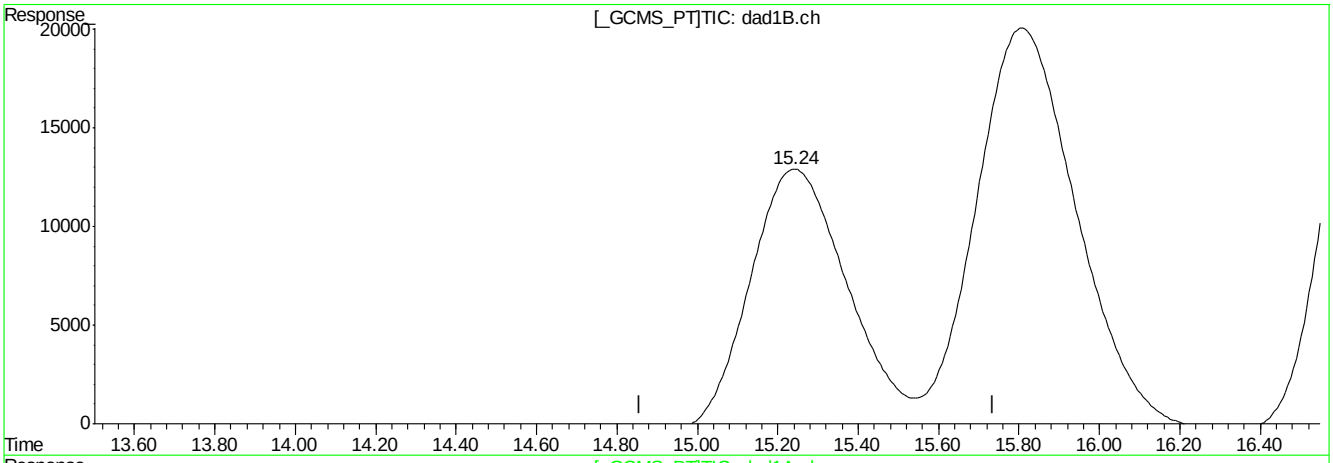
response 1409099

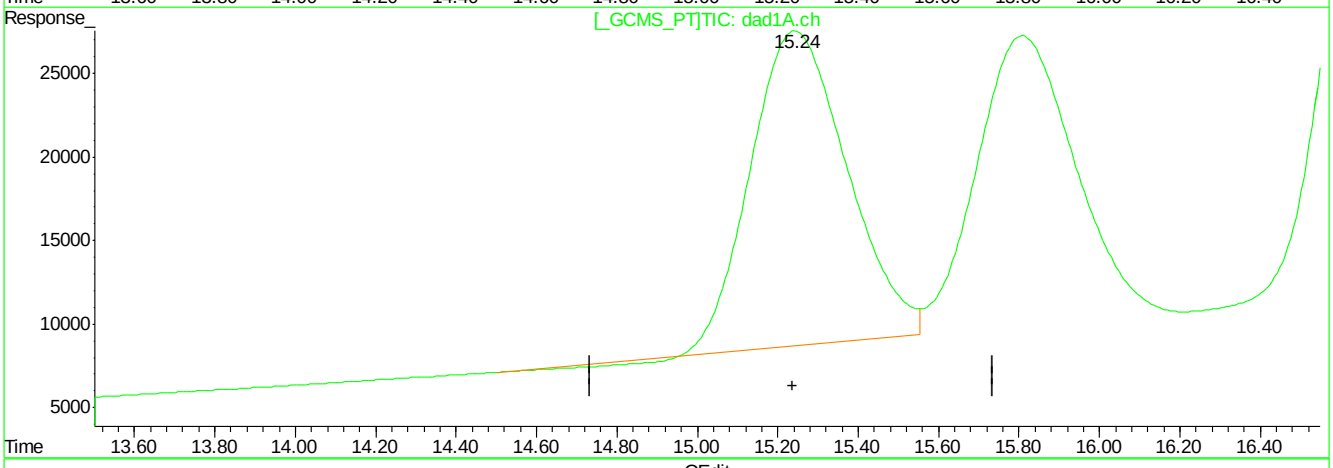
(+) = Expected Retention Time
BB070763.D BBB2118_103021.M Mon Nov 01 09:52:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 09:21:12 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 9:52 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.24min 1152.063ppb

response 2287202

(18) o-Nitrotoluene #2

15.24min 1116.373ppb

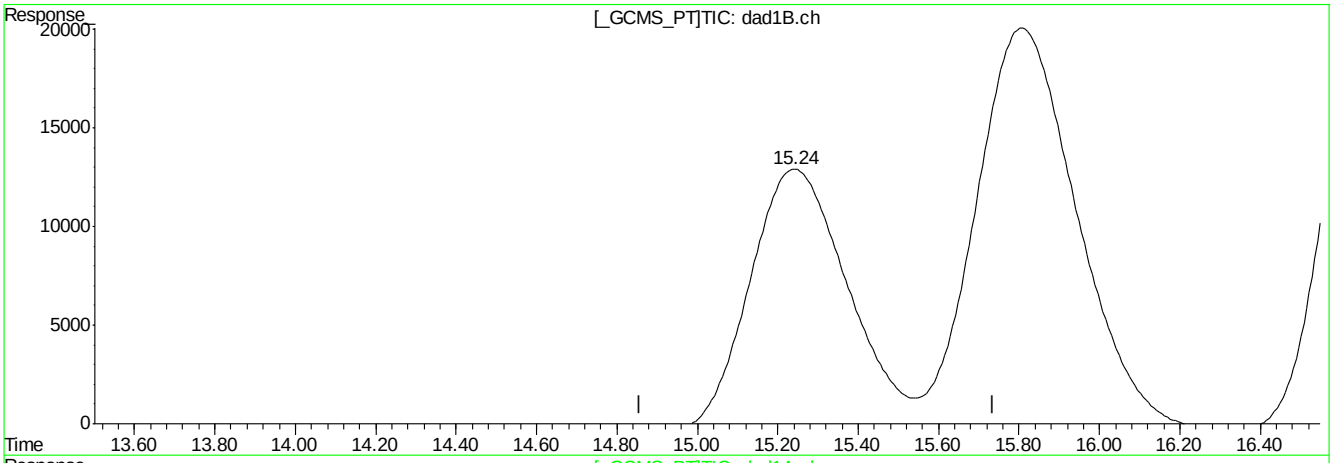
response 3123612

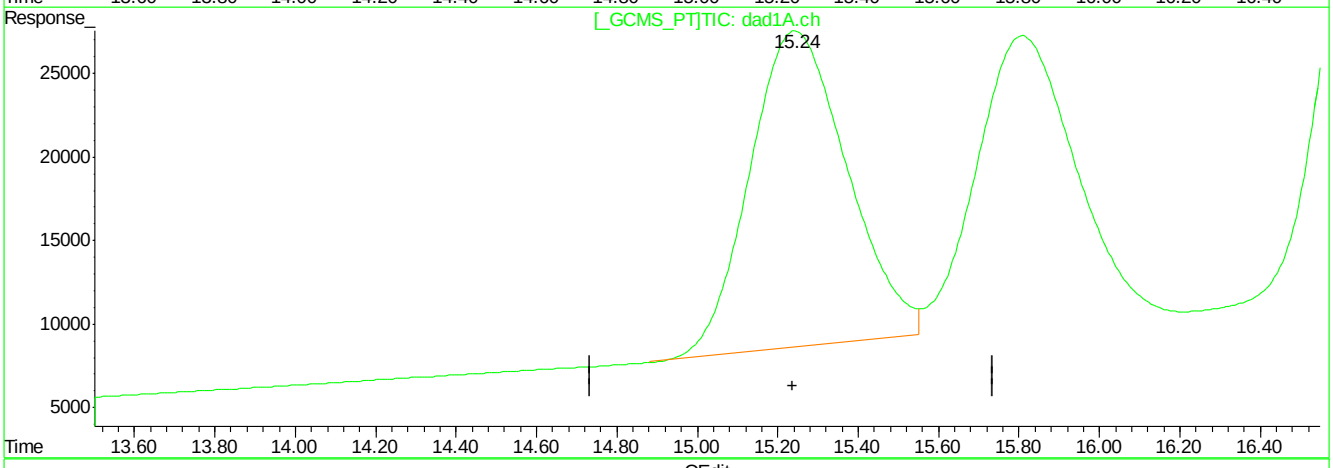
(+) = Expected Retention Time
BB070763.D BBB2118_103021.M Mon Nov 01 09:52:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 09:21:12 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 9:52 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.24min 1152.063ppb

response 2287202

(18) o-Nitrotoluene #2

15.24min 1136.834ppb m

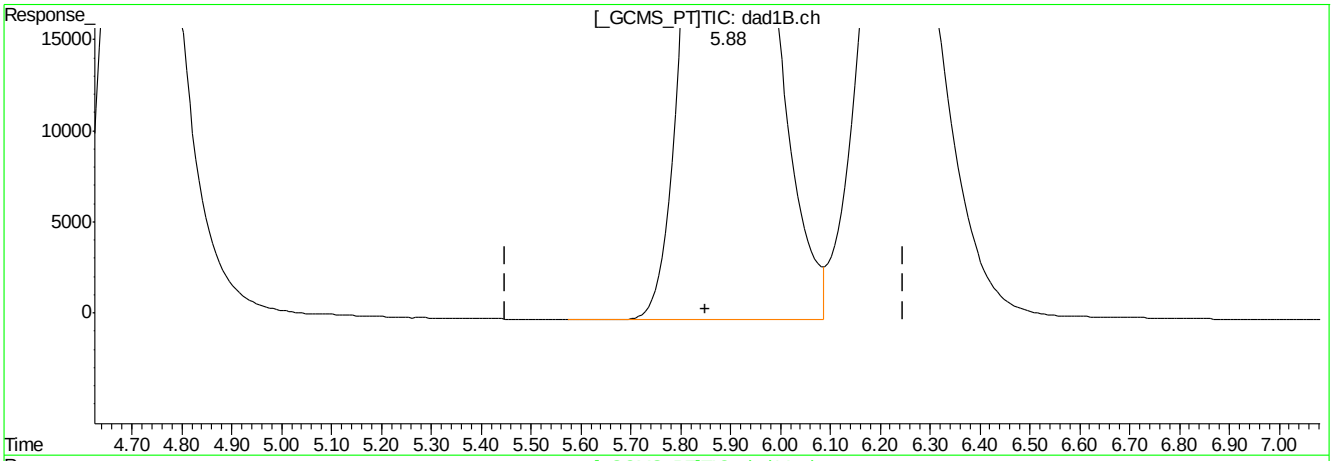
response 3180862

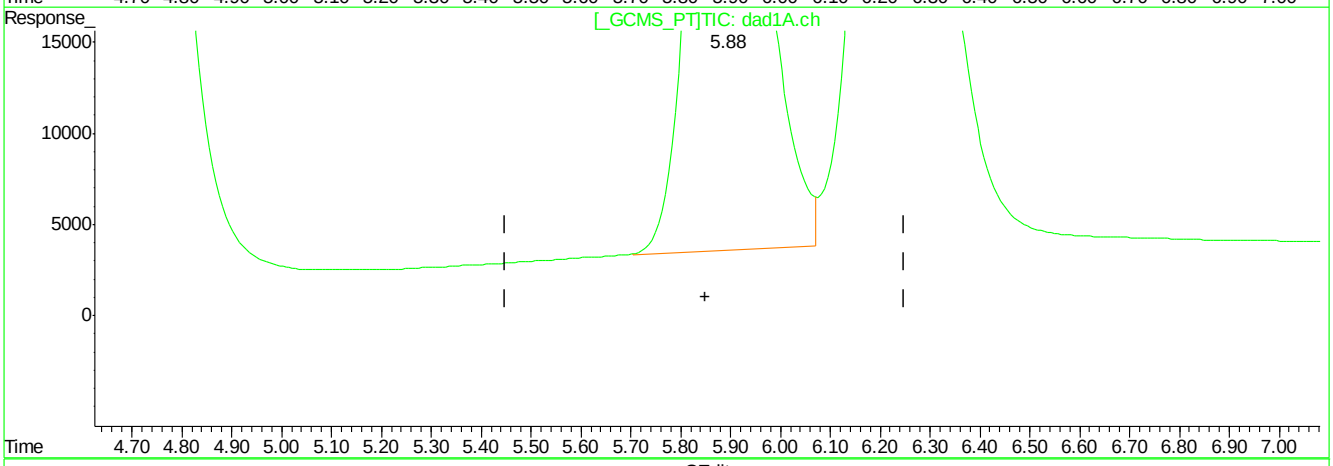
(+) = Expected Retention Time
BB070763.D BBB2118_103021.M Mon Nov 01 09:52:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 09:21:12 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 9:52 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.89min 1150.460ppb

response 5525101

(7) 1,3-Dinitrobenzene #2

5.88min 1094.875ppb m

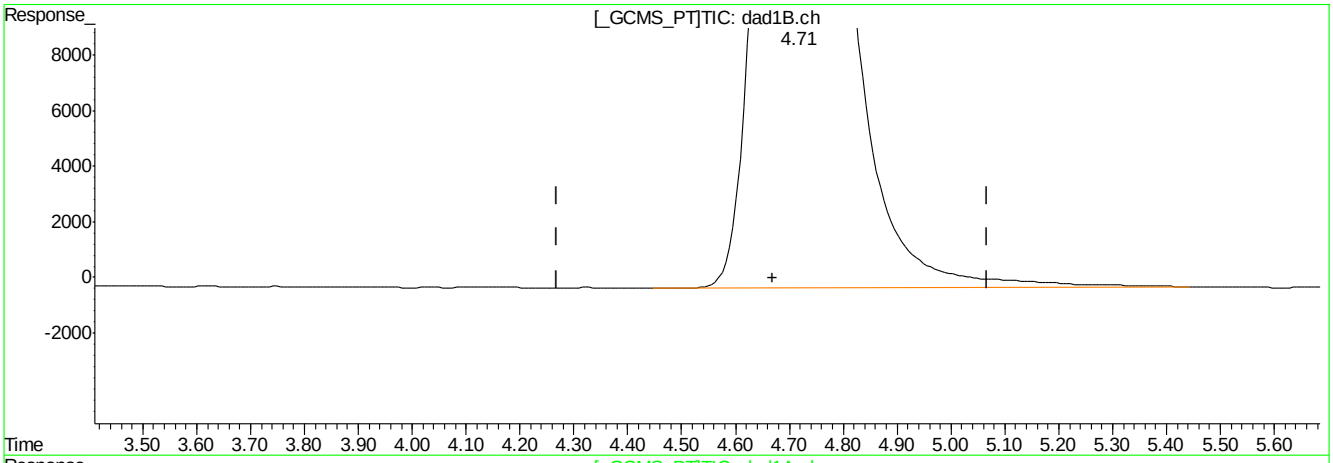
response 3757699

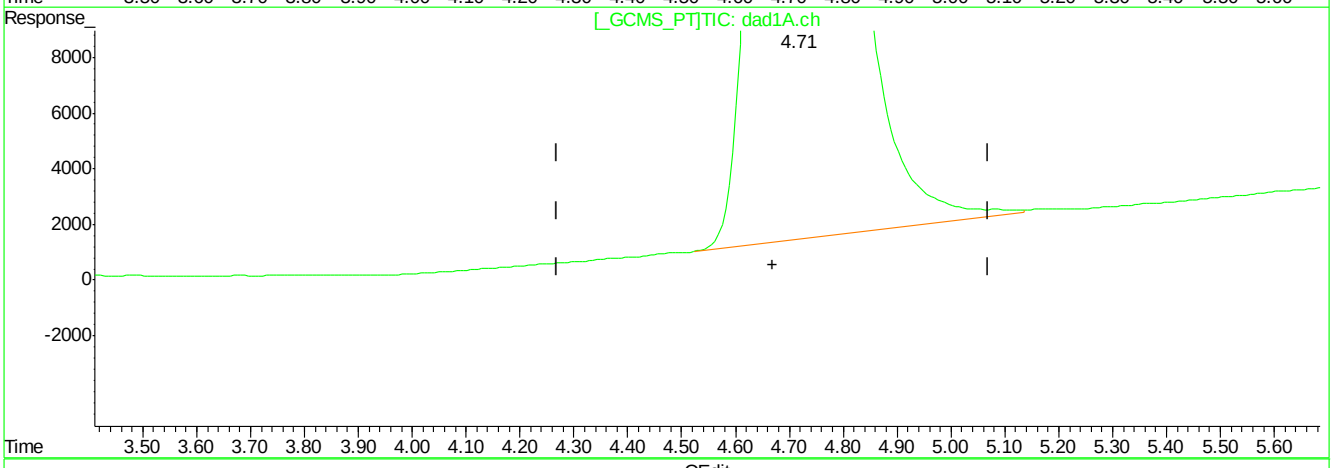
(+) = Expected Retention Time
BB070763.D BBB2118_103021.M Mon Nov 01 09:52:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 09:21:12 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 9:52 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.71min 1160.225ppb

response 4244067

(6) 1,3,5-Trinitrobenzene #2

4.71min 1169.584ppb m

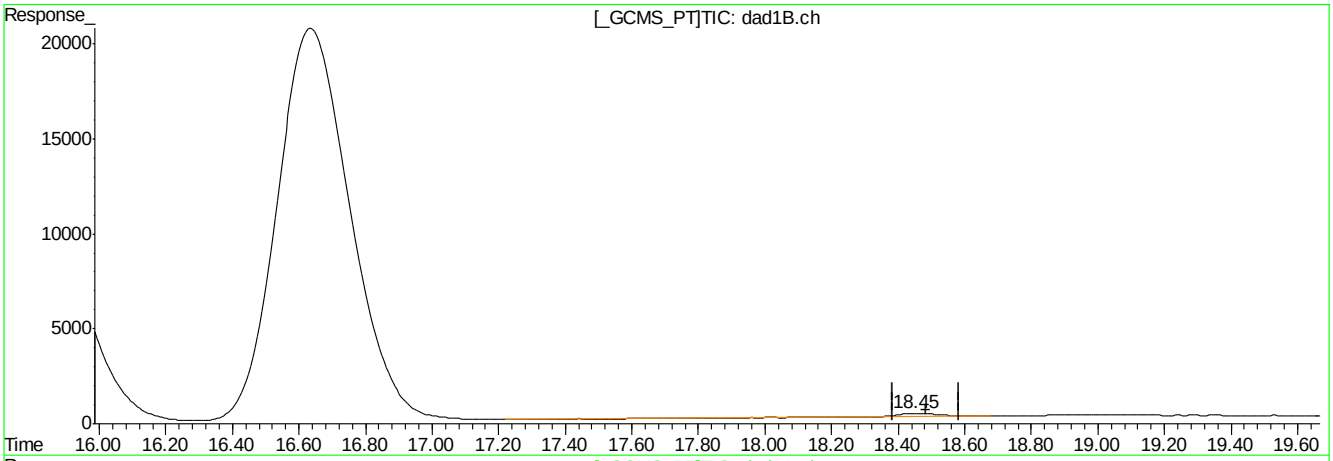
response 6646167

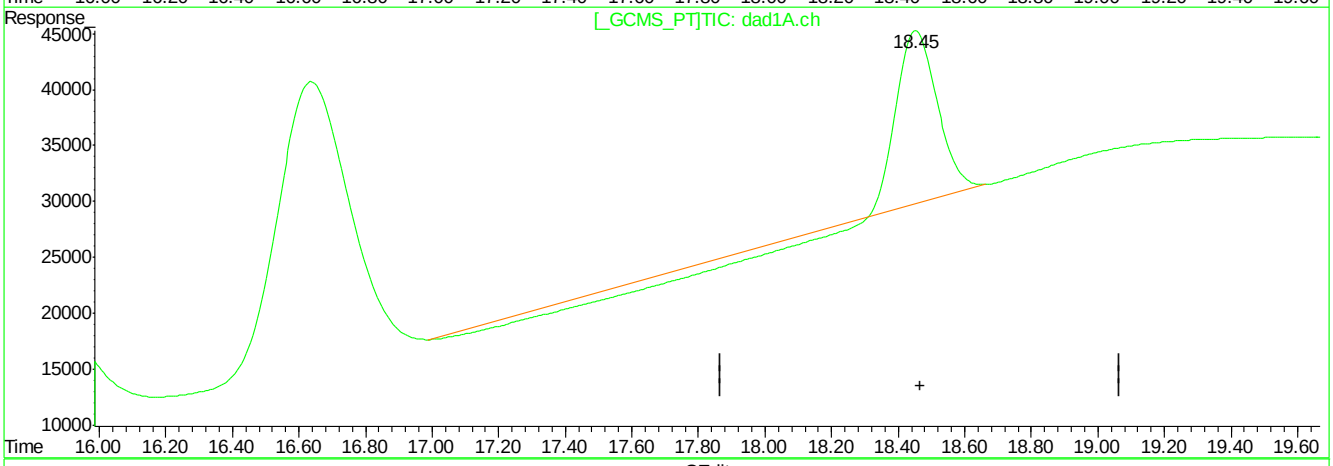
(+) = Expected Retention Time
BB070763.D BBB2118_103021.M Mon Nov 01 09:53:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 11:17:38 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 11:43 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.46min 0.000ppb

response 10426

(21) PETN #2

18.45min 618.441ppb

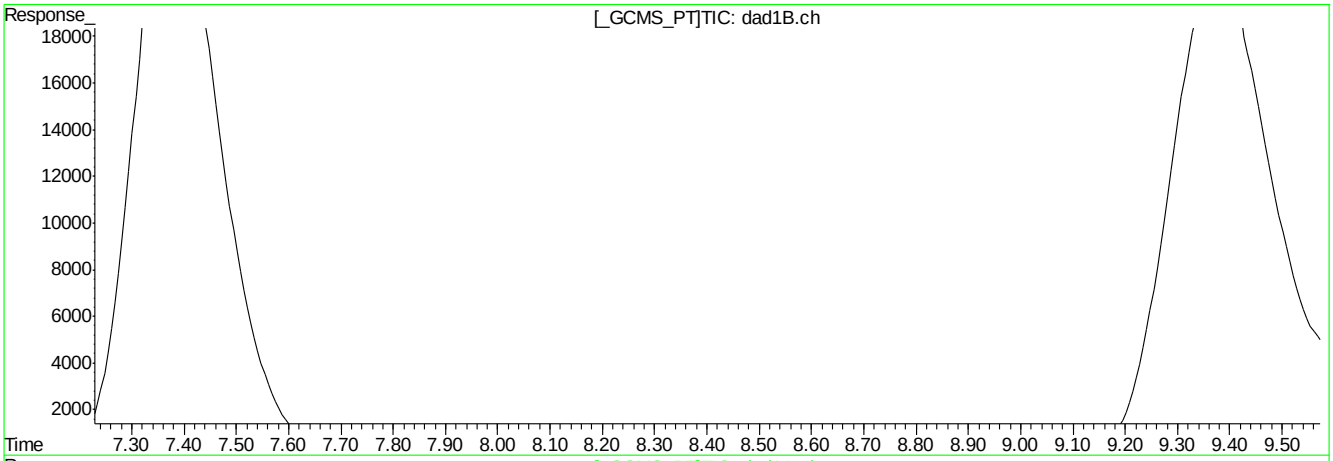
response 788480

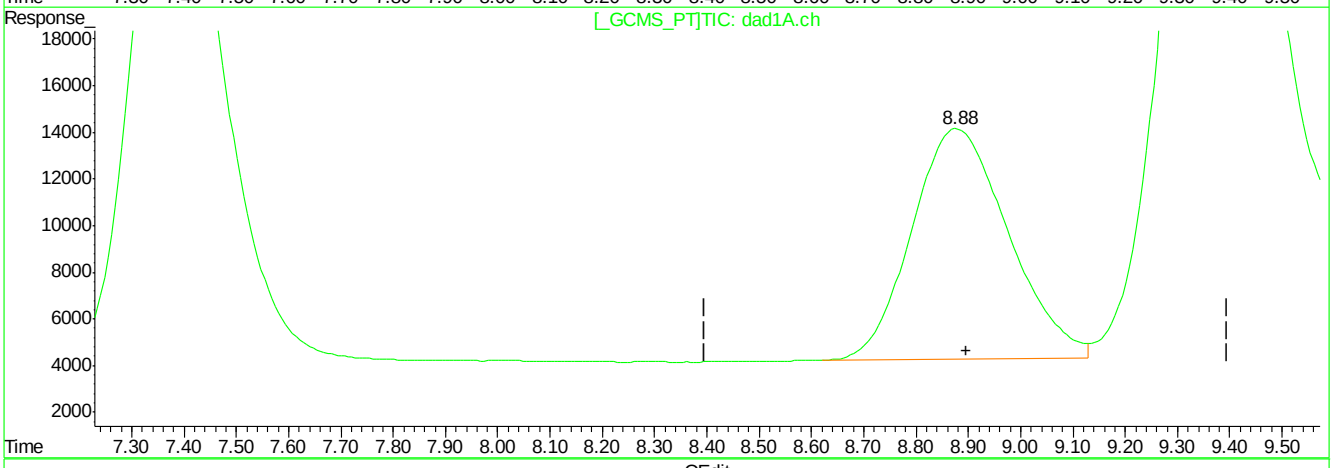
(+) = Expected Retention Time
BB070763.D BBB2118_103021.M Mon Nov 01 11:43:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2118\BB070763.D\dad1A.ch
Acq On : 01-Nov-2021, 11:17:38 Operator: jamesb
Sample : icv2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 1 11:43 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

8.88min 1146.705ppb m

response 1268172

(+) = Expected Retention Time
BB070763.D BBB2118_103021.M Mon Nov 01 11:44:10 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/05/21 16:57

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1A.ch
Acq On : 04-Nov-2021, 10:52:55 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 04 14:13:08 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.95	10.95	1720840	2875784	953.591	860.020
	Spiked Amount 500.000	Range 70 - 136		Recovery =		190.72%#	172.00%#
	Target Compounds						
1)	TNX	1.33	1.33	653798	1063546	448.344	444.389
2)	HMX	1.46	1.46	1377048	3773889	951.821	946.676
3)	DNX	1.69	1.69	1532482	2454204	917.752	838.134
4)	MNX	2.27	2.27	2945307	4520692	1097.850	1100.208
5)	RDX	2.87	2.87	1636675	2596221	944.088	956.358
6)	1,3,5-Trinitrobe	4.64	4.64	3495902	5236096	955.694	921.441
7)	1,3-Dinitrobenze	5.81	5.81	4557026	3258668	948.883	949.473
8)	3,5-Dinitroanili	6.14	6.14	3507012	6021095	955.548	939.243
9)	Nitrobenzene	7.34	7.34	2695311	2663904	954.216	944.421
10)	Nitroglycerin	0.00	8.83	0	1045239	N.D.	945.125 #
11)	Tetryl	9.30	9.30	2489064	3993521	912.105	943.199
12)	2,4,6-Trinitroto	9.70	9.70	3075053	3590164	922.963	952.551
13)	2-Amino-4,6-Dini	10.00	10.00	3072138	4548853	962.614	925.918
14)	4-Amino-2,6-Dini	10.48	10.48	2156843	4190708	946.877	894.355
16)	2,4-Dinitrotolue	11.61	11.61	3988865	2443807	947.462	934.370
17)	2,6-Dinitrotolue	12.06	12.06	2432350	3102103	950.949	994.395
18)	o-Nitrotoluene	15.11	15.11	1882114	2689361	948.020	961.173
19)	p-Nitrotoluene	15.68	15.68	2942931	2477271	960.146	908.331
20)	m-Nitrotoluene	16.55	16.55	2801209	3279302	949.966	942.106
21)	PETN	0.00	18.41	0	1241469	N.D. d	973.741m

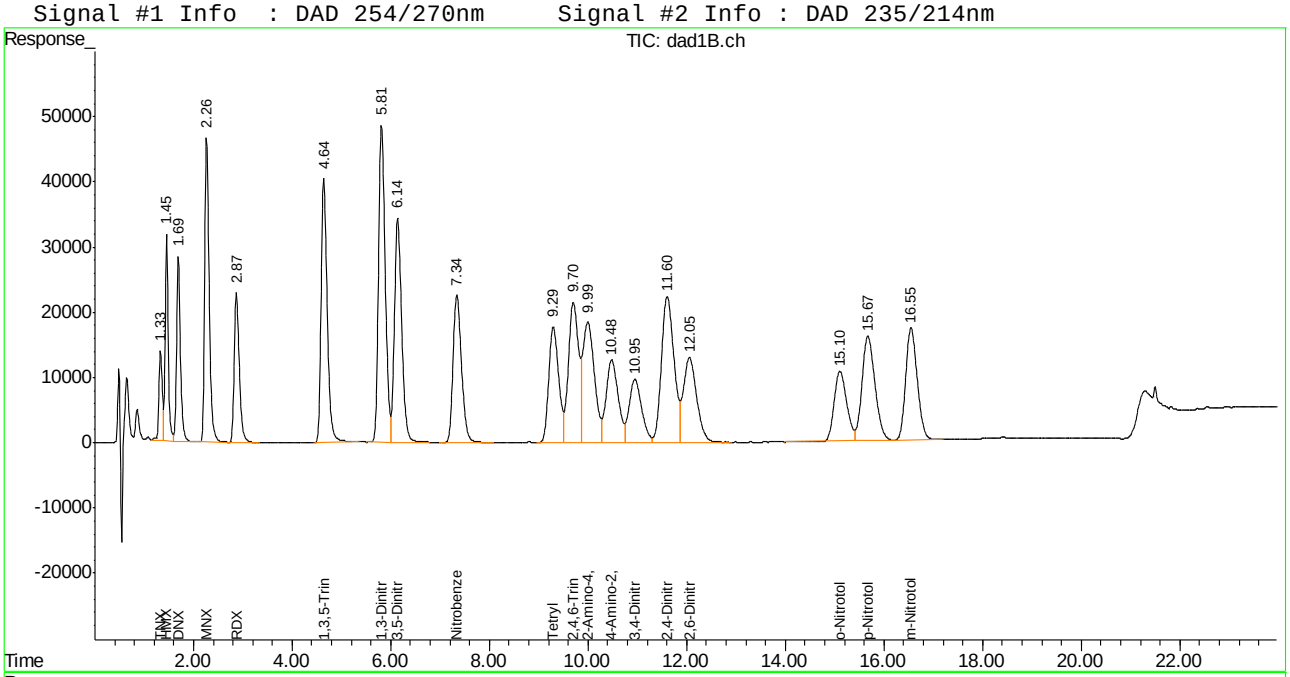
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070807.D BBB2118_103021.M Fri Nov 05 10:14:18 2021 Page 1

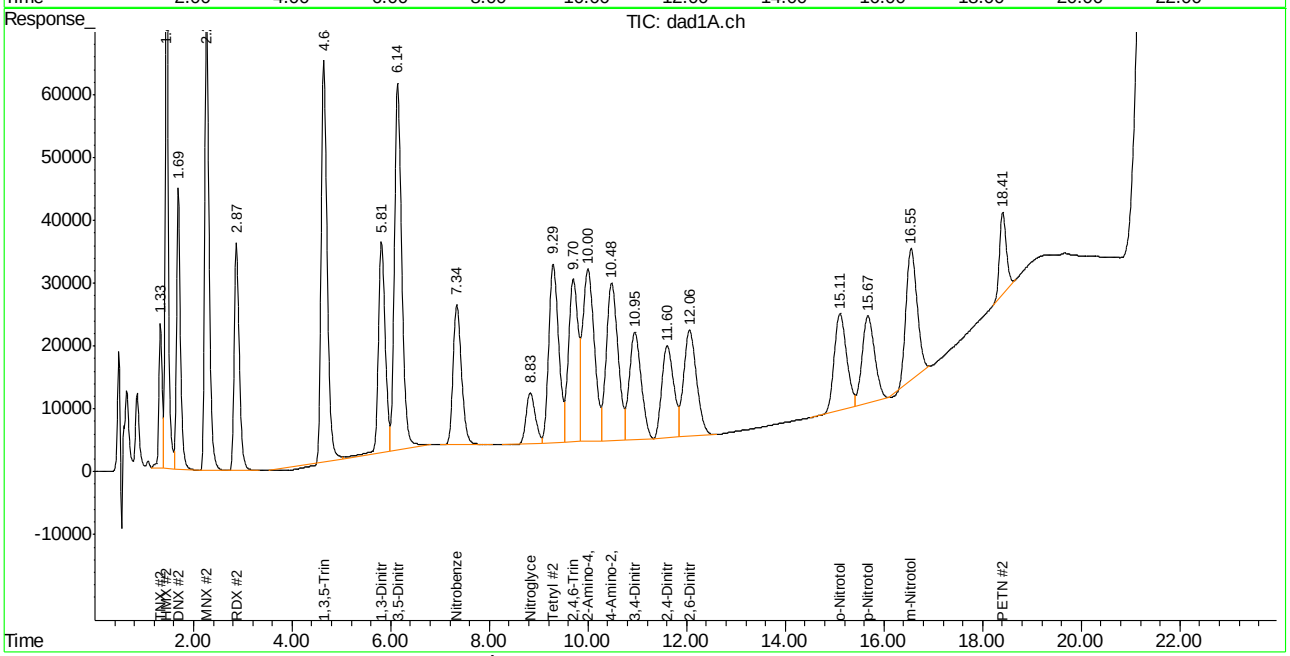
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1A.ch
Acq On : 04-Nov-2021, 10:52:55 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:53 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

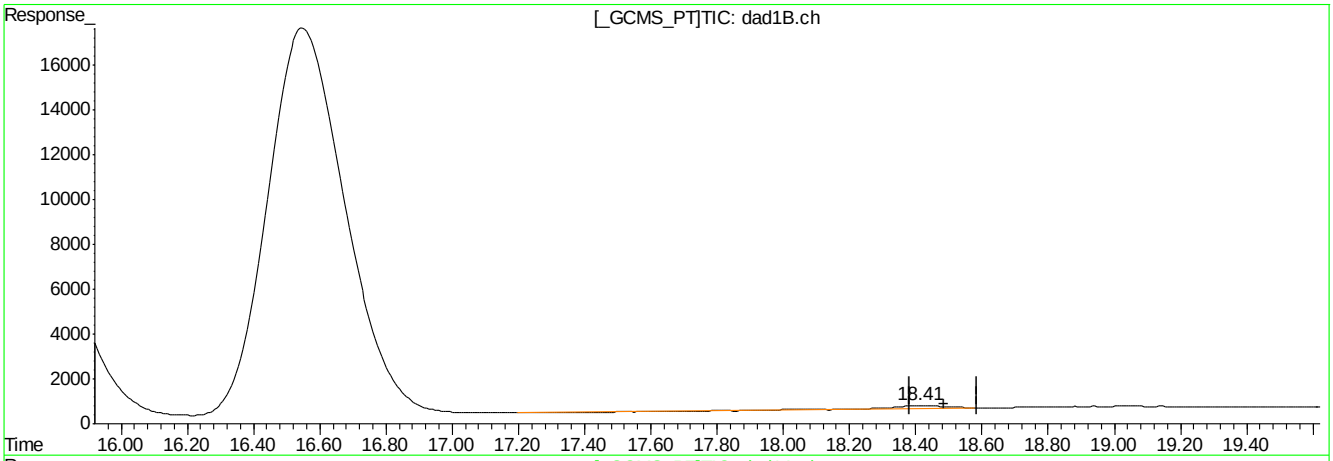
Sample Number: GBB2121-CC2118
Lab FileID: BB070807.D
Injection Time: 11/04/21 10:52
Method: SW846 8330B
Analyst approved: 11/05/21 11:16 James Boone
Supervisor approved: 11/05/21 16:57 Naresh Jiawan

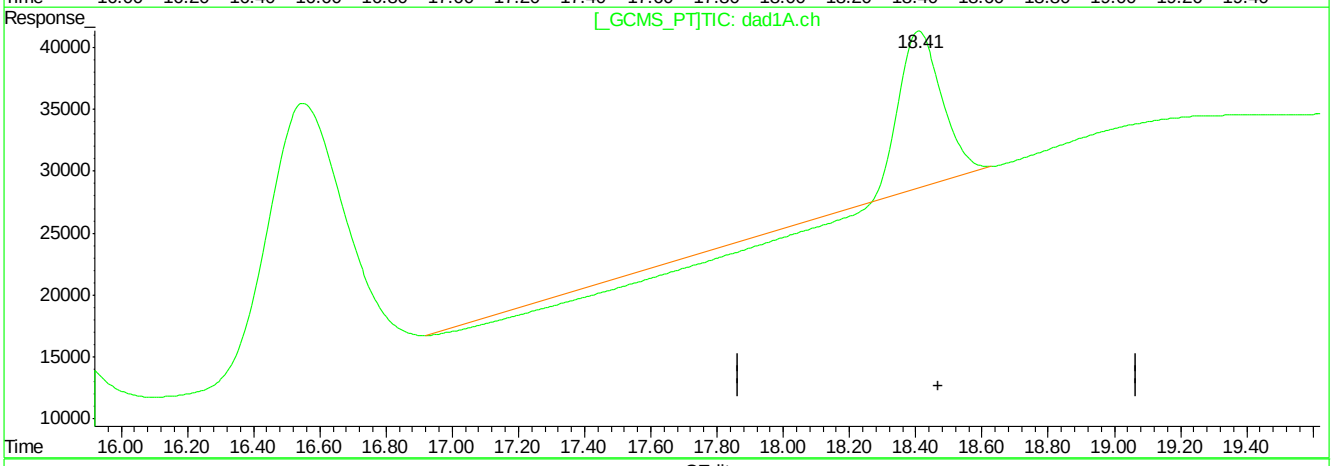
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.41	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1A.ch
Acq On : 04-Nov-2021, 10:52:55 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 4 14:13 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.41min 0.000ppb

response 9367

(21) PETN #2

18.41min 470.568ppb

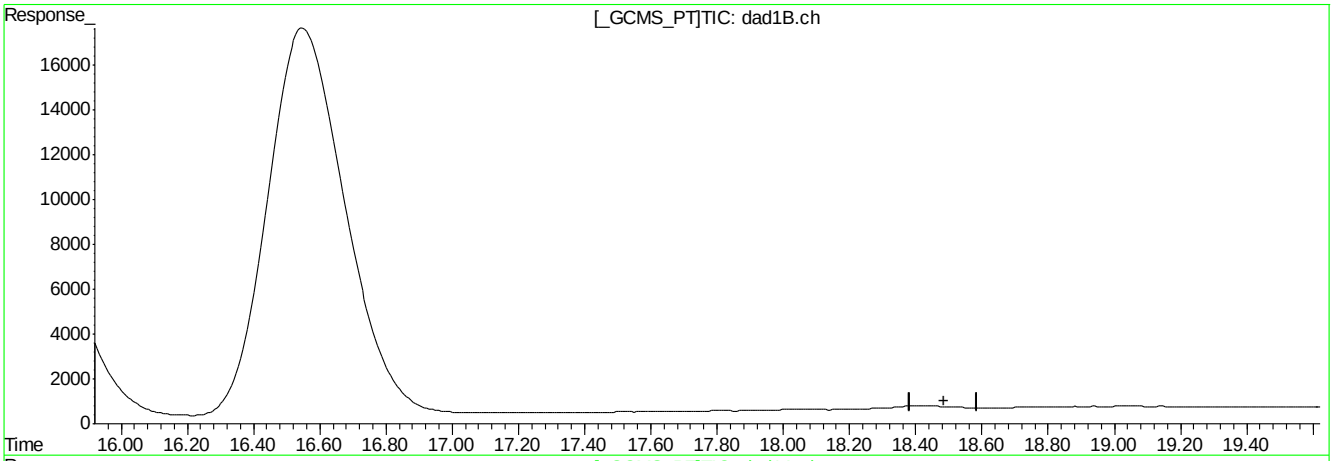
response 599949

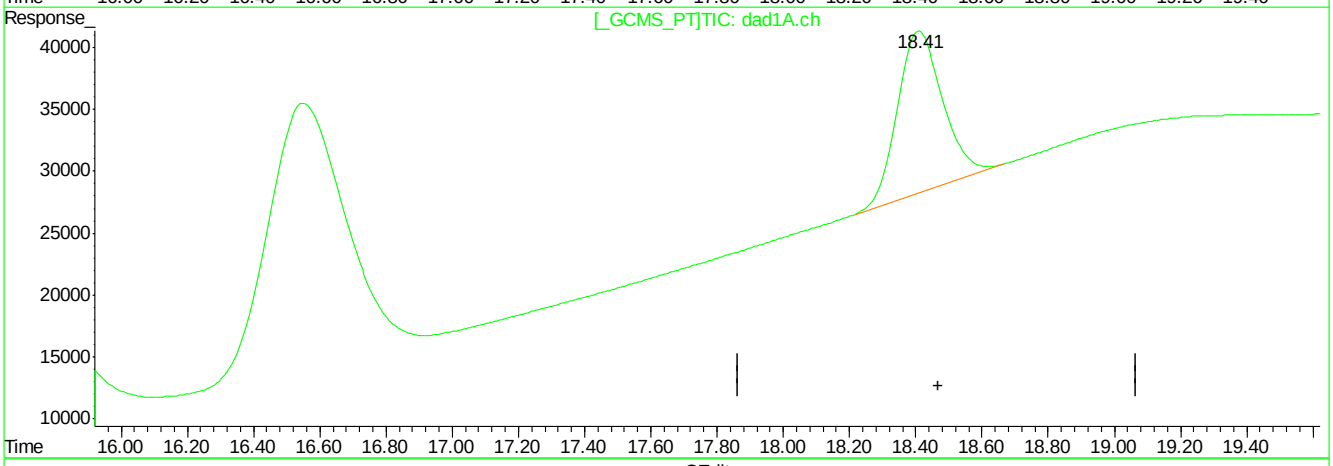
(+) = Expected Retention Time
BB070807.D BBB2118_103021.M Fri Nov 05 09:53:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070807.D\dad1A.ch
Acq On : 04-Nov-2021, 10:52:55 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 4 14:13 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.41min 973.741ppb m

response 1241469

(+) = Expected Retention Time
BB070807.D BBB2118_103021.M Fri Nov 05 09:53:55 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/05/21 16:57

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1A.ch
Acq On : 04-Nov-2021, 17:24:28 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 05 09:30:27 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.98	10.98	1740030	2859626	964.225	855.188
	Spiked Amount 500.000	Range 70 - 136		Recovery =		192.85%#	171.04%#
	Target Compounds						
1)	TNX	1.33	1.33	629569	1054130	431.728	440.455
2)	HMX	1.45	1.45	1377263	3759869	951.969	943.159
3)	DNX	1.69	1.69	1536492	2453926	920.154	838.039
4)	MNX	2.26	2.26	2952422	4522644	1100.502	1100.684
5)	RDX	2.87	2.87	1635516	2597762	943.420	956.926
6)	1,3,5-Trinitrobe	4.65	4.65	3488265	5275379	953.607	928.354
7)	1,3-Dinitrobenze	5.82	5.82	4553784	3284281	948.208	956.936
8)	3,5-Dinitroanili	6.14	6.14	3502035	6046244	954.192	943.166
9)	Nitrobenzene	7.35	7.35	2698997	2671378	955.521	947.070
10)	Nitroglycerin	0.00	8.85	0	1048190	N.D.	947.794 #
11)	Tetryl	9.32	9.32	2506635	3995463	918.543	943.657
12)	2,4,6-Trinitroto	9.73	9.73	3072246	3568565	922.120	946.820
13)	2-Amino-4,6-Dini	10.02	10.02	3099796	4568913	971.280	930.001
14)	4-Amino-2,6-Dini	10.50	10.50	2185709	4199177	959.549	896.162
16)	2,4-Dinitrotolue	11.64	11.64	4017161	2449887	954.183	936.694
17)	2,6-Dinitrotolue	12.09	12.09	2464851	3097480	963.656	992.913
18)	o-Nitrotoluene	15.15	15.15	1893949	2673265	953.981	955.420
19)	p-Nitrotoluene	15.71	15.72	2937614	2447088	958.411	897.264
20)	m-Nitrotoluene	16.58	16.59	2804325	3267026	951.023	938.579
21)	PETN	0.00	18.43	0	1222678	N.D. d	959.003m

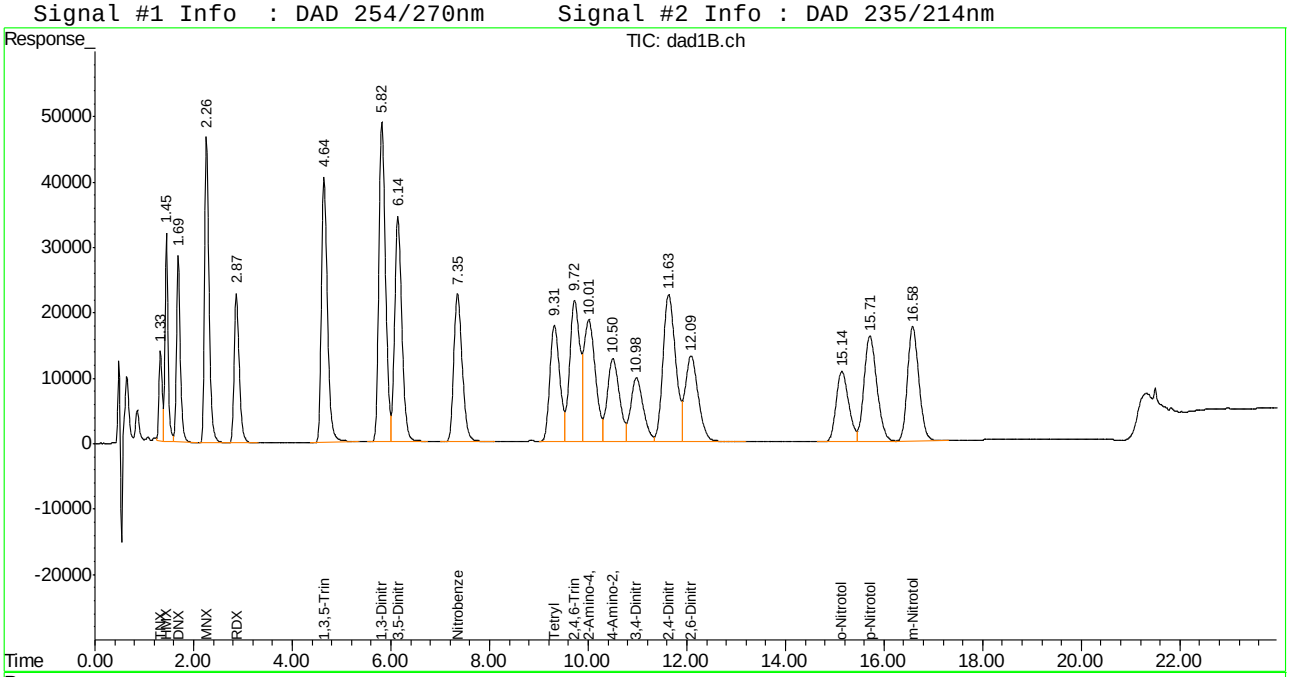
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070819.D BBB2118_103021.M Fri Nov 05 10:14:19 2021 Page 1

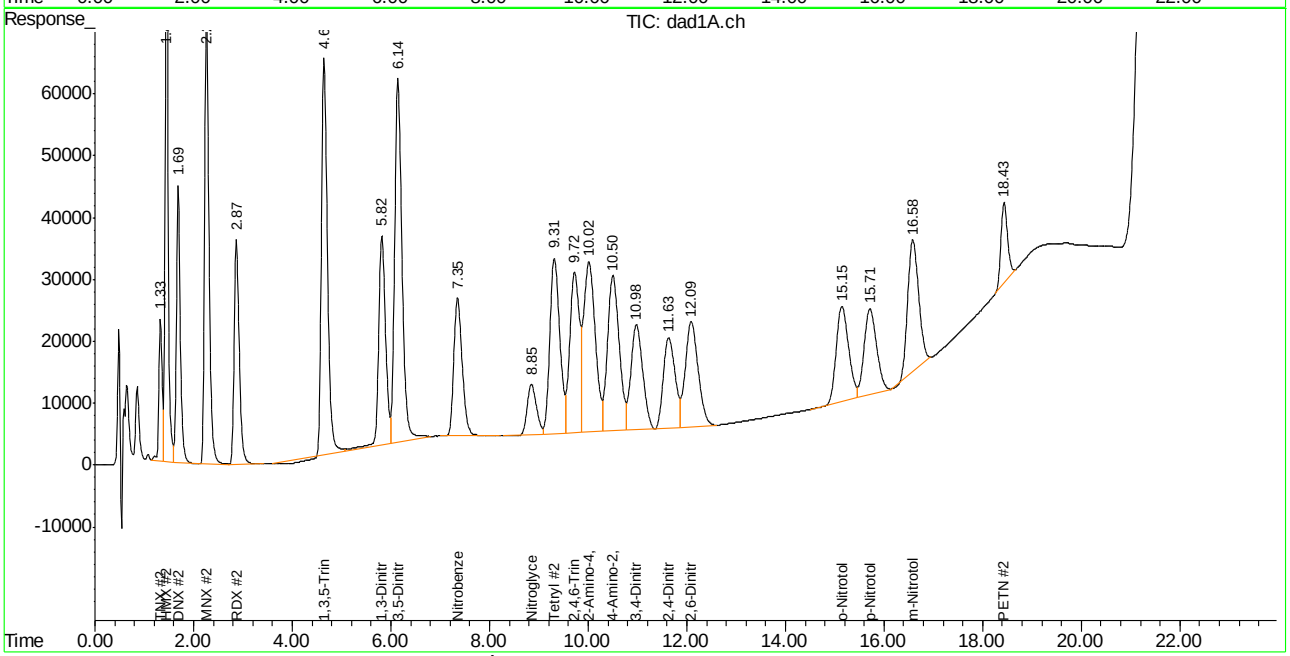
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1A.ch
Acq On : 04-Nov-2021, 17:24:28 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:55 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

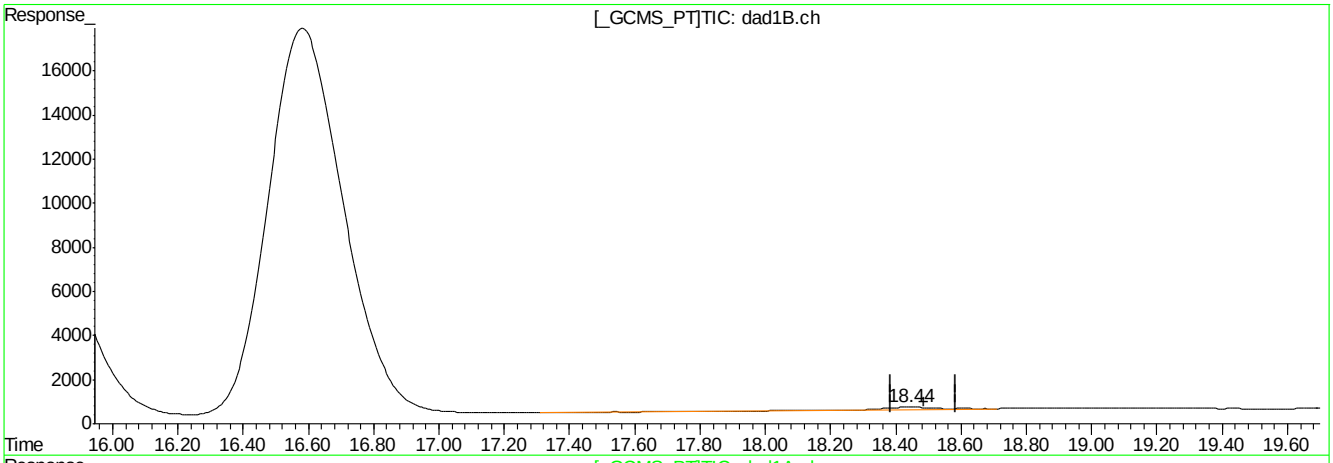
Sample Number: GBB2121-CC2118
Lab FileID: BB070819.D
Injection Time: 11/04/21 17:24
Method: SW846 8330B
Analyst approved: 11/05/21 11:16 James Boone
Supervisor approved: 11/05/21 16:57 Naresh Jiawan

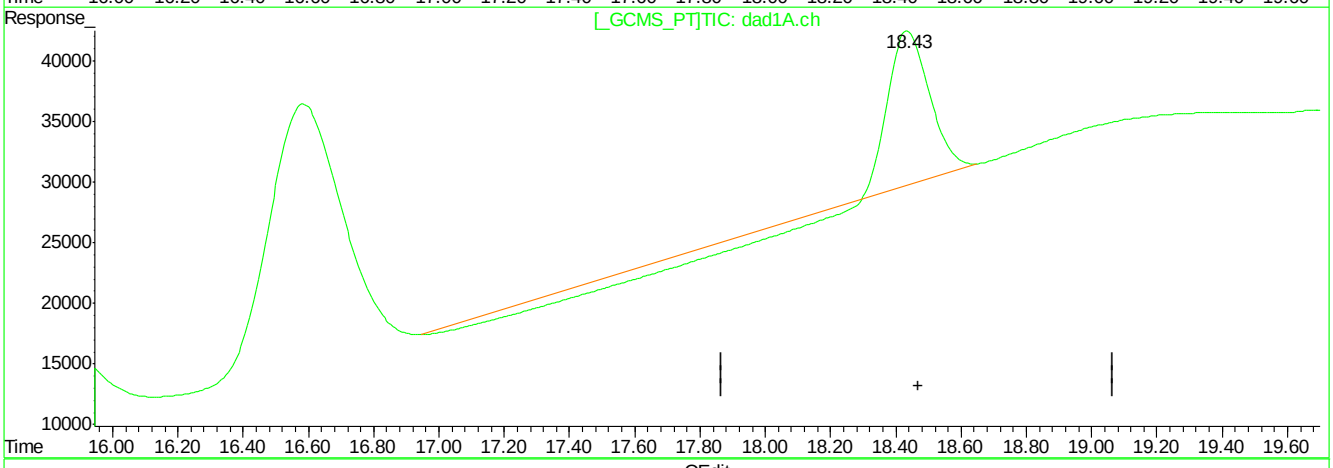
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.43	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1A.ch
Acq On : 04-Nov-2021, 17:24:28 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.45min 0.000ppb

response 13904

(21) PETN #2

18.44min 431.225ppb

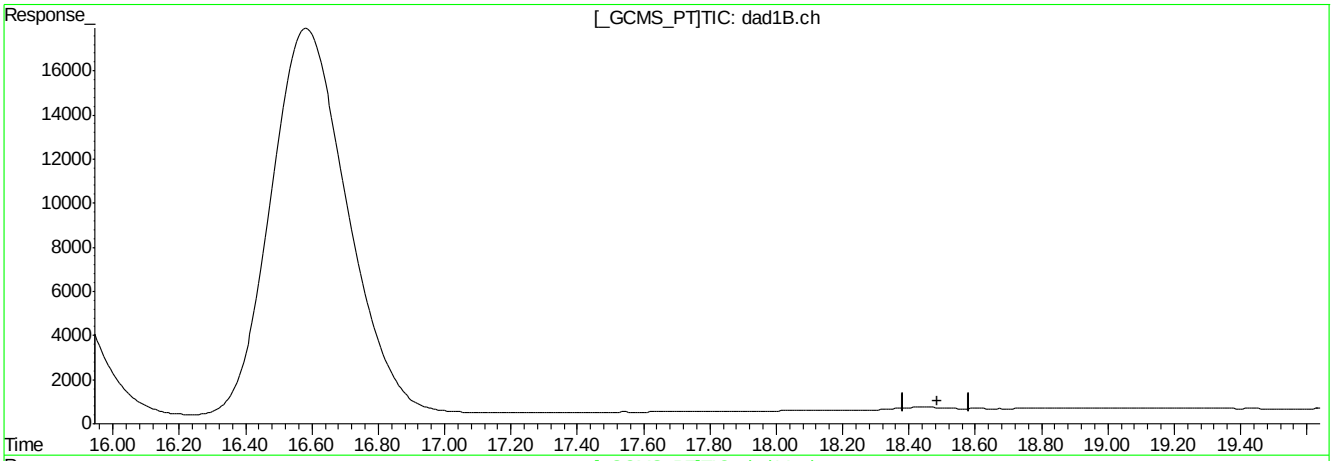
response 549789

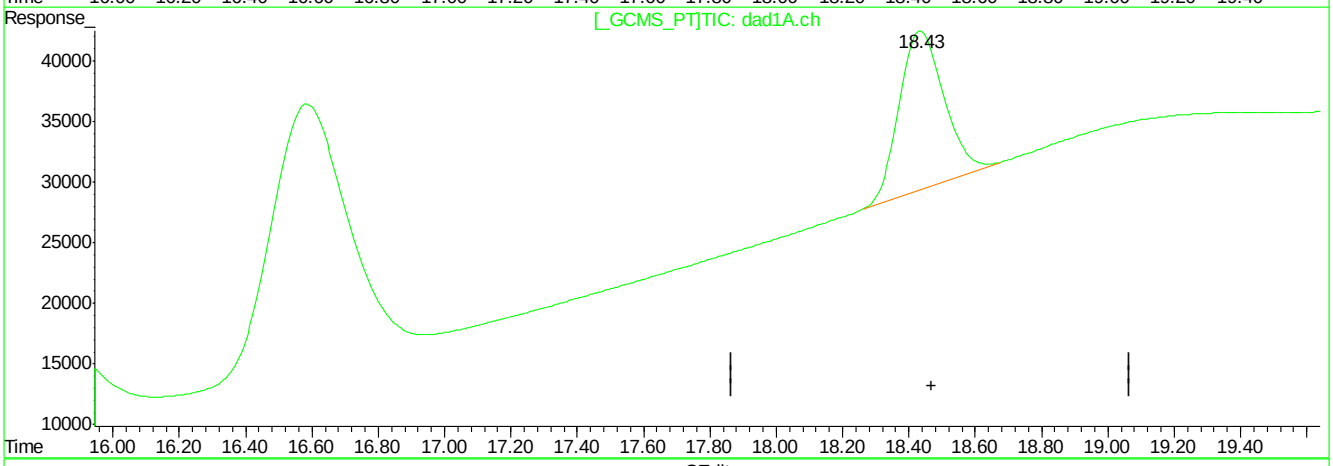
(+) = Expected Retention Time
BB070819.D BBB2118_103021.M Fri Nov 05 09:55:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070819.D\dad1A.ch
Acq On : 04-Nov-2021, 17:24:28 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.43min 959.003ppb m

response 1222678

(+) = Expected Retention Time
BB070819.D BBB2118_103021.M Fri Nov 05 09:55:19 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/05/21 16:57

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1A.ch
Acq On : 04-Nov-2021, 23:36:36 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 05 09:30:39 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.95	10.95	1715187	2855642	950.458	853.996
	Spiked Amount 500.000	Range 70 - 136		Recovery =		190.09%#	170.80%#
	Target Compounds						
1)	TNX	1.33	1.33	623423	1007911	427.514	421.143
2)	HMX	1.45	1.45	1371999	3742457	948.330	938.791
3)	DNX	1.68	1.68	1523292	2430938	912.249	830.189
4)	MNX	2.26	2.26	2938657	4512707	1095.371	1098.265
5)	RDX	2.86	2.86	1634427	2598659	942.792	957.256
6)	1,3,5-Trinitrobe	4.63	4.63	3483222	5347678	952.228	941.077
7)	1,3-Dinitrobenze	5.81	5.81	4542163	3359350	945.788	978.809
8)	3,5-Dinitroanili	6.13	6.13	3495532	6186515	952.420	965.048
9)	Nitrobenzene	7.33	7.33	2685849	2656583	950.866	941.825
10)	Nitroglycerin	0.00	8.83	0	1068673	N.D.	966.315 #
11)	Tetryl	9.29	9.29	2488352	4000012	911.844	944.732
12)	2,4,6-Trinitroto	9.71	9.71	3052513	3562214	916.198	945.135
13)	2-Amino-4,6-Dini	9.98	9.99	3088783	4584624	967.829	933.199
14)	4-Amino-2,6-Dini	10.47	10.47	2168877	4205247	952.160	897.458
16)	2,4-Dinitrotolue	11.61	11.61	3991444	2450253	948.075	936.834
17)	2,6-Dinitrotolue	12.06	12.06	2436504	3092179	952.574	991.214
18)	o-Nitrotoluene	15.11	15.12	1878344	2670912	946.122	954.579
19)	p-Nitrotoluene	15.68	15.68	2919505	2445916	952.503	896.834
20)	m-Nitrotoluene	16.56	16.56	2775468	3234168	941.237	929.139
21)	PETN	0.00	18.42	0	1227719	N.D. d	962.957m

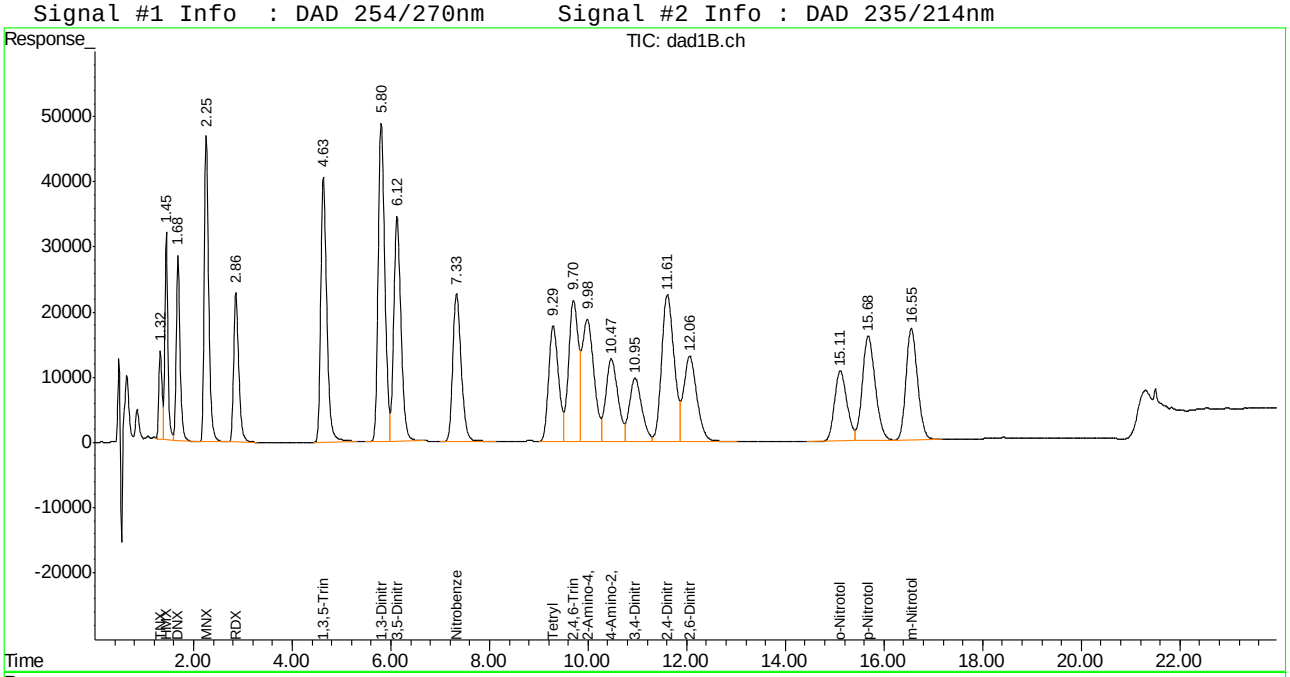
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB070831.D BBB2118_103021.M Fri Nov 05 10:14:20 2021 Page 1

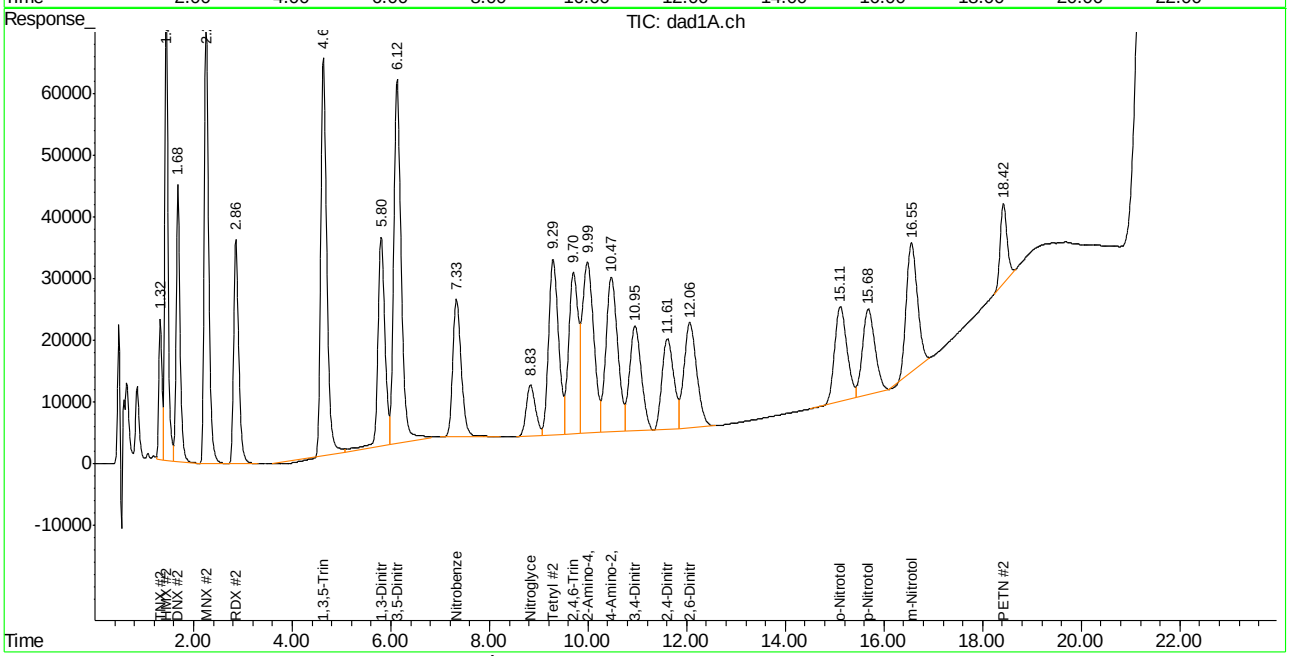
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1A.ch
Acq On : 04-Nov-2021, 23:36:36 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : op88132,GBB2121,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:56 2021 Quant Results File: BBB2118_103021.RES

Quant Method : C:\MSDCHEM\2...\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

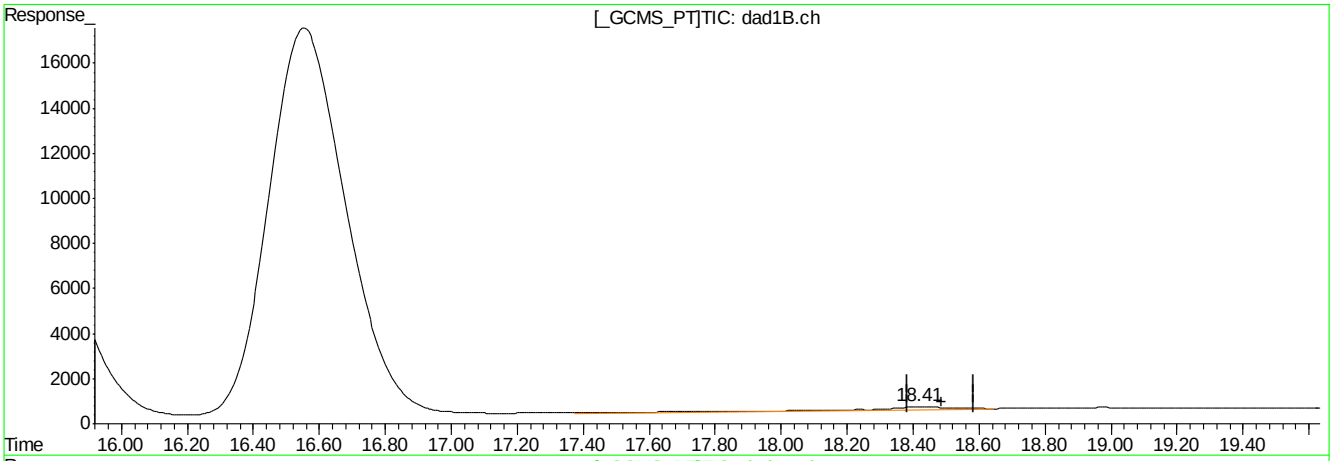
Sample Number: GBB2121-CC2118
Lab FileID: BB070831.D
Injection Time: 11/04/21 23:36
Method: SW846 8330B
Analyst approved: 11/05/21 11:16 James Boone
Supervisor approved: 11/05/21 16:57 Naresh Jiawan

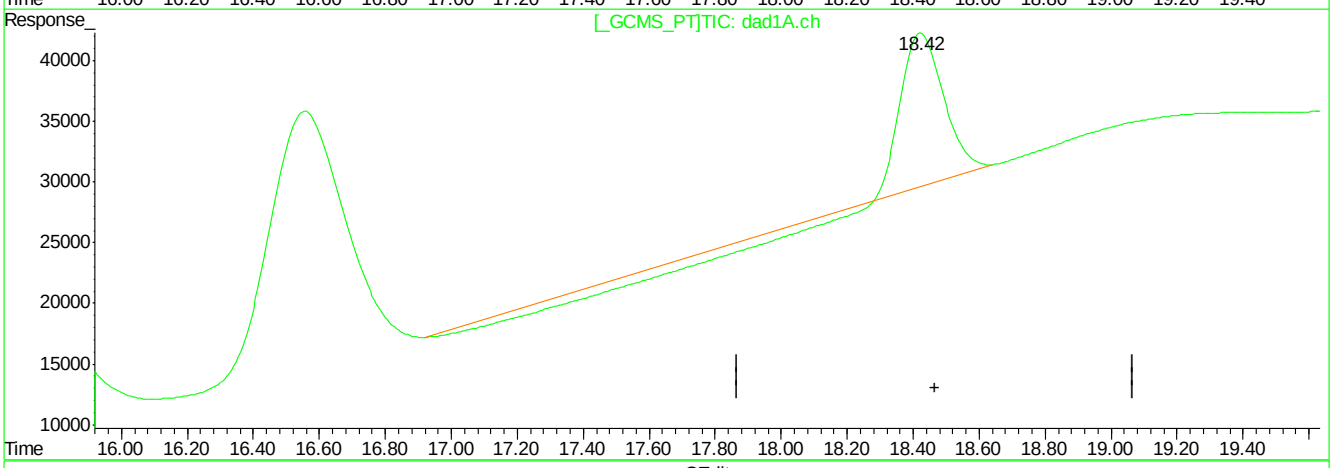
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.42	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1A.ch
Acq On : 04-Nov-2021, 23:36:36 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.42min 0.000ppb

response 18801

(21) PETN #2

18.42min 443.970ppb

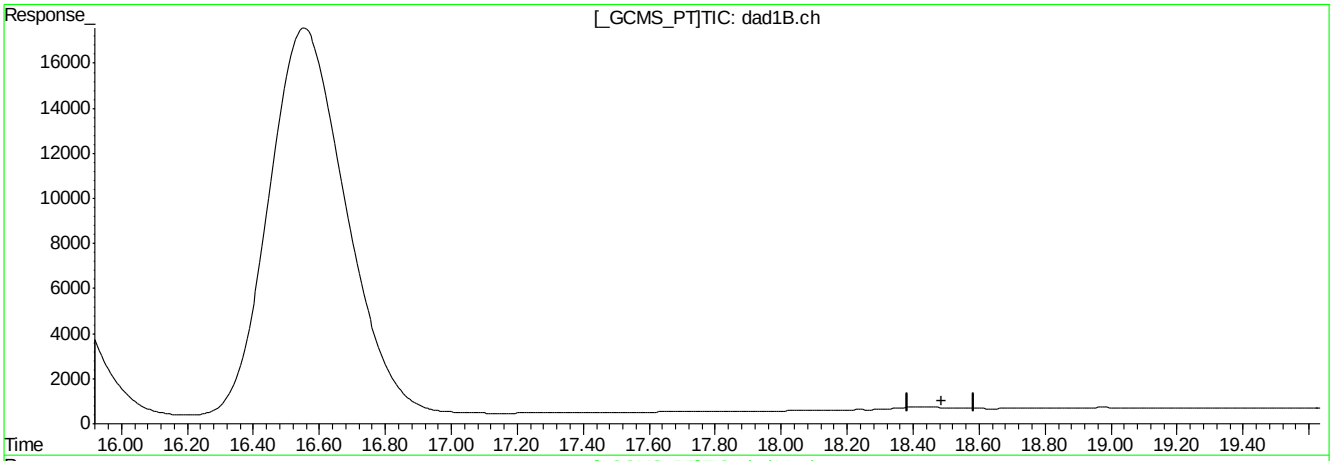
response 566039

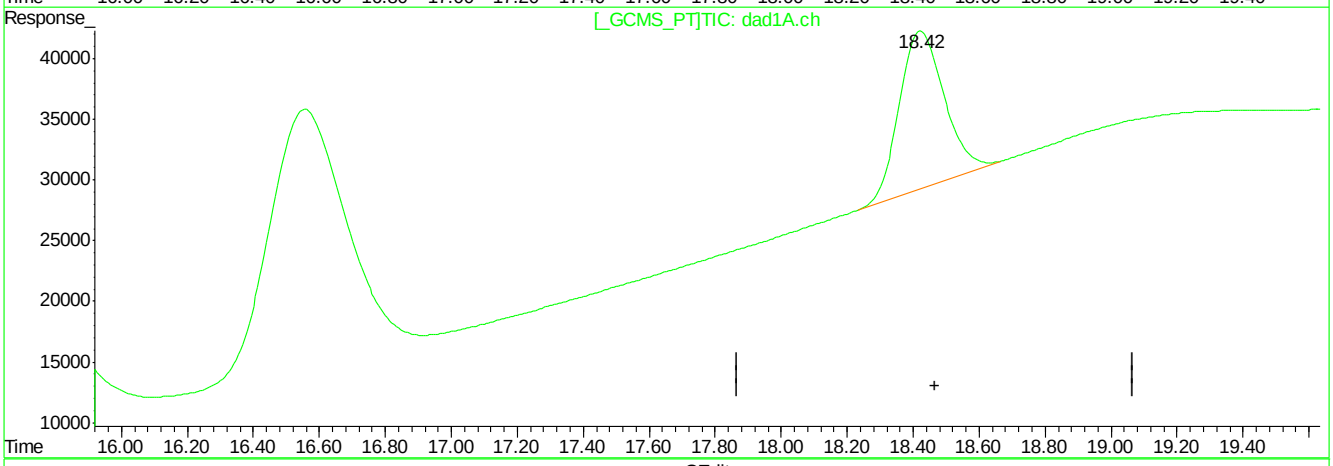
(+) = Expected Retention Time
BB070831.D BBB2118_103021.M Fri Nov 05 09:55:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2121\BB070831.D\dad1A.ch
Acq On : 04-Nov-2021, 23:36:36 Operator: jamesb
Sample : cc2118-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Nov 5 9:30 2021 Quant Results File: BBB2118_103021.RES

Method : C:\MSDCHEM\2\METHODS\BBB2118_103021.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 08:44:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.42min 962.957ppb m

response 1227719

(+) = Expected Retention Time
BB070831.D BBB2118_103021.M Fri Nov 05 09:56:04 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 16:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 01 15:14:01 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.85	13.87	69158	146970	16.828	17.625
	Spiked Amount 500.000	Range 70 - 136		Recovery =		3.37%#	3.52%#
	Target Compounds						
1)	TNX	4.85	4.85	25746	27260	6.906m	7.301m
2)	HMX	5.27	5.27	50587	50587	17.314	17.314
3)	DNX	5.43	5.43	53190	56791	13.910m	14.888m
4)	MNX	6.54	6.54	110279	110279	17.982	17.982
5)	1,3,5-Trinitrobe	7.47	7.47	138070	138070	16.573	16.573
6)	RDX	7.79	7.79	65553	65553	16.582	16.582
7)	1,3-Dinitrobenze	9.69	9.69	185811	122299	16.299	13.906m
8)	Nitrobenzene	10.59	10.59	110211	104591	15.307	15.227m
9)	2,4,6-Trinitroto	11.52	11.51	134172	190588	16.735	17.036m
10)	Nitroglycerin	0.00	12.28	0	38242	N.D.	13.250m#
11)	Tetryl	12.78	12.80	99628	151520	15.654	13.766m
13)	2,6-Dinitrotolue	14.18	14.14	87142	146504	15.518	17.479
14)	2,4-Dinitrotolue	14.78	14.79	162471	78764	15.806	10.504
15)	3,5-Dinitroanili	15.44	15.44	139420	221792	16.017	15.760
16)	o-Nitrotoluene	16.29	16.28	65788	85475	14.565m	12.166
17)	p-Nitrotoluene	17.25	17.26	151932	238033	32.173	28.751
18)	4-Amino-2,6-Dini	17.25	17.26	151932	238033	32.173	28.751
19)	m-Nitrotoluene	18.46	18.58	86668	152922	17.156	17.842m
20)	2-Amino-4,6-Dini	19.05	19.12	124818	209669	16.260	19.689m
21)	PETN	0.00	21.21	0	28018	N.D.	9.241m#

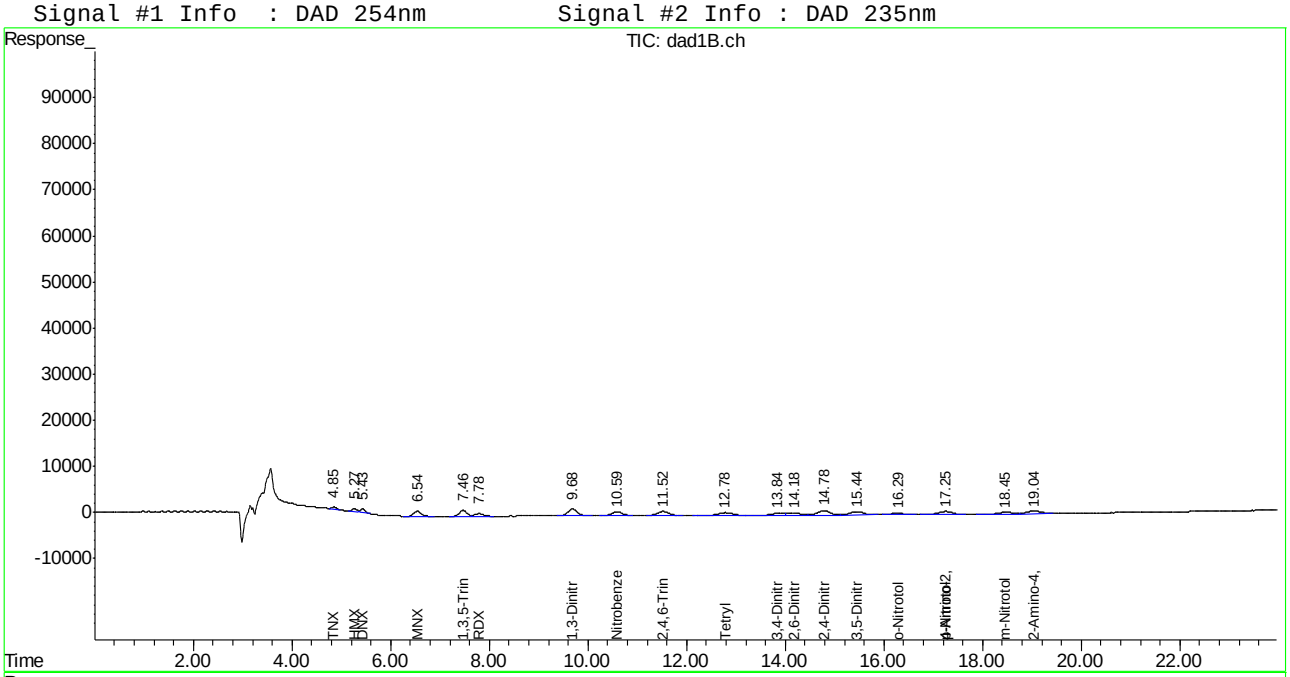
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622644.D GGG3059_103121.M Mon Nov 01 15:28:29 2021 Page 1

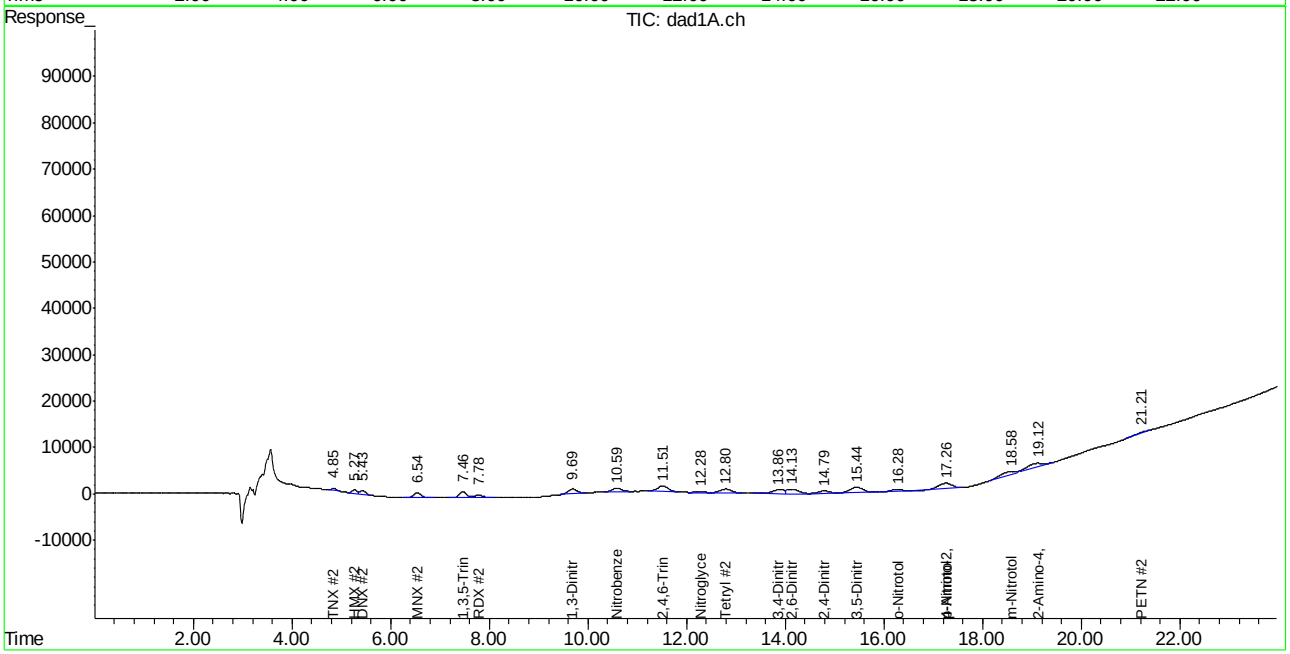
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:23 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

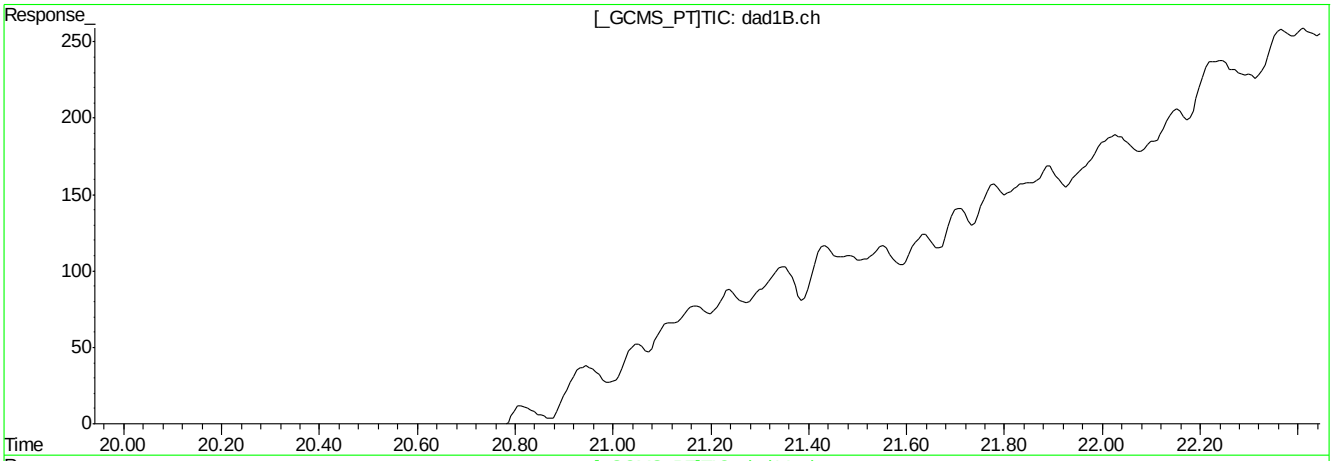
Sample Number: GGG3059-IC3059
Lab FileID: GG622644.D
Injection Time: 10/31/21 11:04
Method: SW846 8330A
Analyst approved: 11/01/21 16:29 James Boone
Supervisor approved: 11/01/21 16:46 Naresh Jiawan

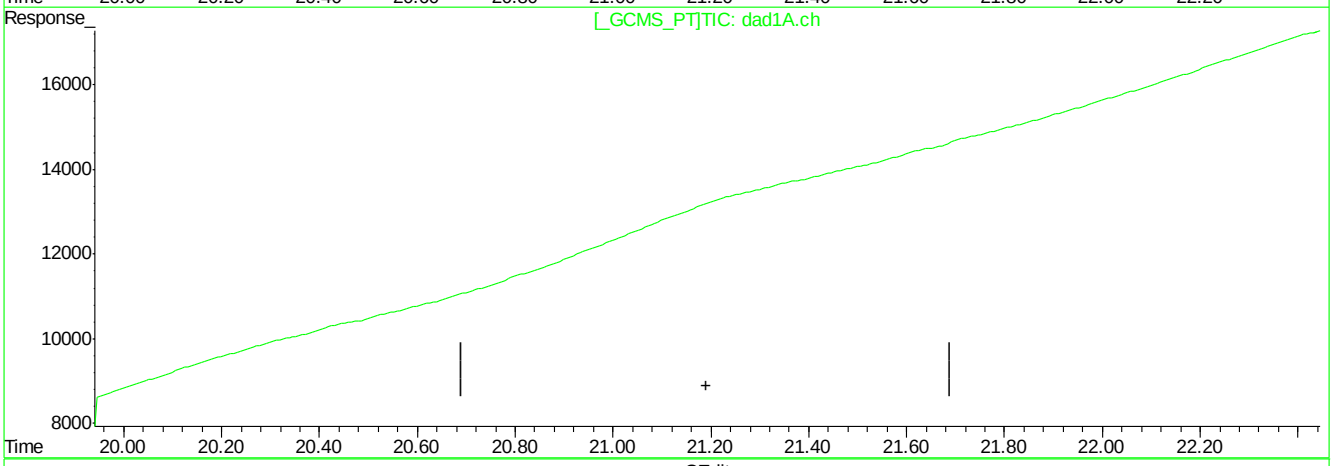
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	4.85	Poor instrument integration
TNX		2	4.85	Poor instrument integration
DNX		1	5.43	Poor instrument integration
DNX		2	5.43	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.69	Poor instrument integration
Nitrobenzene	98-95-3	2	10.59	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.51	Poor instrument integration
Nitroglycerine	55-63-0	2	12.28	Poor instrument integration
Tetryl	479-45-8	2	12.80	Poor instrument integration
o-Nitrotoluene	88-72-2	1	16.29	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.58	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.12	Poor instrument integration
PETN	78-11-5	2	21.21	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

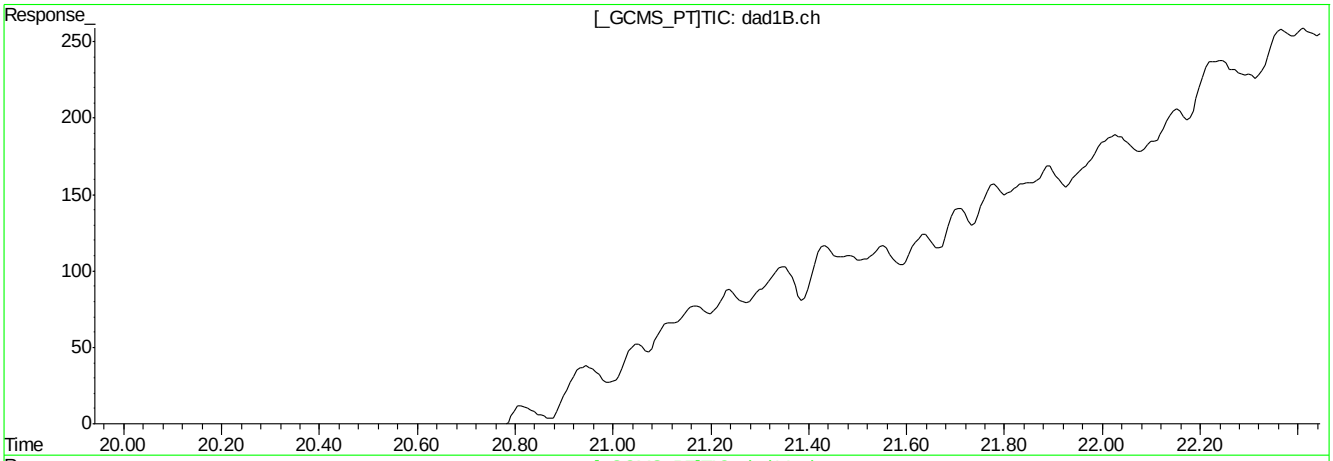
response 0

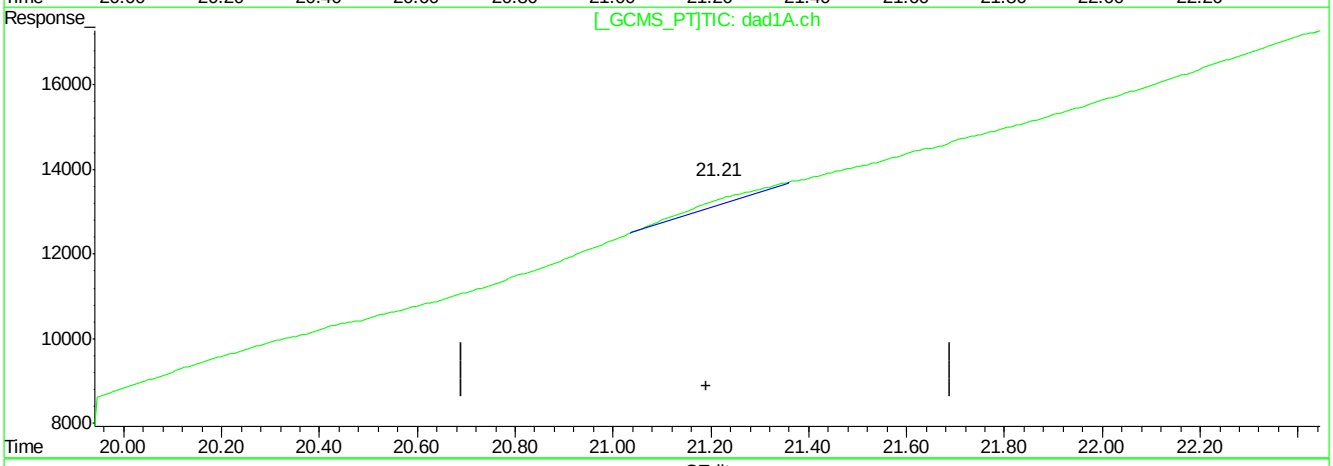
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:41:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.21min 4.876ppb m

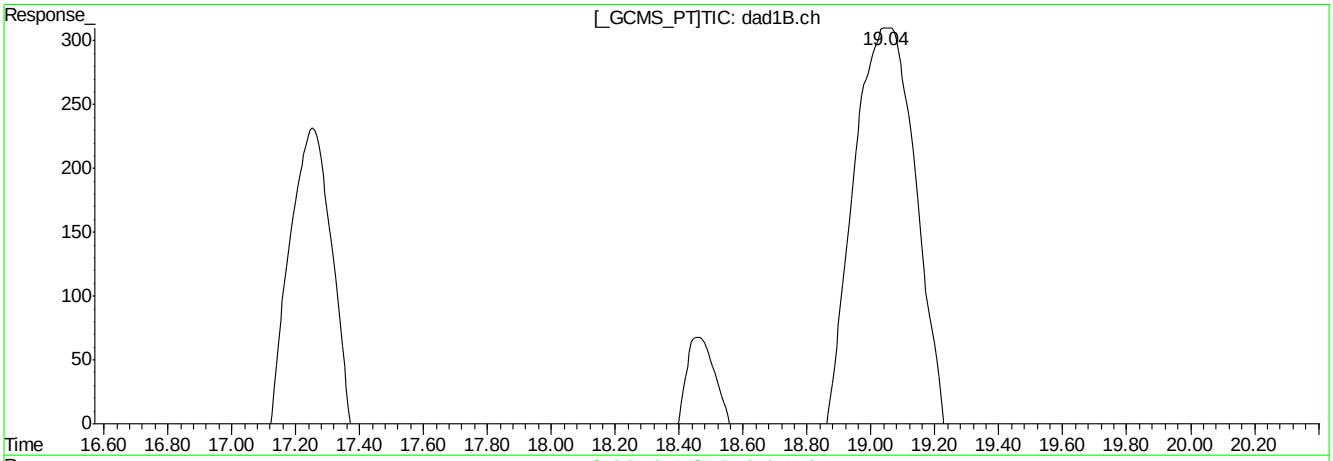
response 16172

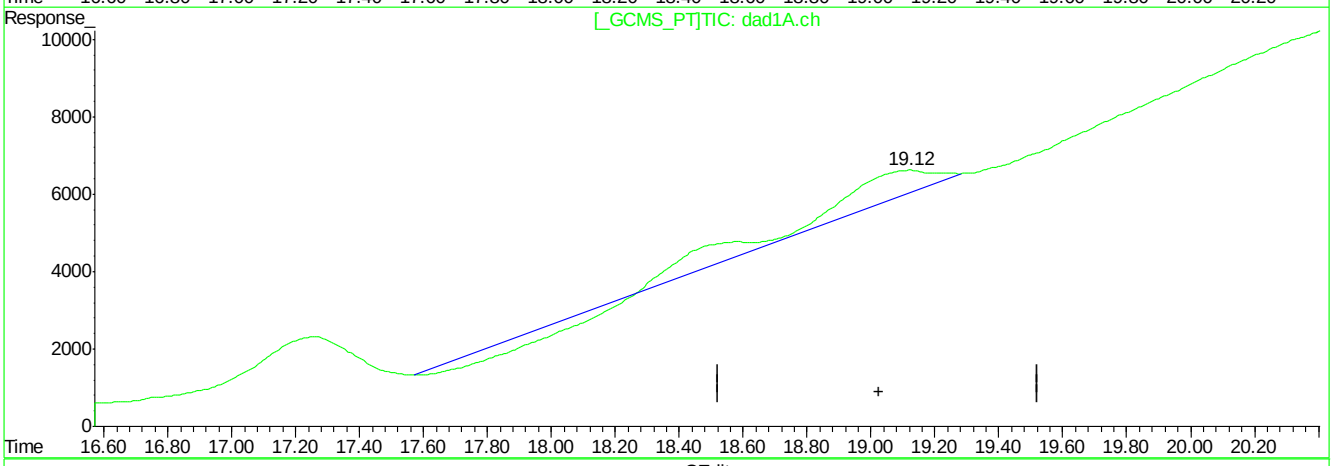
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:42:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.05min 14.707ppb

response 124818

(20) 2-Amino-4,6-Dinitrotoluene #2

19.12min 9.489ppb

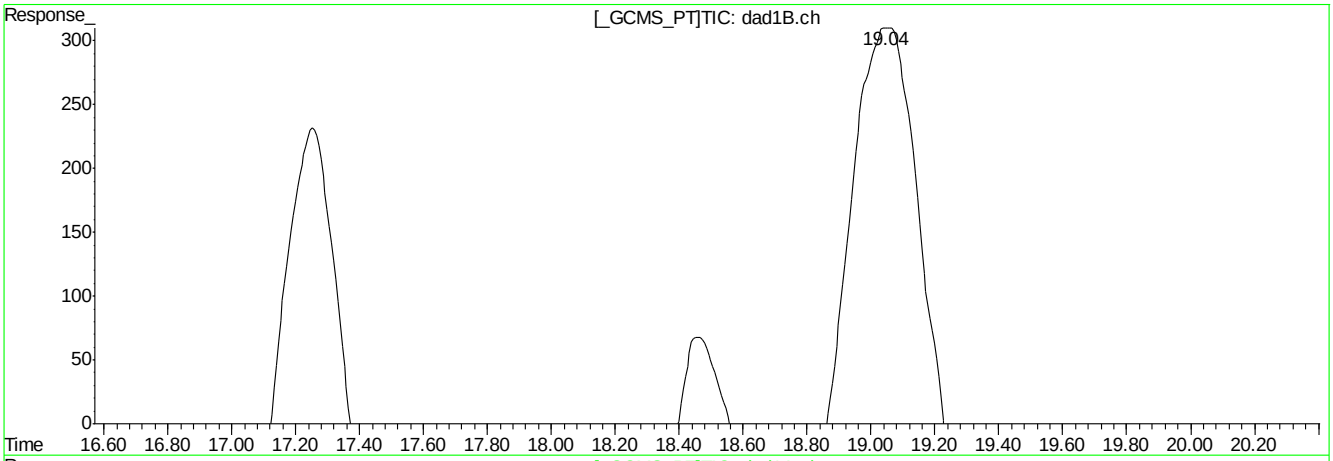
response 110667

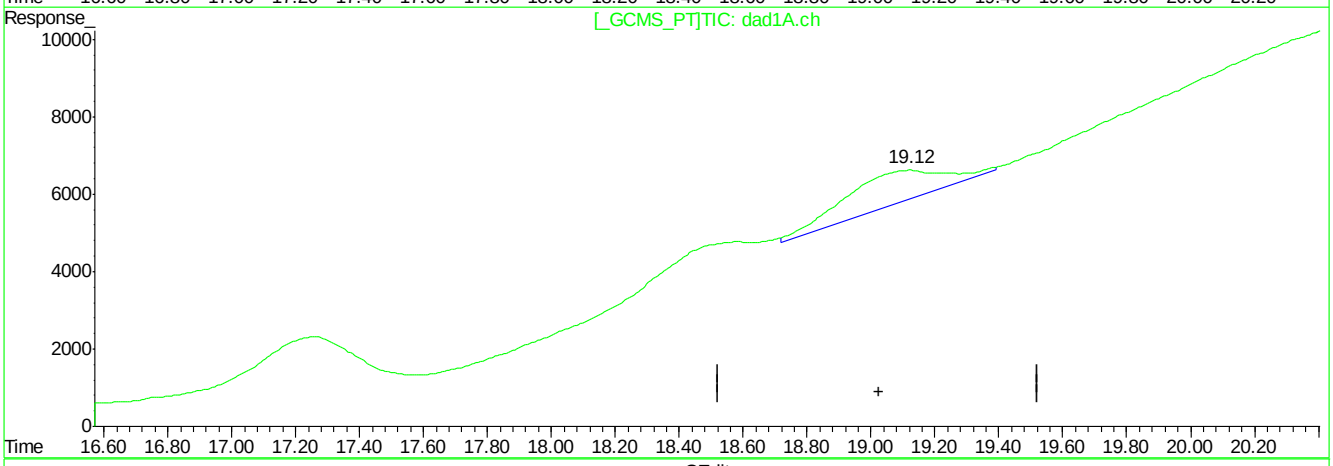
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:42:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.05min 14.707ppb

response 124818

(20) 2-Amino-4,6-Dinitrotoluene #2

19.12min 15.365ppb m

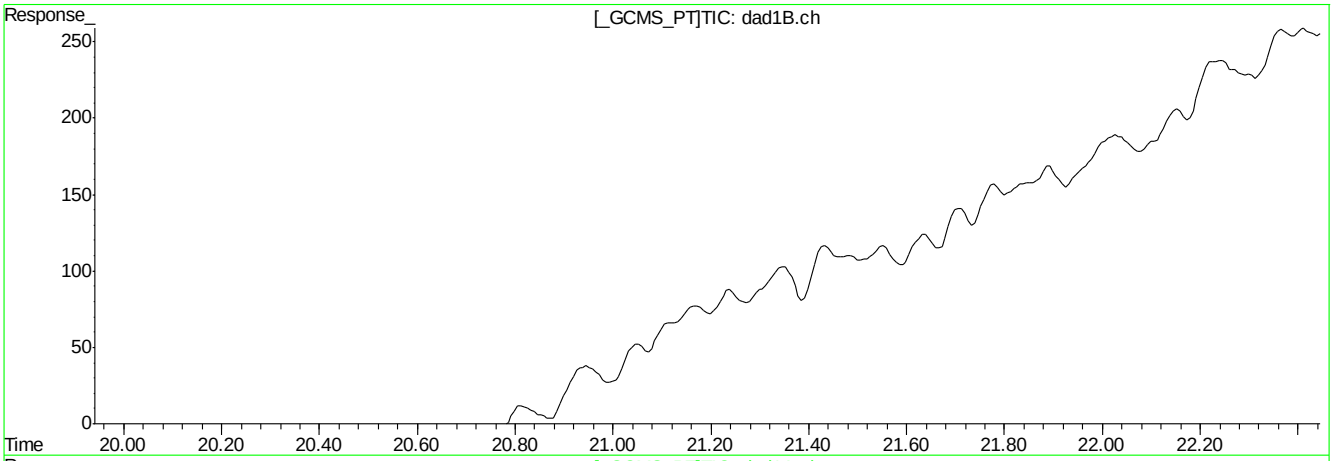
response 179187

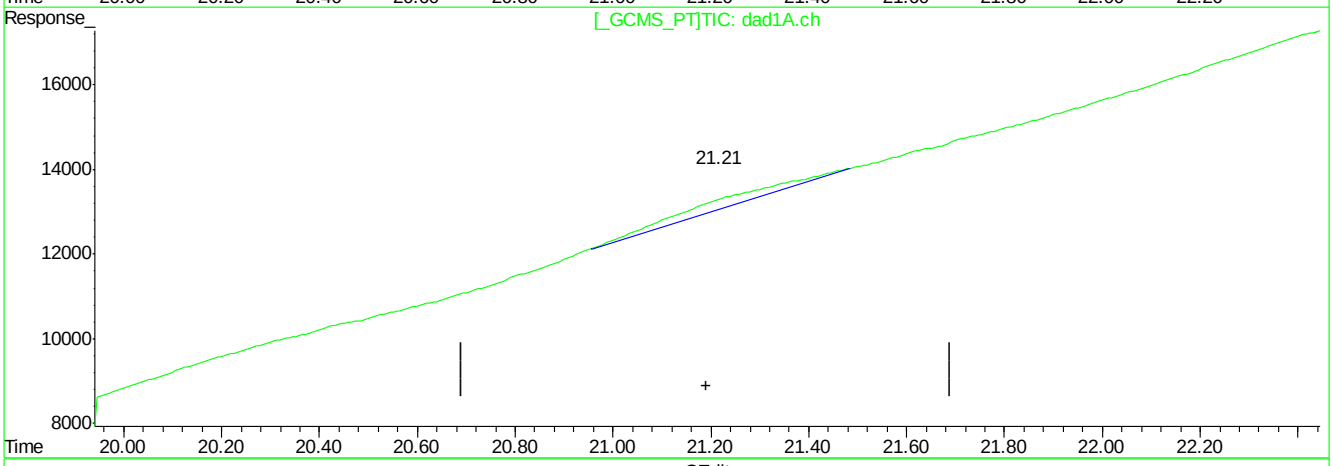
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:42:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.21min 12.927ppb m

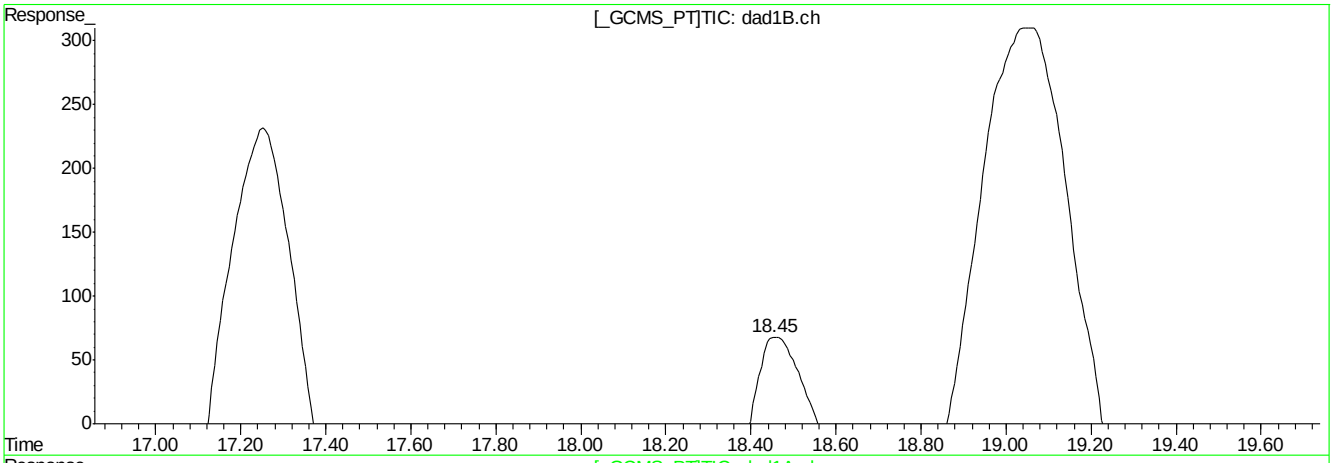
response 42875

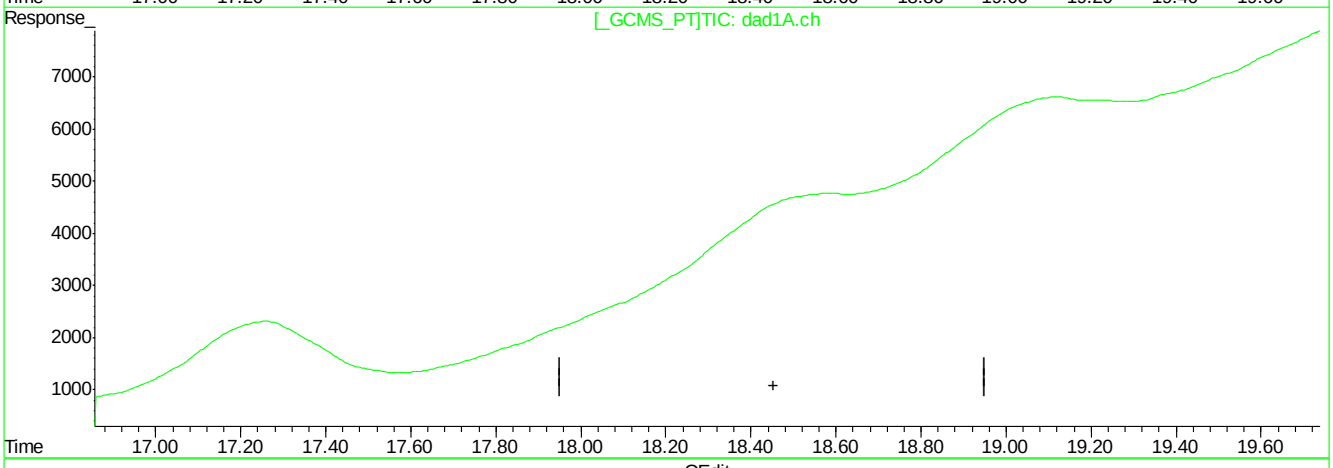
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:42:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.46min 15.526ppb

response 86668

(19) m-Nitrotoluene #2

0.00min 0.000ppb

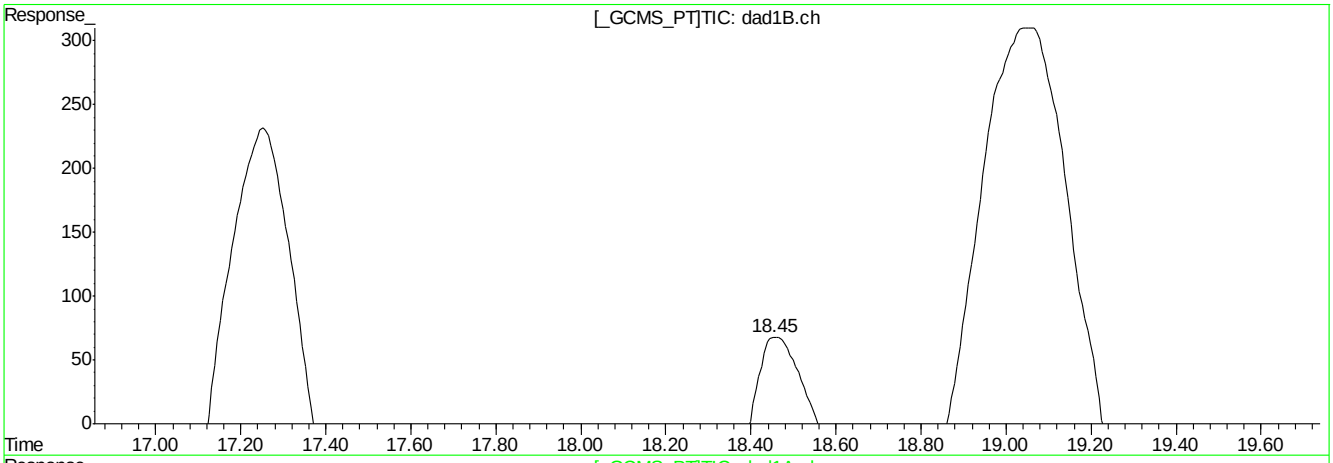
response 0

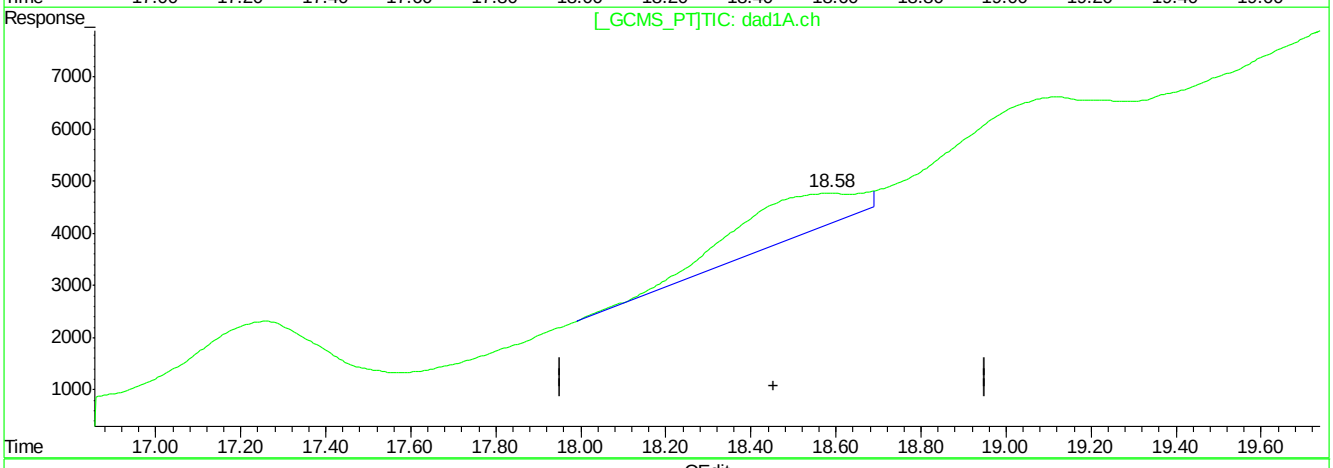
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:42:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.46min 15.526ppb

response 86668

(19) m-Nitrotoluene #2

18.58min 16.033ppb m

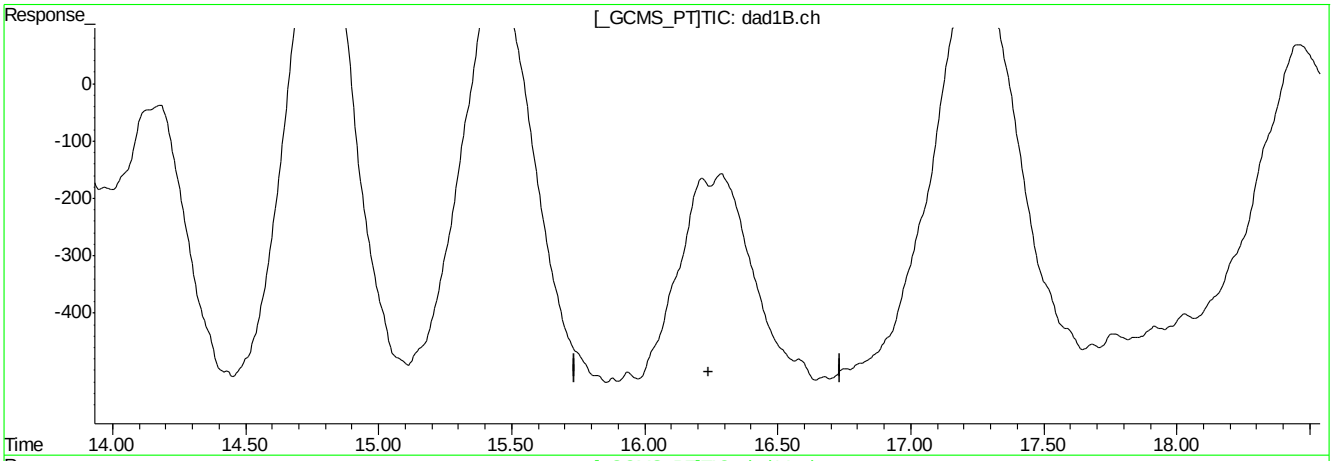
response 156960

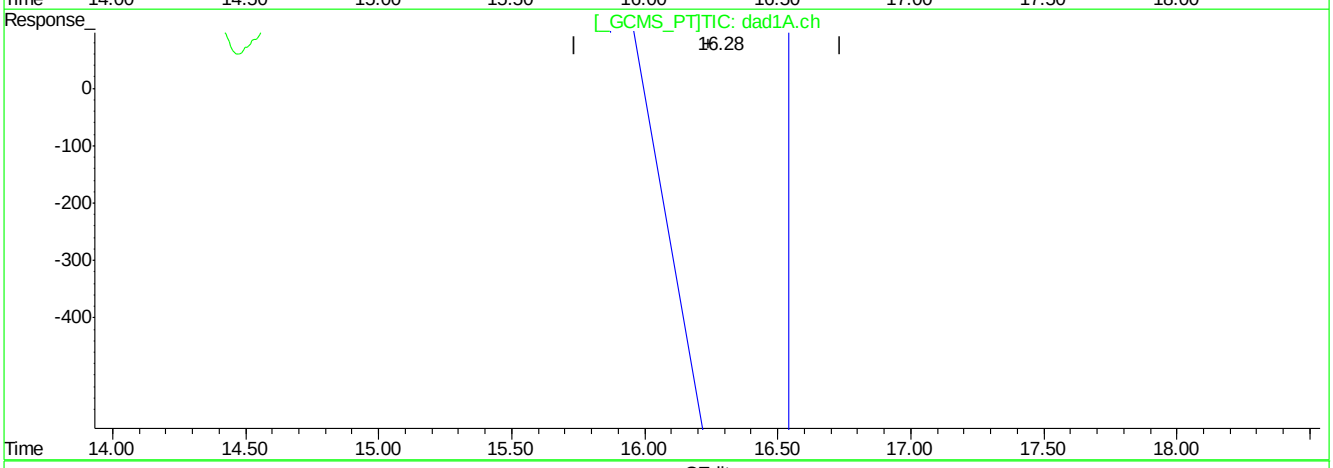
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:42:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(16) o-Nitrotoluene

0.00min 0.000ppb

response 0

(16) o-Nitrotoluene #2

16.28min 11.900ppb

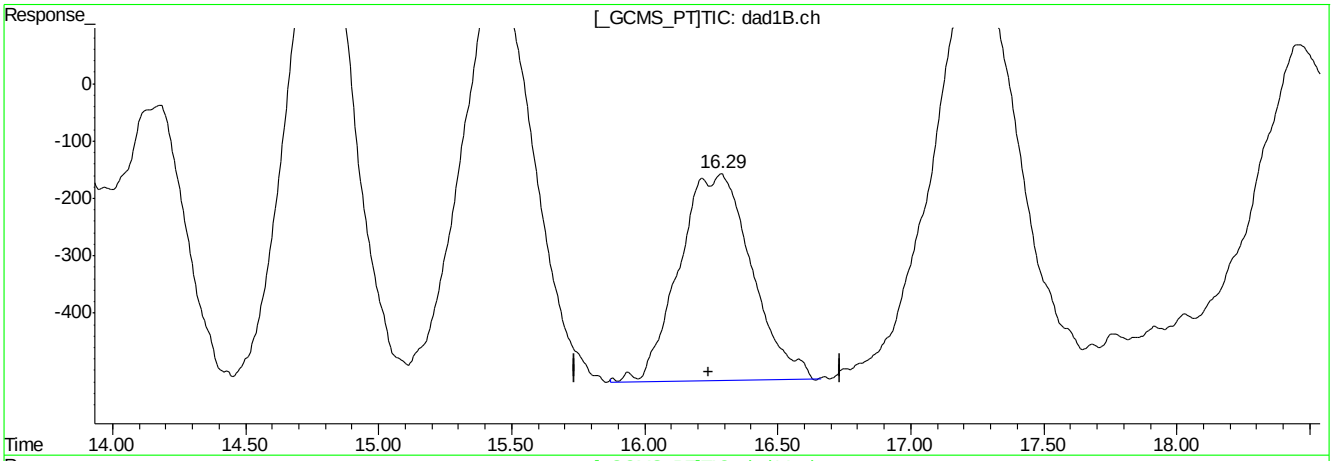
response 85475

(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:42:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration



(16) o-Nitrotoluene

16.29min 14.039ppb m

response 68122

(16) o-Nitrotoluene #2

16.28min 11.900ppb

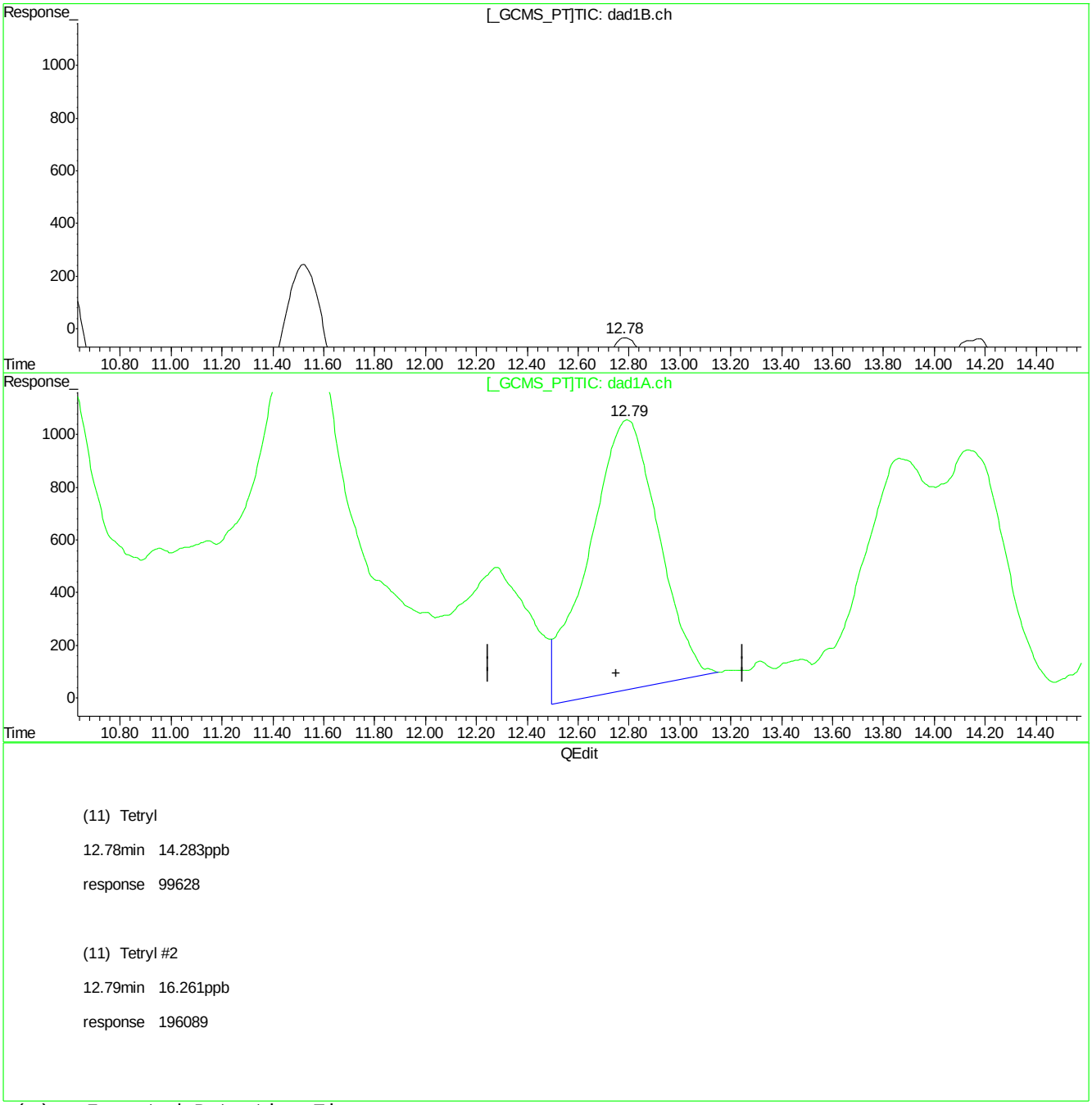
response 85475

(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:42:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration



(11) Tetryl

12.78min 14.283ppb

response 99628

(11) Tetryl #2

12.79min 16.261ppb

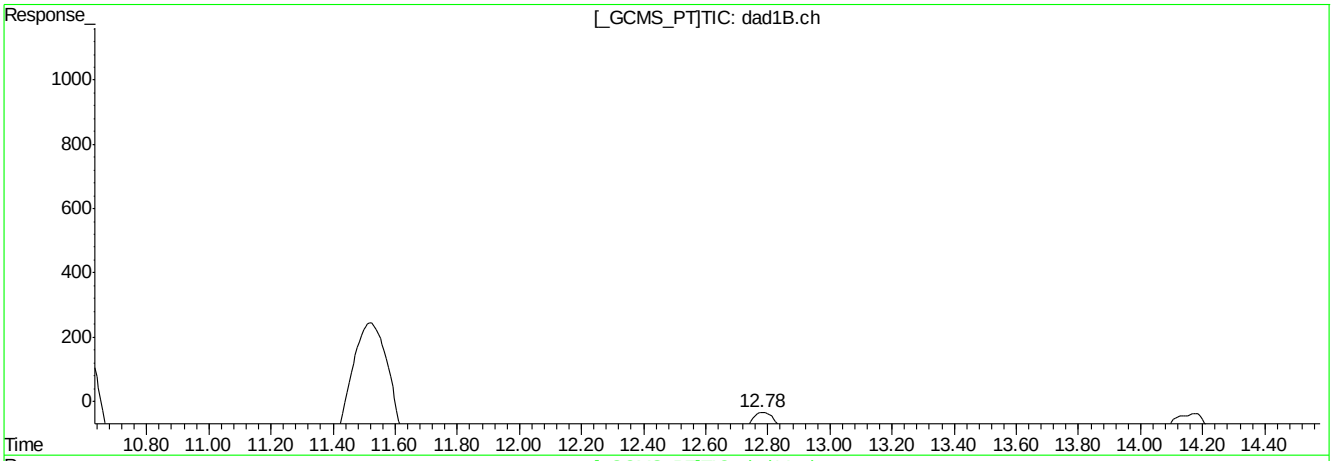
response 196089

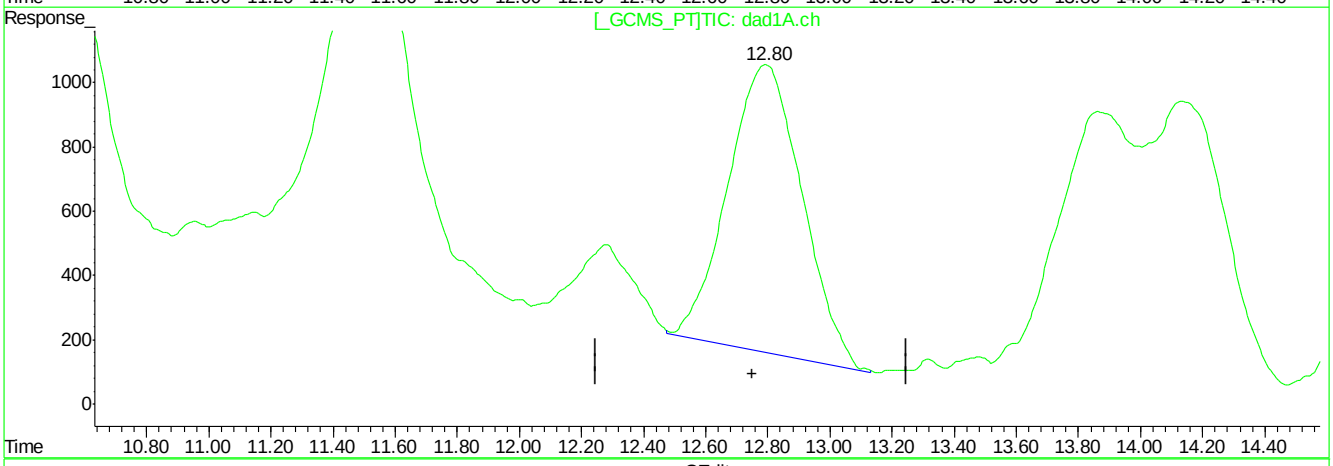
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.78min 14.283ppb

response 99628

(11) Tetryl #2

12.80min 12.386ppb m

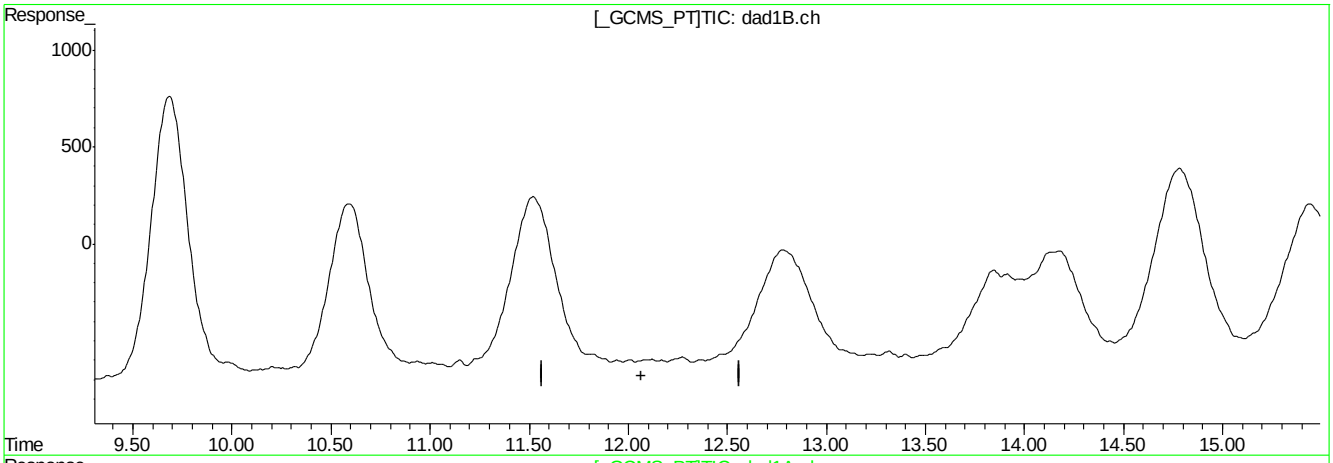
response 149354

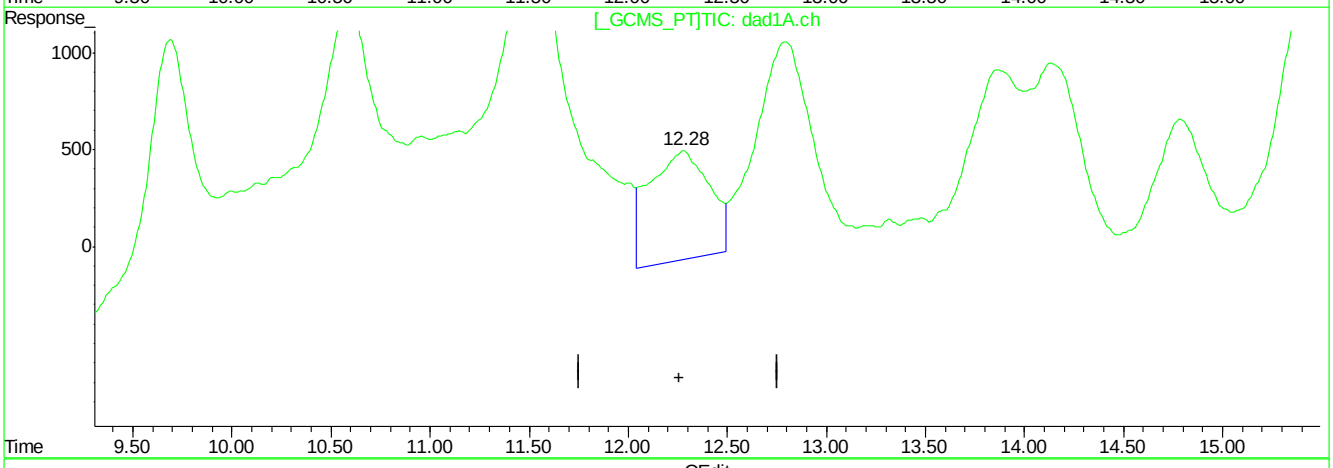
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.28min 38.522ppb

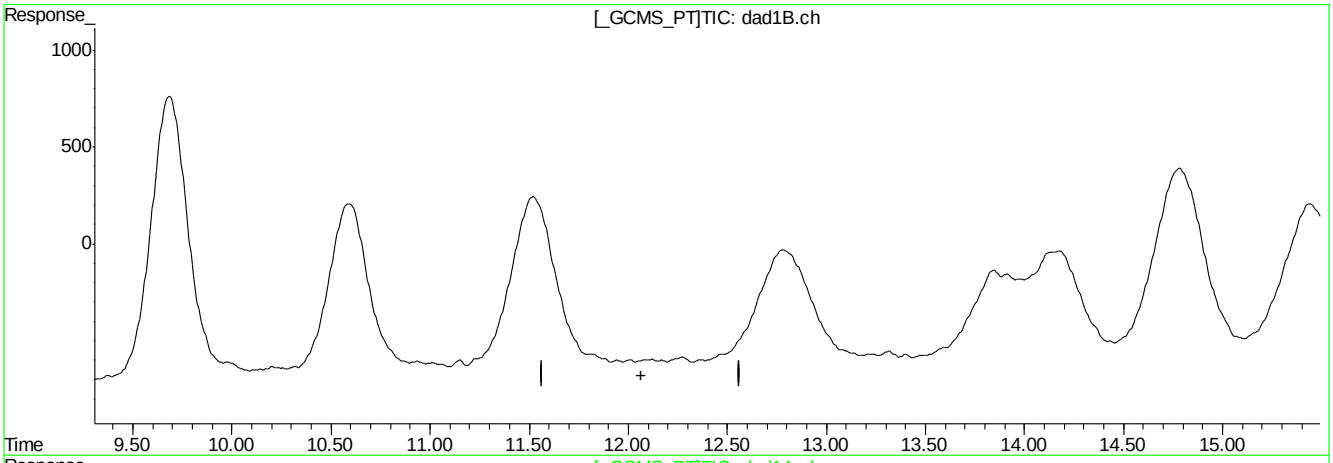
response 119003

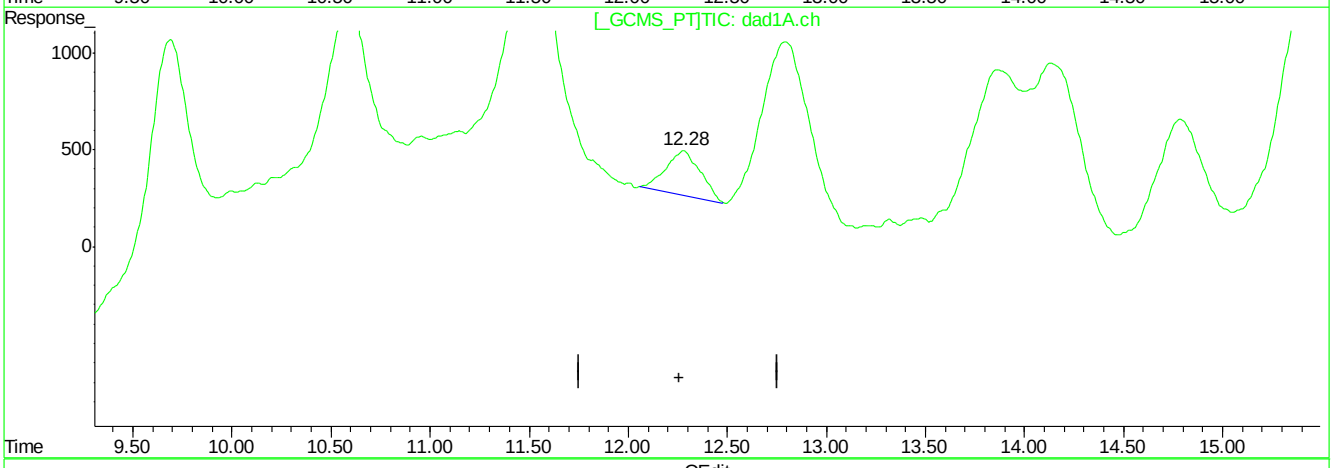
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.28min 8.994ppb m

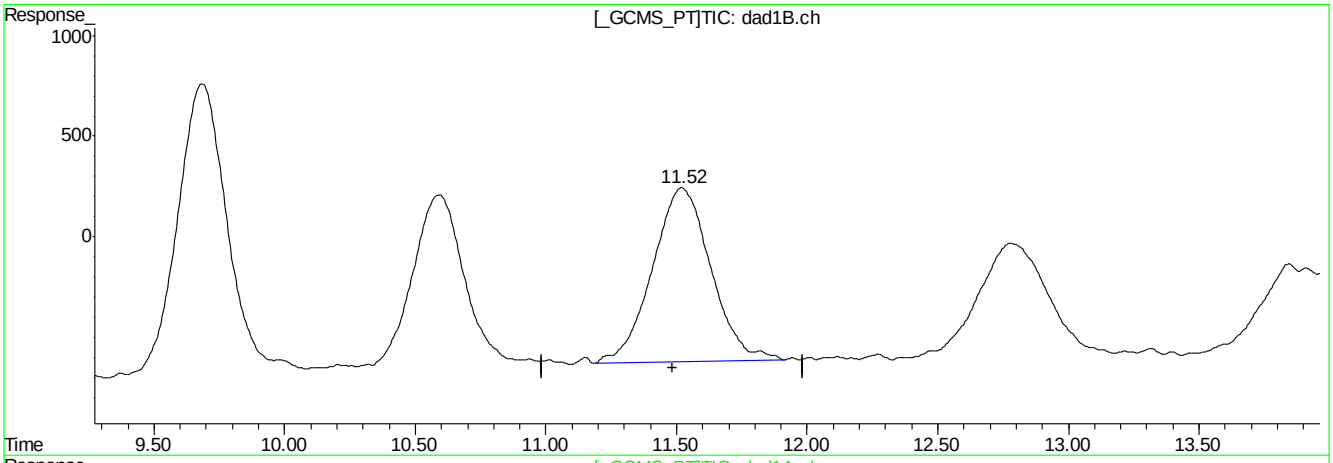
response 27786

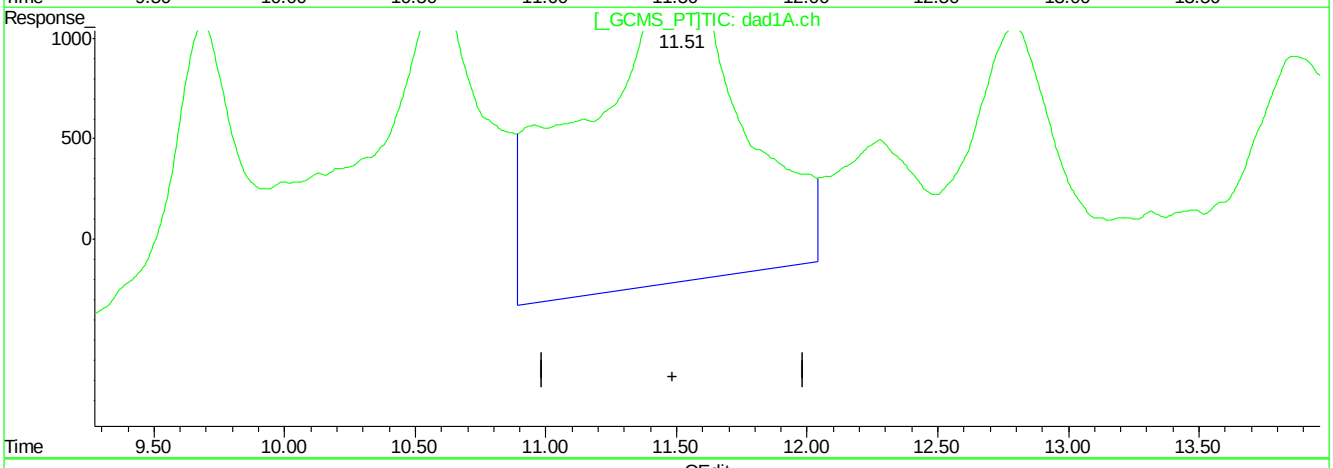
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.52min 15.323ppb

response 134172

(9) 2,4,6-Trinitrotoluene #2

11.51min 55.438ppb

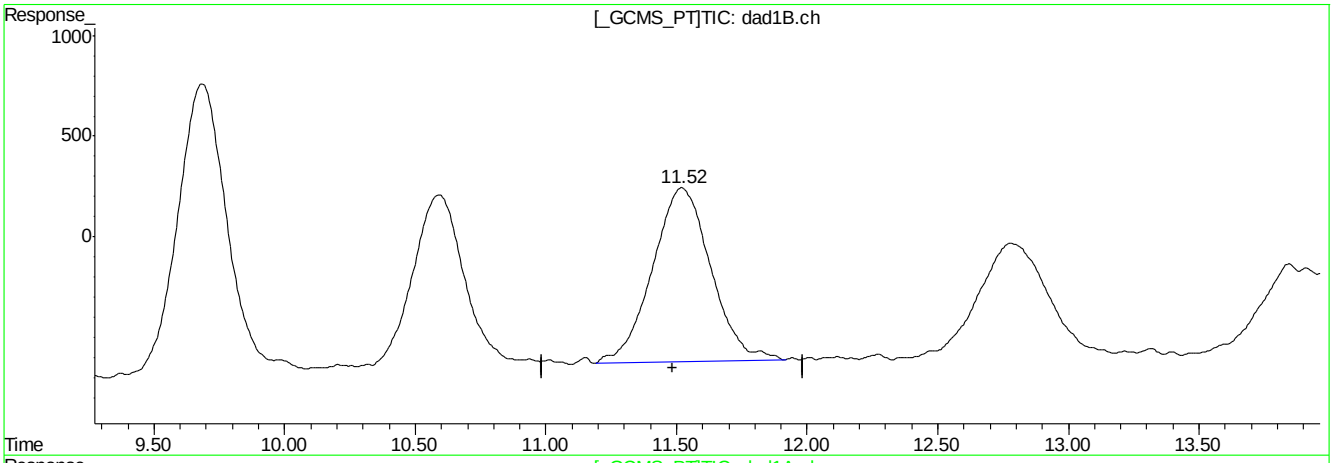
response 684492

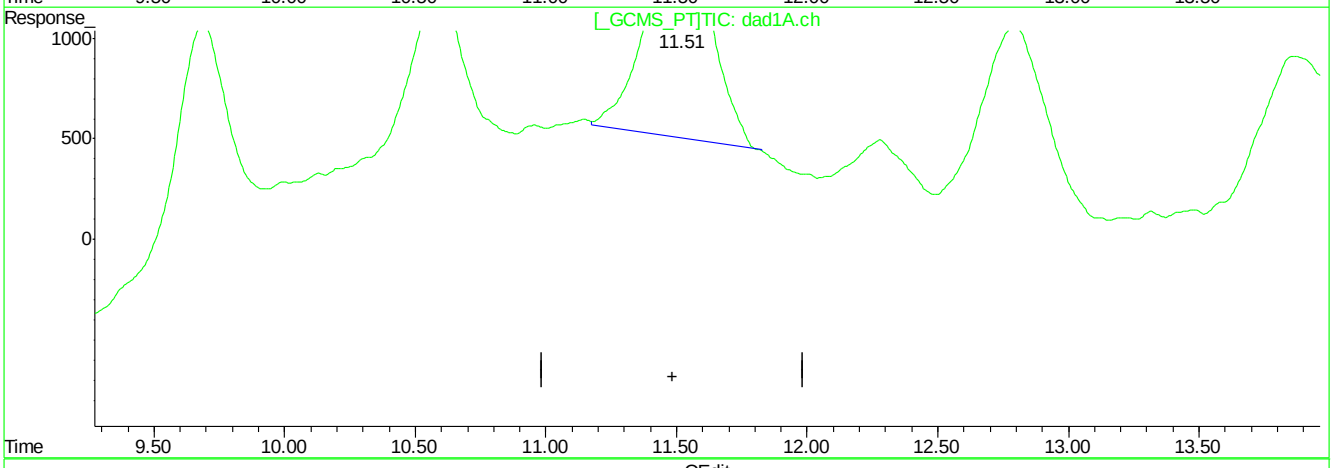
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.52min 15.323ppb

response 134172

(9) 2,4,6-Trinitrotoluene #2

11.51min 15.389ppb m

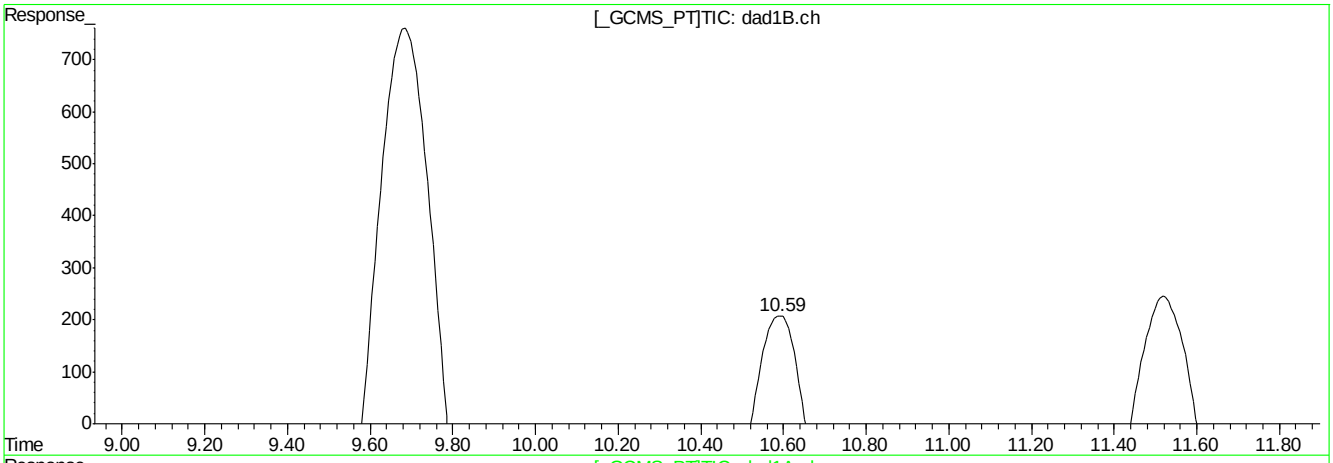
response 190008

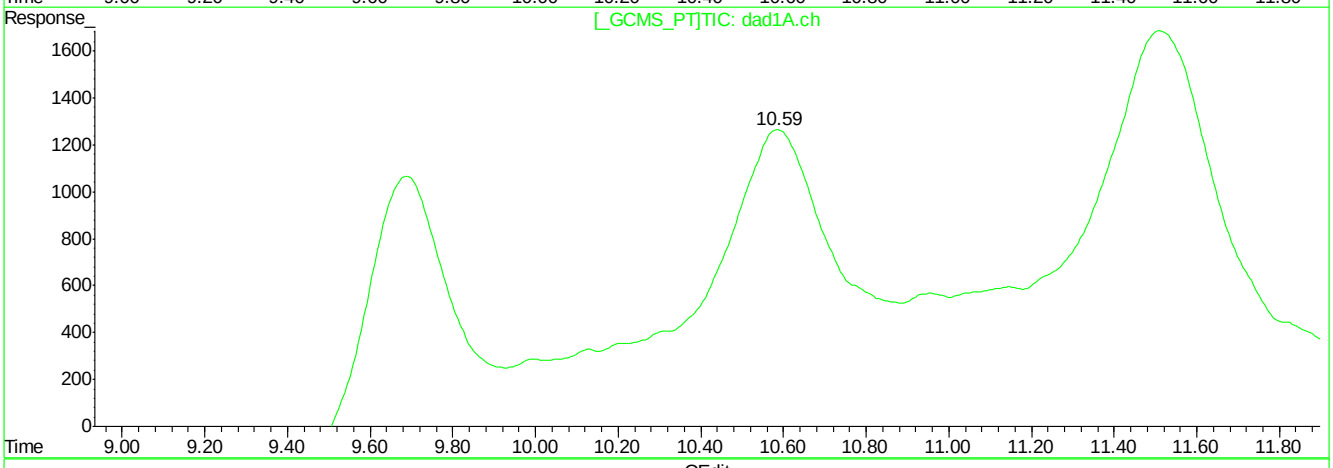
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.59min 13.980ppb

response 110211

(8) Nitrobenzene #2

10.59min 76.516ppb

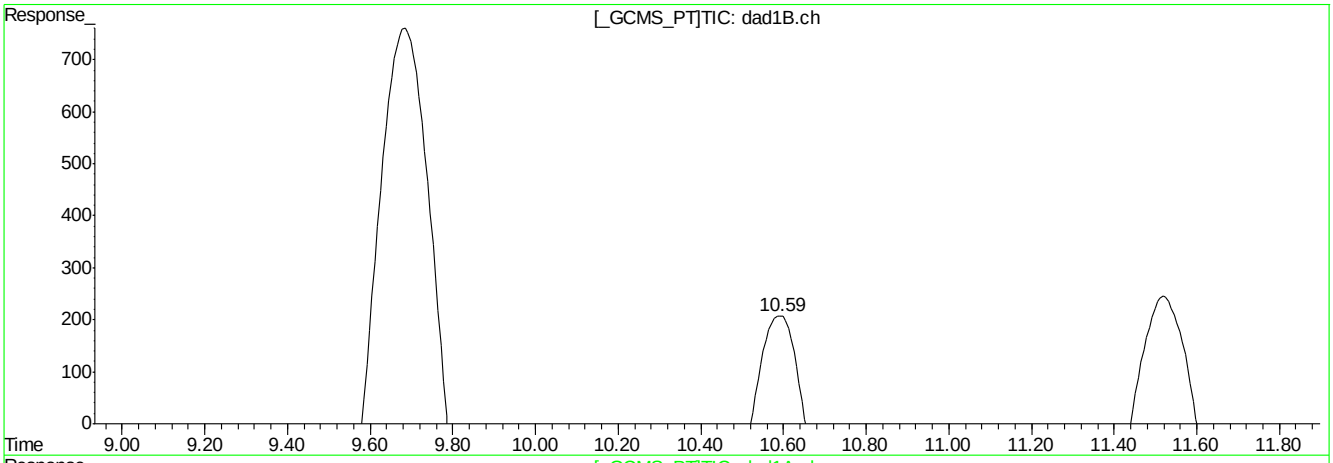
response 578591

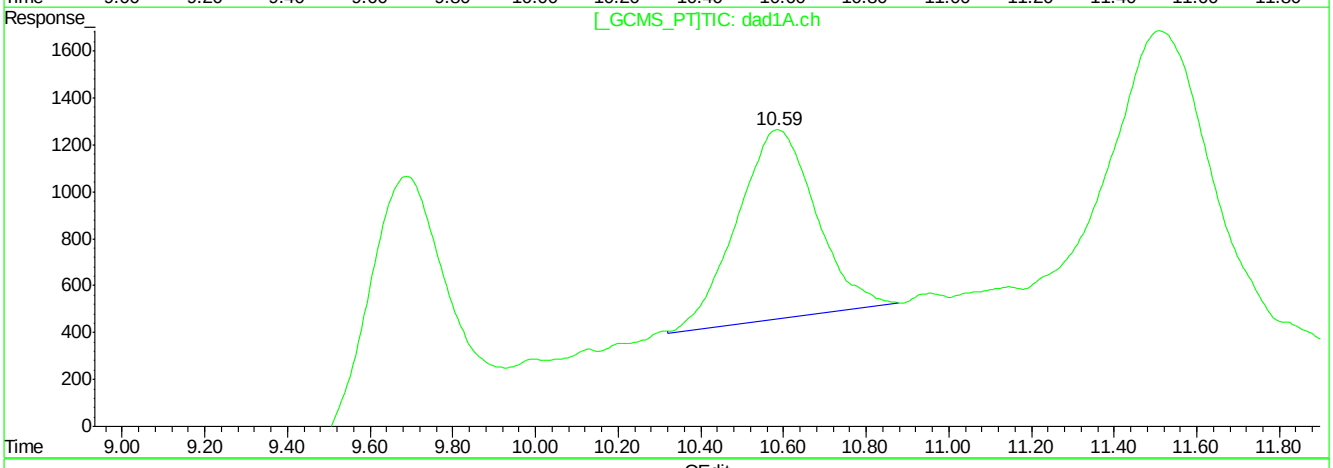
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.59min 13.980ppb

response 110211

(8) Nitrobenzene #2

10.59min 14.172ppb m

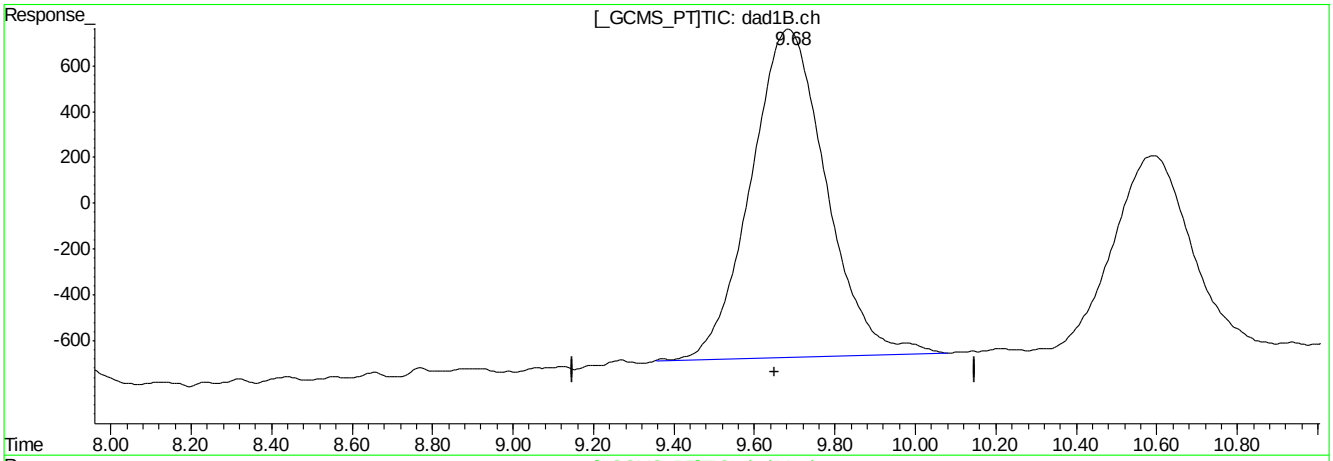
response 107164

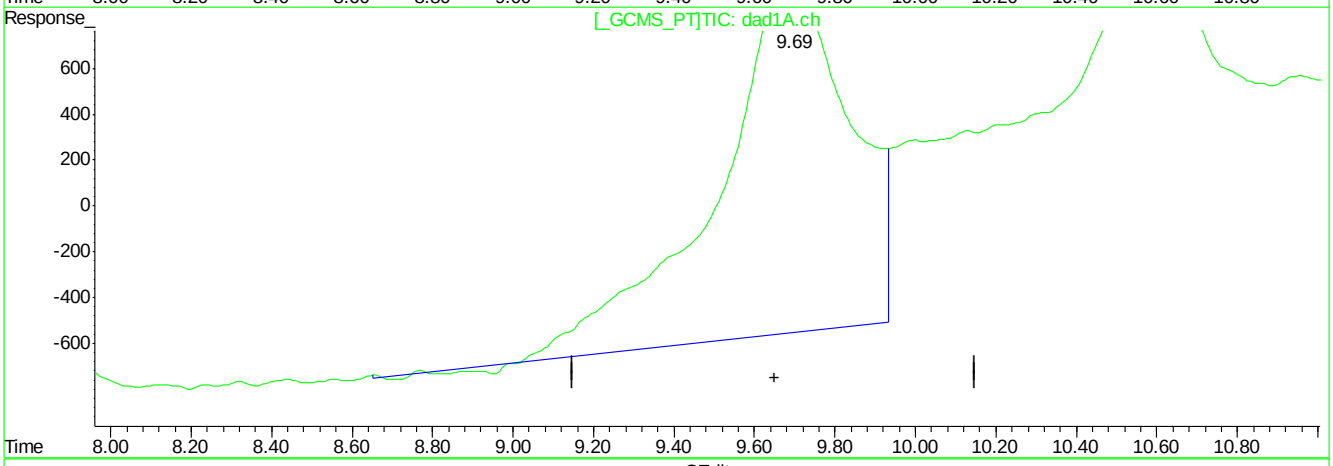
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.69min 14.756ppb

response 185811

(7) 1,3-Dinitrobenzene #2

9.69min 37.545ppb

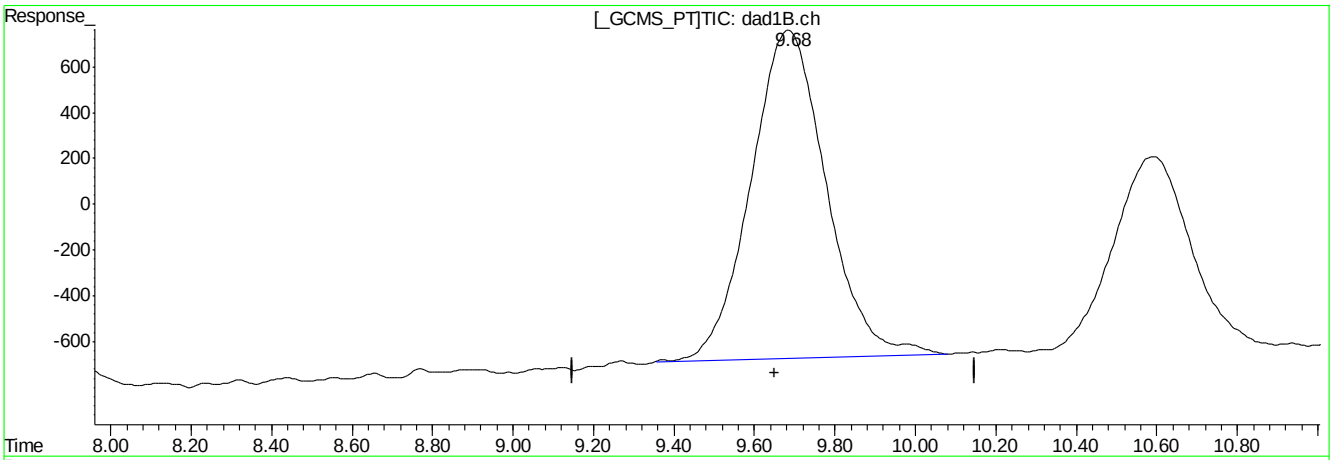
response 353274

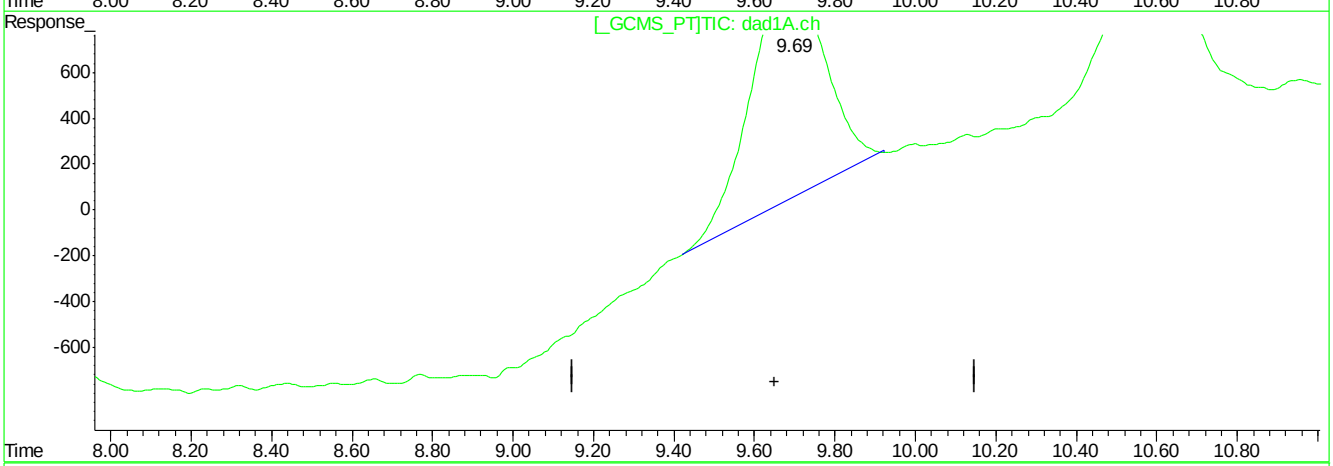
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.69min 14.756ppb

response 185811

(7) 1,3-Dinitrobenzene #2

9.69min 13.355ppb m

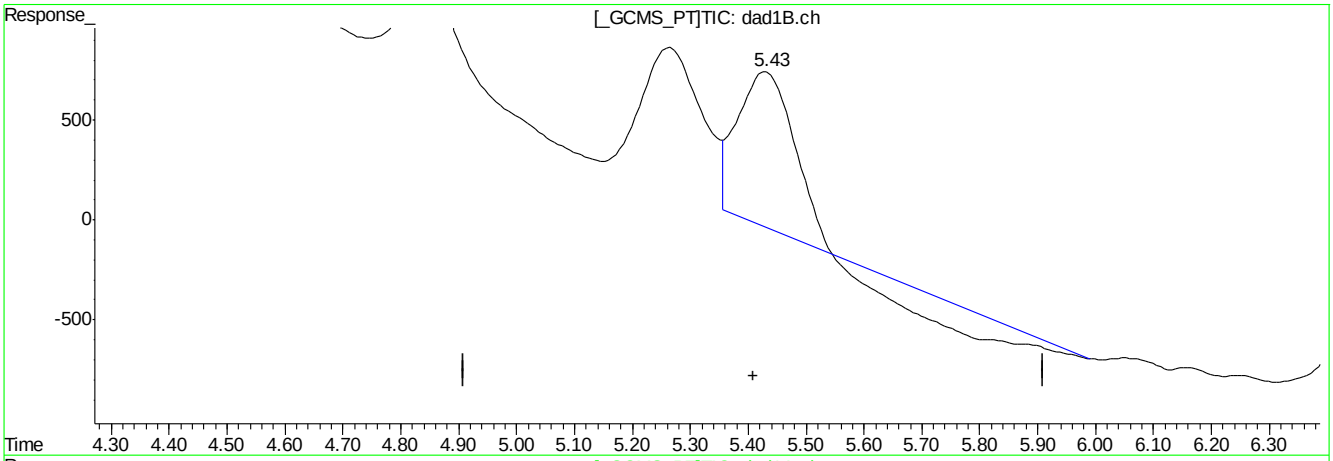
response 125662

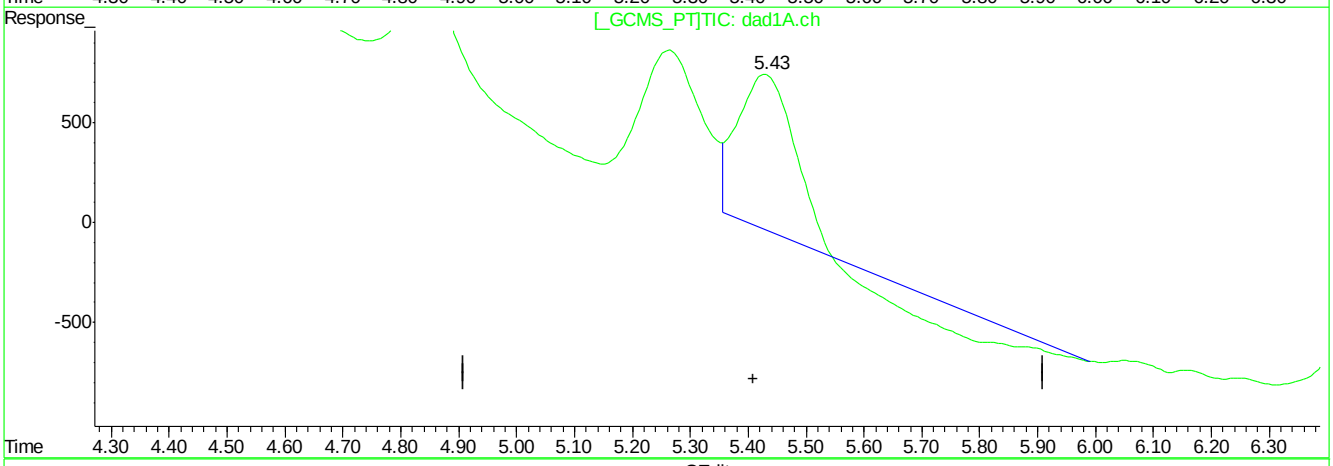
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:43:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.43min 6.857ppb

response 33248

(3) DNX #2

5.43min 6.849ppb

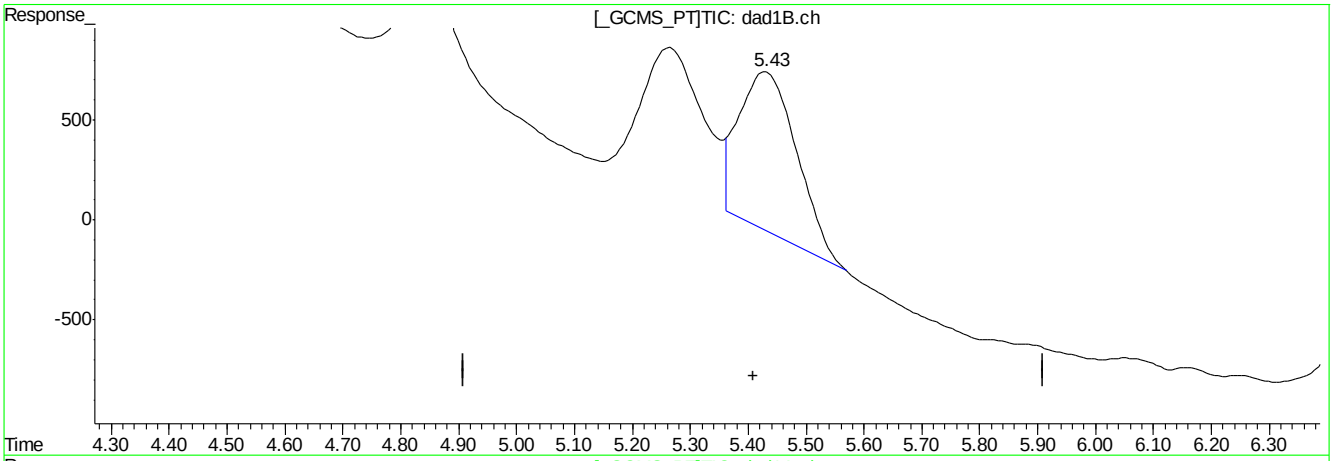
response 33248

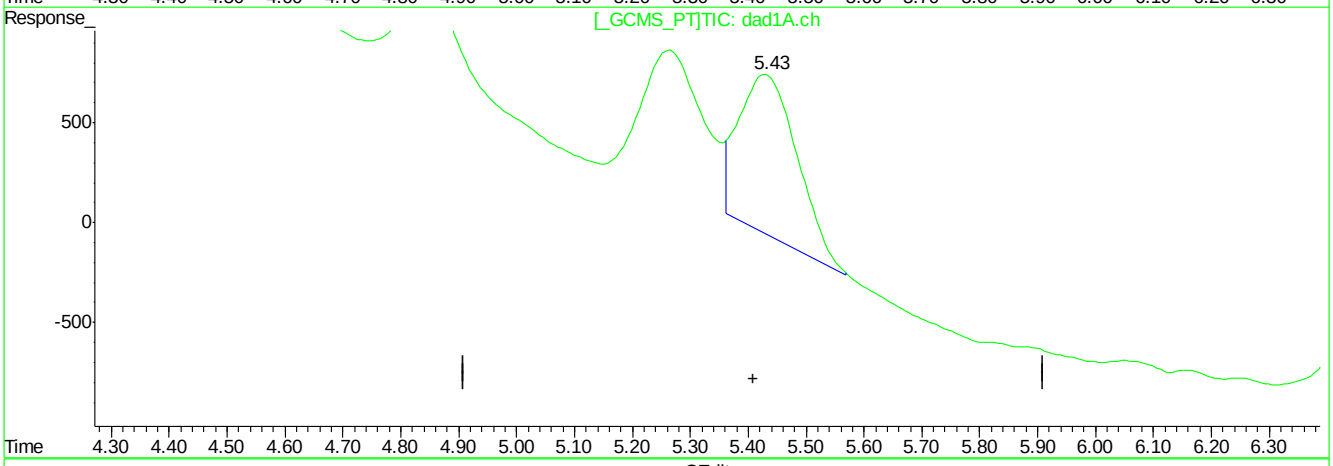
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:44:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.43min 11.363ppb m

response 55099

(3) DNX #2

5.43min 11.479ppb m

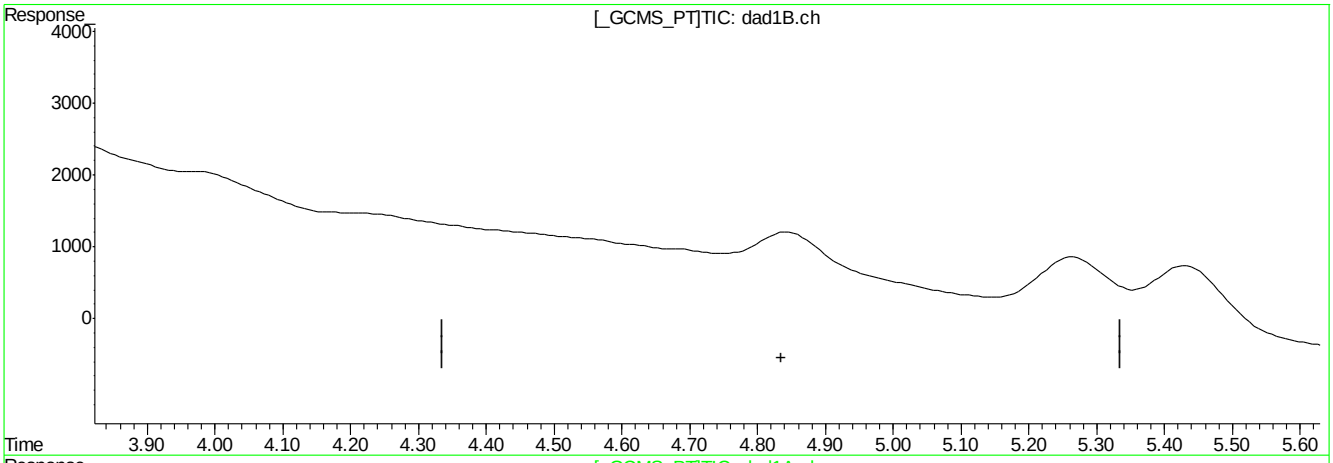
response 55722

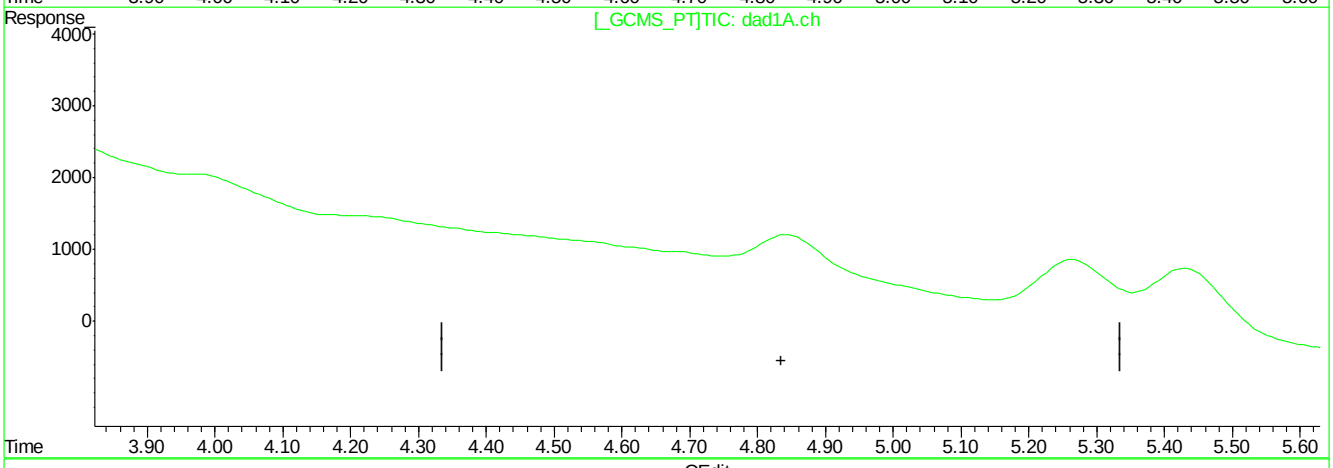
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:44:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

0.00min 0.000ppb

response 0

(1) TNX #2

0.00min 0.000ppb

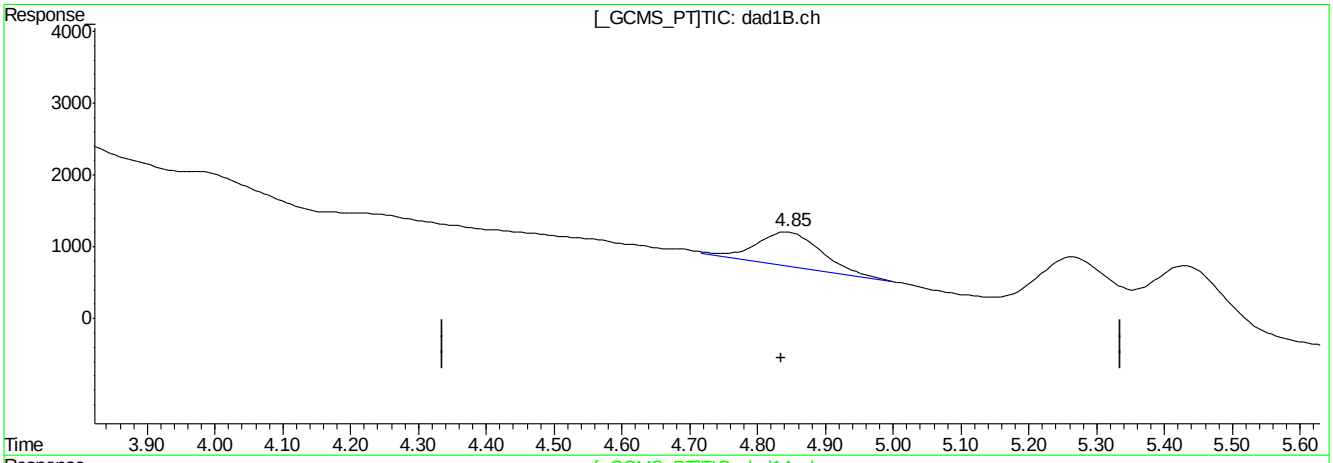
response 0

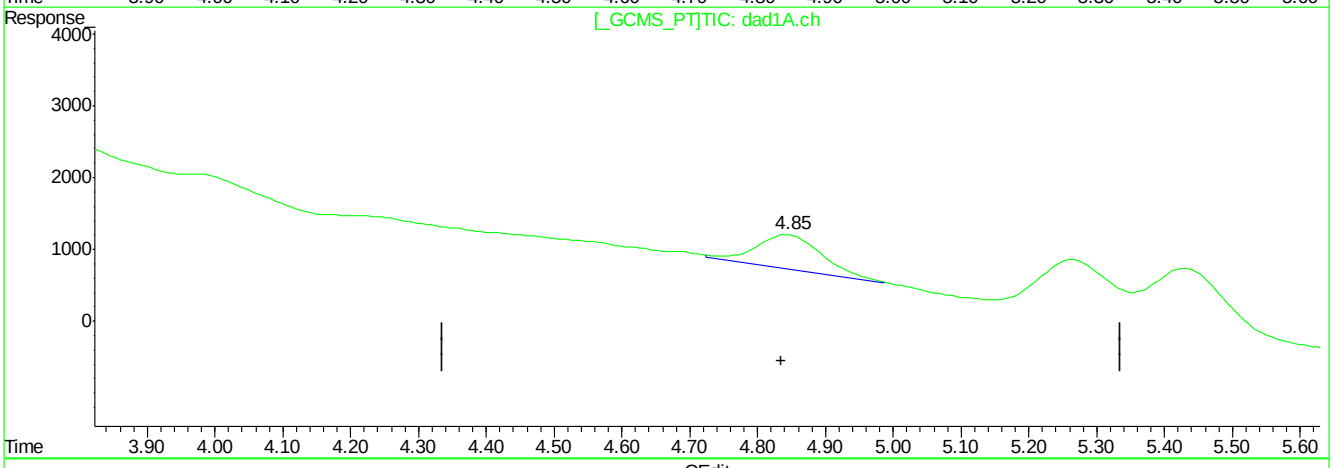
(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:44:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622644.D\dad1A.ch
Acq On : 31-Oct-2021, 11:04:43 Operator: jamesb
Sample : ic3059-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.85min 8.237ppb m

response 32084

(1) TNX #2

4.85min 8.020ppb m

response 31240

(+) = Expected Retention Time
GG622644.D GGG3047_092721.M Mon Nov 01 13:44:22 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 16:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 01 15:14:02 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.86	13.86	198062	378044	48.195	45.337
	Spiked Amount 500.000	Range 70 - 136		Recovery =		9.64%#	9.07%#
	Target Compounds						
1)	TNX	4.84	4.84	86054	83818	23.083m	22.449m
2)	HMX	5.25	5.25	140166	140166	47.974	47.974
3)	DNX	5.42	5.42	179838	176713	47.031m	46.326m
4)	MNX	6.52	6.52	344085	344085	56.106	56.106
5)	1,3,5-Trinitrobe	7.44	7.44	399967	399967	48.009	48.009
6)	RDX	7.76	7.76	186353	186353	47.138	47.138
7)	1,3-Dinitrobenze	9.66	9.67	557369	517847	48.893	58.883m
8)	Nitrobenzene	10.58	10.57	346131	320908	48.072	46.720m
9)	2,4,6-Trinitroto	11.51	11.50	387275	597404	48.304	53.400m
10)	Nitroglycerin	0.00	12.28	0	181259	N.D.	62.802m#
11)	Tetryl	12.77	12.78	313639	758204	49.281	68.884m
13)	2,6-Dinitrotolue	14.14	14.14	282759	466933	50.352	55.710
14)	2,4-Dinitrotolue	14.76	14.76	502827	392523	48.916	52.349
15)	3,5-Dinitroanili	15.42	15.43	429799	667962	49.375	47.463
16)	o-Nitrotoluene	16.24	16.23	223253	432391	49.427	61.547m
17)	p-Nitrotoluene	17.22	17.21	455987	693169	96.559	83.723
18)	4-Amino-2,6-Dini	17.22	17.21	455987	693169	96.559	83.723
19)	m-Nitrotoluene	18.44	18.47	247931	392993	49.077	45.853m
20)	2-Amino-4,6-Dini	19.01	19.04	377721	473515	49.205	44.465
21)	PETN	0.00	21.11	0	67514	N.D.	22.268m#

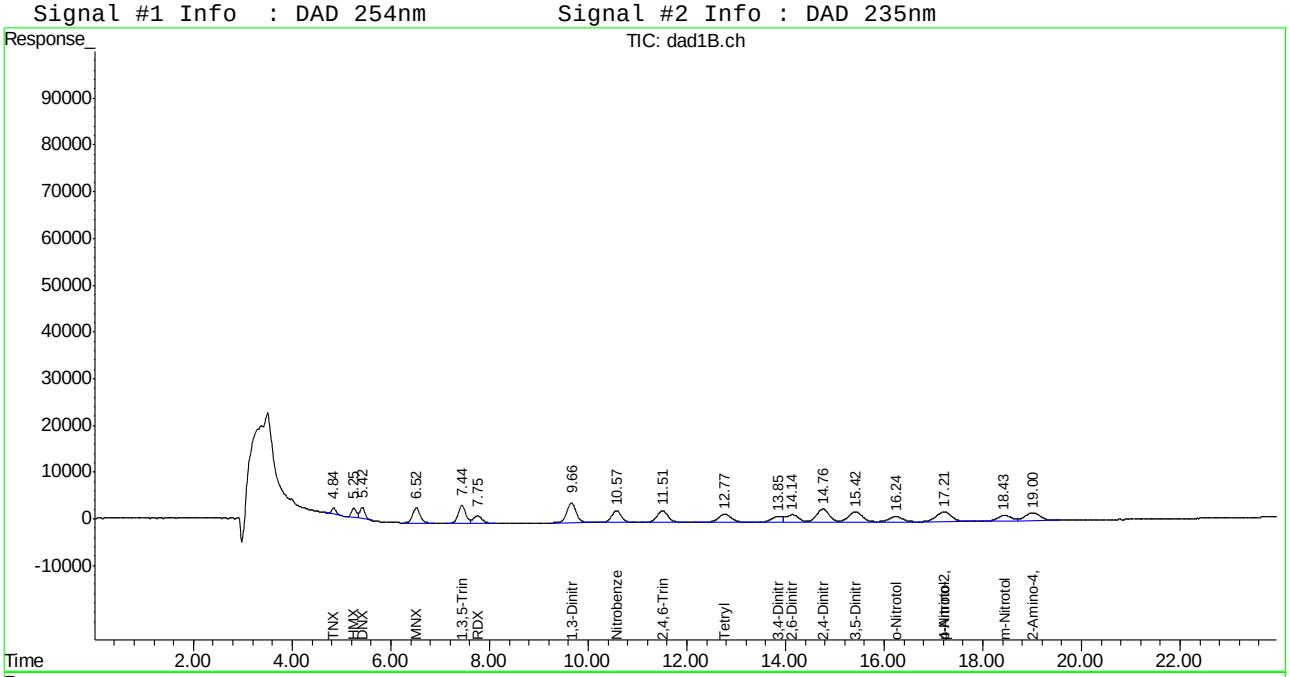
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622645.D GGG3059_103121.M Mon Nov 01 15:26:14 2021 Page 1

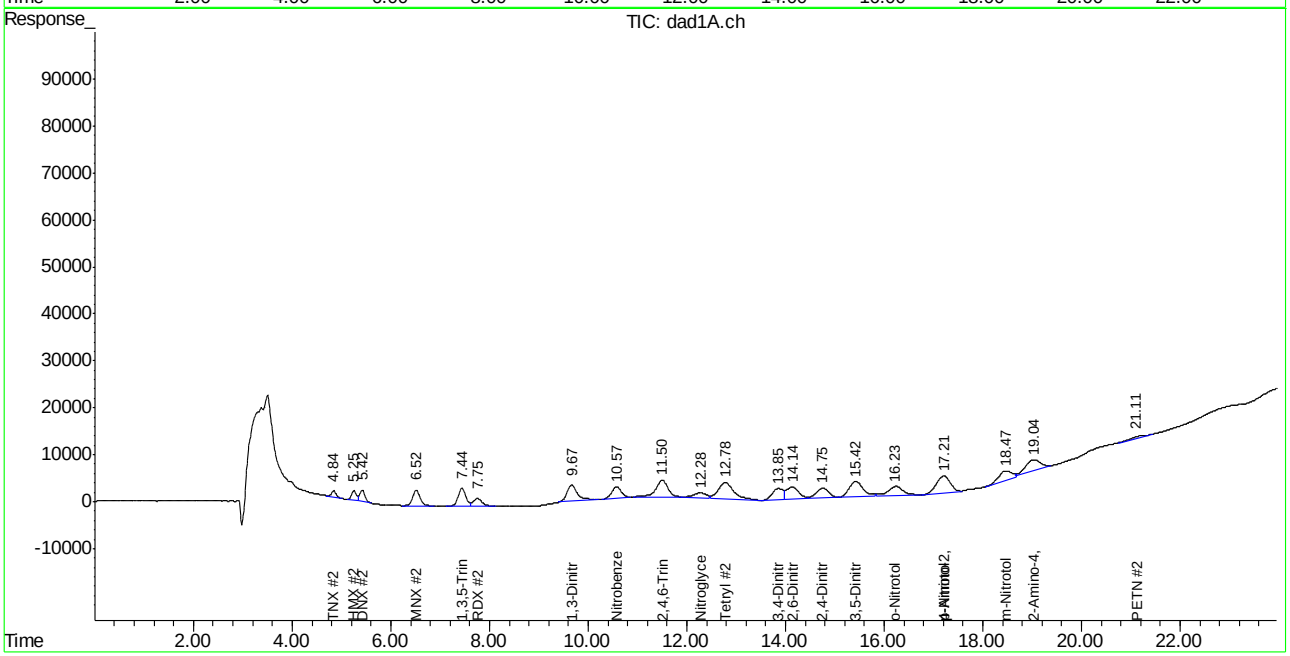
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:22 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

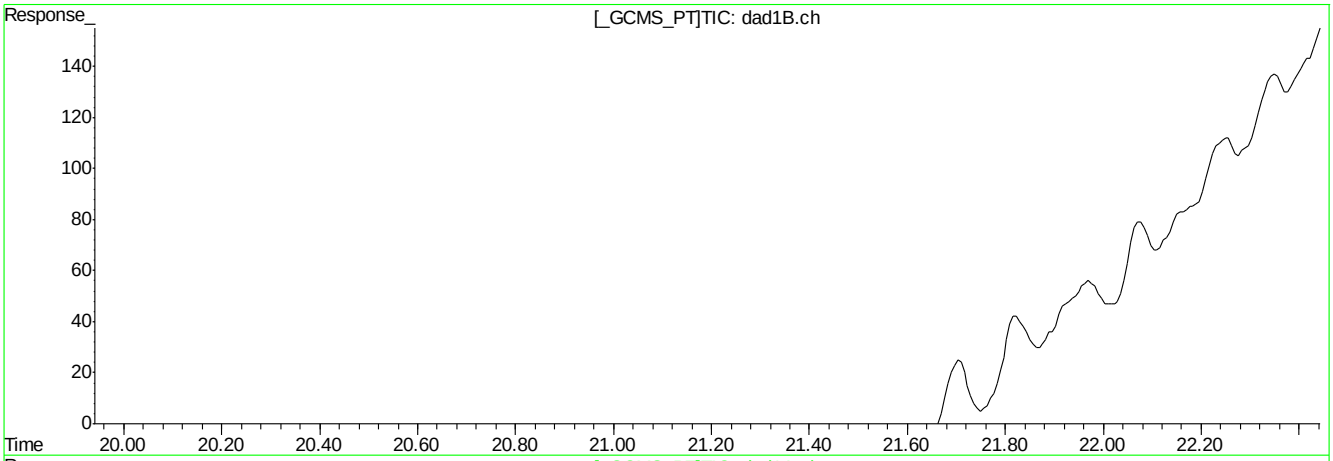
Sample Number: GGG3059-IC3059
Lab FileID: GG622645.D
Injection Time: 10/31/21 11:36
Method: SW846 8330A
Analyst approved: 11/01/21 16:29 James Boone
Supervisor approved: 11/01/21 16:46 Naresh Jiawan

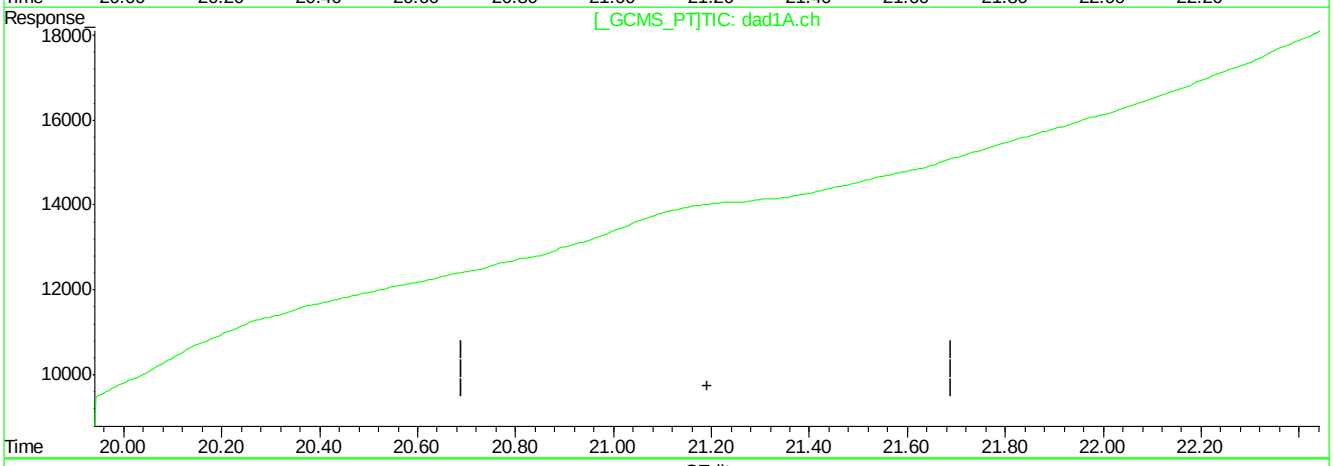
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	4.84	Poor instrument integration
TNX		2	4.84	Poor instrument integration
DNX		1	5.42	Poor instrument integration
DNX		2	5.42	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.67	Poor instrument integration
Nitrobenzene	98-95-3	2	10.57	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.50	Poor instrument integration
Nitroglycerine	55-63-0	2	12.28	Poor instrument integration
Tetryl	479-45-8	2	12.78	Poor instrument integration
o-Nitrotoluene	88-72-2	2	16.23	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.47	Poor instrument integration
PETN	78-11-5	2	21.11	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

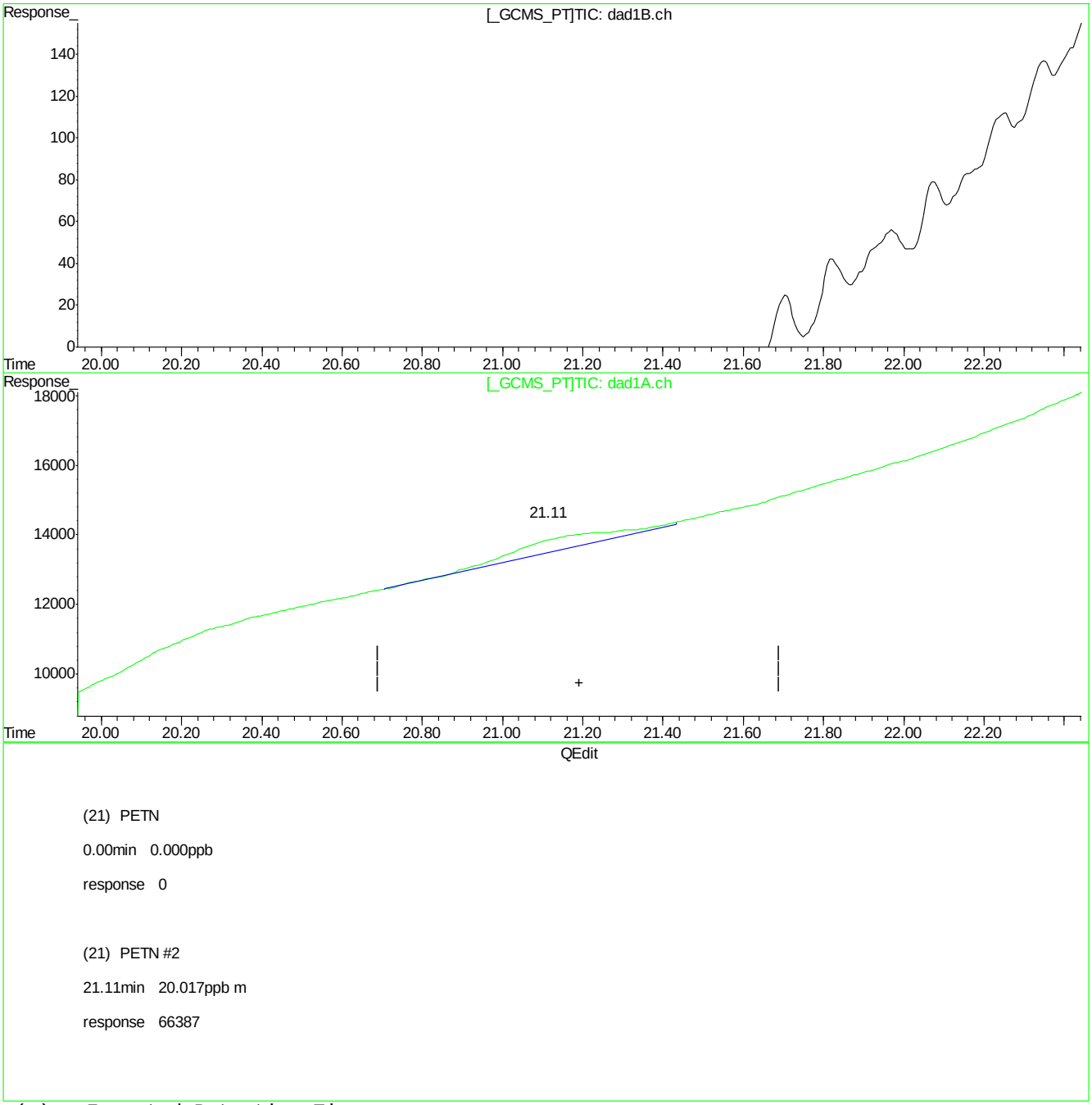
response 0

(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:39:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration

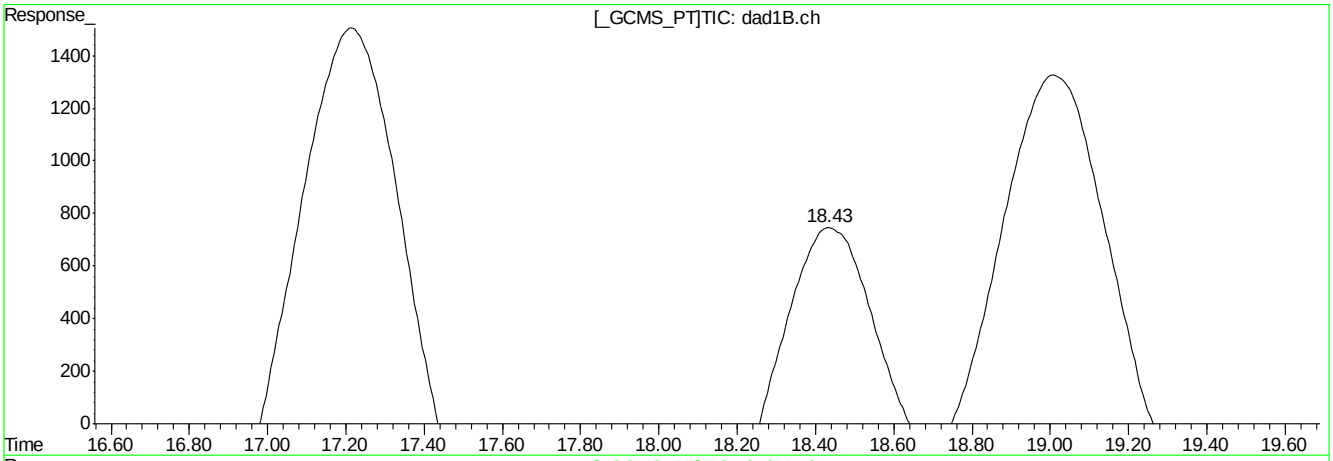


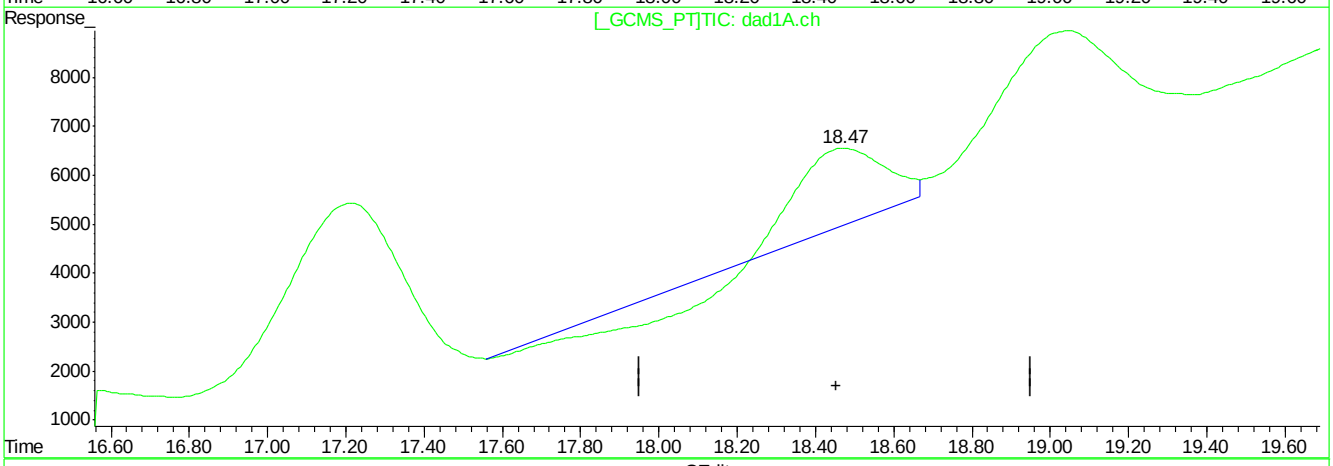
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:39:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.44min 44.416ppb

response 247931

(19) m-Nitrotoluene #2

18.47min 12.435ppb

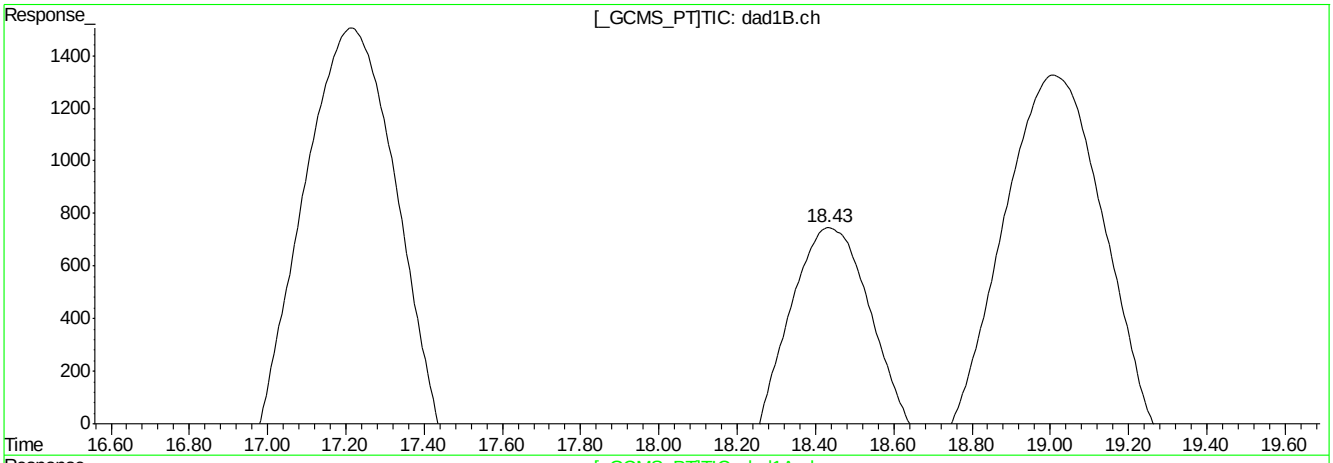
response 121744

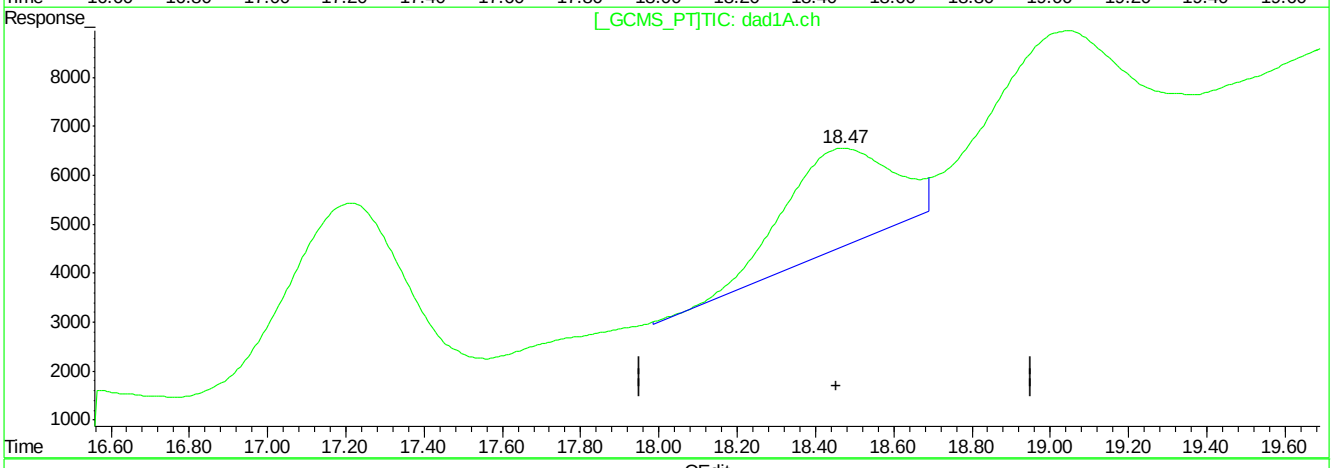
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:39:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.44min 44.416ppb

response 247931

(19) m-Nitrotoluene #2

18.47min 40.552ppb m

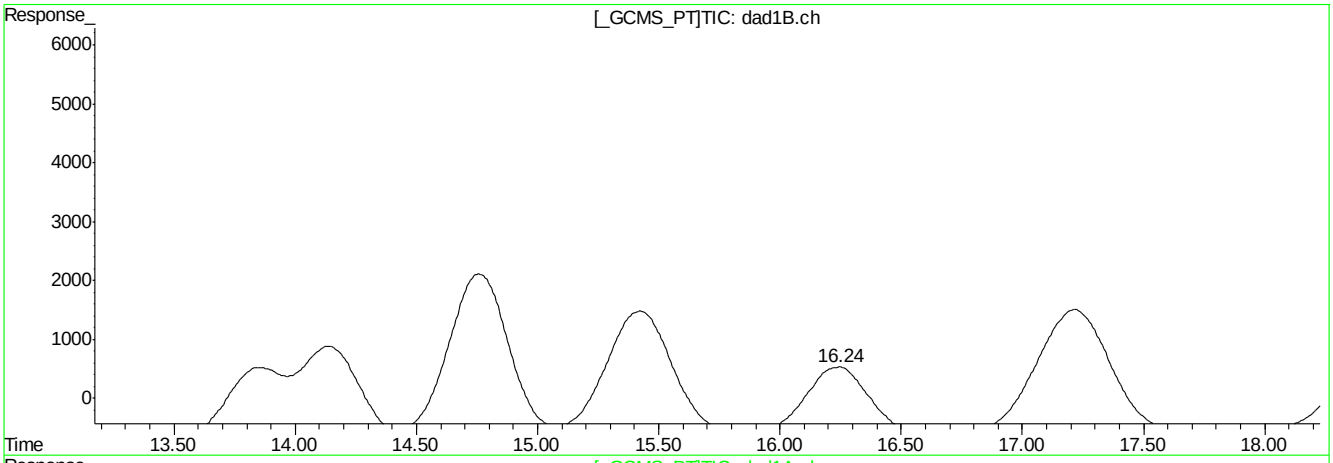
response 397008

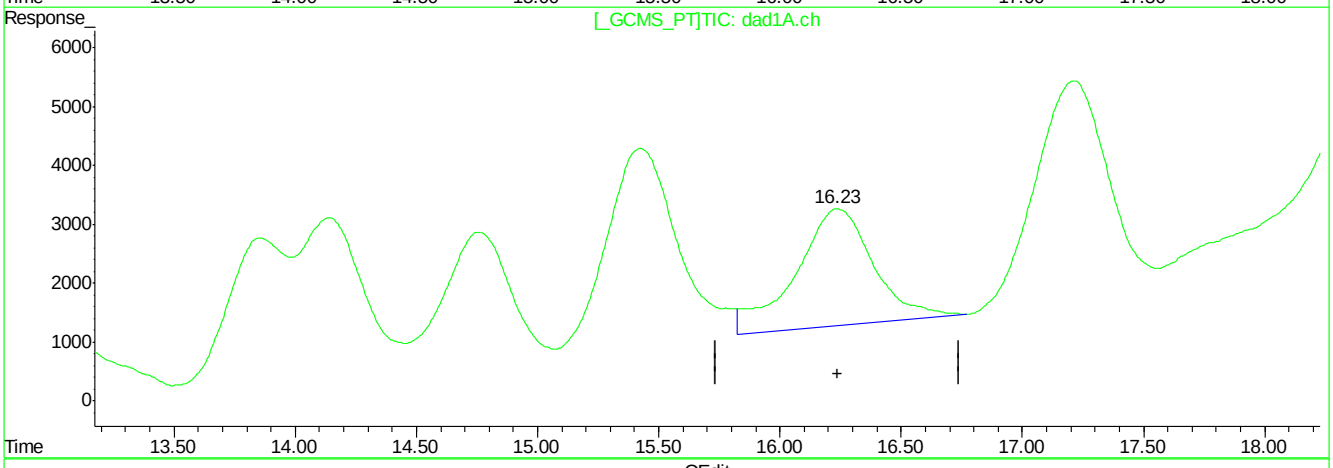
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:39:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(16) o-Nitrotoluene

16.24min 46.010ppb

response 223253

(16) o-Nitrotoluene #2

16.24min 61.985ppb

response 445214

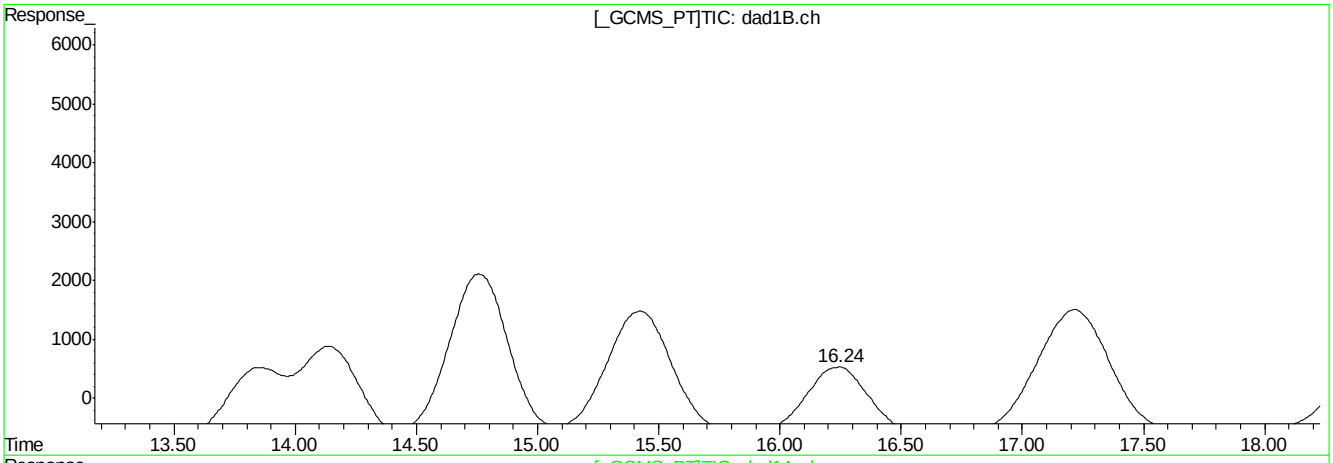
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:39:44 2021

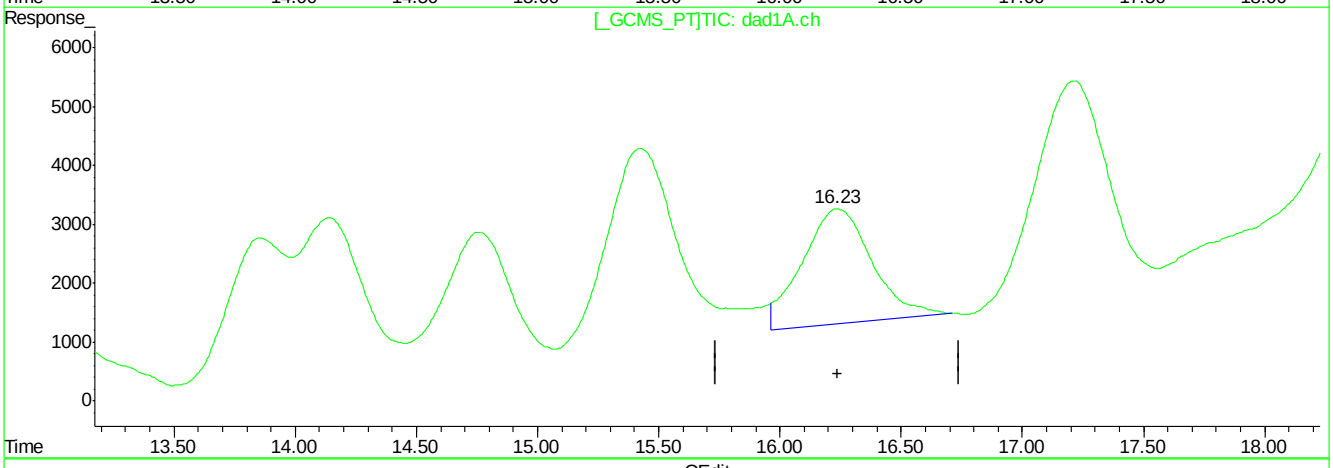
GG622645.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(16) o-Nitrotoluene

16.24min 46.010ppb

response 223253

(16) o-Nitrotoluene #2

16.23min 54.321ppb m

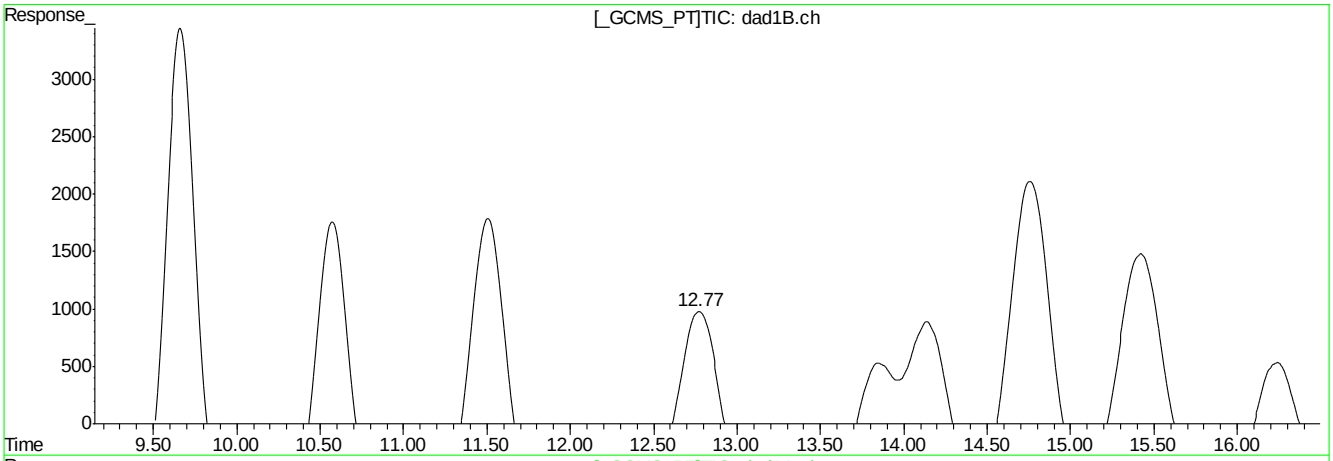
response 390166

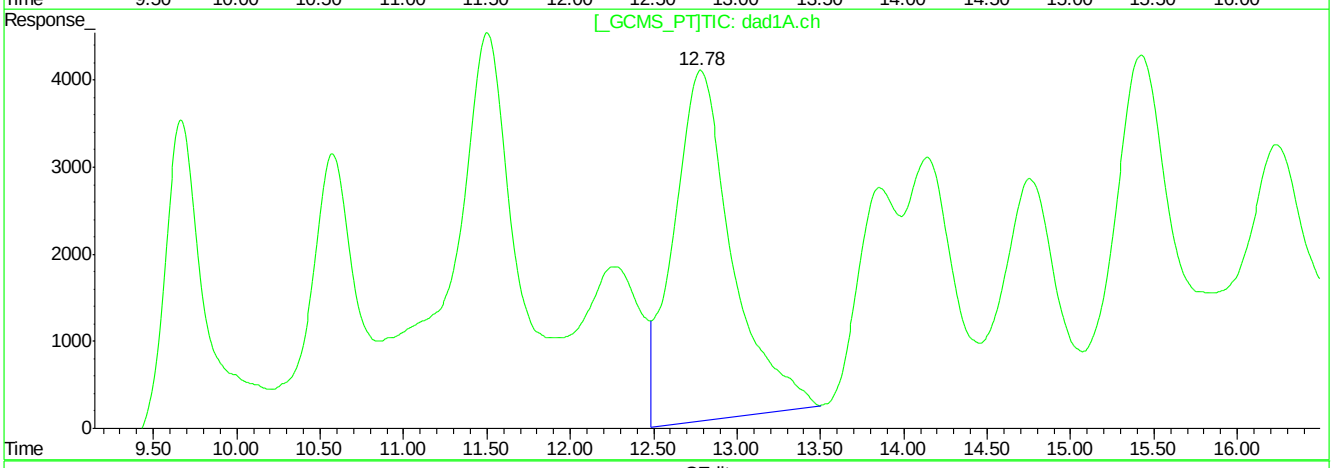
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:39:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.77min 44.966ppb

response 313639

(11) Tetryl #2

12.78min 82.252ppb

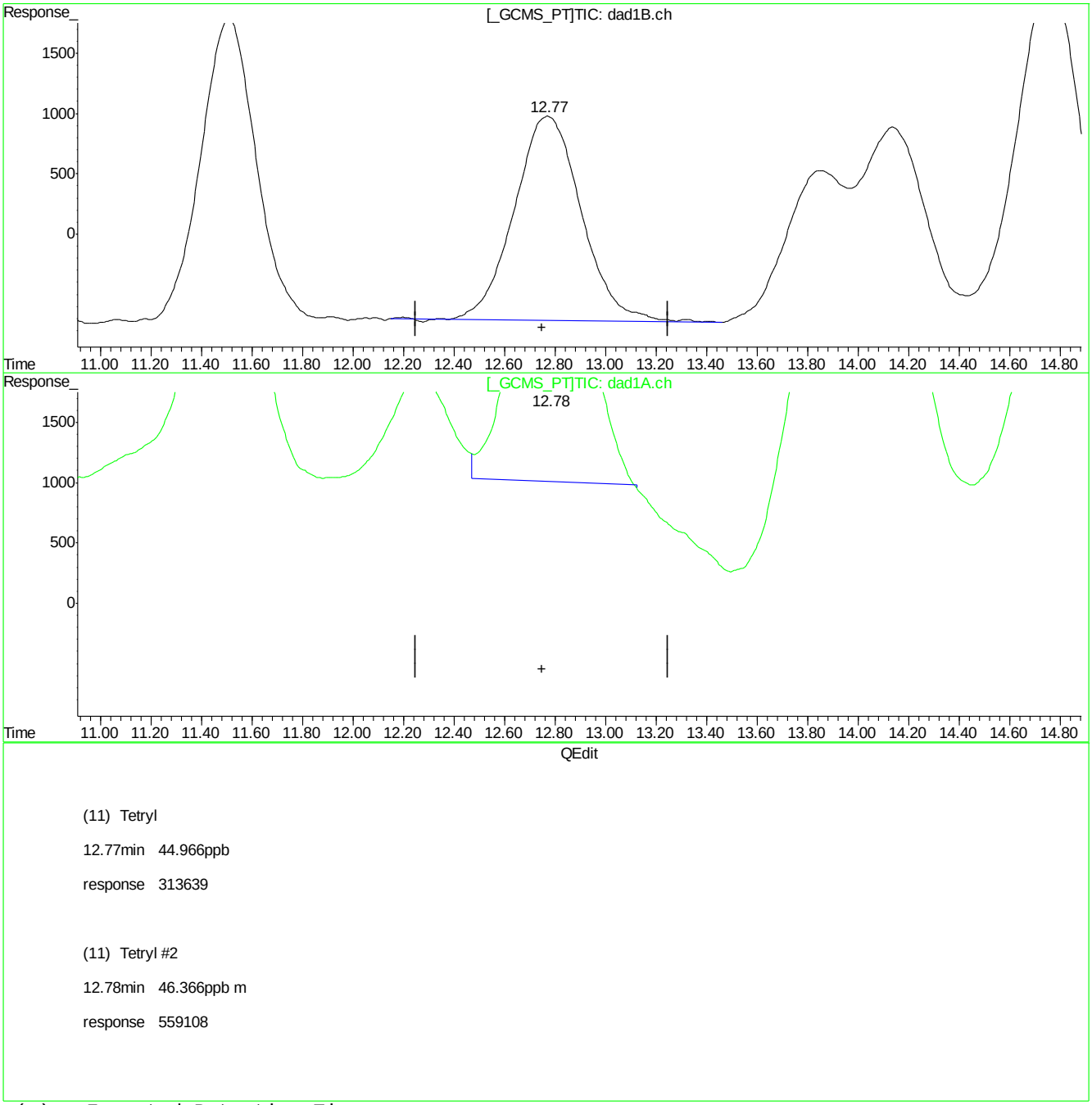
response 991848

(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:40:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration

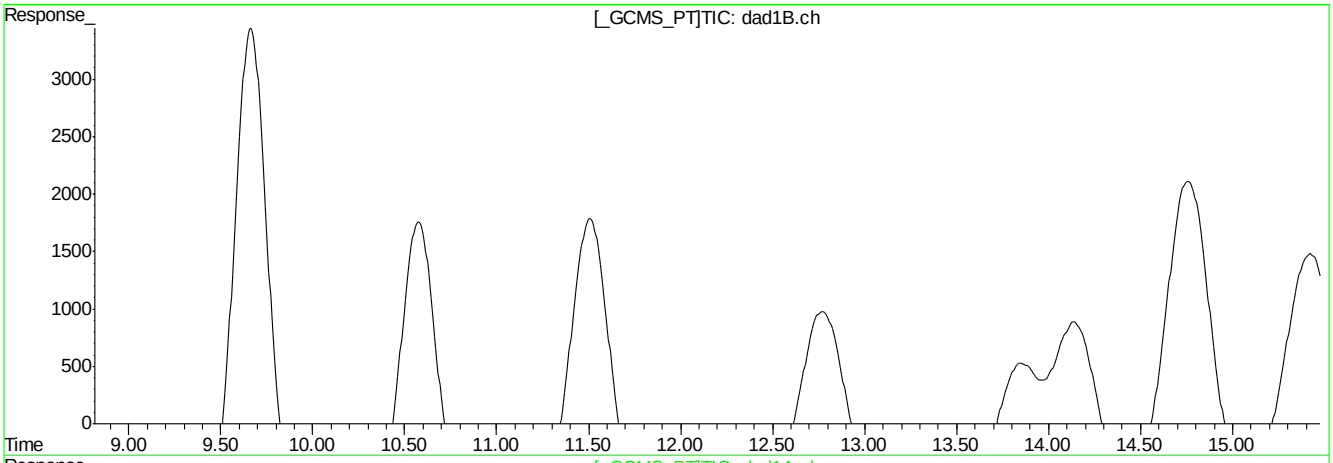


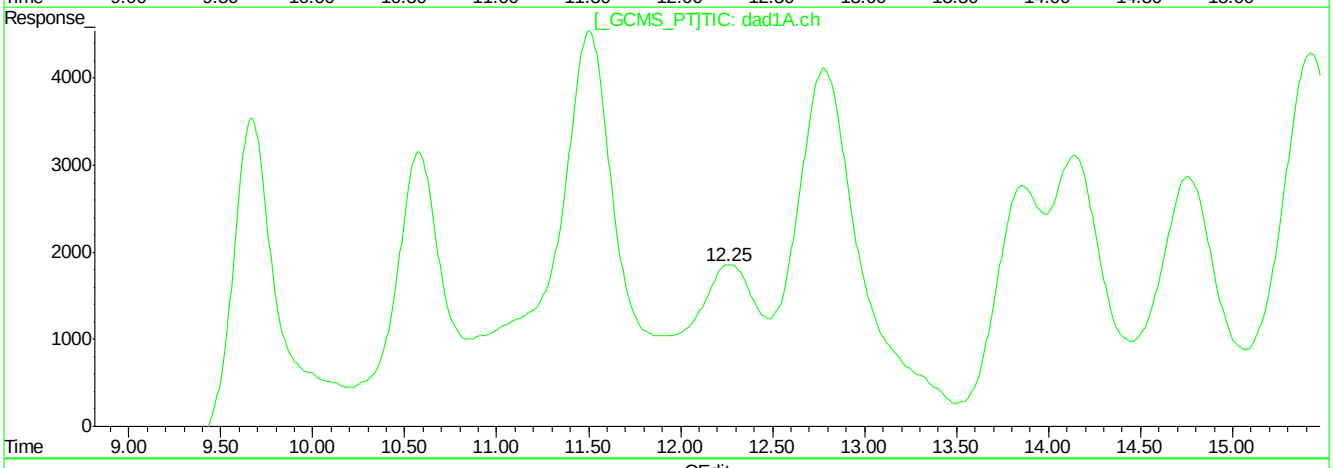
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:40:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.27min 171.835ppb

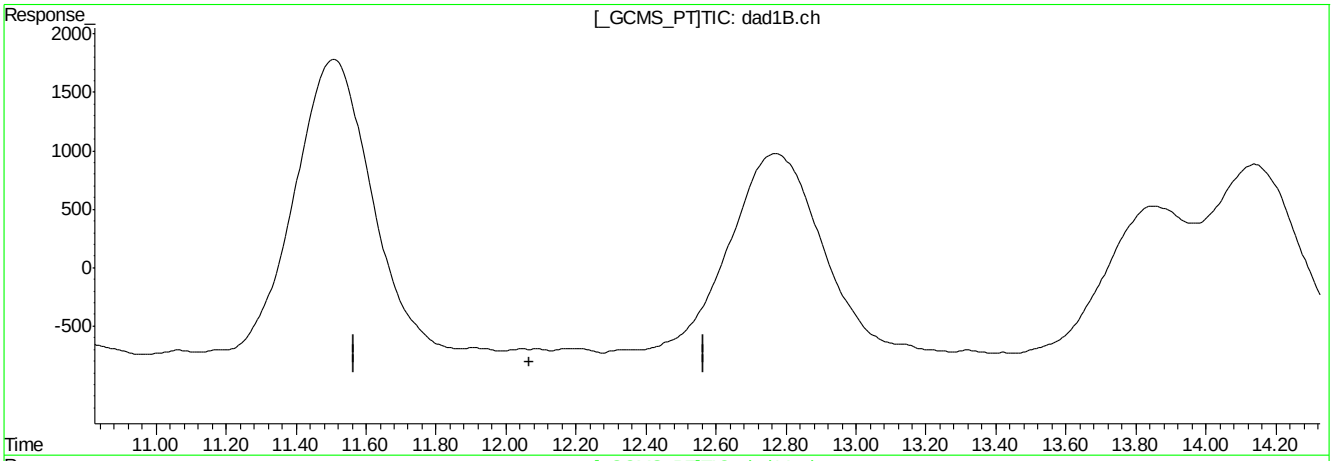
response 530839

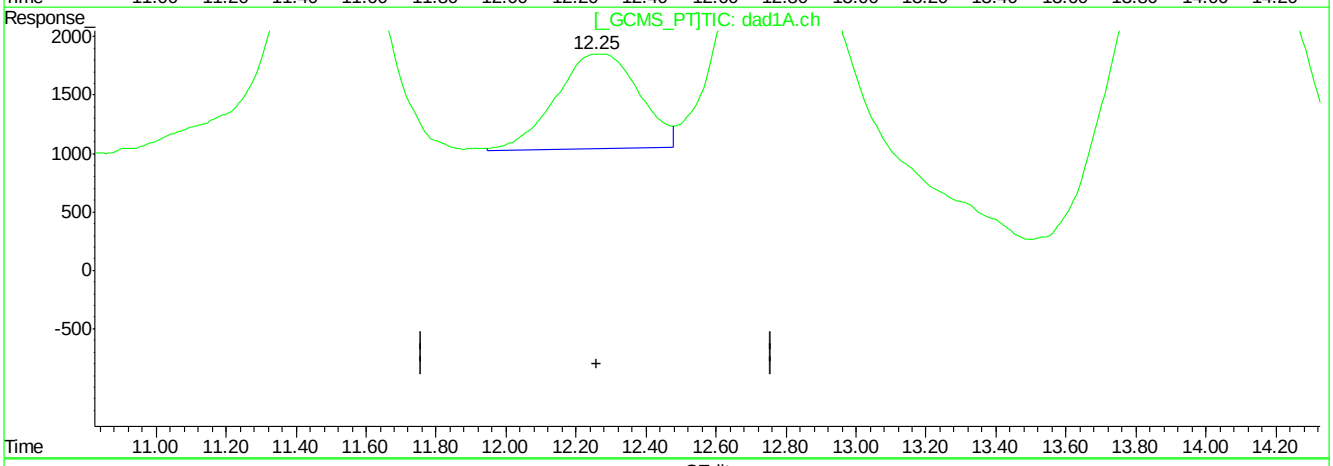
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:40:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.25min 43.637ppb m

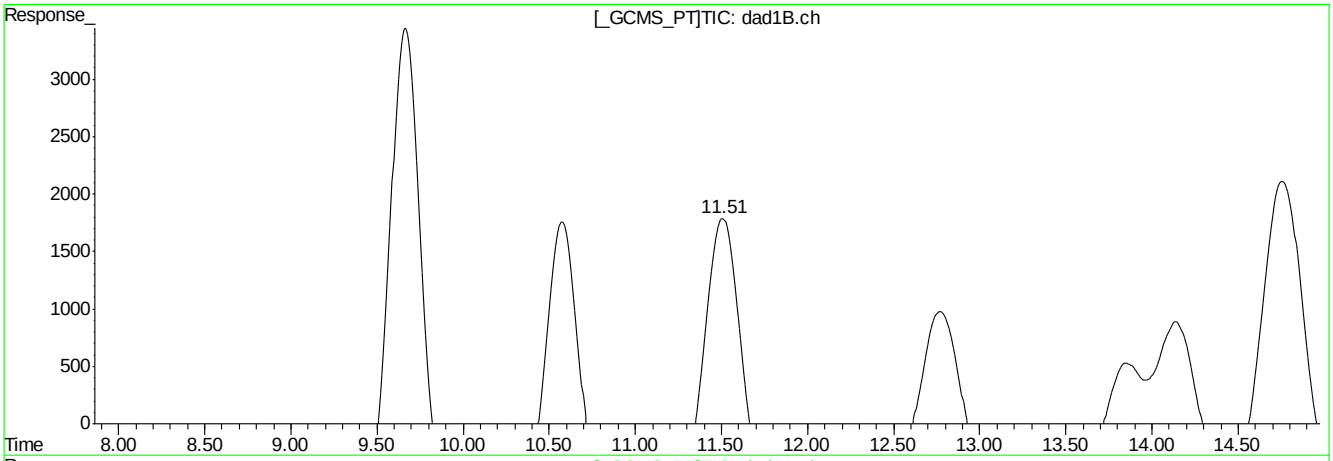
response 134806

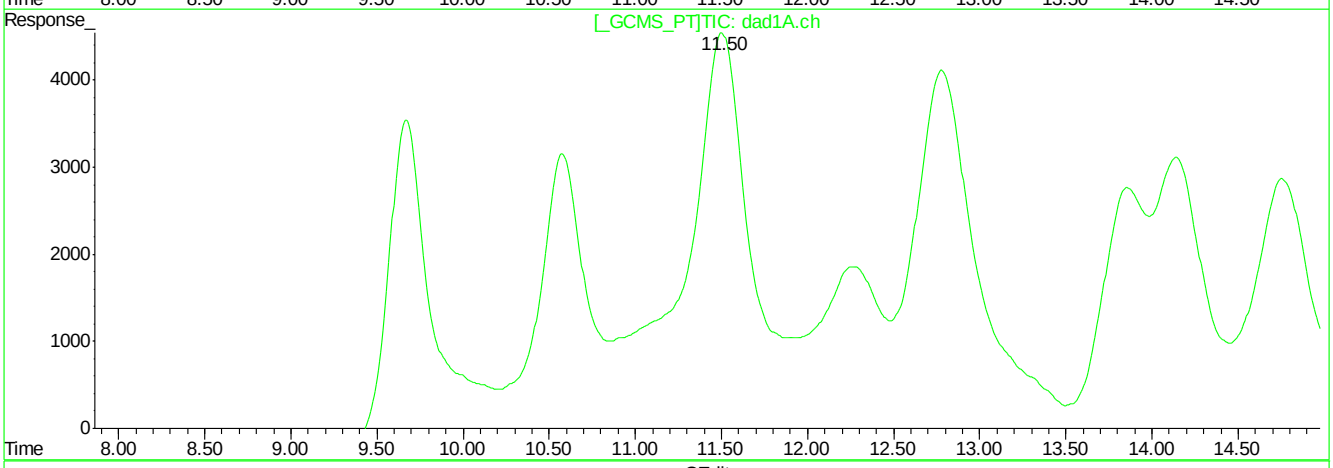
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:40:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.51min 44.228ppb

response 387275

(9) 2,4,6-Trinitrotoluene #2

11.51min 112.607ppb

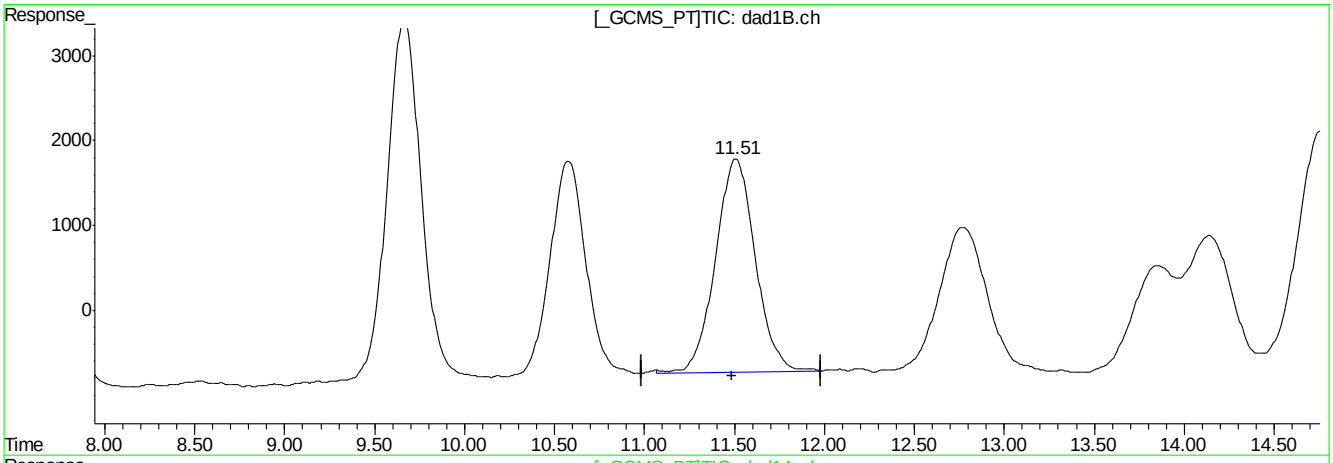
response 1390365

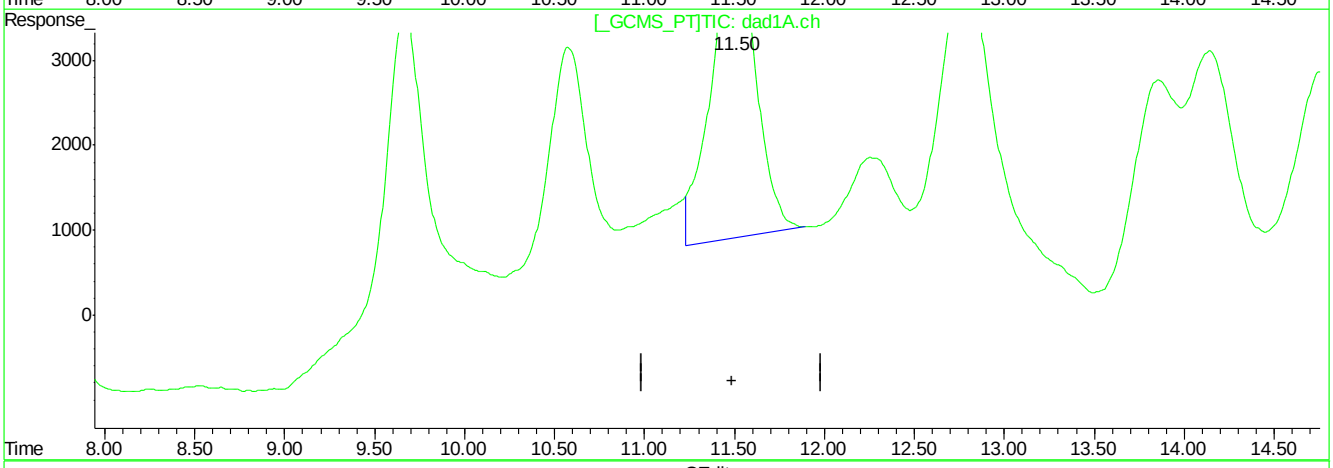
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:40:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.51min 44.228ppb

response 387275

(9) 2,4,6-Trinitrotoluene #2

11.50min 48.977ppb m

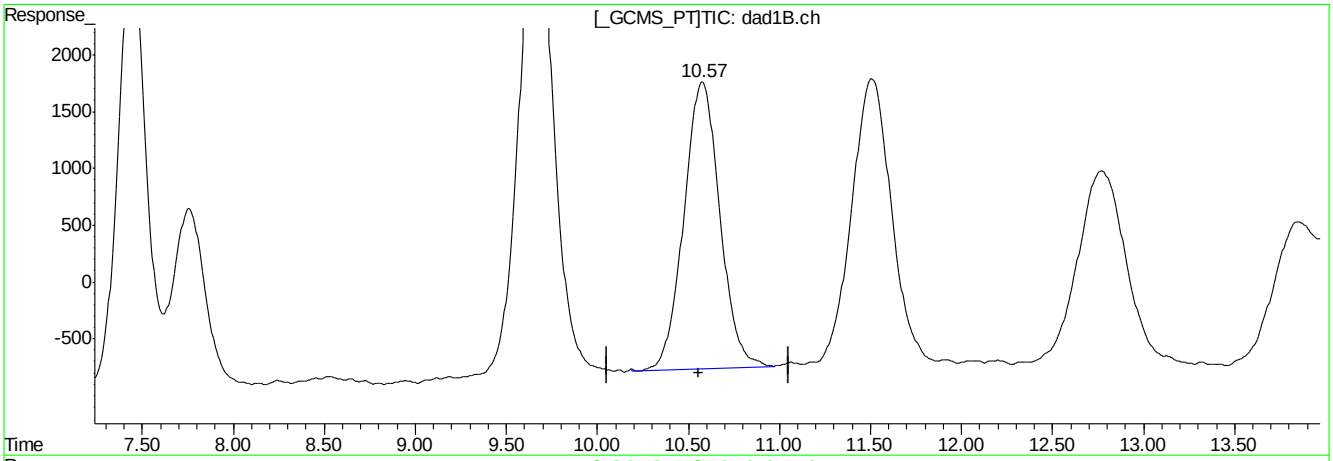
response 604720

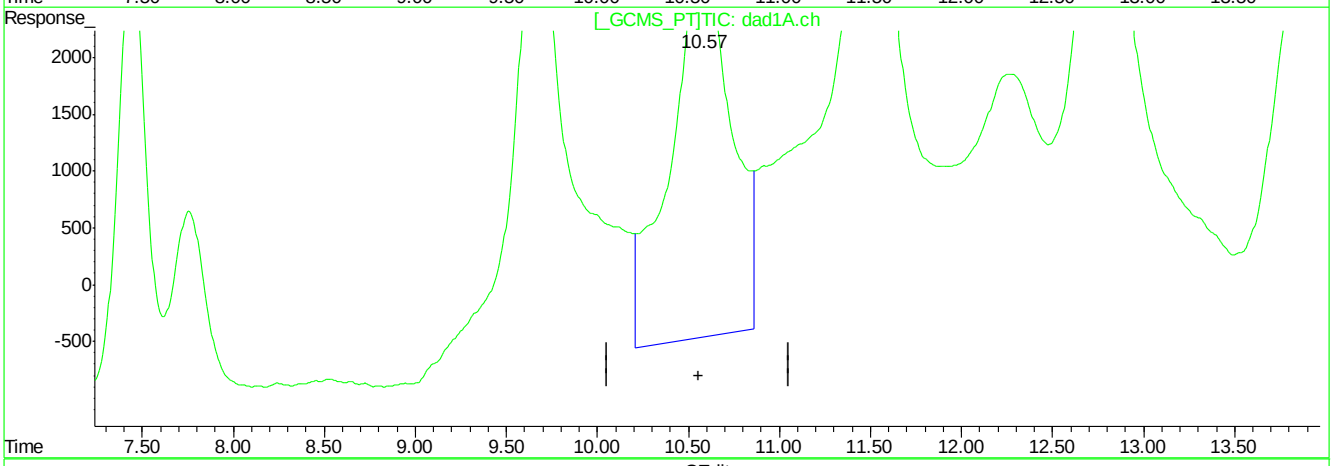
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:40:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.58min 43.907ppb

response 346131

(8) Nitrobenzene #2

10.58min 104.459ppb

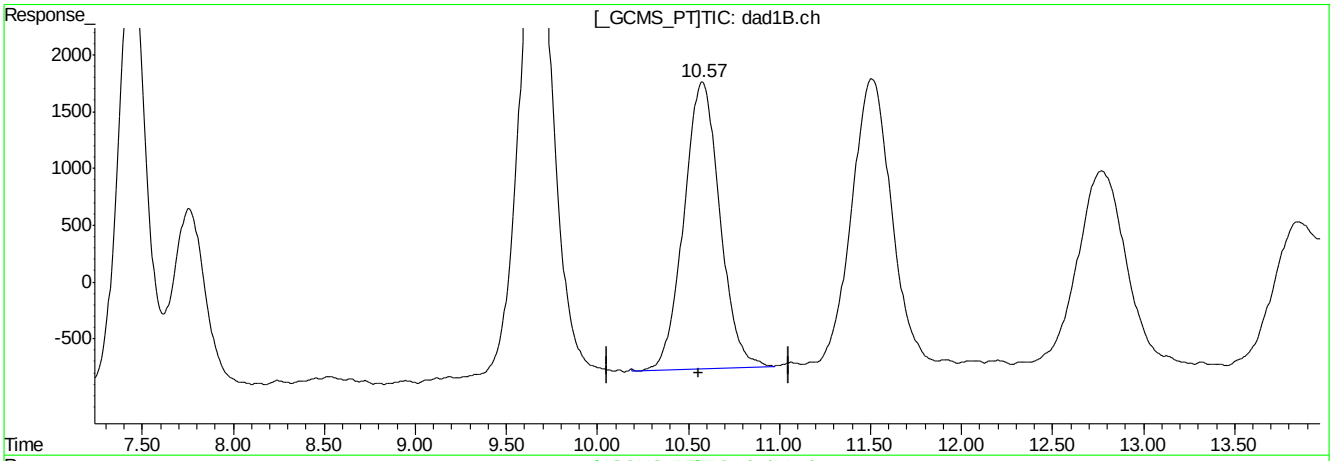
response 789890

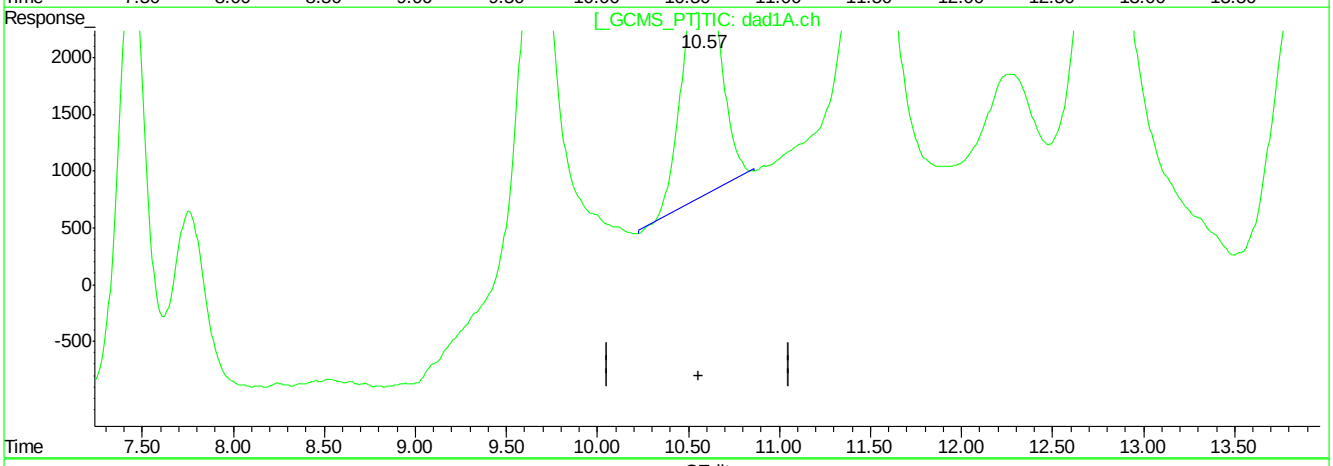
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:40:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.58min 43.907ppb

response 346131

(8) Nitrobenzene #2

10.57min 41.761ppb m

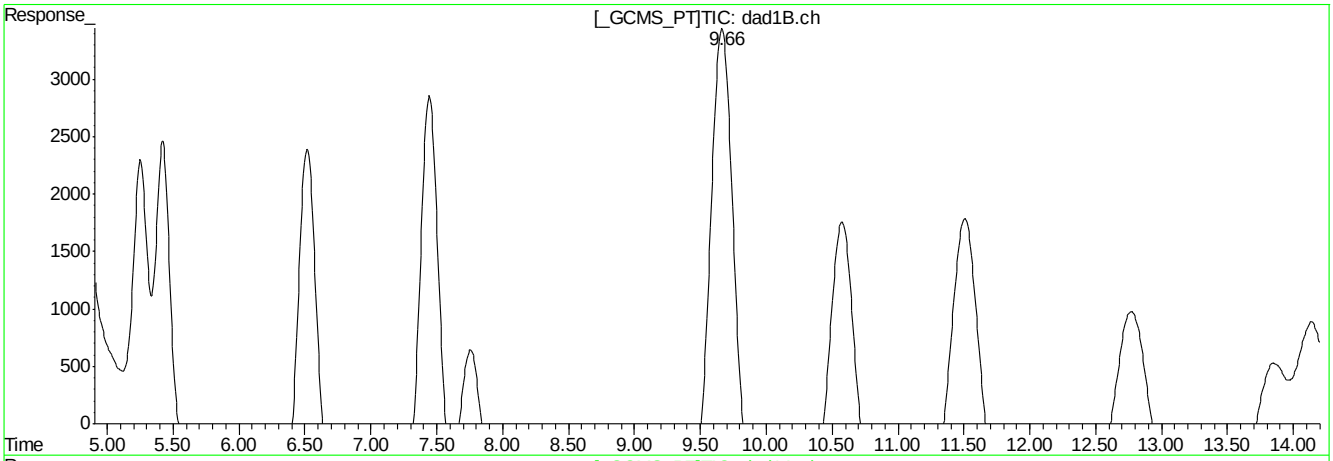
response 315786

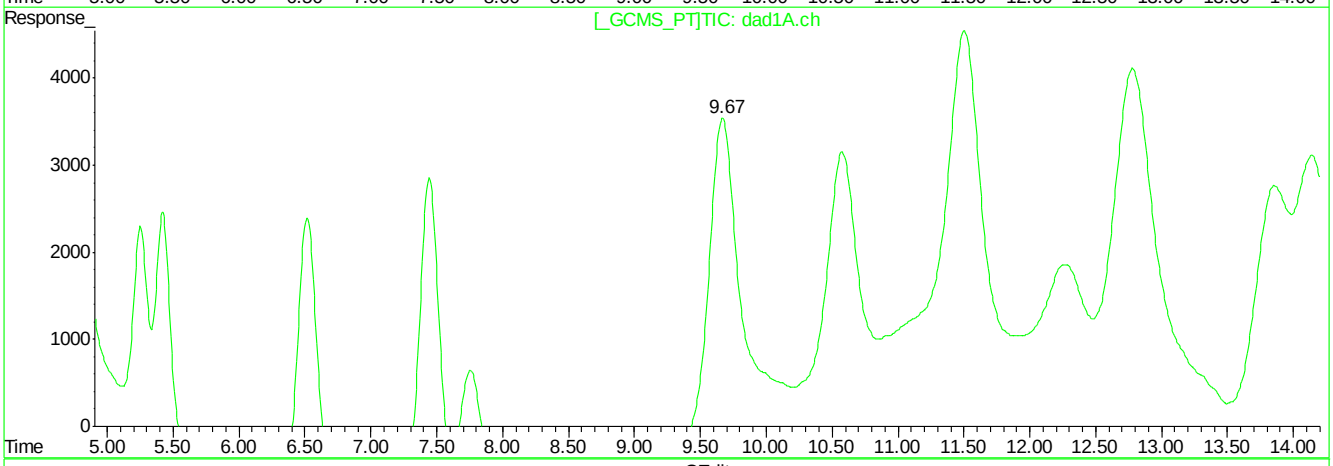
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:40:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.66min 44.265ppb

response 557369

(7) 1,3-Dinitrobenzene #2

9.67min 105.557ppb

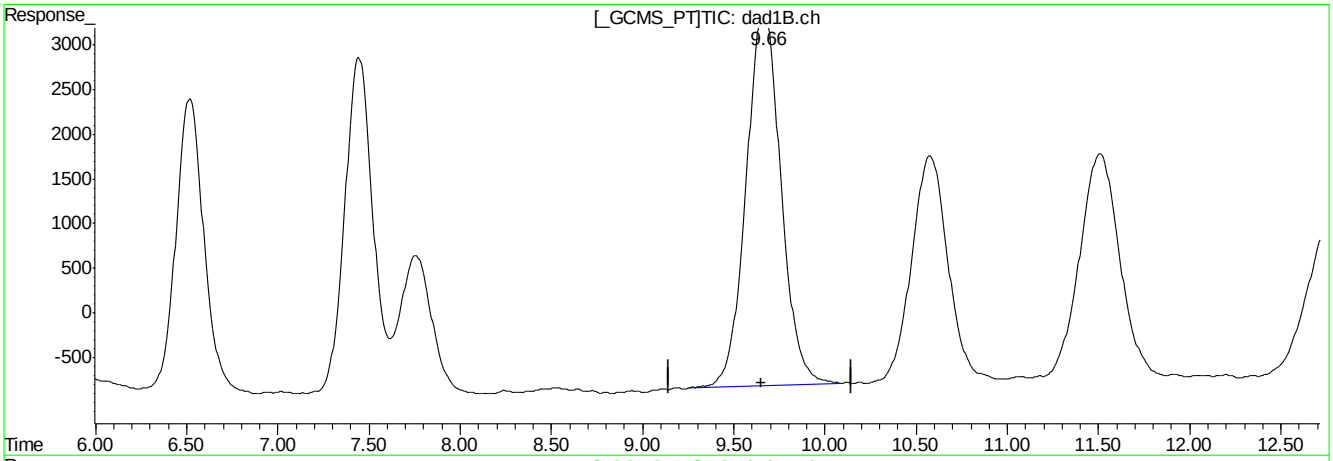
response 993222

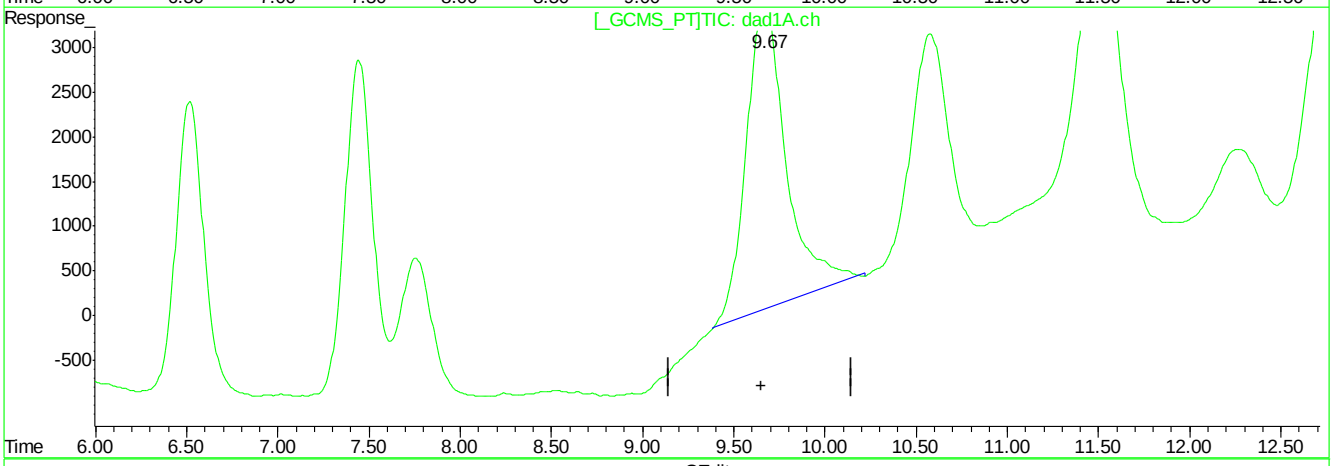
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:41:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.66min 44.265ppb

response 557369

(7) 1,3-Dinitrobenzene #2

9.67min 55.195ppb m

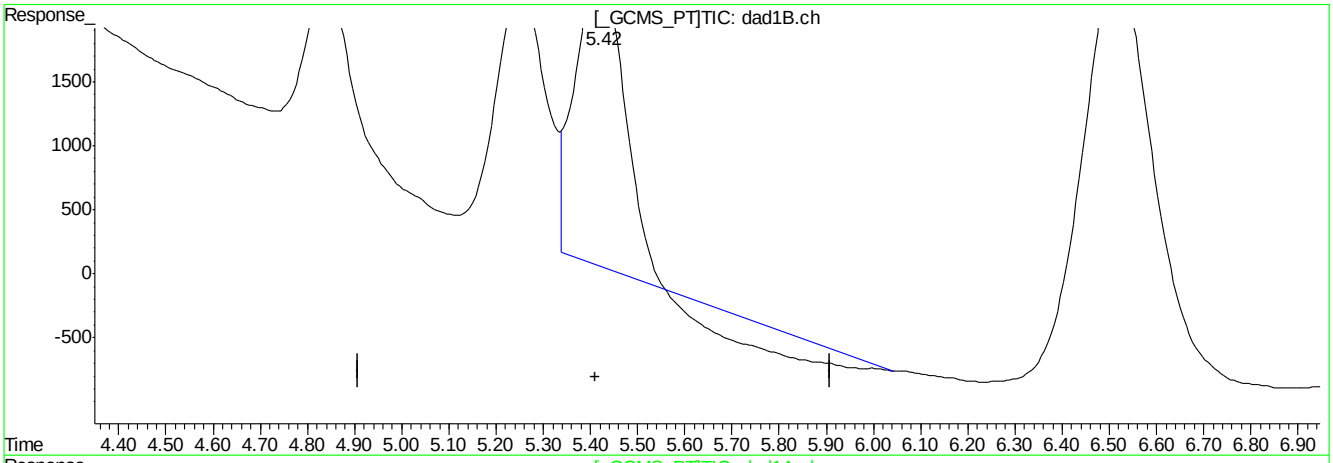
response 519352

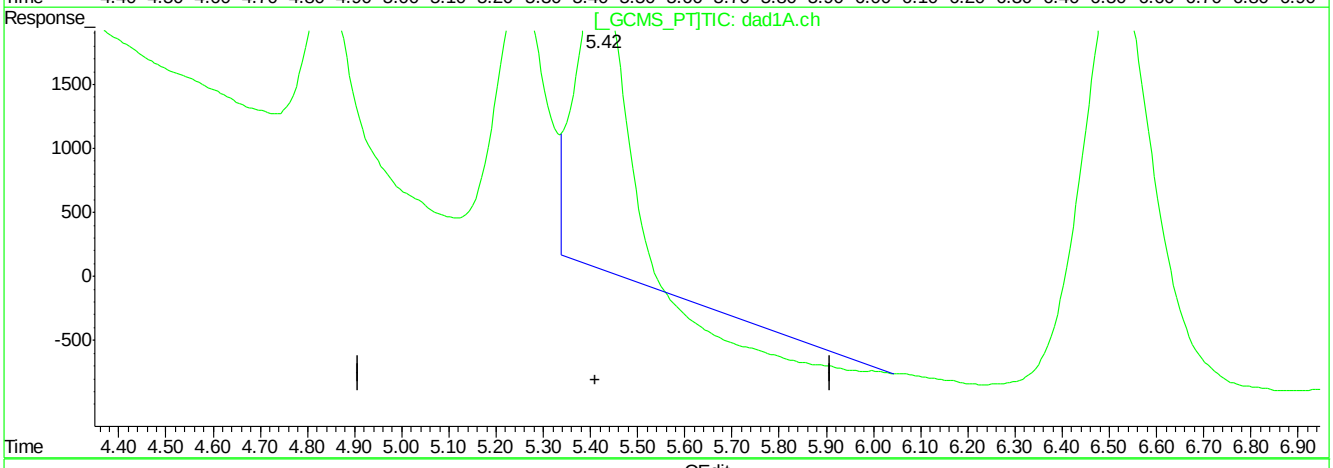
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:41:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.42min 27.550ppb

response 133591

(3) DNX #2

5.42min 27.521ppb

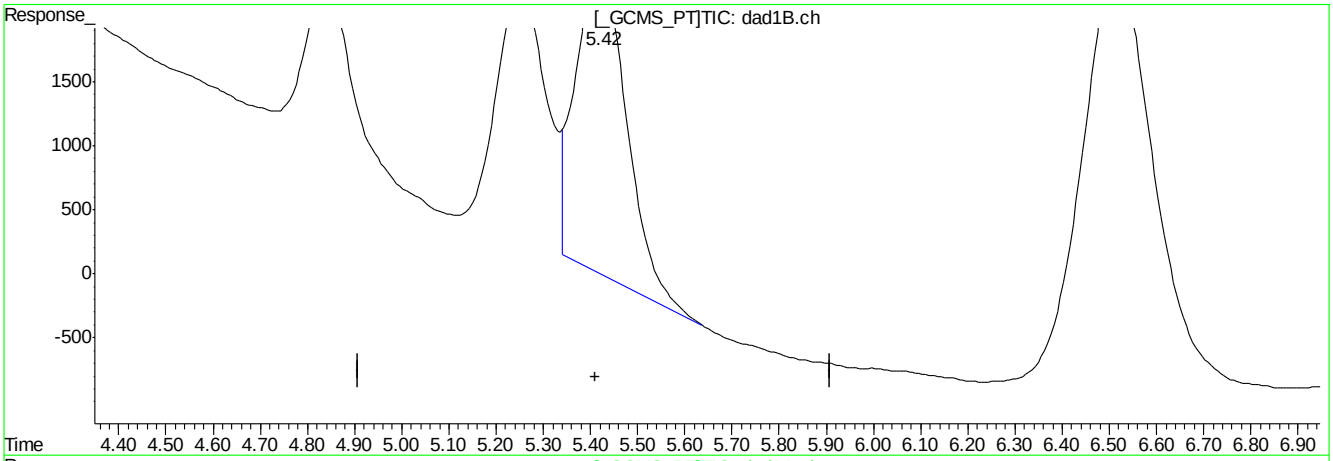
response 133591

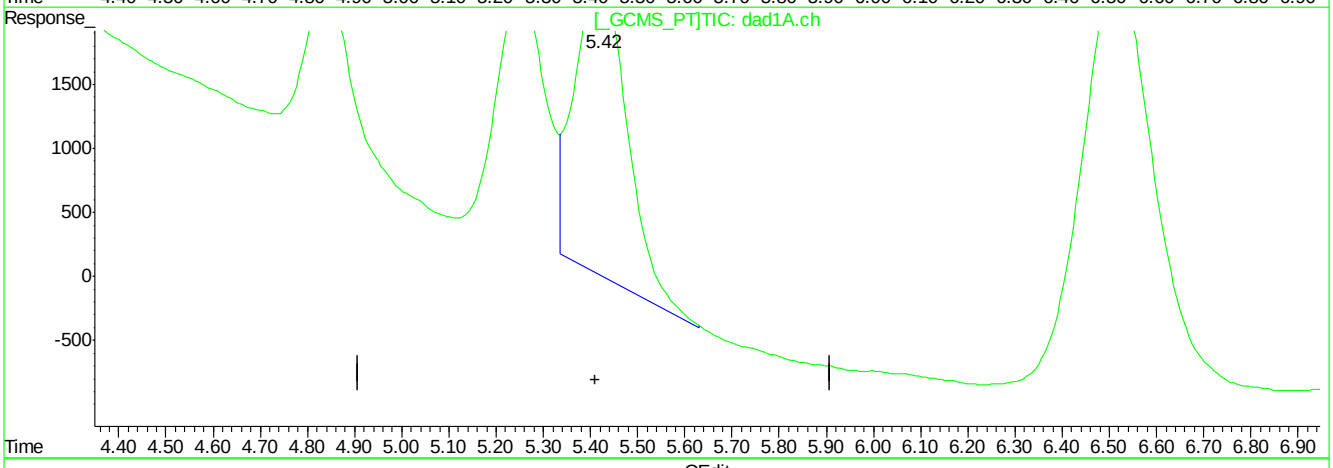
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:41:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.42min 37.332ppb m

response 181024

(3) DNX #2

5.42min 37.946ppb m

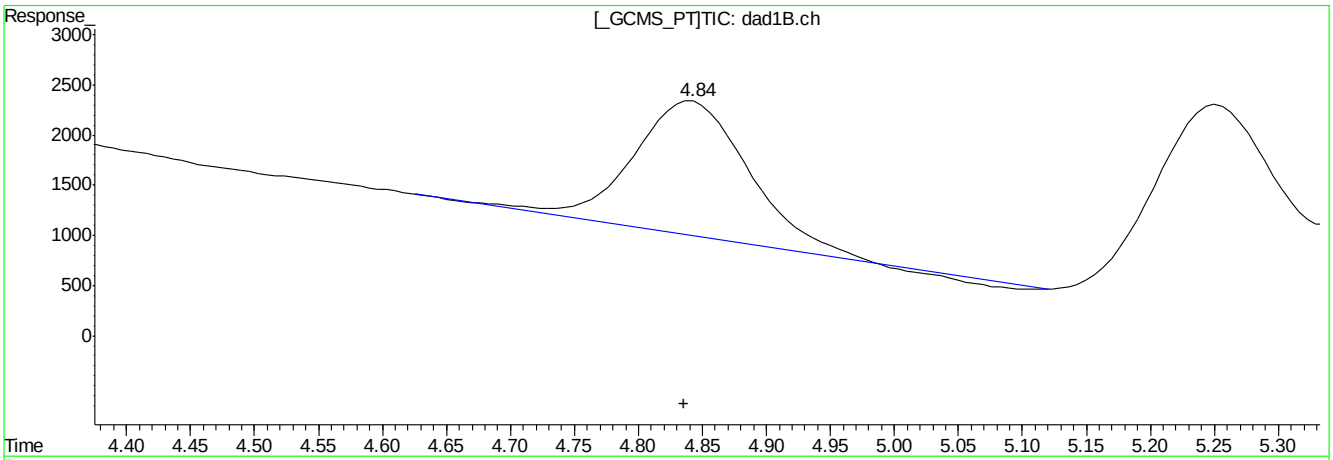
response 184199

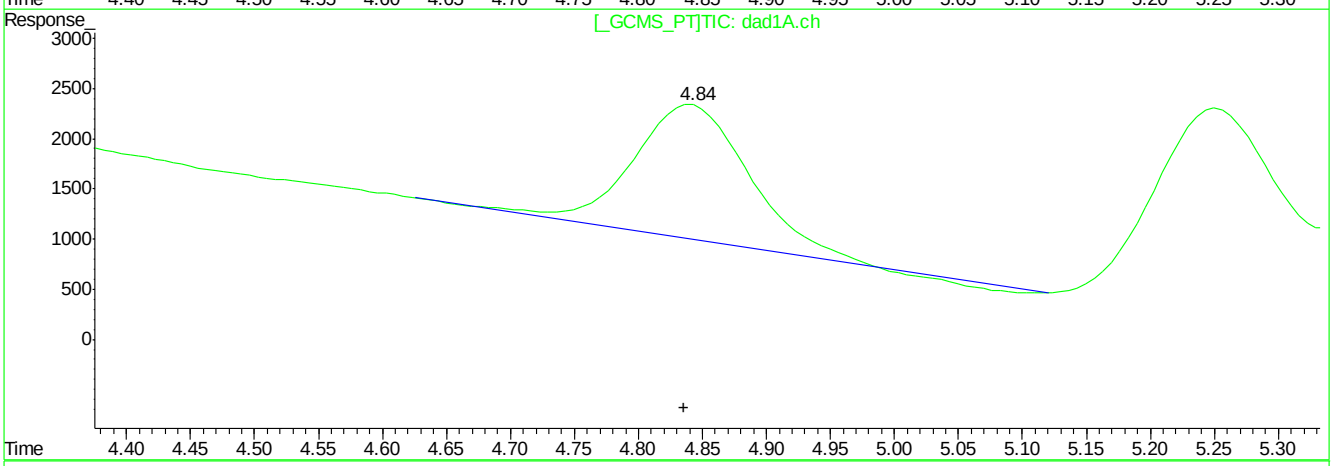
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:41:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.84min 22.084ppb

response 86021

(1) TNX #2

4.84min 22.084ppb

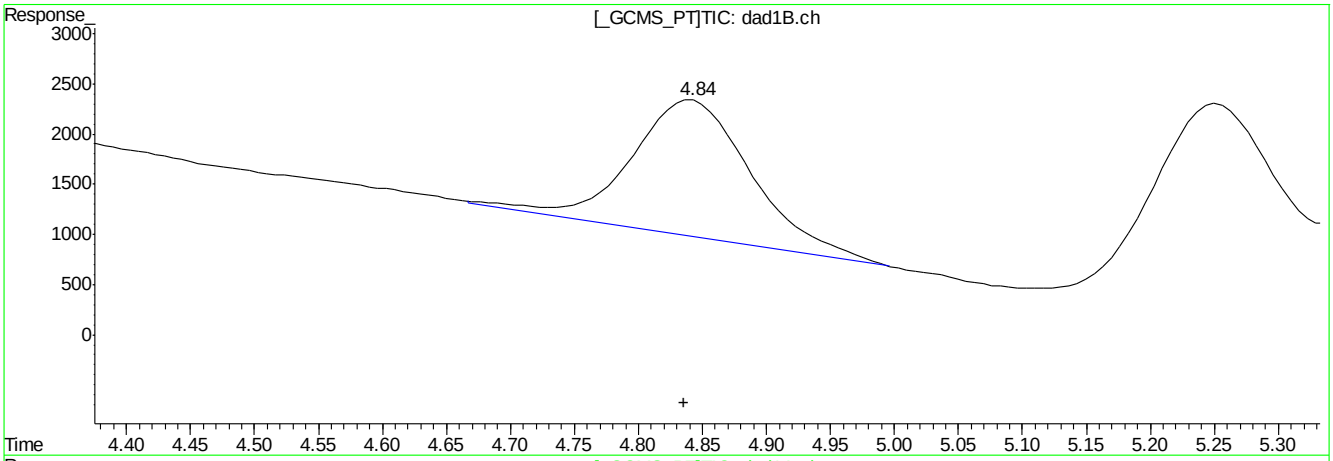
response 86021

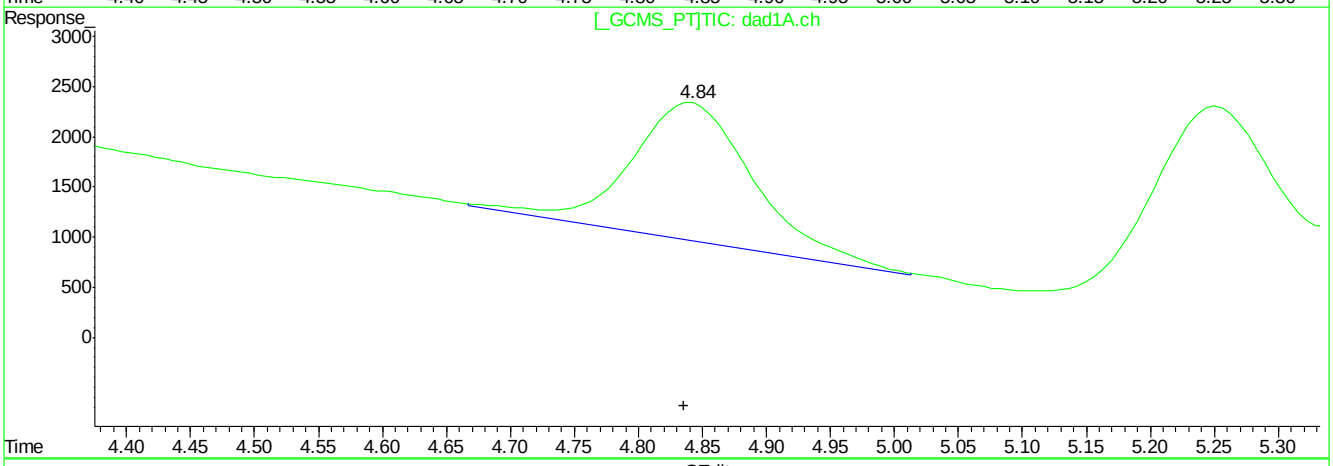
(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:41:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622645.D\dad1A.ch
Acq On : 31-Oct-2021, 11:36:09 Operator: jamesb
Sample : ic3059-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.84min 22.639ppb m

response 88182

(1) TNX #2

4.84min 23.462ppb m

response 91389

(+) = Expected Retention Time
GG622645.D GGG3047_092721.M Mon Nov 01 13:41:37 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 16:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 01 15:14:03 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.80	13.81	443435	931986	107.903	111.768
	Spiked Amount 500.000	Range 70 - 136		Recovery =		21.58%#	22.35%#
	Target Compounds						
1)	TNX	4.84	4.84	190298	190298	51.044	50.968
2)	HMX	5.25	5.25	313560	313560	107.320	107.320
3)	DNX	5.42	5.42	404860	405385	105.879m	106.272m
4)	MNX	6.51	6.51	768209	768209	125.262	125.262
5)	1,3,5-Trinitrobe	7.44	7.44	885663	885663	106.308	106.308
6)	RDX	7.75	7.75	420268	420268	106.307	106.307
7)	1,3-Dinitrobenze	9.64	9.64	1215770	855516	106.648	97.279m
8)	Nitrobenzene	10.54	10.54	762658	673554	105.922	98.062m
9)	2,4,6-Trinitroto	11.47	11.46	843786	1110947	105.245	99.303m
10)	Nitroglycerin	0.00	12.23	0	240950	N.D.	83.483m#
11)	Tetryl	12.72	12.73	667276	1195578	104.848	108.620
13)	2,6-Dinitrotolue	14.09	14.09	597228	936163	106.351	111.693
14)	2,4-Dinitrotolue	14.72	14.72	1094455	701231	106.471	93.521
15)	3,5-Dinitroanili	15.38	15.38	921499	1401723	105.862	99.601
16)	o-Nitrotoluene	16.20	16.20	475291	764902	105.228	108.876
17)	p-Nitrotoluene	17.17	17.17	1003049	1784087	212.403	215.489
18)	4-Amino-2,6-Dini	17.17	17.17	1003049	1784087	212.403	215.489
19)	m-Nitrotoluene	18.39	18.40	529251	769611	104.763	89.795m
20)	2-Amino-4,6-Dini	18.97	18.98	819276	1031646	106.725	96.875
21)	PETN	0.00	21.18	0	280511	N.D.	92.523m#

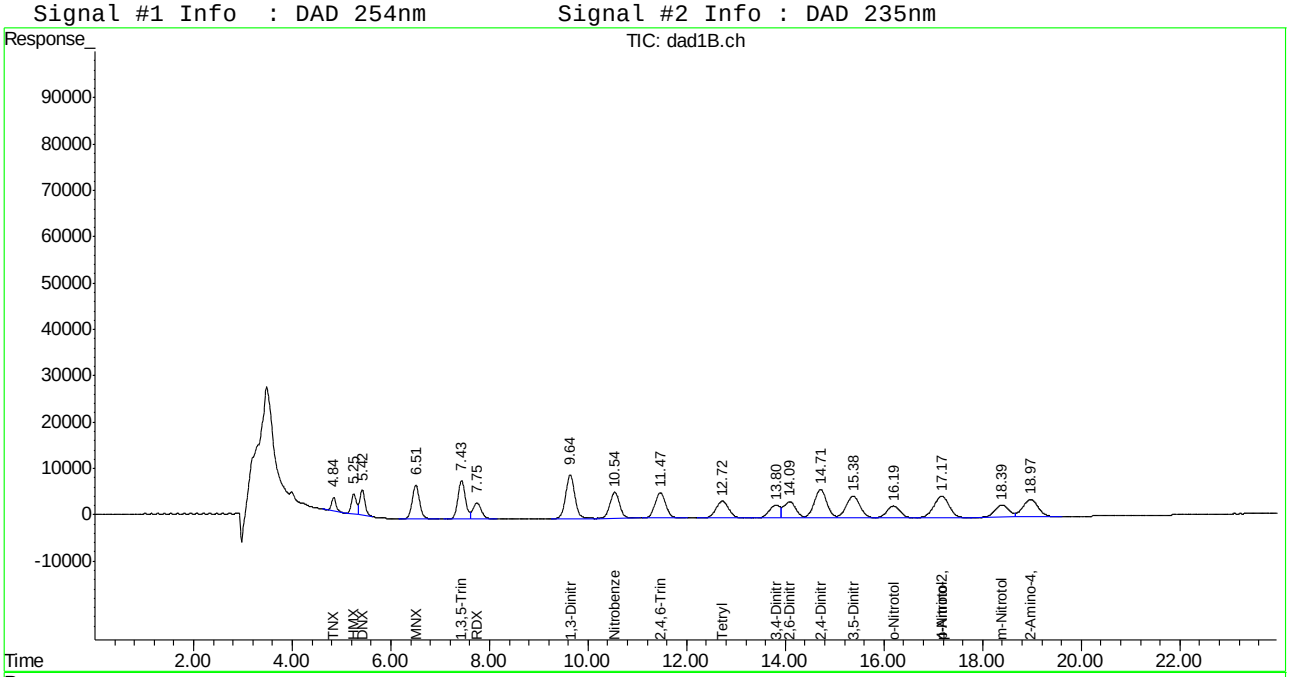
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

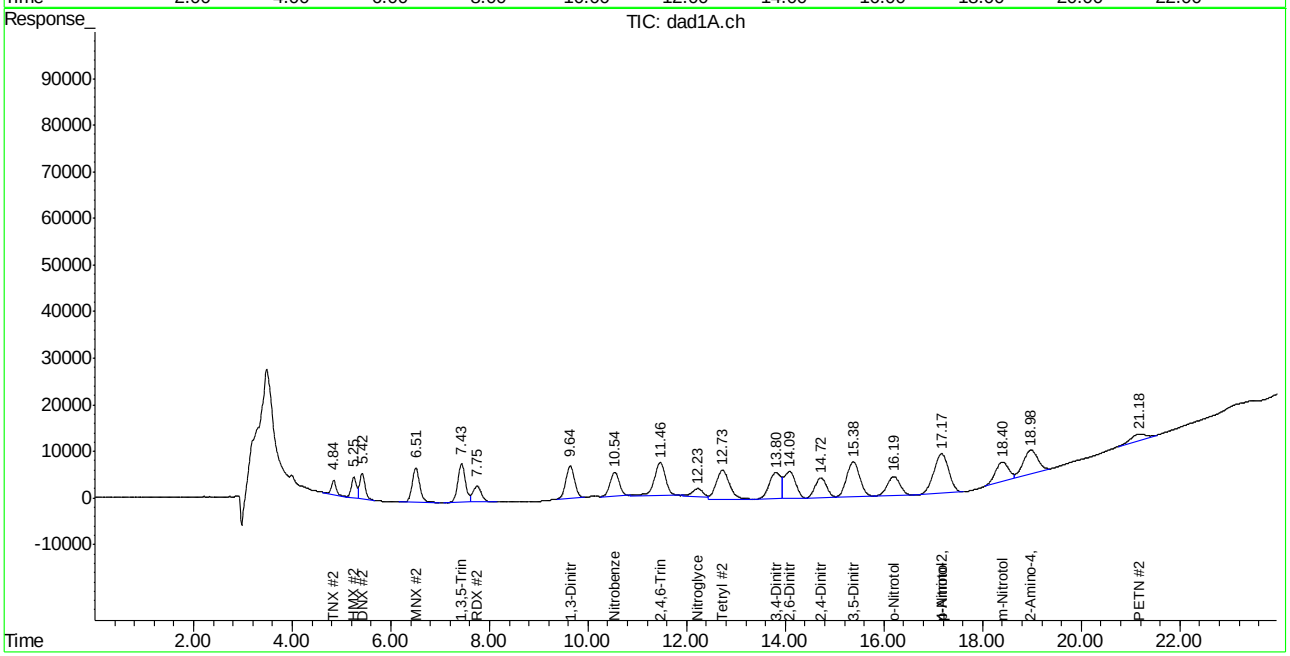
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:20 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

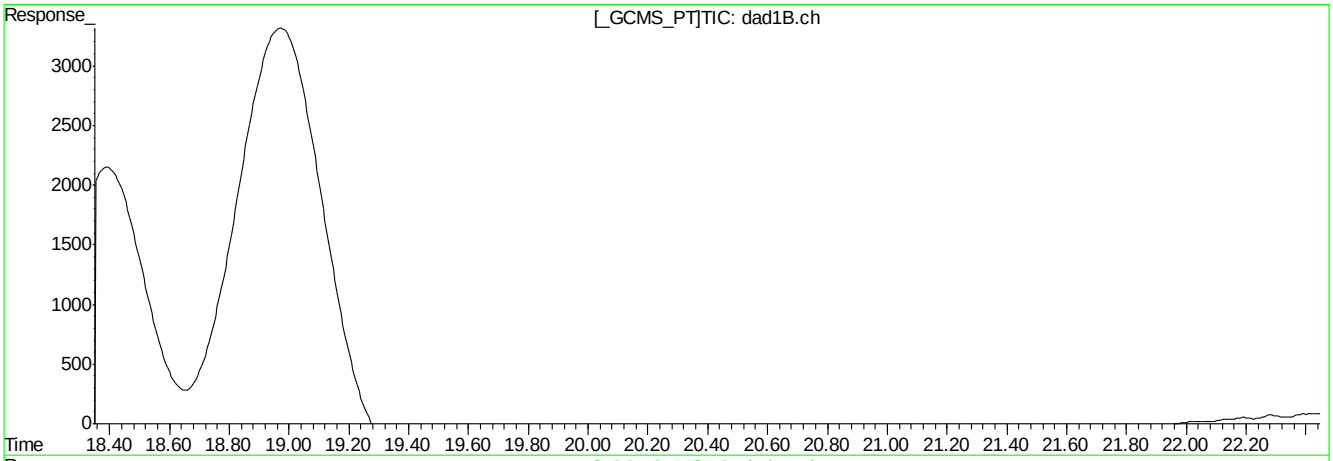
Sample Number: GGG3059-IC3059
Lab FileID: GG622646.D
Injection Time: 10/31/21 12:07
Method: SW846 8330A
Analyst approved: 11/01/21 16:29 James Boone
Supervisor approved: 11/01/21 16:46 Naresh Jiawan

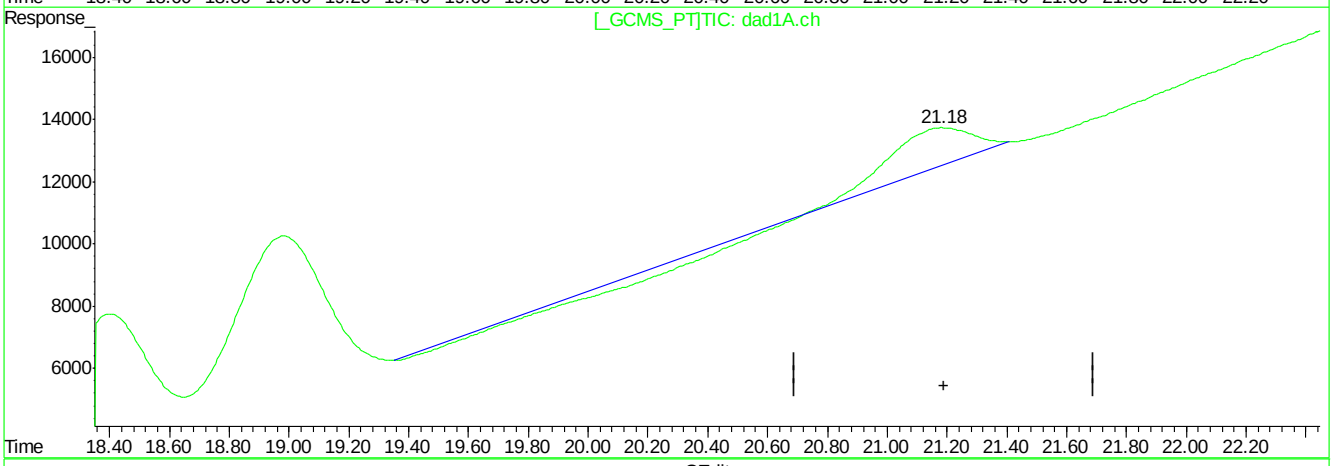
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.42	Poor instrument integration
DNX		2	5.42	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.64	Poor instrument integration
Nitrobenzene	98-95-3	2	10.54	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.46	Poor instrument integration
Nitroglycerine	55-63-0	2	12.23	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.40	Poor instrument integration
PETN	78-11-5	2	21.18	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.19min 32.048ppb

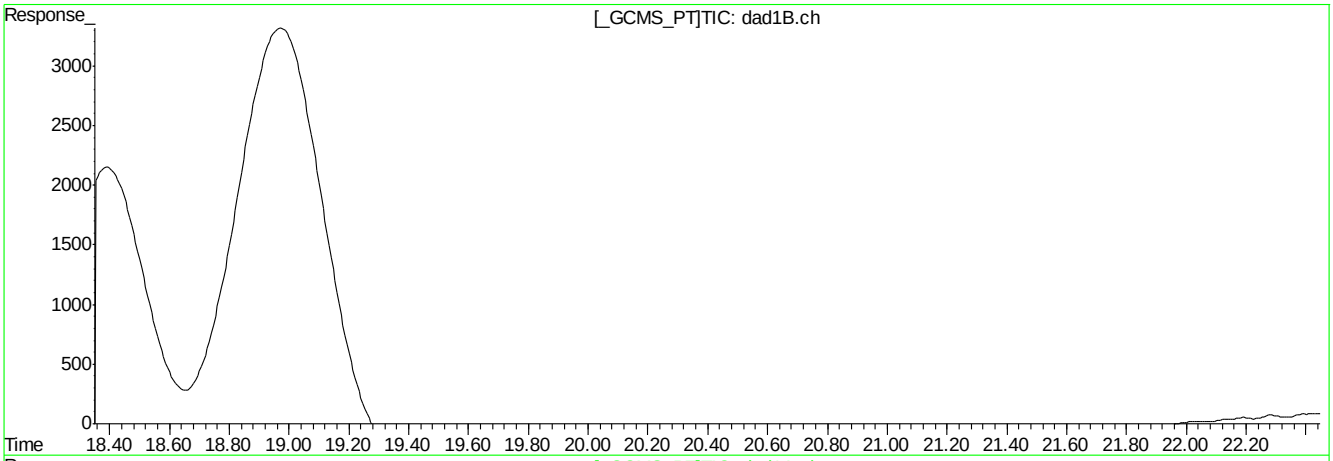
response 106290

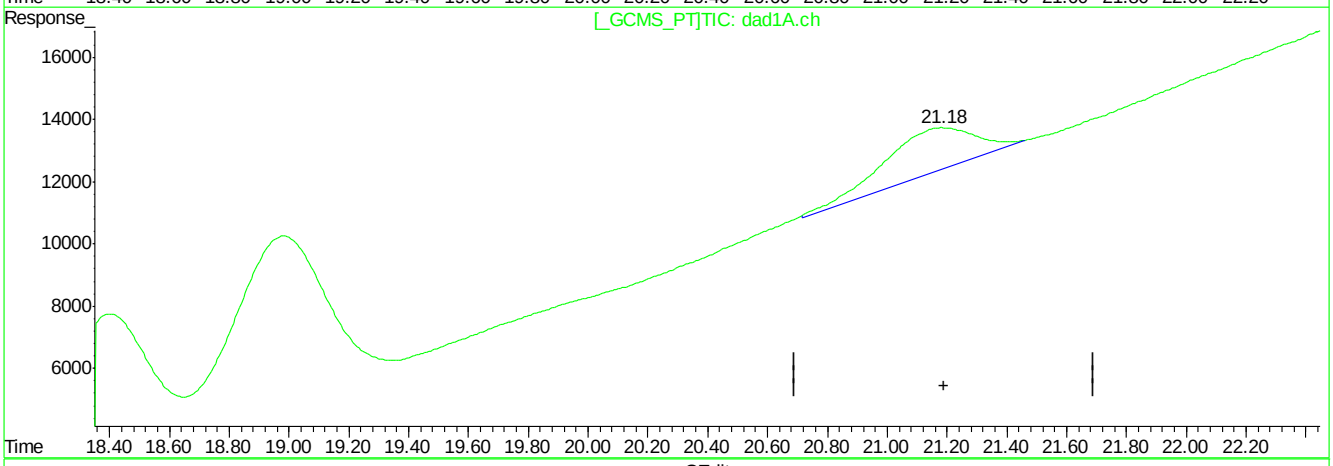
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:36:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.18min 89.318ppb m

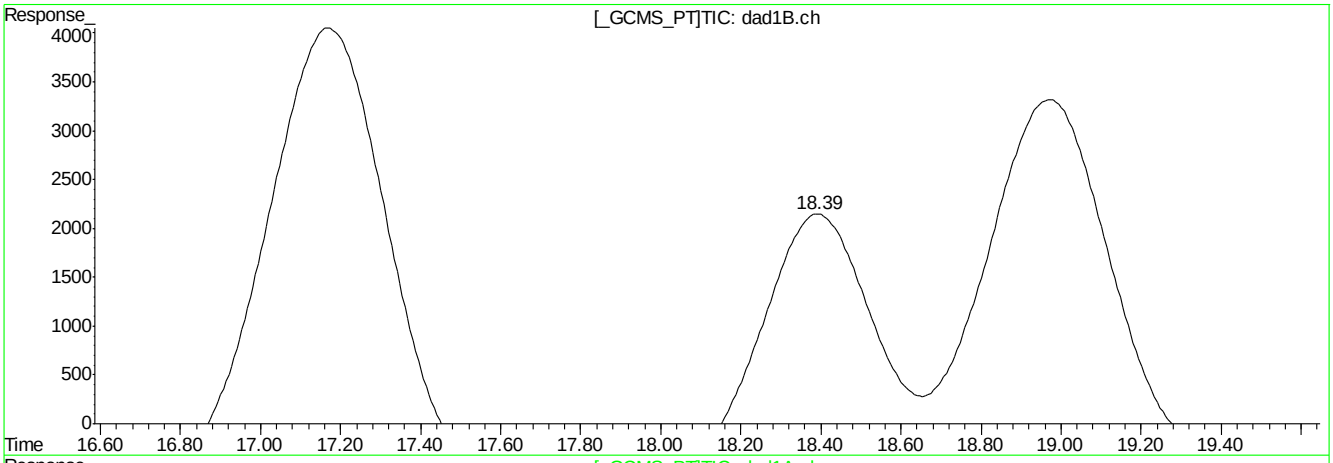
response 296232

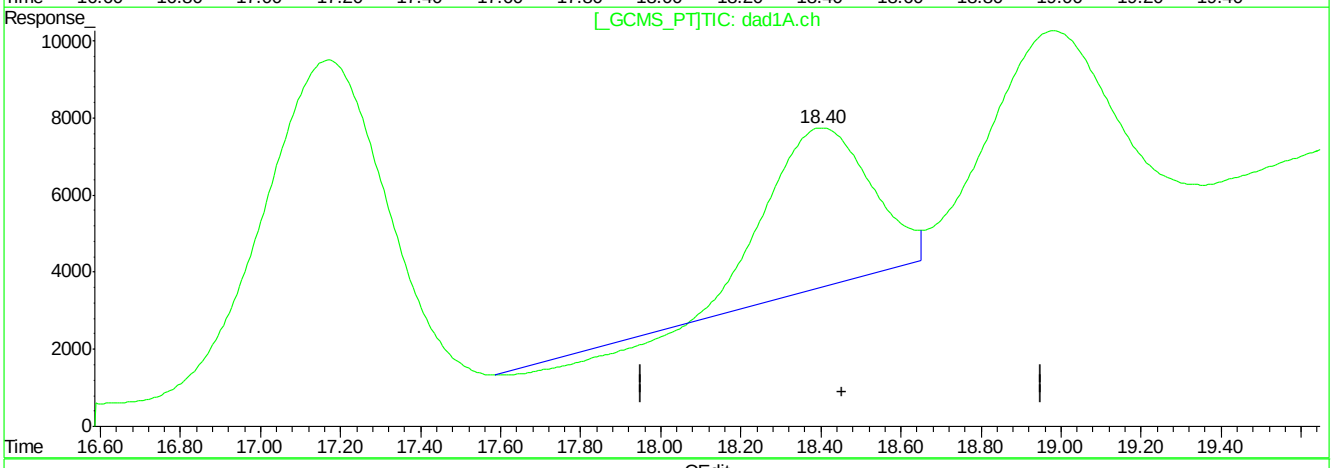
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:36:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.39min 94.814ppb

response 529251

(19) m-Nitrotoluene #2

18.40min 70.956ppb

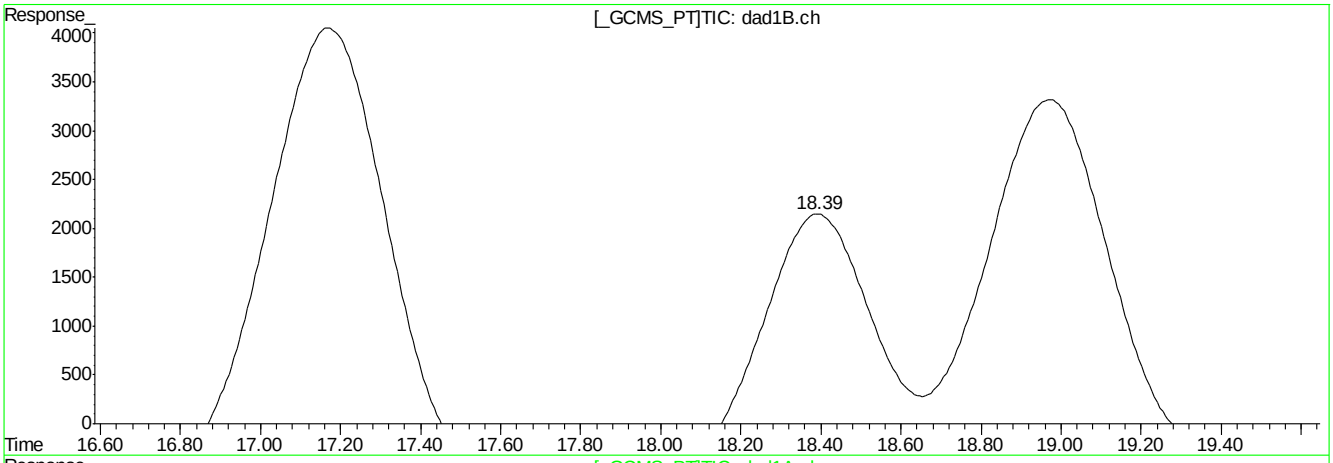
response 694670

(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:36:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration



(19) m-Nitrotoluene

18.39min 94.814ppb

response 529251

(19) m-Nitrotoluene #2

18.40min 84.910ppb m

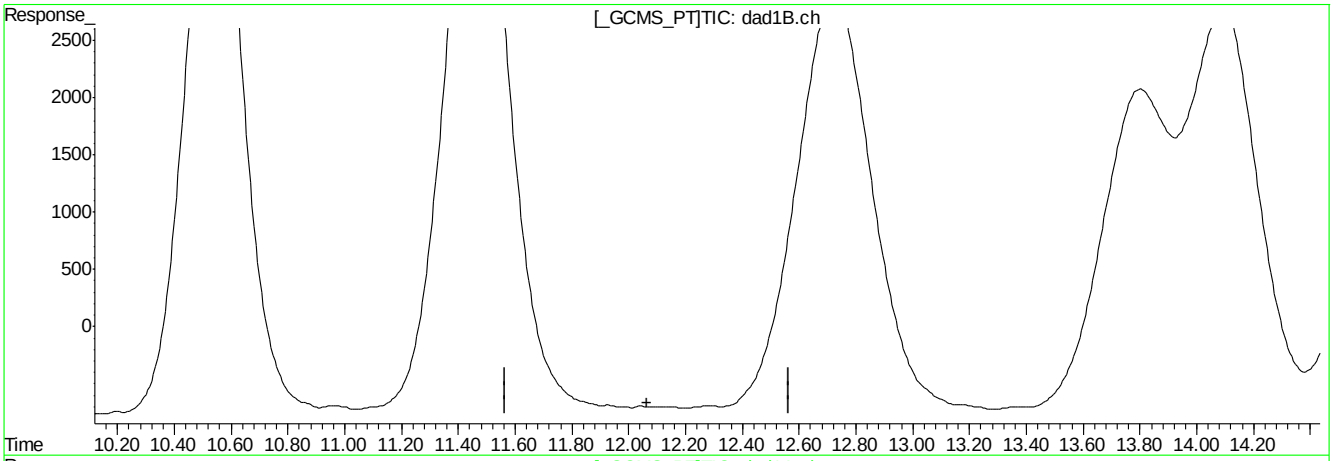
response 831273

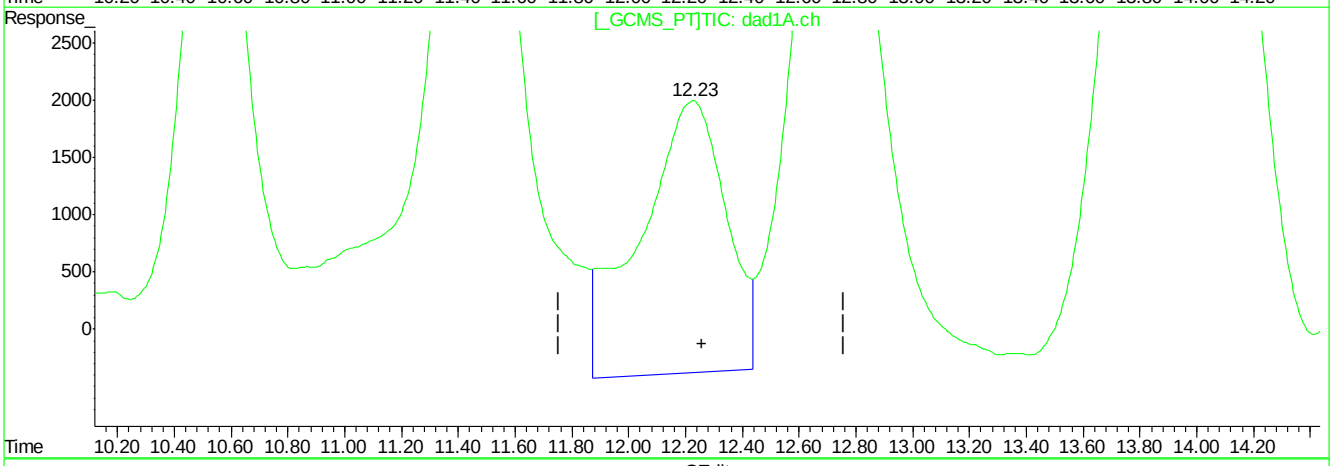
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:37:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.23min 160.993ppb

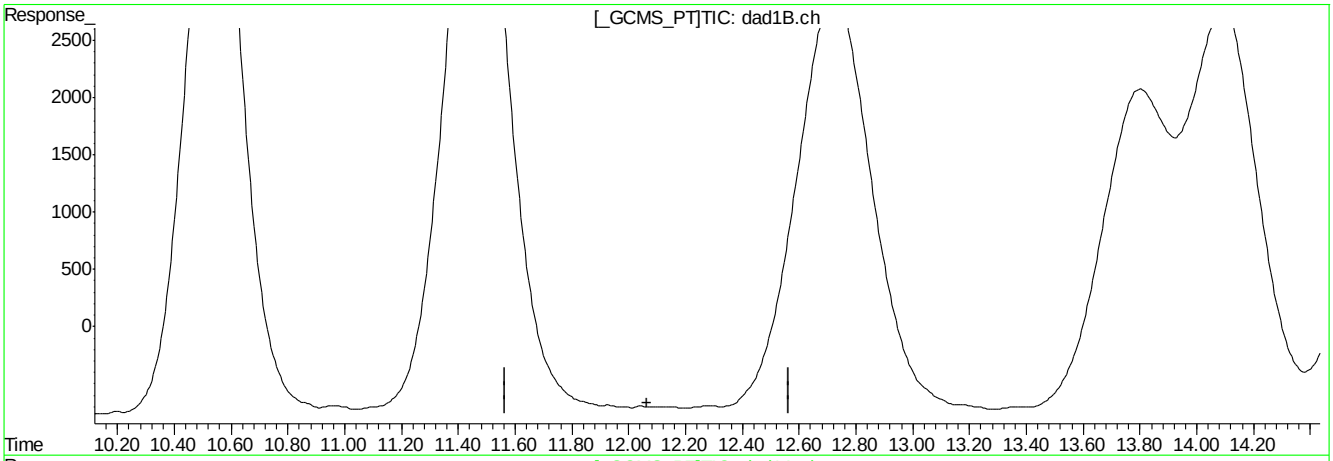
response 497347

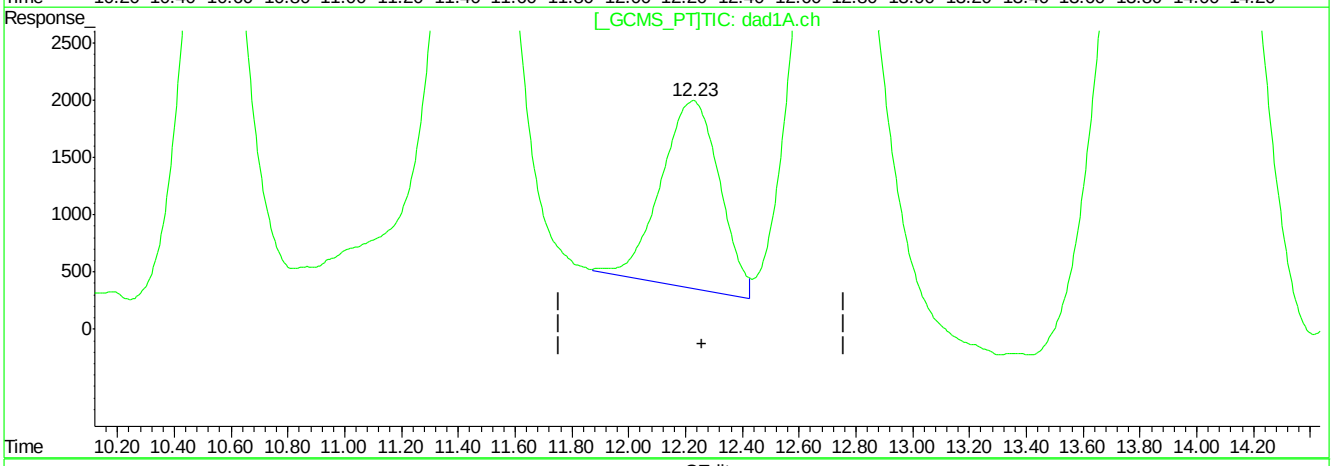
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:37:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.23min 76.105ppb m

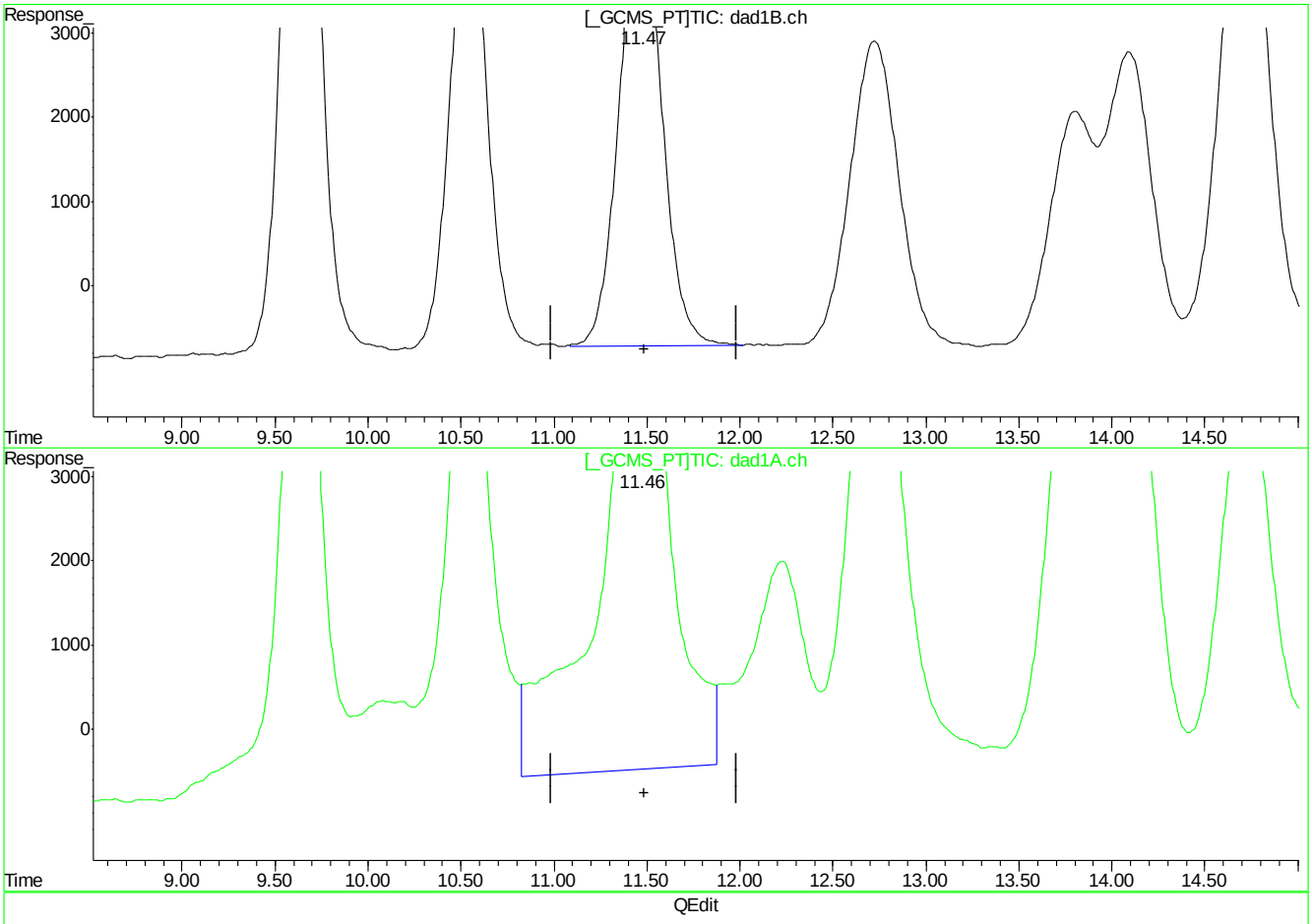
response 235107

(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:37:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration



(9) 2,4,6-Trinitrotoluene

11.47min 96.362ppb

response 843786

(9) 2,4,6-Trinitrotoluene #2

11.47min 142.292ppb

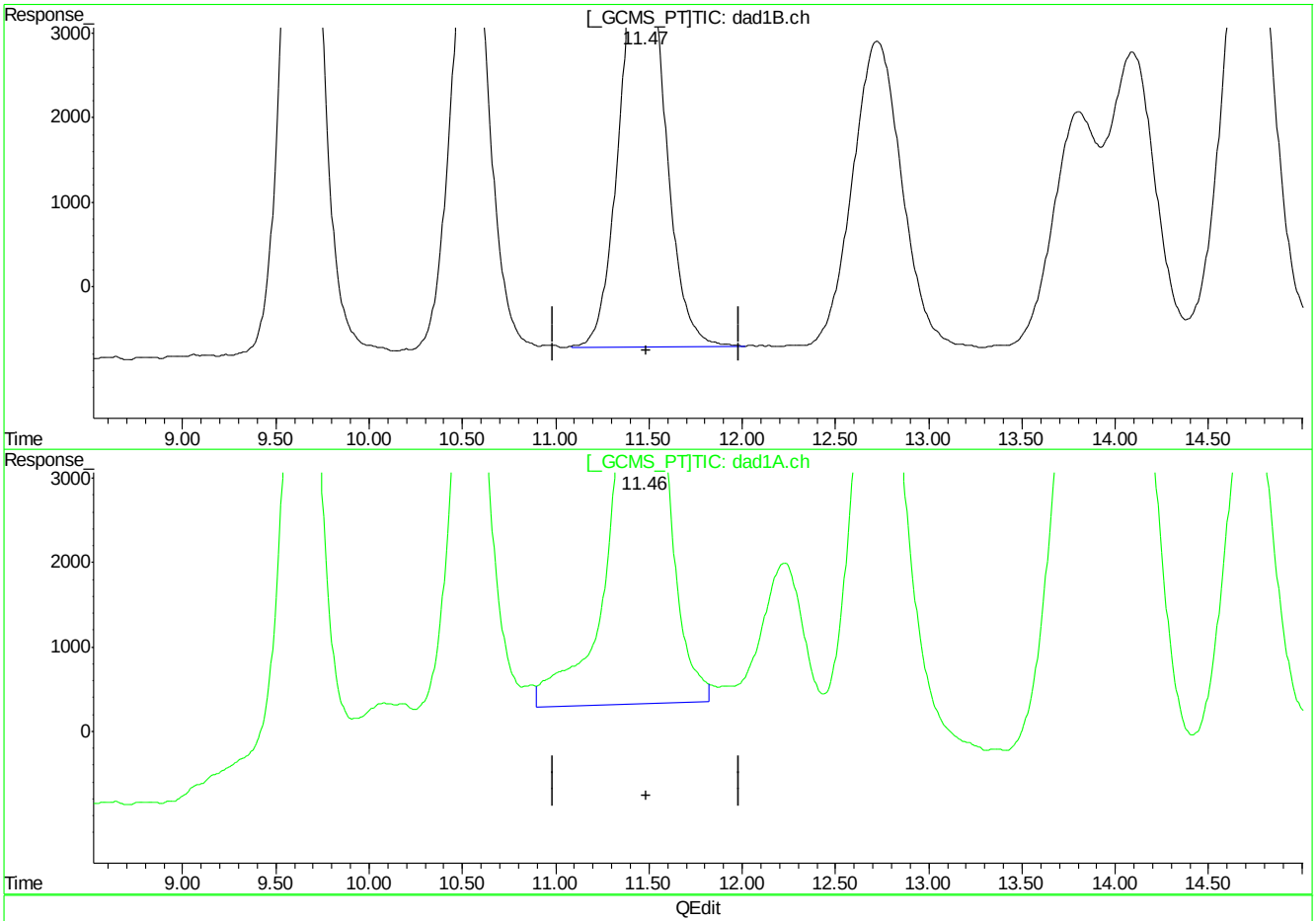
response 1756894

(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:38:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration



(9) 2,4,6-Trinitrotoluene

11.47min 96.362ppb

response 843786

(9) 2,4,6-Trinitrotoluene #2

11.46min 99.316ppb m

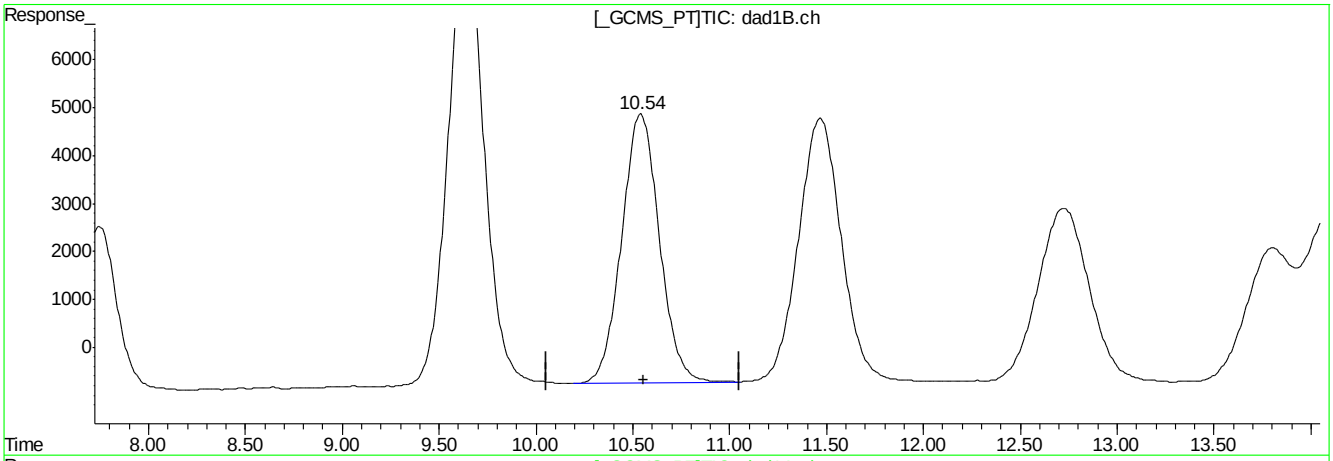
response 1226258

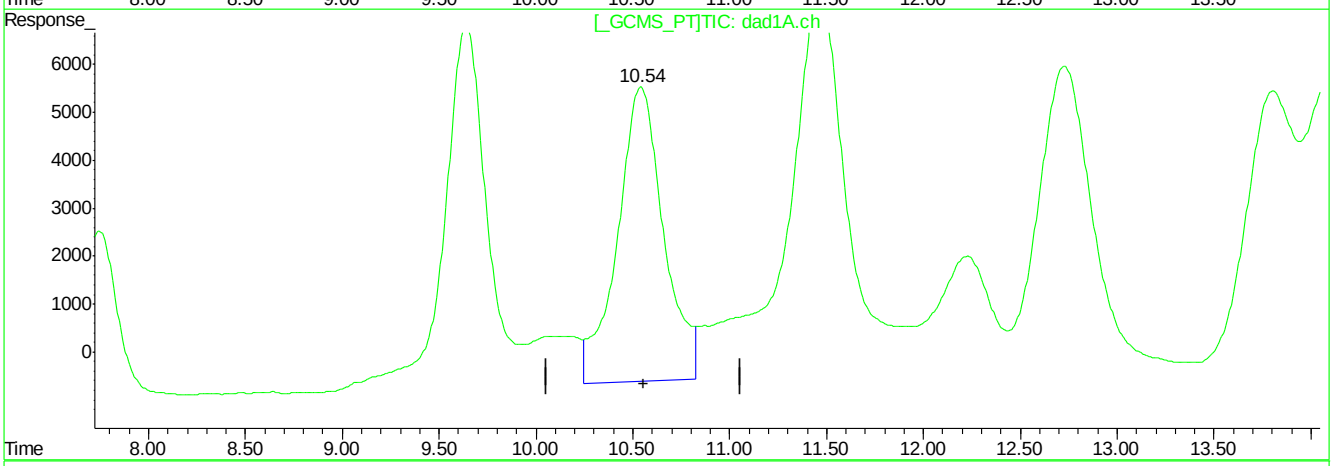
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:38:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.54min 96.744ppb

response 762658

(8) Nitrobenzene #2

10.54min 134.666ppb

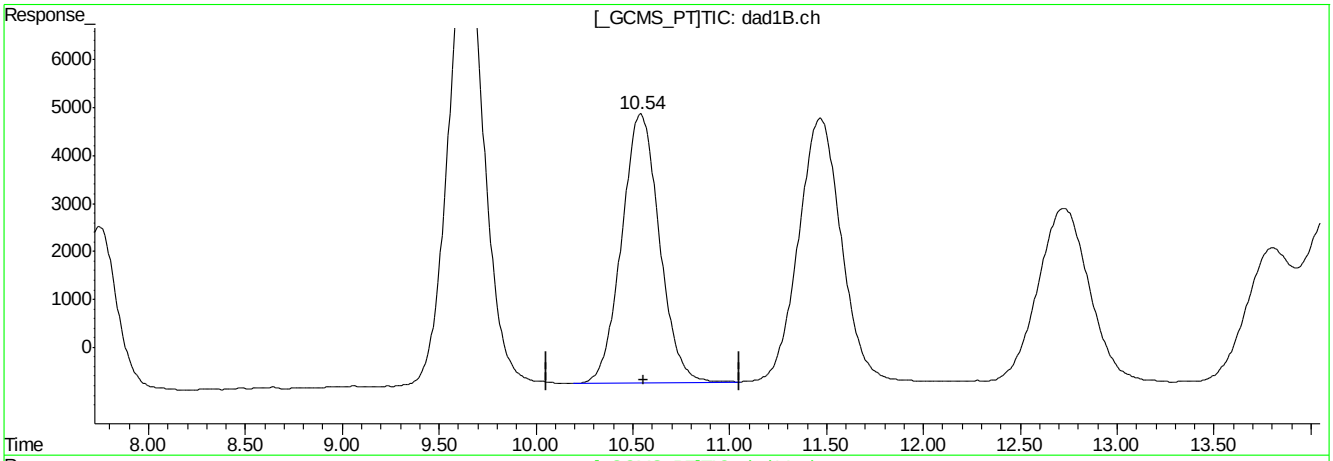
response 1018304

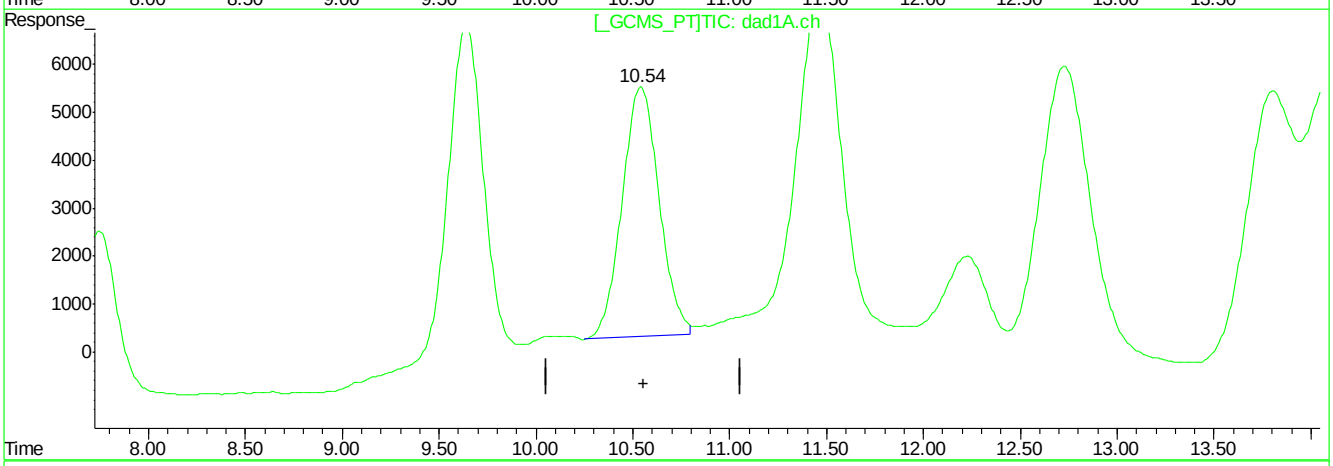
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:38:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.54min 96.744ppb

response 762658

(8) Nitrobenzene #2

10.54min 91.374ppb m

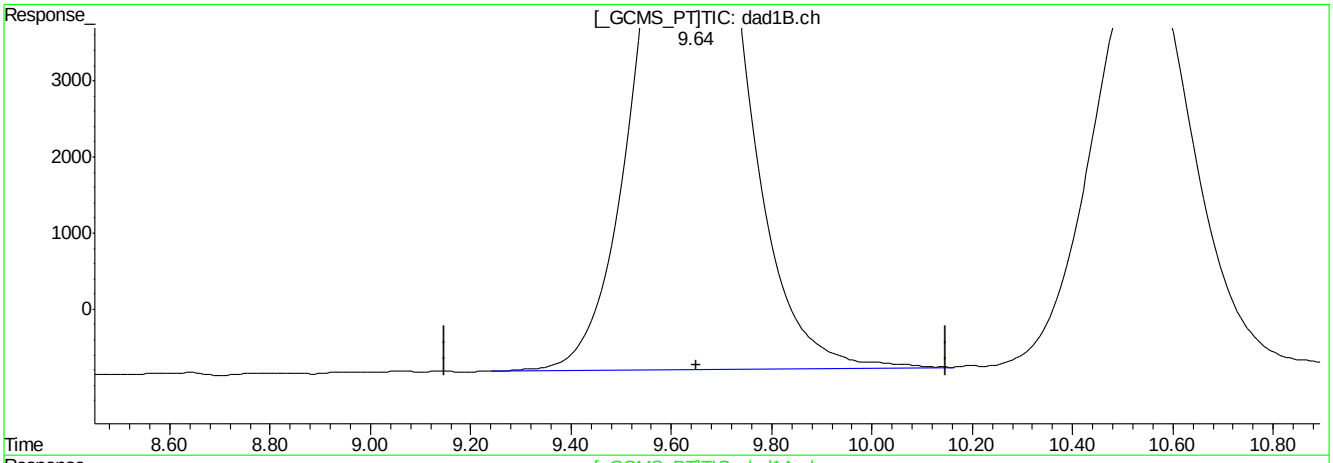
response 690940

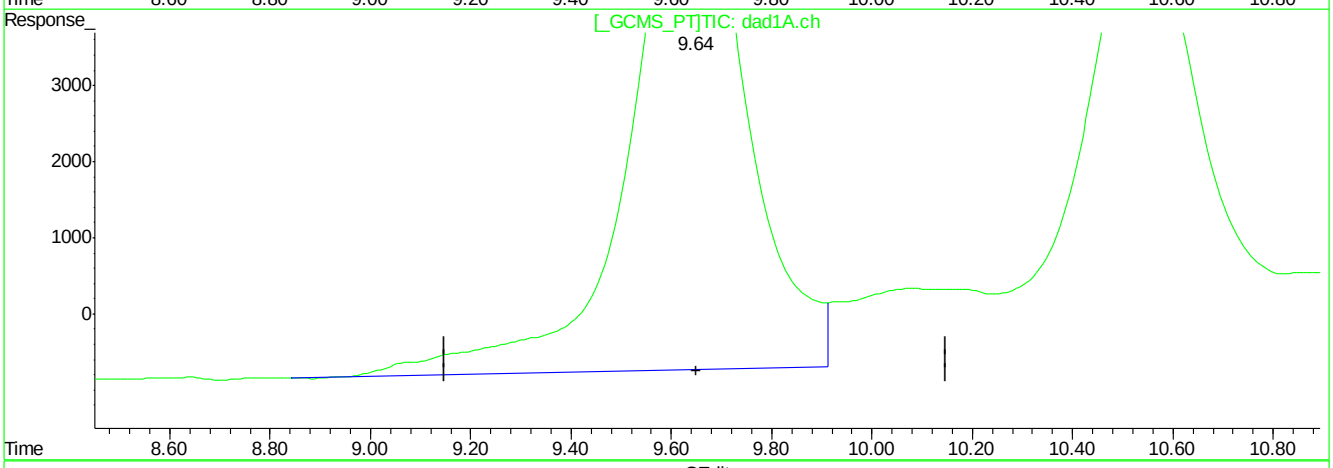
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:38:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.64min 96.553ppb

response 1215770

(7) 1,3-Dinitrobenzene #2

9.64min 120.980ppb

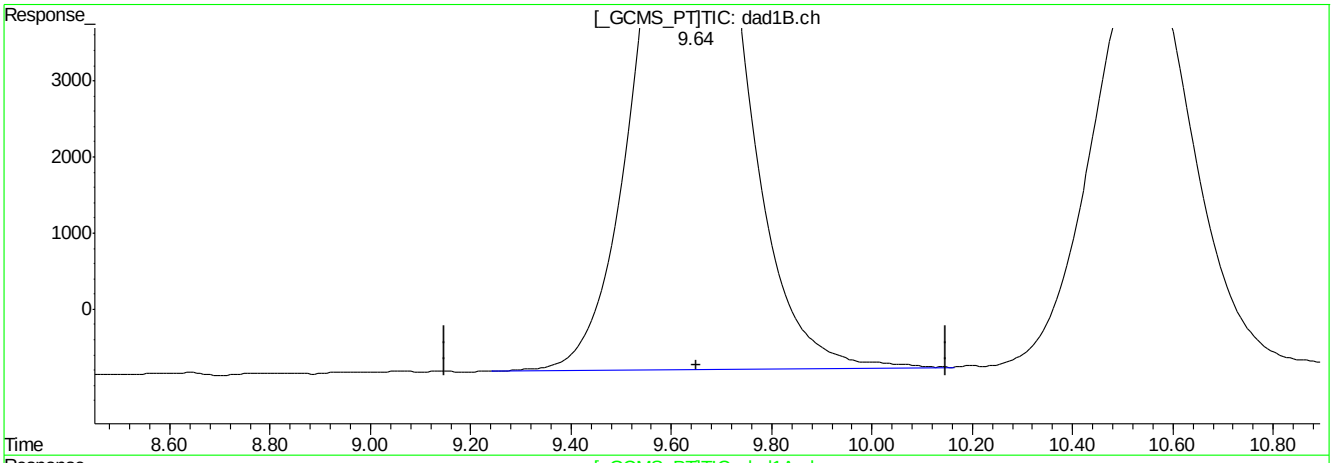
response 1138338

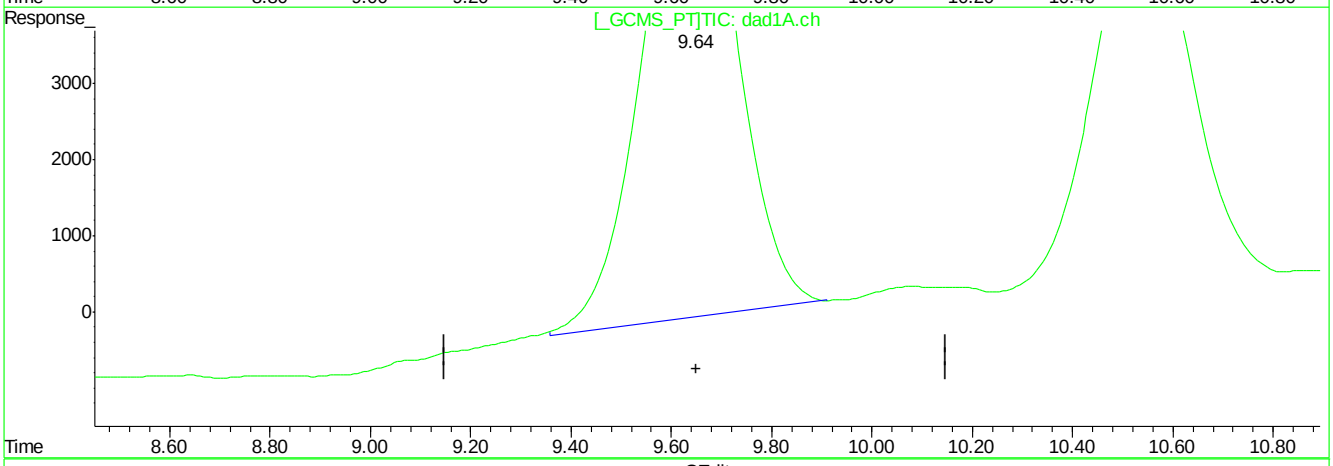
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:38:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.64min 96.553ppb

response 1215770

(7) 1,3-Dinitrobenzene #2

9.64min 91.304ppb m

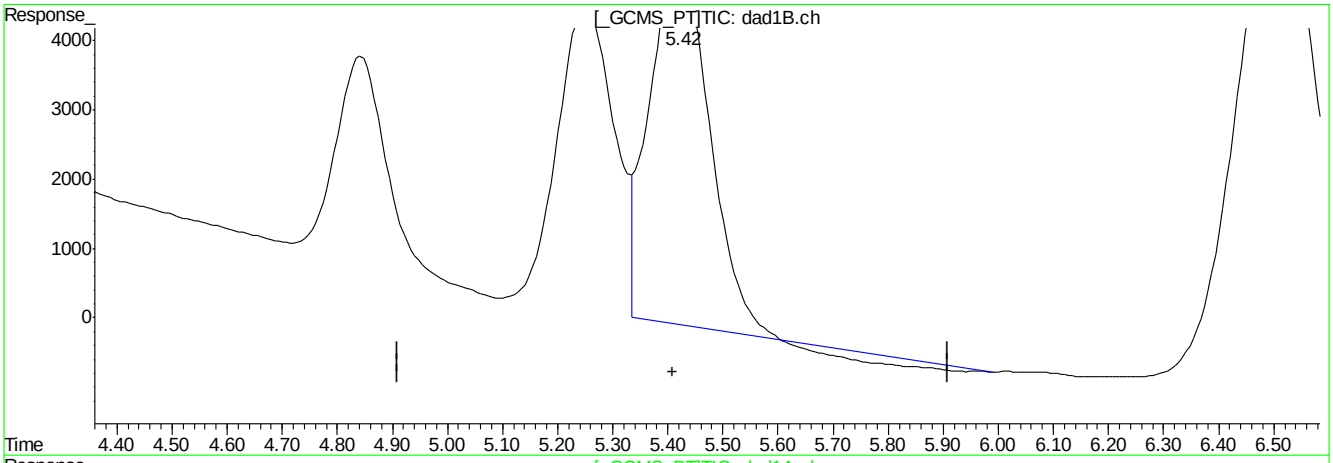
response 859109

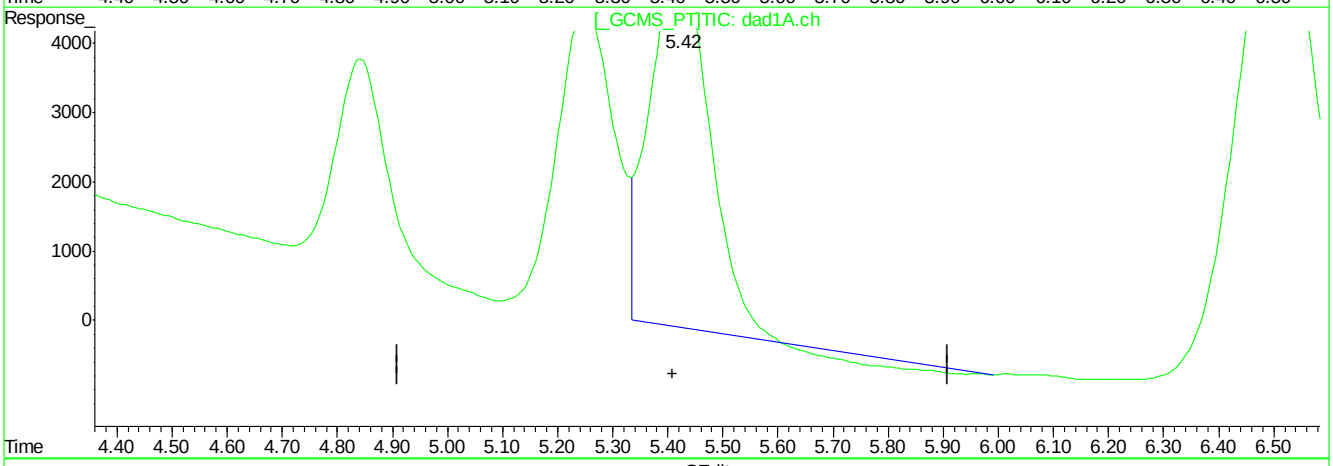
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:38:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.42min 80.101ppb

response 388417

(3) DNX #2

5.42min 80.017ppb

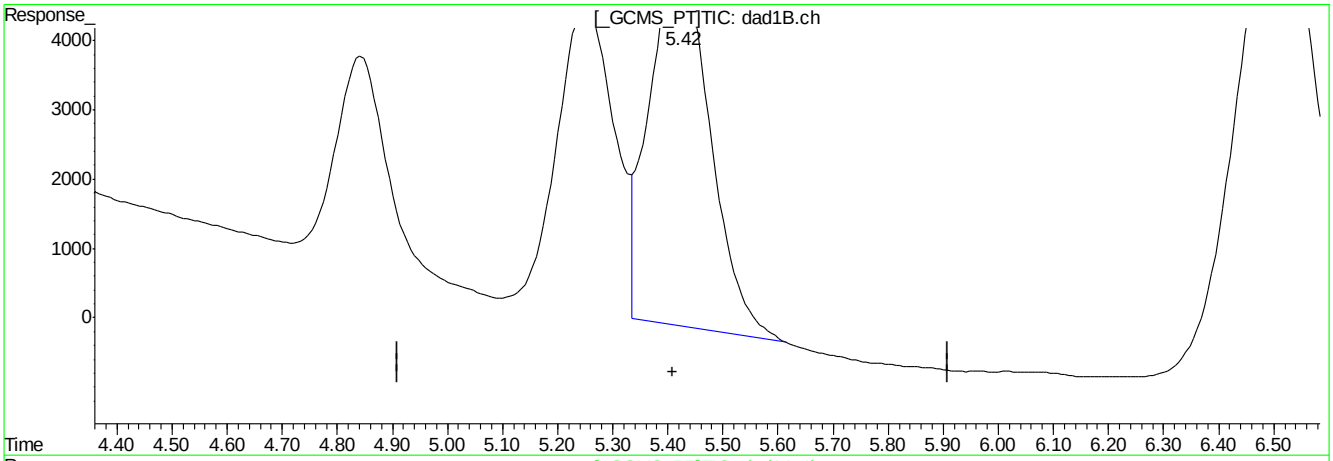
response 388417

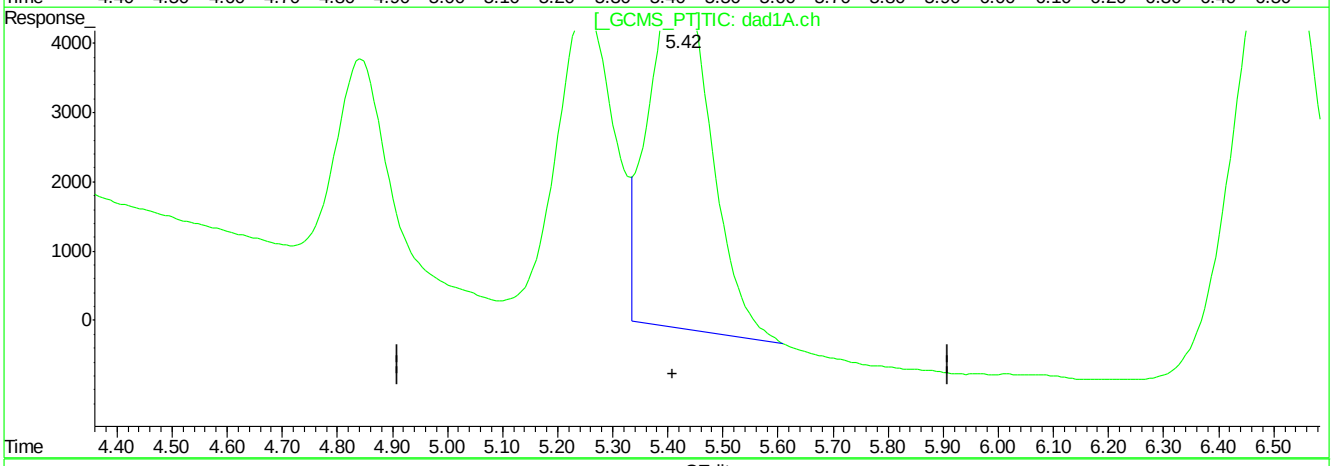
(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:38:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622646.D\dad1A.ch
Acq On : 31-Oct-2021, 12:07:34 Operator: jamesb
Sample : ic3059-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.42min 83.289ppb m

response 403877

(3) DNX #2

5.42min 83.109ppb m

response 403425

(+) = Expected Retention Time
GG622646.D GGG3047_092721.M Mon Nov 01 13:38:45 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 16:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 01 15:14:04 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.87	13.86	845067	1716885	205.633	205.896
	Spiked Amount 500.000	Range 70 - 136		Recovery =		41.13%#	41.18%#
	Target Compounds						
1)	TNX	4.85	4.85	360945	360945	96.817	96.672
2)	HMX	5.26	5.26	614471	614471	210.311	210.311
3)	DNX	5.43	5.43	798192	816724	208.743m	214.105m
4)	MNX	6.53	6.53	1510351	1510351	246.274	246.274
5)	1,3,5-Trinitrobe	7.46	7.46	1749556	1749556	210.004	210.004
6)	RDX	7.78	7.78	833262	833262	210.773	210.773
7)	1,3-Dinitrobenze	9.67	9.67	2395982	1851038	210.176	210.477m
8)	Nitrobenzene	10.58	10.58	1518404	1492548	210.884	217.297m
9)	2,4,6-Trinitroto	11.51	11.51	1670841	2404892	208.403	214.964m
10)	Nitroglycerin	0.00	12.27	0	501446	N.D.	173.739m#
11)	Tetryl	12.77	12.77	1309208	2377324	205.713	215.983
13)	2,6-Dinitrotolue	14.15	14.14	1179907	1698467	210.110	202.643
14)	2,4-Dinitrotolue	14.77	14.77	2159435	1584482	210.075	211.317
15)	3,5-Dinitroanili	15.42	15.42	1823294	3013802	209.461	214.148
16)	o-Nitrotoluene	16.26	16.26	937672	1378638	207.597	196.236
17)	p-Nitrotoluene	17.24	17.24	1977203	3586078	418.687	433.140
18)	4-Amino-2,6-Dini	17.24	17.24	1977203	3586078	418.687	433.140
19)	m-Nitrotoluene	18.47	18.47	1048494	1804251	207.546	210.512m
20)	2-Amino-4,6-Dini	19.04	19.04	1613676	2270665	210.210	213.223
21)	PETN	0.00	21.23	0	611155	N.D.	201.581m#

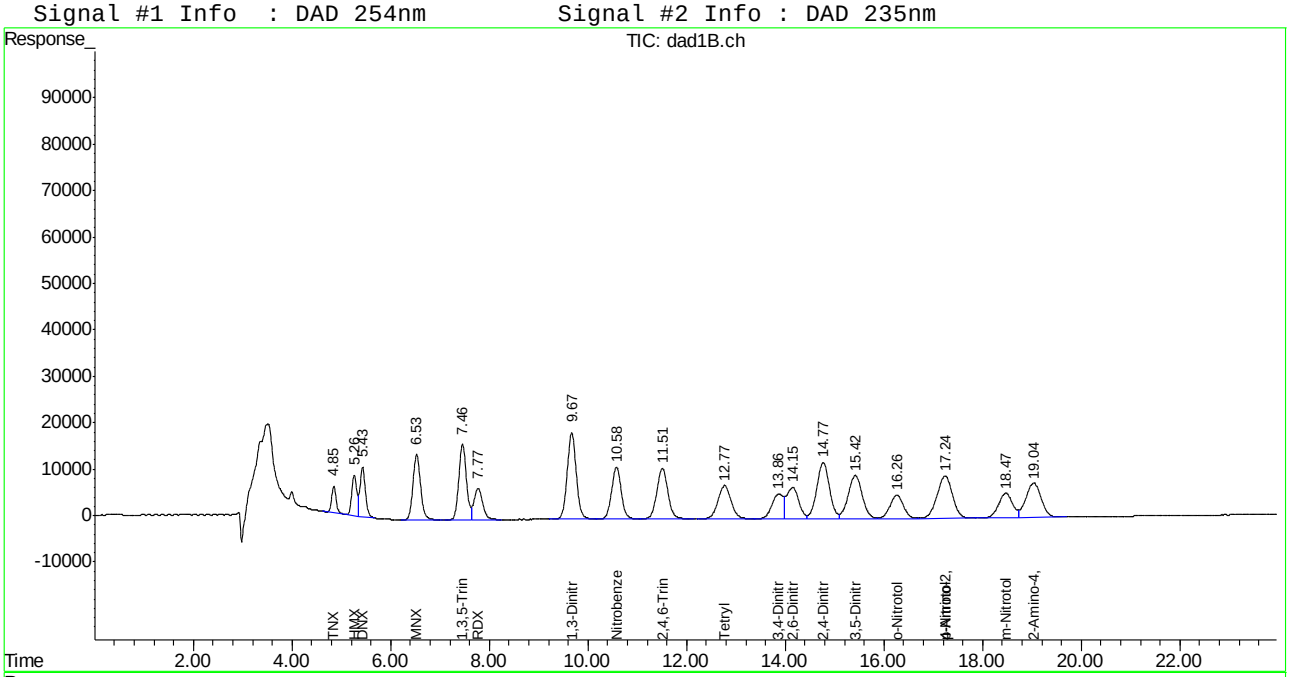
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622647.D GGG3059_103121.M Mon Nov 01 15:26:16 2021 Page 1

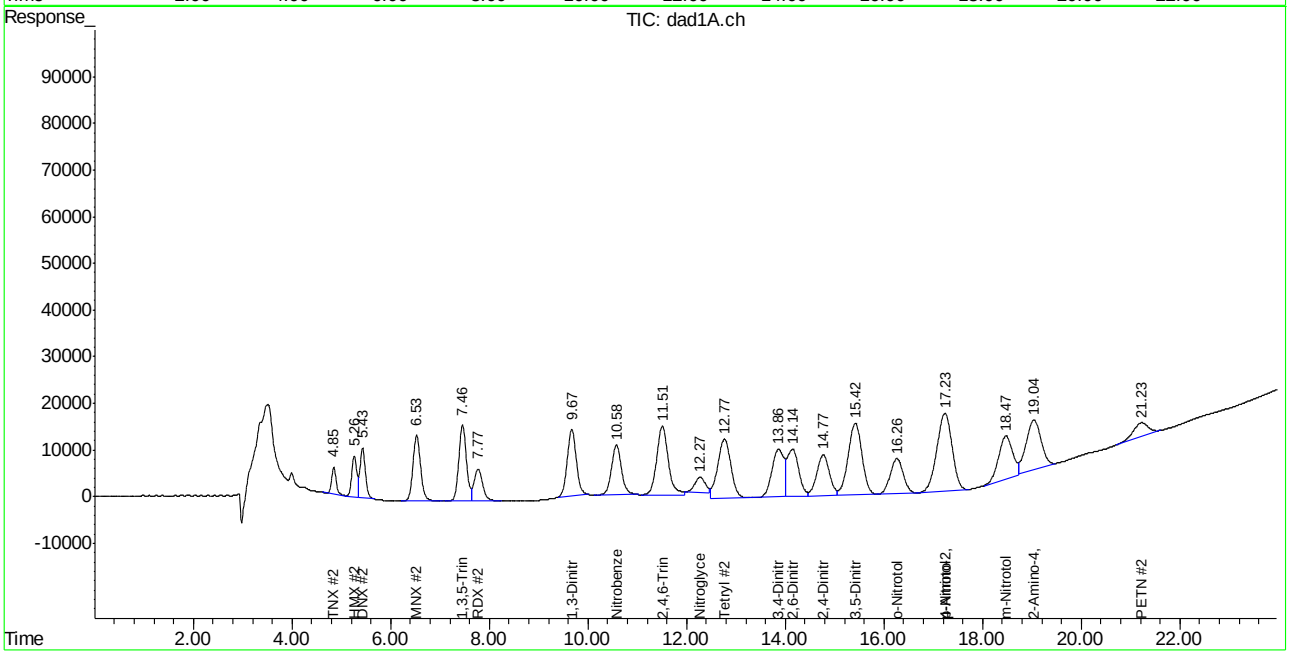
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:19 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

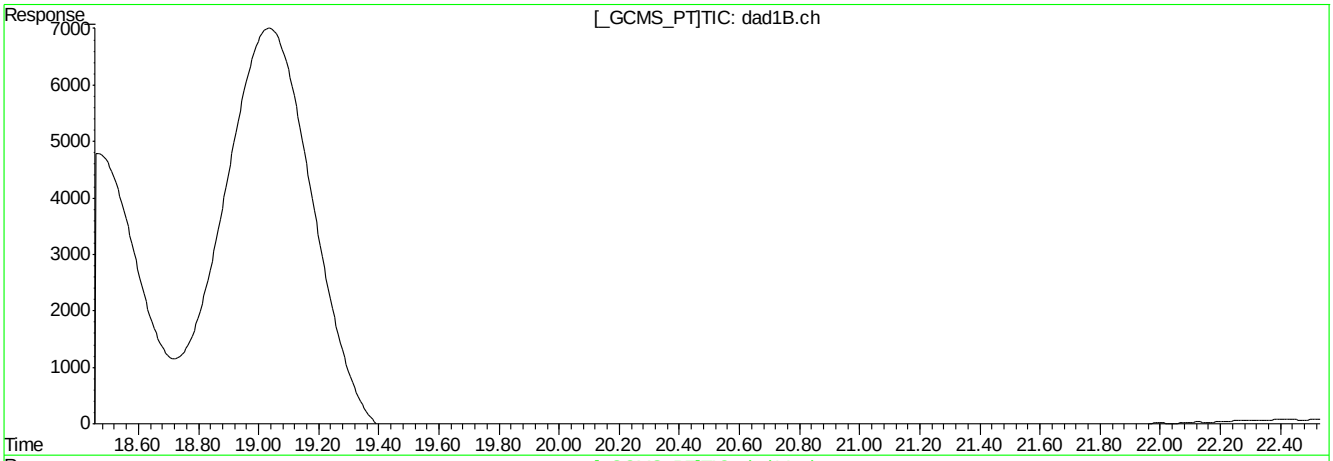
Sample Number: GGG3059-IC3059
Lab FileID: GG622647.D
Injection Time: 10/31/21 12:38
Method: SW846 8330A
Analyst approved: 11/01/21 16:29 James Boone
Supervisor approved: 11/01/21 16:46 Naresh Jiawan

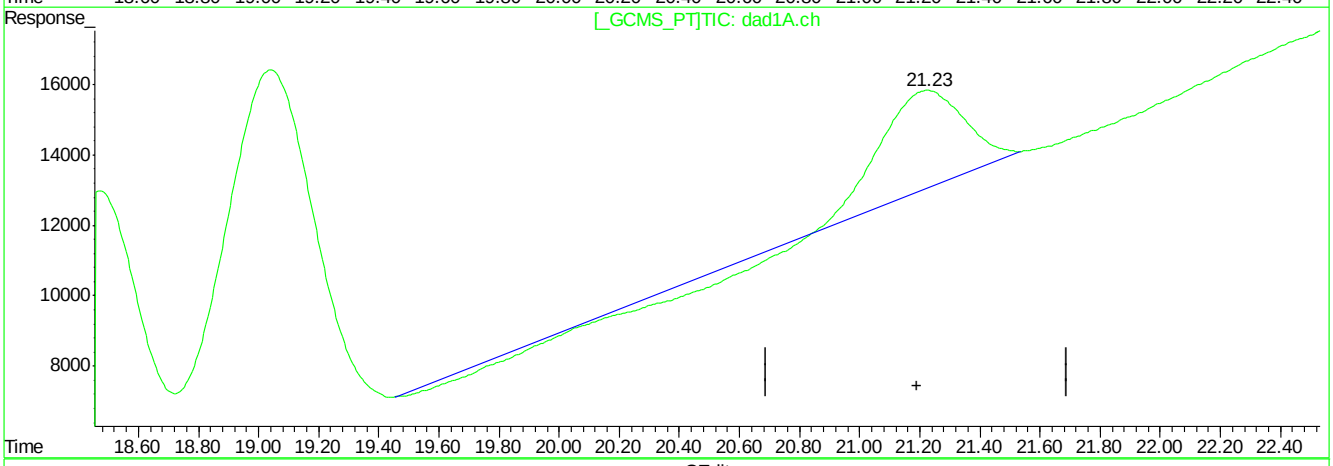
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.43	Poor instrument integration
DNX		2	5.43	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.67	Poor instrument integration
Nitrobenzene	98-95-3	2	10.58	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.51	Poor instrument integration
Nitroglycerine	55-63-0	2	12.27	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.47	Poor instrument integration
PETN	78-11-5	2	21.23	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.23min 113.929ppb

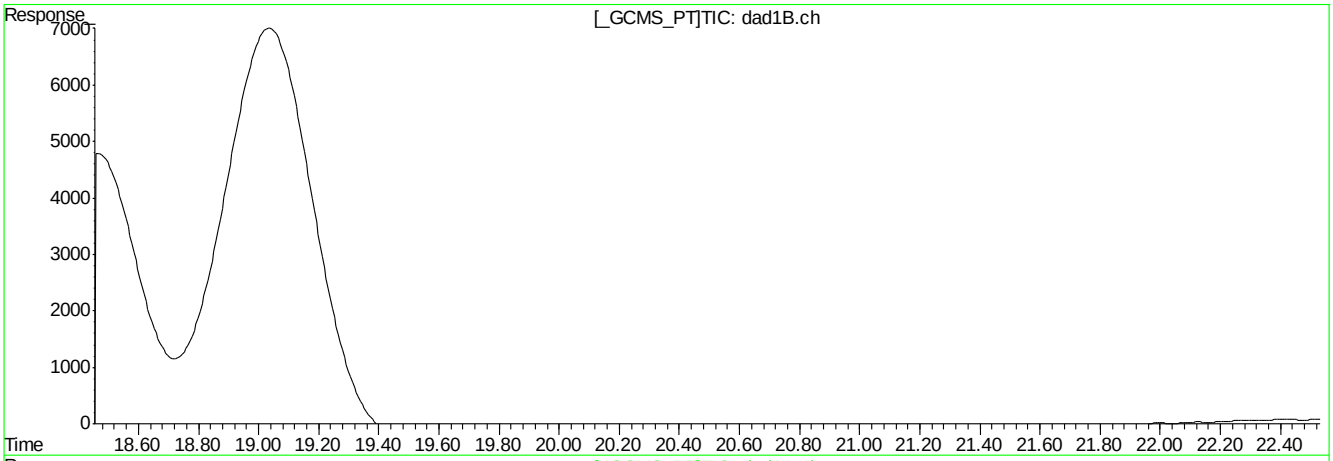
response 377855

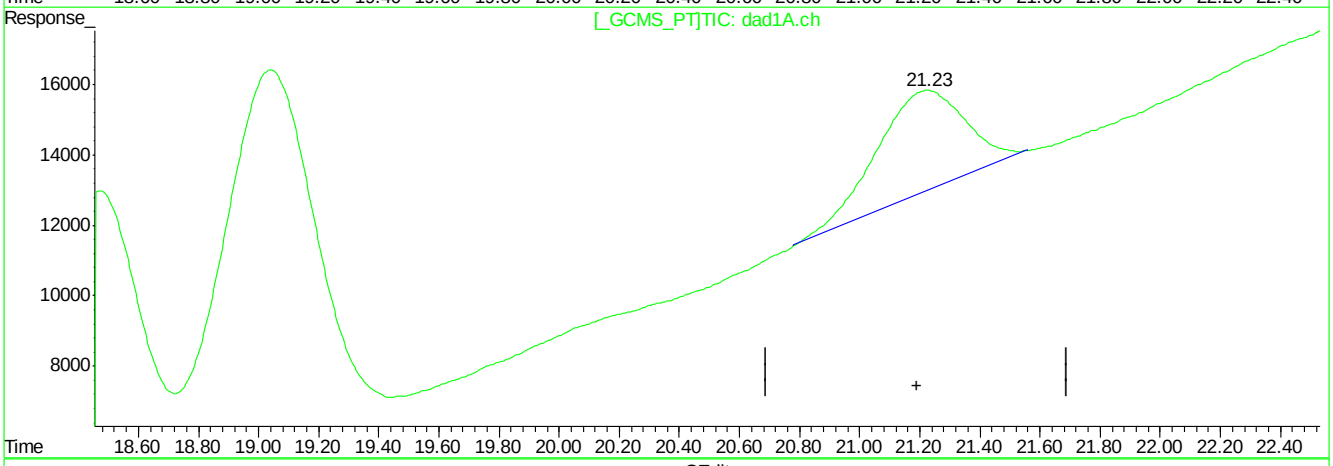
(+) = Expected Retention Time
GG622647.D GGG3047_092721.M Mon Nov 01 13:33:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.23min 178.987ppb m

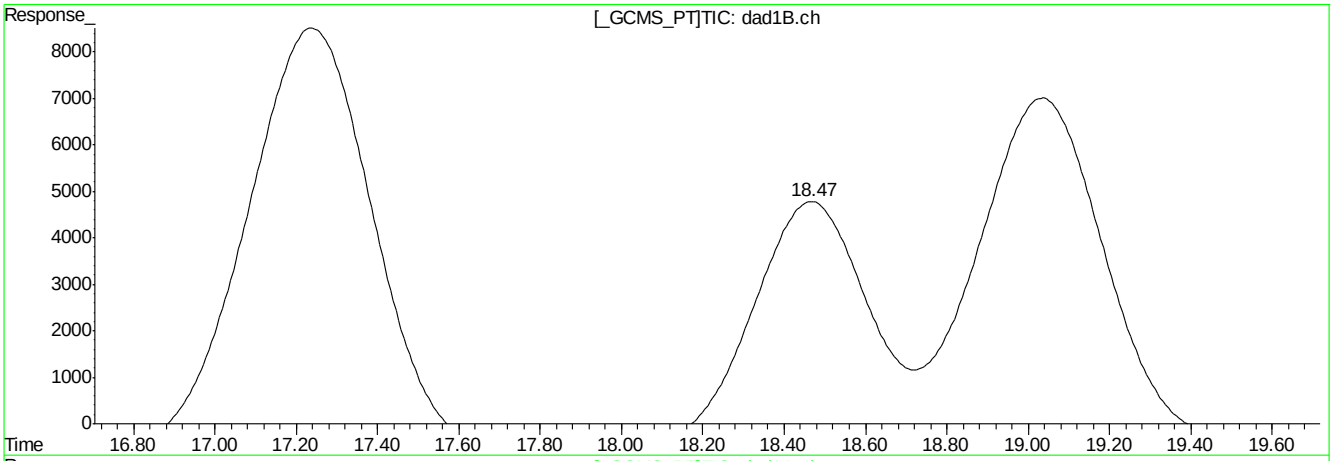
response 593627

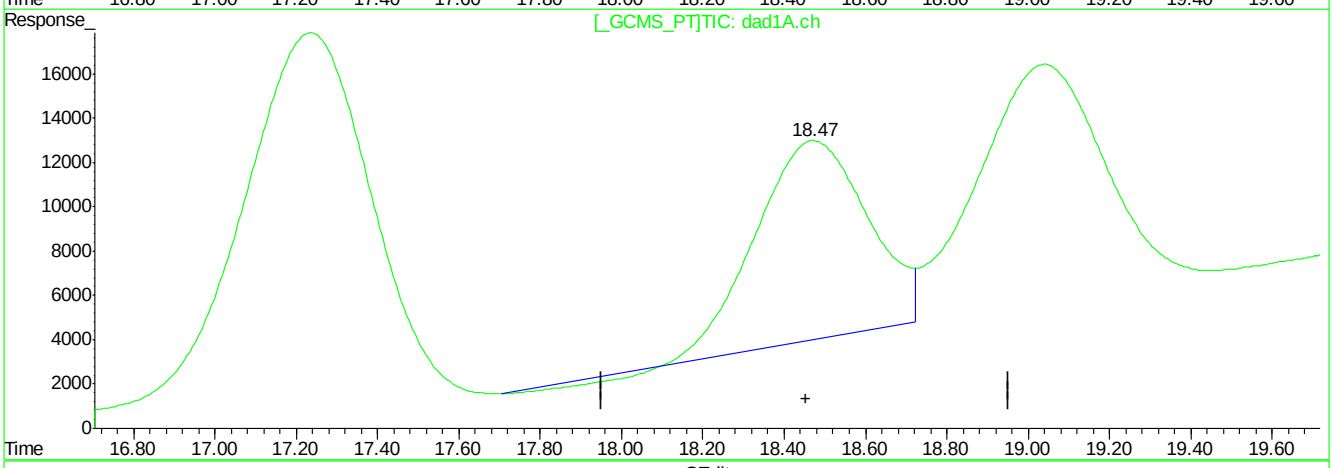
(+) = Expected Retention Time
GG622647.D GGG3047_092721.M Mon Nov 01 13:33:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.47min 187.835ppb

response 1048494

(19) m-Nitrotoluene #2

18.47min 172.564ppb

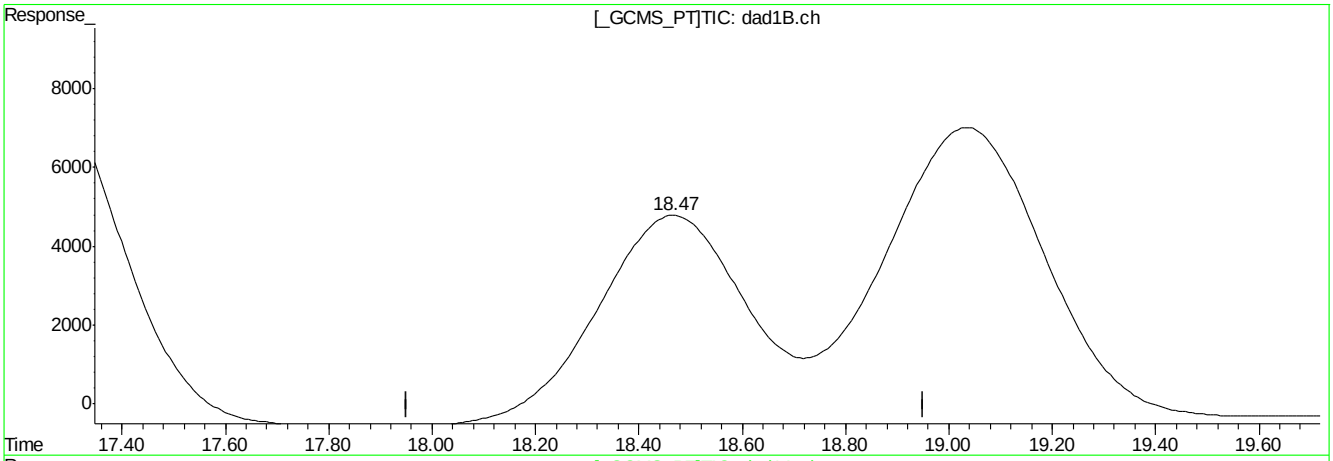
response 1689413

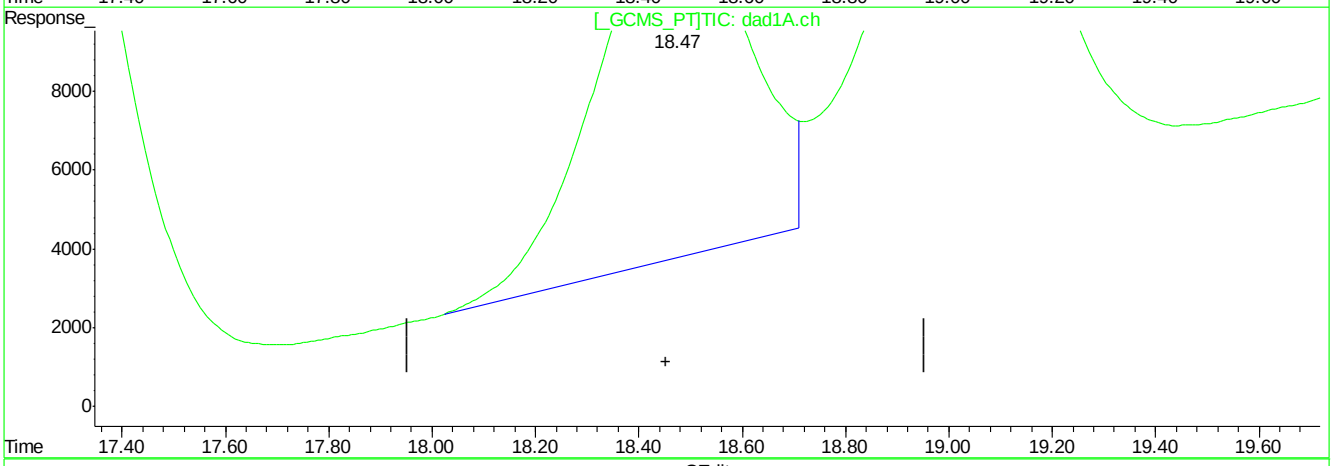
(+) = Expected Retention Time
GG622647.D GGG3047_092721.M Mon Nov 01 13:33:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.47min 187.835ppb

response 1048494

(19) m-Nitrotoluene #2

18.47min 184.683ppb m

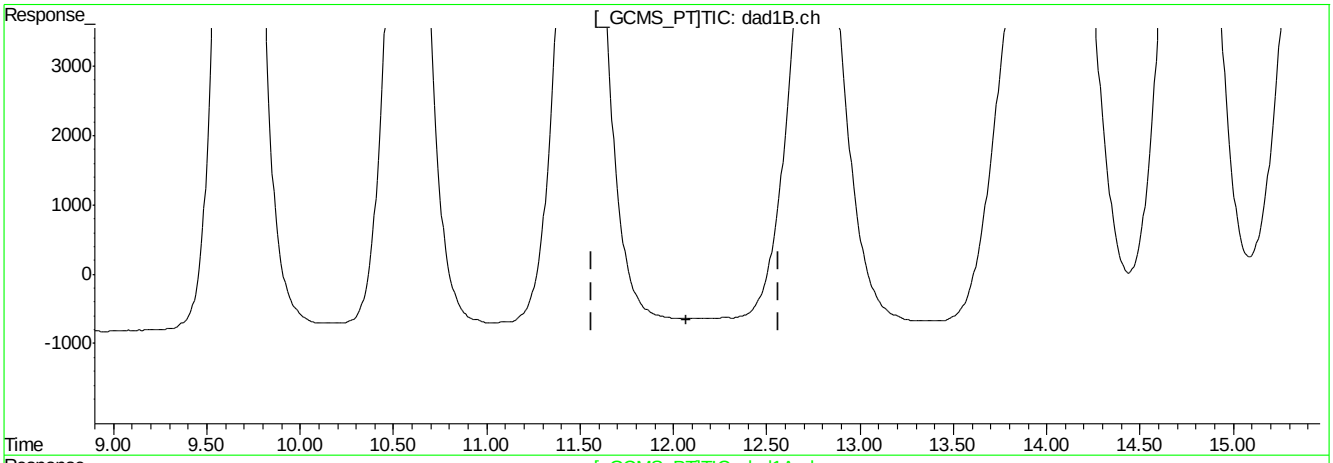
response 1808058

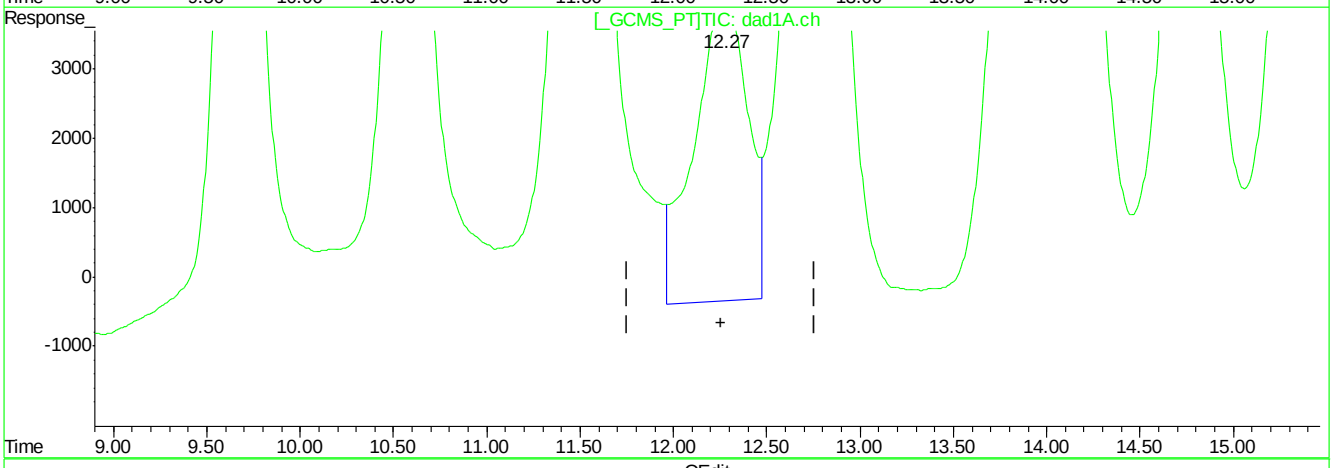
(+) = Expected Retention Time
GG622647.D GGG3047_092721.M Mon Nov 01 13:34:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.28min 283.821ppb

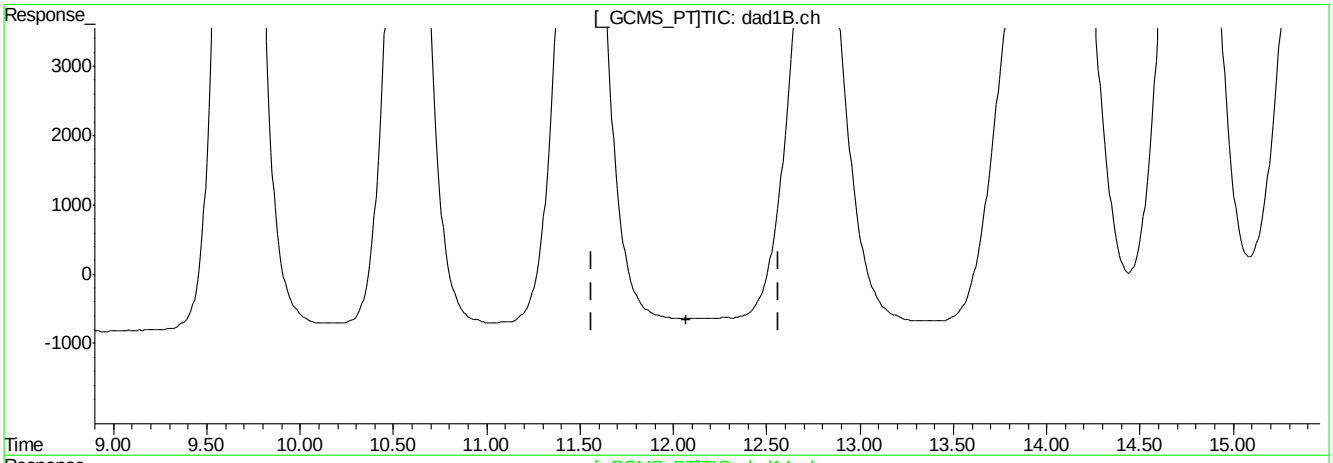
response 876792

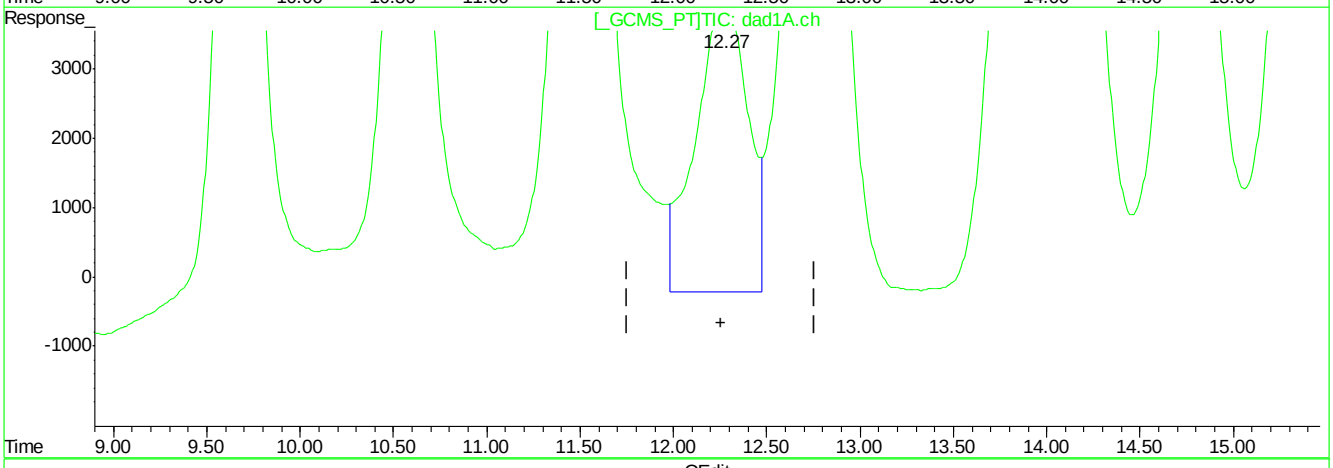
(+) = Expected Retention Time
GG622647.D GGG3047_092721.M Mon Nov 01 13:34:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.27min 268.839ppb m

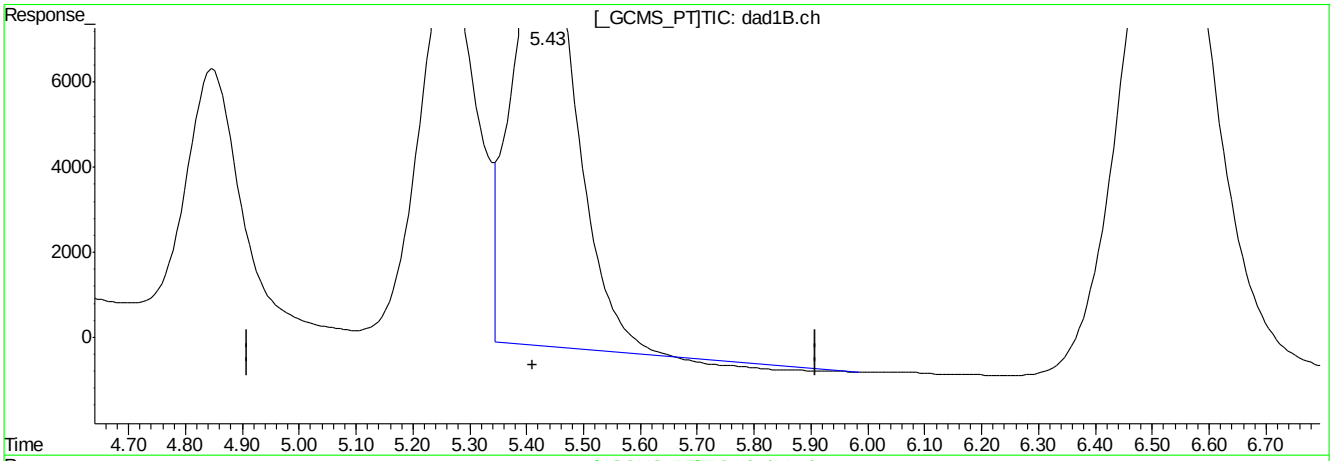
response 830509

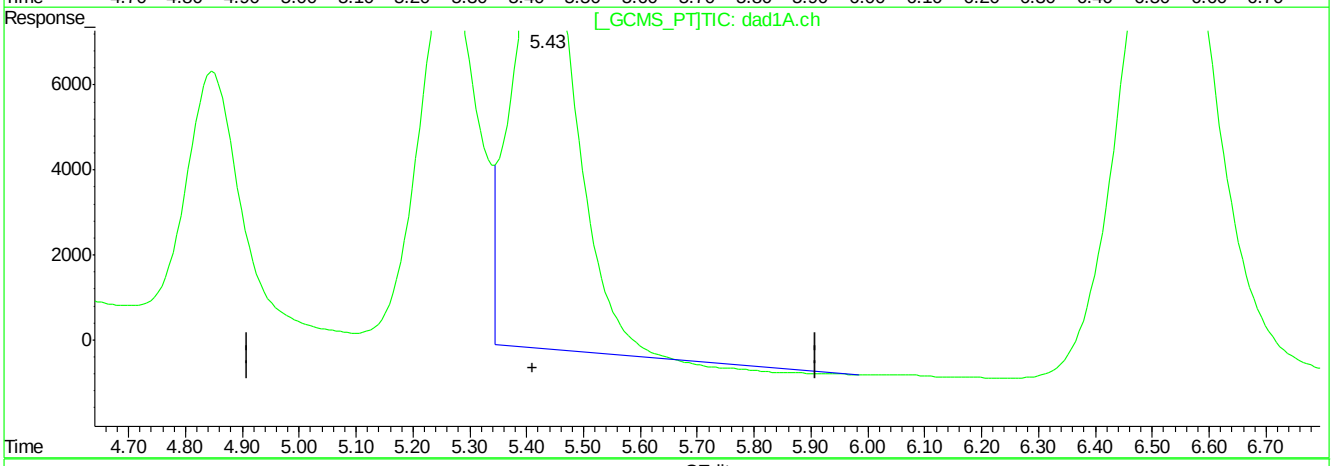
(+) = Expected Retention Time
GG622647.D GGG3047_092721.M Mon Nov 01 13:34:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.43min 166.160ppb

response 805724

(3) DNX #2

5.43min 165.986ppb

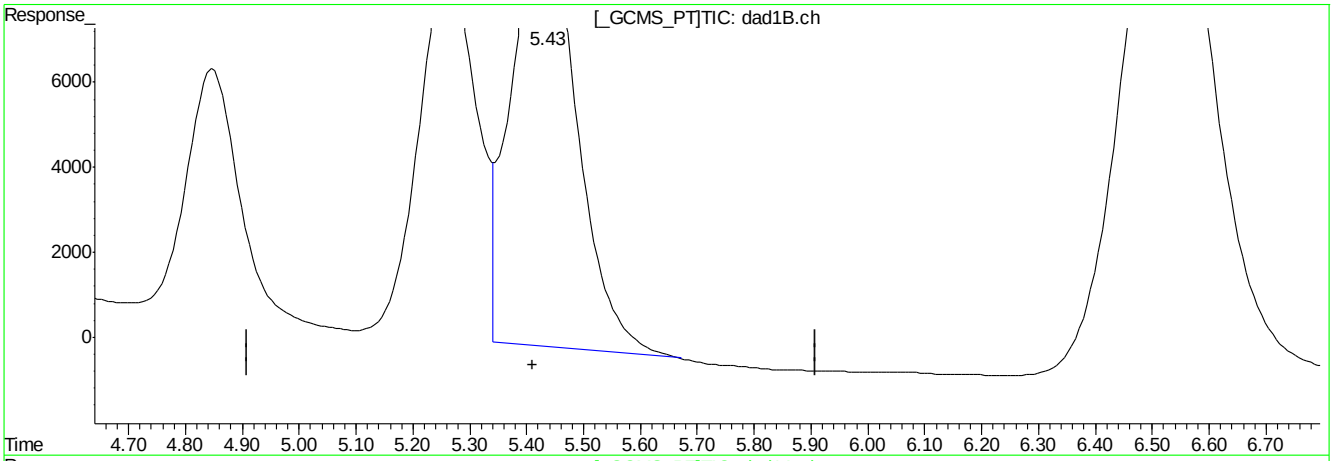
response 805724

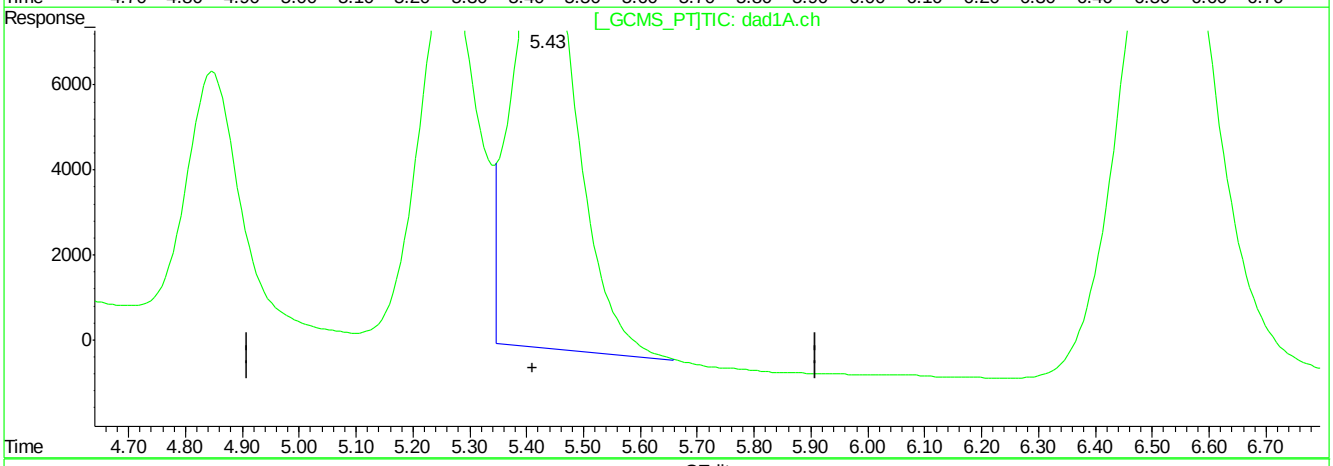
(+) = Expected Retention Time
GG622647.D GGG3047_092721.M Mon Nov 01 13:35:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622647.D\dad1A.ch
Acq On : 31-Oct-2021, 12:38:59 Operator: jamesb
Sample : ic3059-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.43min 169.278ppb m

response 820840

(3) DNX #2

5.43min 165.440ppb m

response 803076

(+) = Expected Retention Time
GG622647.D GGG3047_092721.M Mon Nov 01 13:35:54 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 16:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1A.ch
Acq On : 31-Oct-2021, 13:10:25 Operator: jamesb
Sample : ic3059-500 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 01 15:14:05 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	2094116	4211811	509.569	505.097
	Spiked Amount 500.000	Range 70 - 136		Recovery =		101.91%	101.02%
	Target Compounds						
1)	TNX	4.84	4.84	881847	881847	236.541	236.185
2)	HMX	5.25	5.25	1487819	1487819	509.227	509.227
3)	DNX	5.42	5.42	1964943	1982719	513.870m	519.772m
4)	MNX	6.51	6.51	3690501	3690501	601.764	601.764
5)	1,3,5-Trinitrobe	7.44	7.44	4267542	4267542	512.244	512.244
6)	RDX	7.76	7.76	2025990	2025990	512.473	512.473
7)	1,3-Dinitrobenze	9.66	9.66	5816658	4474034	510.238	508.732
8)	Nitrobenzene	10.56	10.56	3720098	3596552	516.667	523.616m
9)	2,4,6-Trinitroto	11.49	11.48	4079114	5311207	508.785	474.749m
10)	Nitroglycerin	0.00	12.25	0	1308084	N.D.	453.219m#
11)	Tetryl	12.74	12.74	3263895	5682723	512.848	516.283
13)	2,6-Dinitrotolue	14.12	14.12	2847424	3981792	507.051	475.066
14)	2,4-Dinitrotolue	14.74	14.74	5249894	3698829	510.722	493.299
15)	3,5-Dinitroanili	15.39	15.39	4423585	7300077	508.183	518.713
16)	o-Nitrotoluene	16.23	16.23	2299454	3435290	509.090	488.980
17)	p-Nitrotoluene	17.20	17.20	4817239	8760861	1020.086	1058.169
18)	4-Amino-2,6-Dini	17.20	17.20	4817239	8760861	1020.086	1058.169
19)	m-Nitrotoluene	18.43	18.43	2555100	4393007	505.774	512.556
20)	2-Amino-4,6-Dini	19.00	19.00	3907005	5622286	508.957	527.951
21)	PETN	0.00	21.18	0	1465091	N.D.	483.240m#

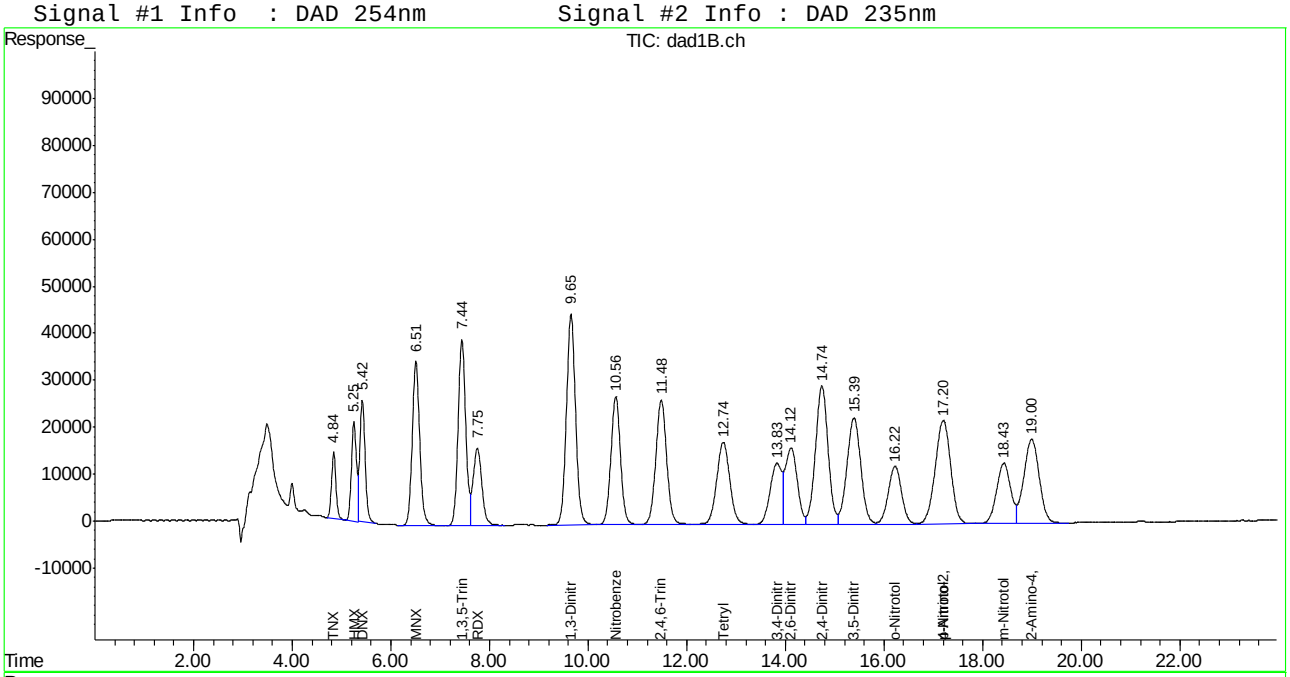
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

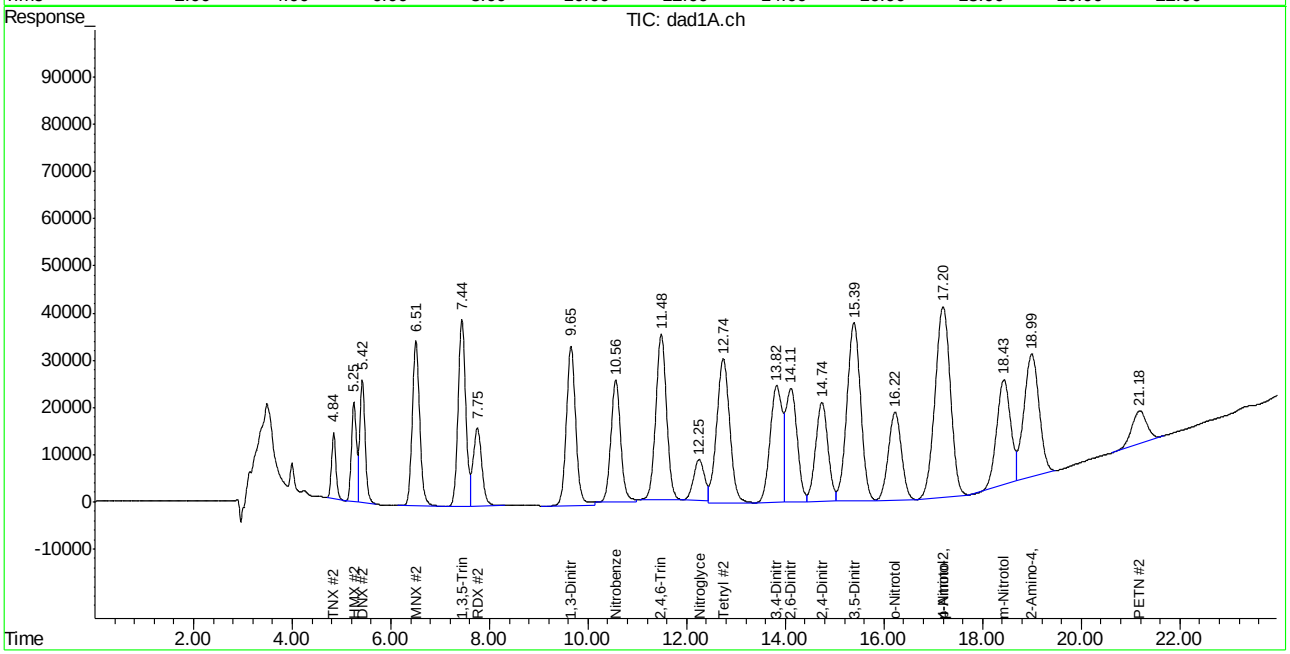
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1A.ch
Acq On : 31-Oct-2021, 13:10:25 Operator: jamesb
Sample : ic3059-500 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:17 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

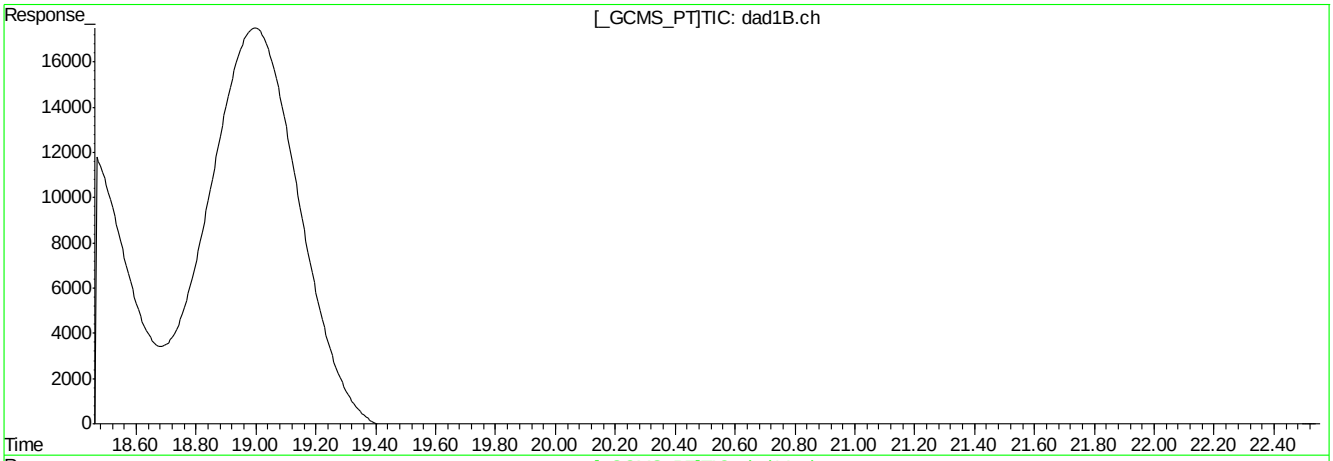
Sample Number: GGG3059-IC3059
Lab FileID: GG622648.D
Injection Time: 10/31/21 13:10
Method: SW846 8330A
Analyst approved: 11/01/21 16:29 James Boone
Supervisor approved: 11/01/21 16:46 Naresh Jiawan

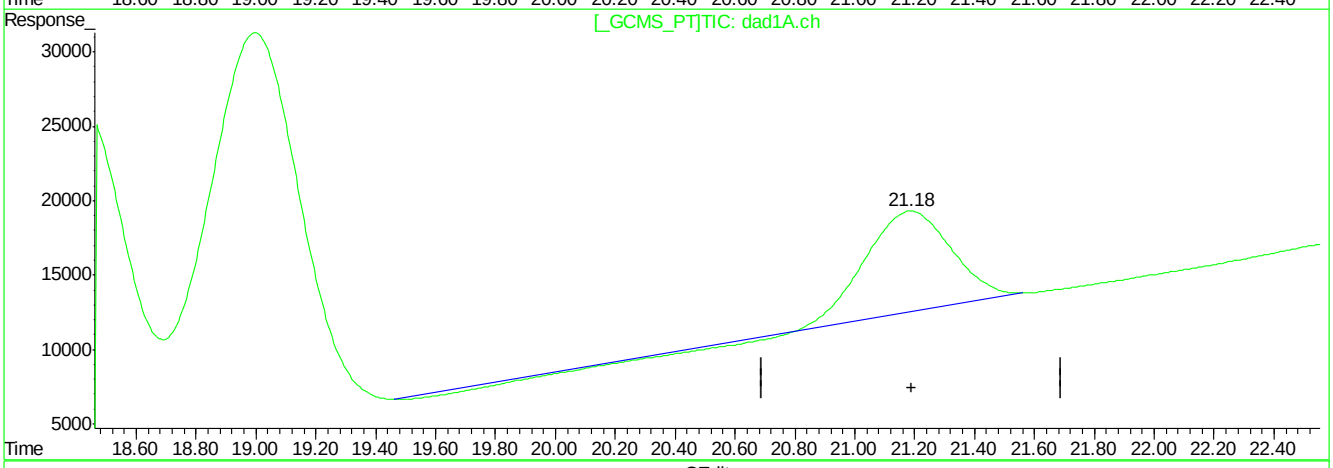
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.42	Poor instrument integration
DNX		2	5.42	Poor instrument integration
Nitrobenzene	98-95-3	2	10.56	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.48	Poor instrument integration
Nitroglycerine	55-63-0	2	12.25	Poor instrument integration
PETN	78-11-5	2	21.18	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1A.ch
Acq On : 31-Oct-2021, 13:10:25 Operator: jamesb
Sample : ic3059-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.19min 372.704ppb

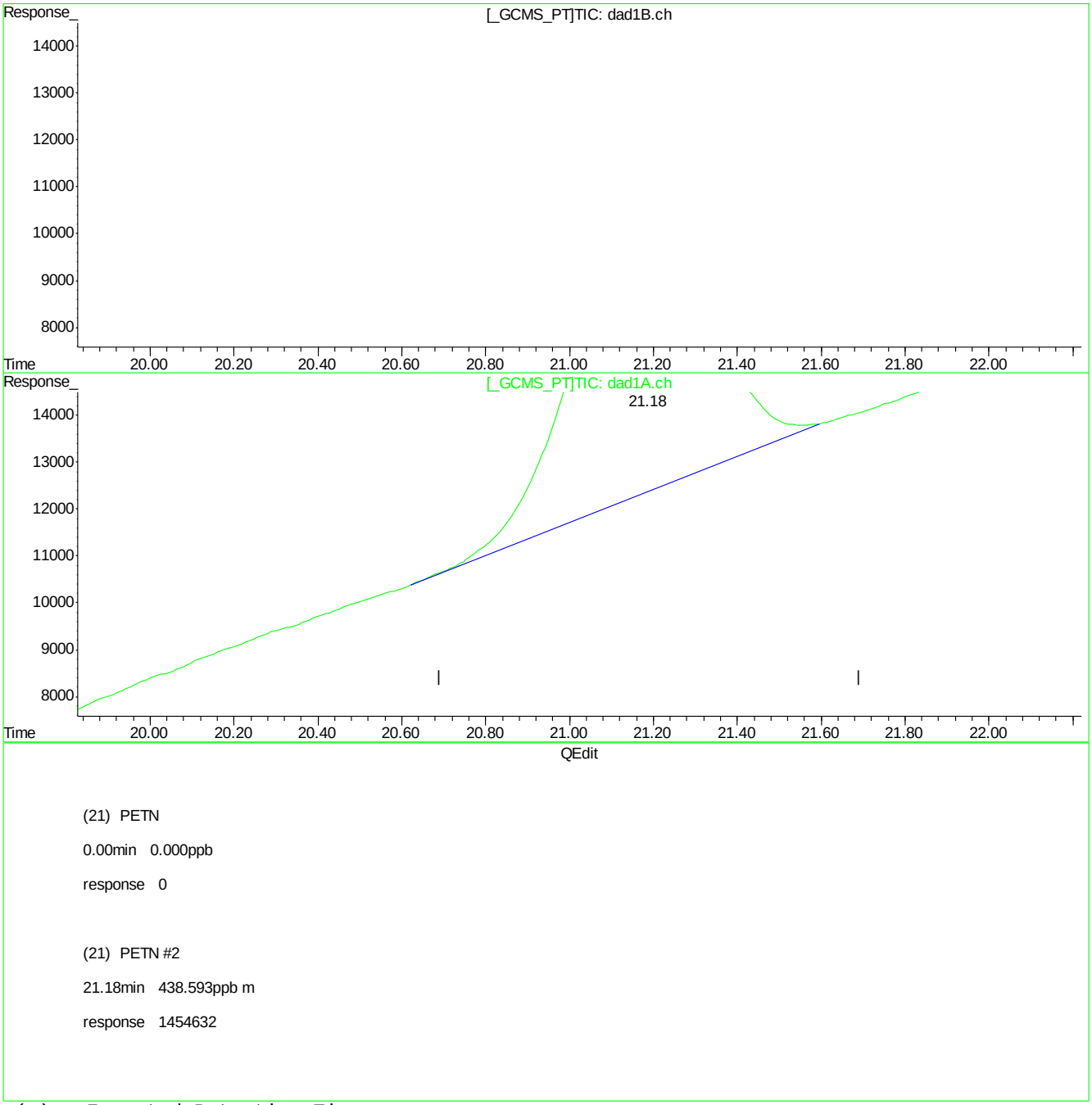
response 1236106

(+) = Expected Retention Time
GG622648.D GGG3047_092721.M Mon Nov 01 13:32:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1A.ch
Acq On : 31-Oct-2021, 13:10:25 Operator: jamesb
Sample : ic3059-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration

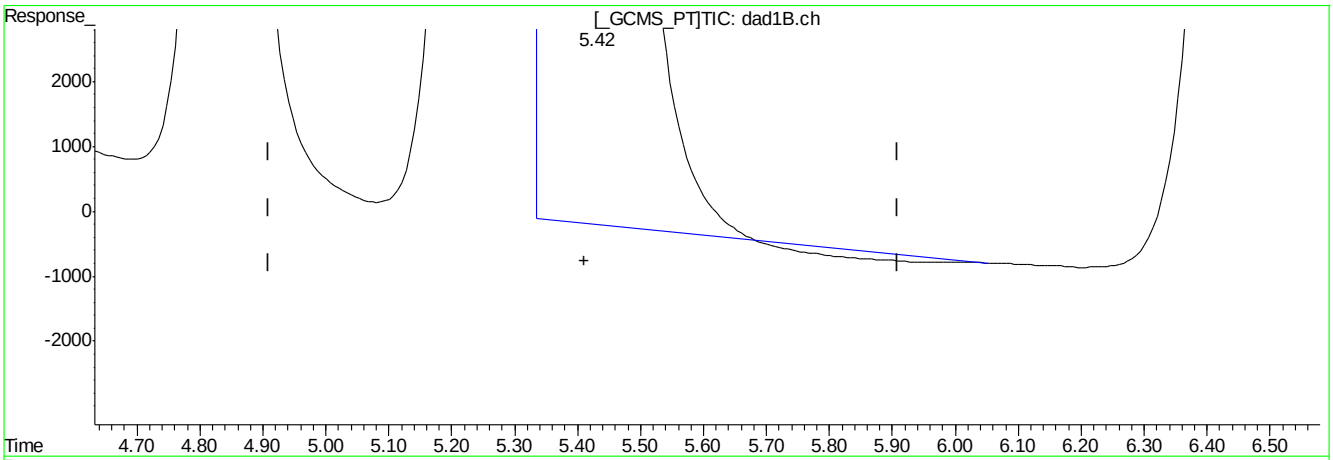


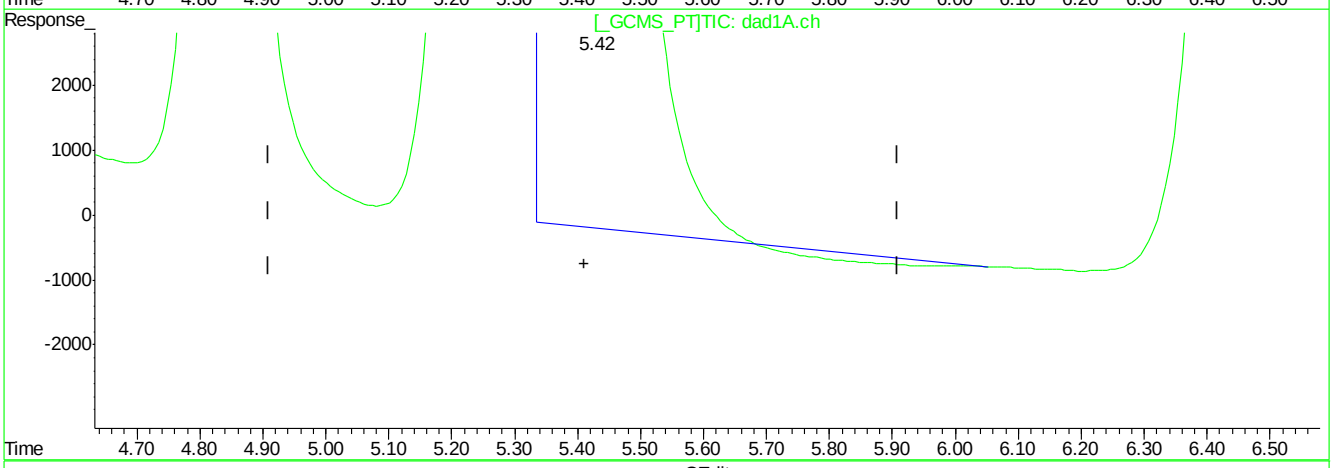
(+) = Expected Retention Time
GG622648.D GGG3047_092721.M Mon Nov 01 13:32:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1A.ch
Acq On : 31-Oct-2021, 13:10:25 Operator: jamesb
Sample : ic3059-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.42min 408.759ppb

response 1982103

(3) DNX #2

5.42min 408.329ppb

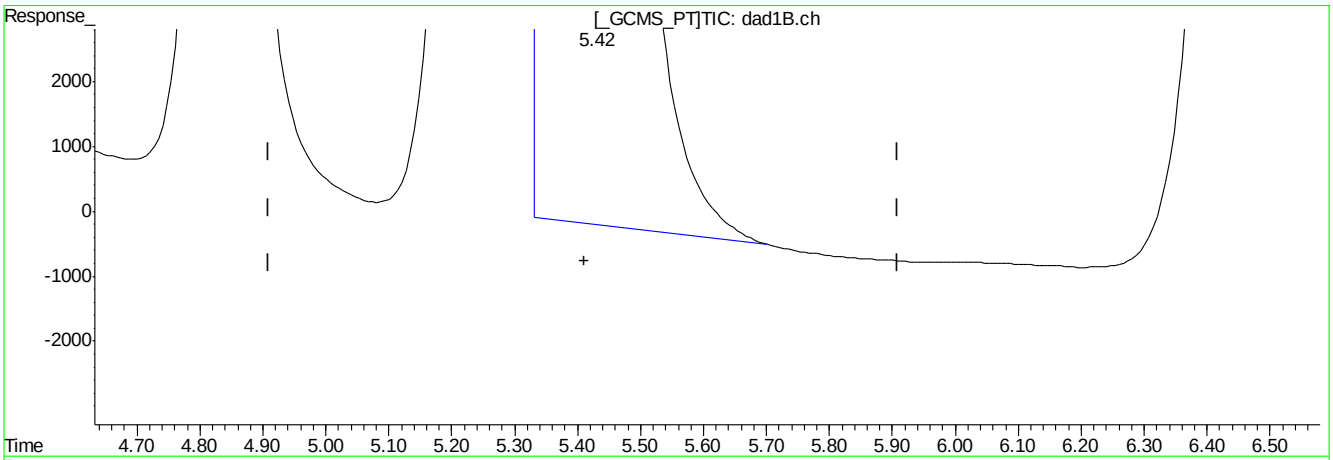
response 1982103

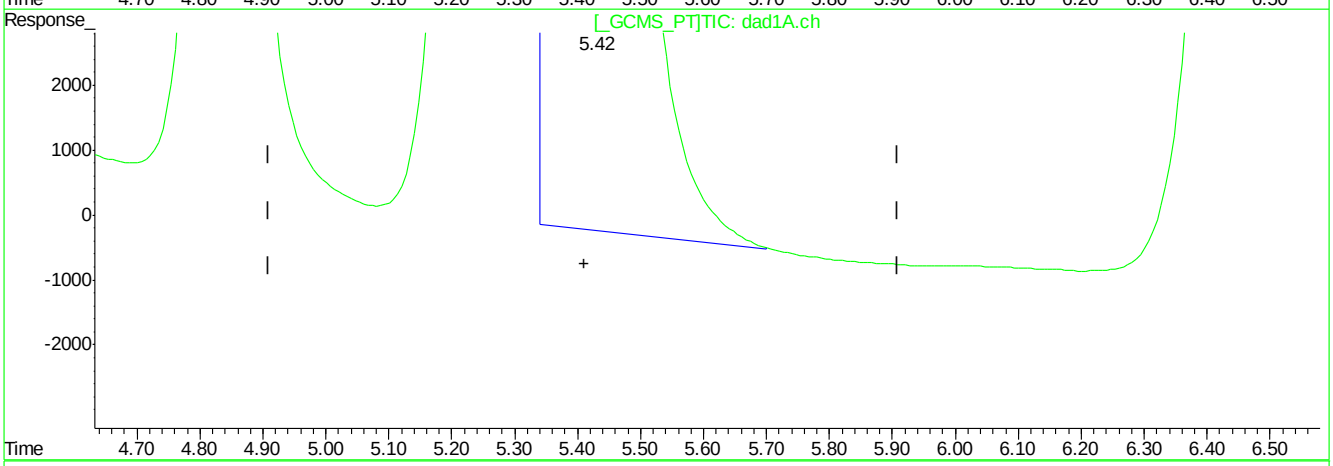
(+) = Expected Retention Time
GG622648.D GGG3047_092721.M Mon Nov 01 13:33:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1A.ch
Acq On : 31-Oct-2021, 13:10:25 Operator: jamesb
Sample : ic3059-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.42min 414.336ppb m

response 2009146

(3) DNX #2

5.42min 406.172ppb m

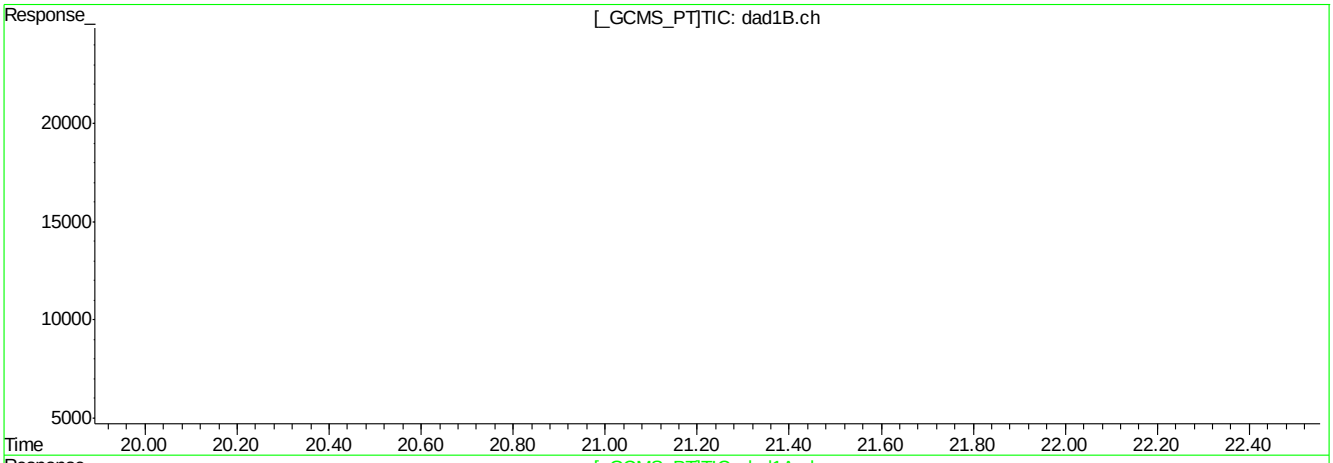
response 1971631

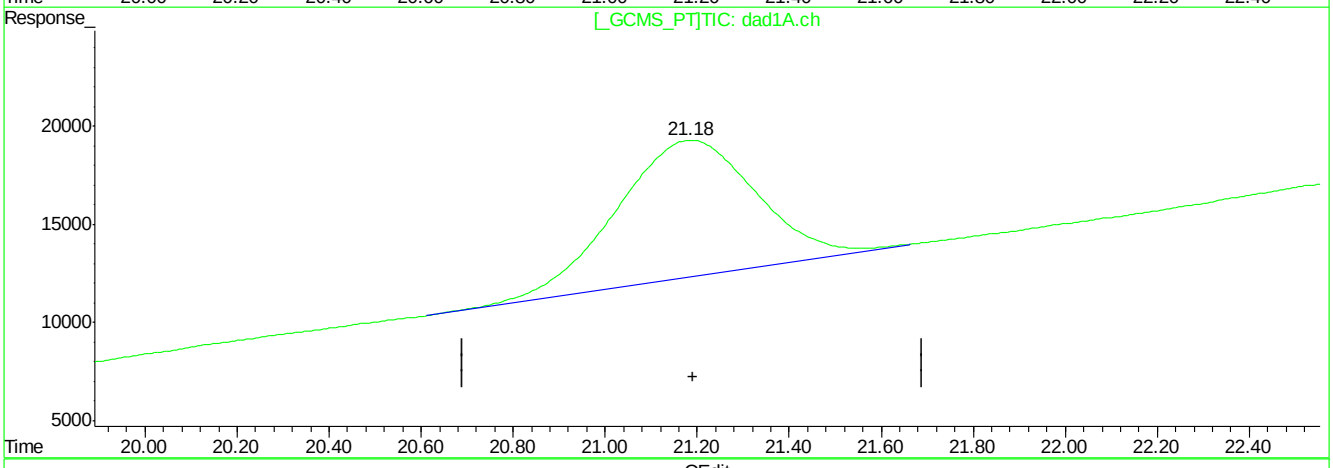
(+) = Expected Retention Time
GG622648.D GGG3047_092721.M Mon Nov 01 13:33:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622648.D\dad1A.ch
Acq On : 31-Oct-2021, 13:10:25 Operator: jamesb
Sample : ic3059-500 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:14 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.18min 483.240ppb m

response 1465091

(+) = Expected Retention Time
GG622648.D GGG3059_103121.M Mon Nov 01 15:17:09 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 16:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622649.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622649.D\dad1A.ch
Acq On : 31-Oct-2021, 13:41:50 Operator: jamesb
Sample : icc3059-1000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 01 15:14:06 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.84	13.84	4276569	8575228	1040.632	1028.376
	Spiked Amount 500.000	Range 70 - 136		Recovery =		208.13%#	205.68%#
	Target Compounds						
1)	TNX	4.84	4.84	1783738	1783738	478.457	477.739
2)	HMX	5.24	5.24	3008279	3008279	1029.625	1029.625
3)	DNX	5.41	5.41	4000208	3962167	1046.131m	1038.687m
4)	MNX	6.50	6.50	7495693	7495693	1222.230	1222.230
5)	1,3,5-Trinitrobe	7.43	7.43	8673346	8673346	1041.085	1041.085
6)	RDX	7.74	7.74	4136261	4136261	1046.265	1046.265
7)	1,3-Dinitrobenze	9.65	9.65	11875267	9058714	1041.701	1030.046m
8)	Nitrobenzene	10.56	10.56	7631463	7075766	1059.898	1030.148m
9)	2,4,6-Trinitroto	11.49	11.49	8485183	10772145	1058.350	962.882m
10)	Nitroglycerin	0.00	12.26	0	2711153	N.D.	939.348m#
11)	Tetryl	12.75	12.75	6810070	11687519	1070.050	1061.827
13)	2,6-Dinitrotolue	14.13	14.13	5878510	8271906	1046.808	986.918
14)	2,4-Dinitrotolue	14.76	14.76	10799439	7646999	1050.594	1019.852
15)	3,5-Dinitroanili	15.41	15.41	9167540	15071311	1053.170	1070.904
16)	o-Nitrotoluene	16.24	16.24	4836268	7246957	1070.732	1031.533
17)	p-Nitrotoluene	17.23	17.22	9872820	17796285	2090.643	2149.500
18)	4-Amino-2,6-Dini	17.23	17.22	9872820	17796285	2090.643	2149.500
19)	m-Nitrotoluene	18.45	18.46	5196179	8823701	1028.567	1029.509
20)	2-Amino-4,6-Dini	19.03	19.03	7966187	11374161	1037.738	1068.070
21)	PETN	0.00	21.19	0	3015415	N.D.	994.594m#

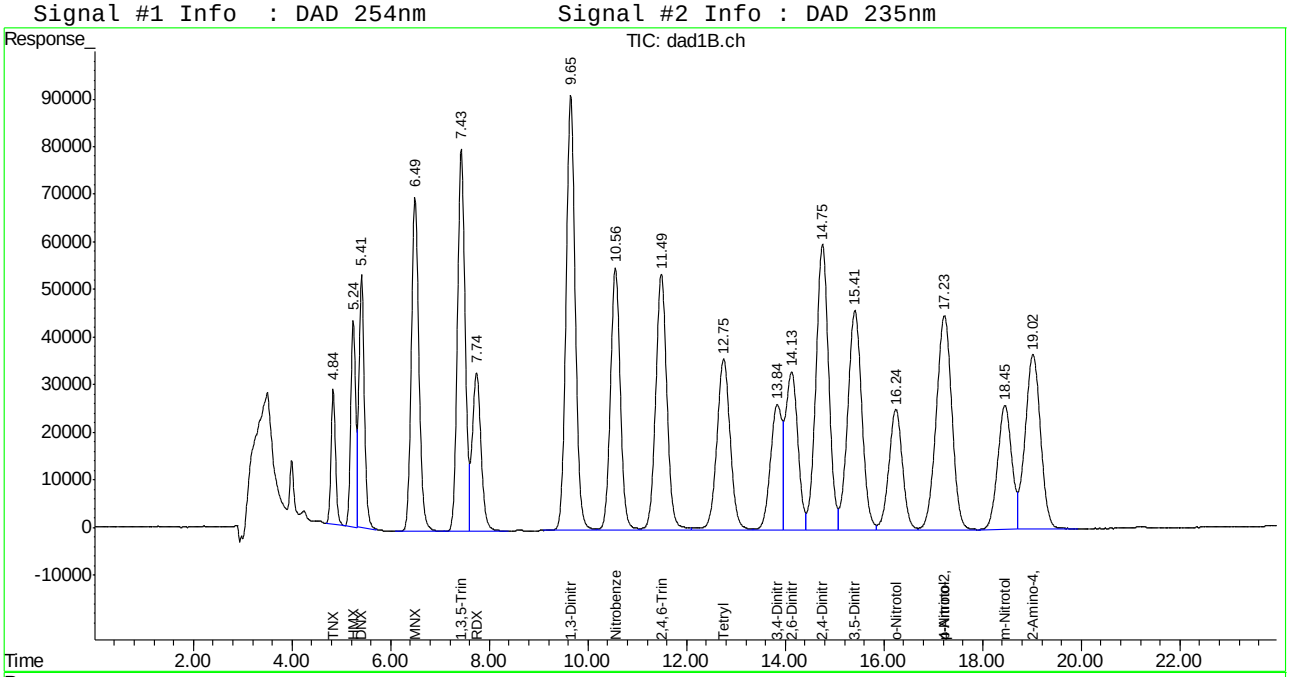
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

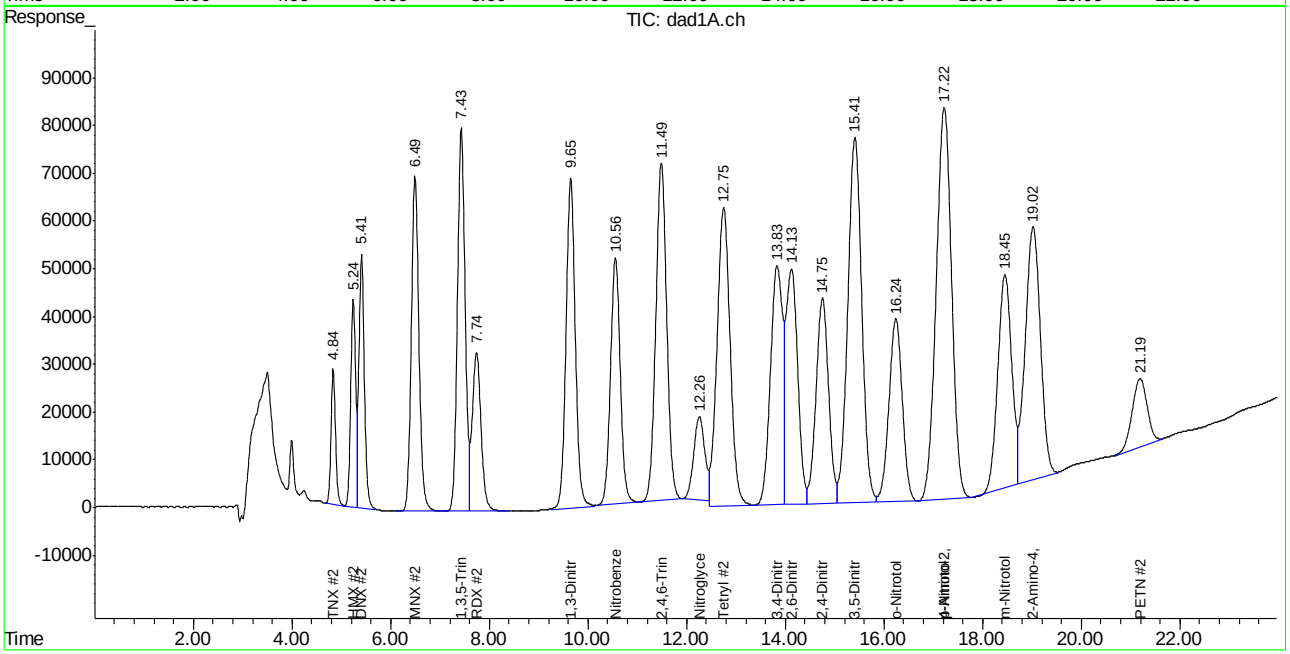
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622649.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622649.D\dad1A.ch
Acq On : 31-Oct-2021, 13:41:50 Operator: jamesb
Sample : icc3059-1000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:16 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

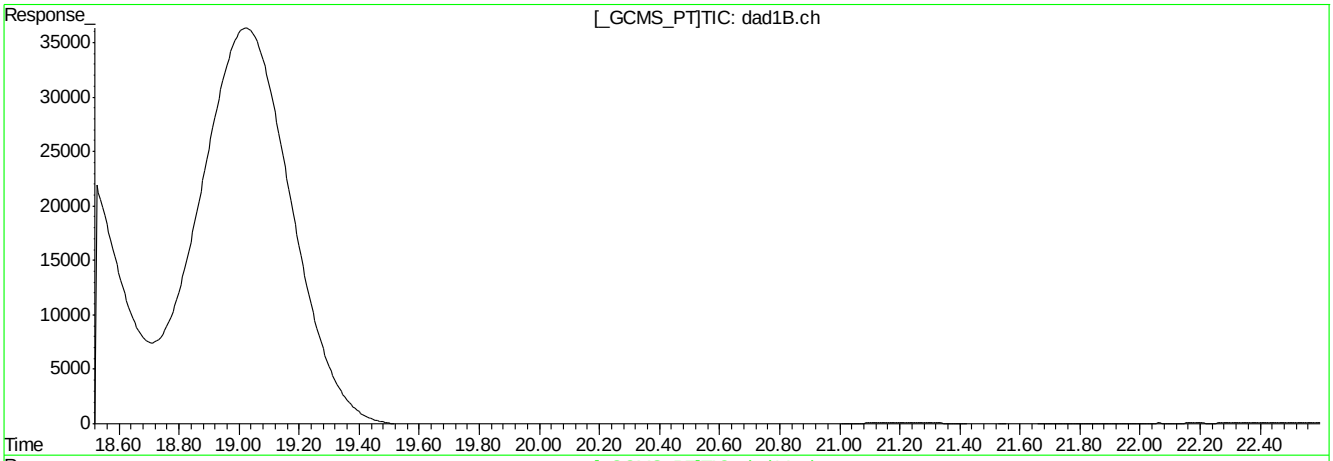
Sample Number: GGG3059-ICC3059 **Method:** SW846 8330A
Lab FileID: GG622649.D **Analyst approved:** 11/01/21 16:29 James Boone
Injection Time: 10/31/21 13:41 **Supervisor approved:** 11/01/21 16:46 Naresh Jiawan

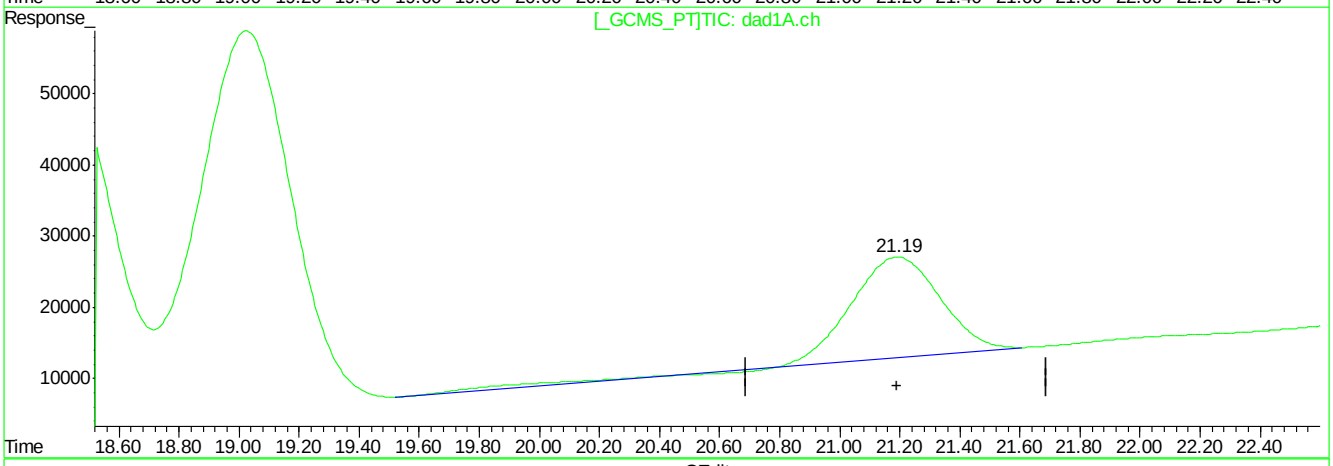
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.41	Poor instrument integration
DNX		2	5.41	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.65	Poor instrument integration
Nitrobenzene	98-95-3	2	10.56	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.49	Poor instrument integration
Nitroglycerine	55-63-0	2	12.26	Poor instrument integration
PETN	78-11-5	2	21.19	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622649.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622649.D\dad1A.ch
Acq On : 31-Oct-2021, 13:41:50 Operator: jamesb
Sample : icc3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.19min 887.931ppb

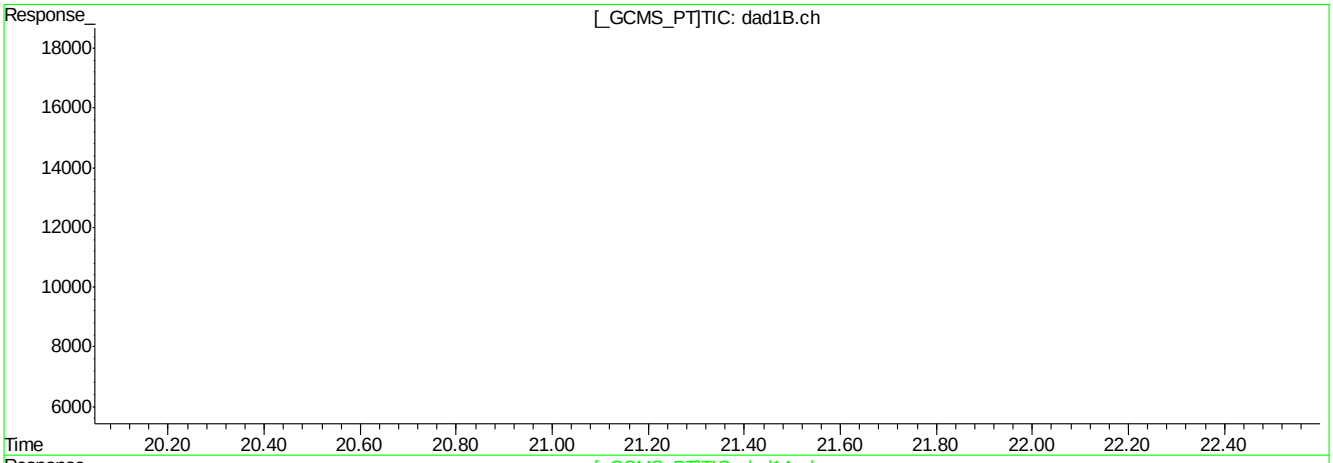
response 2944903

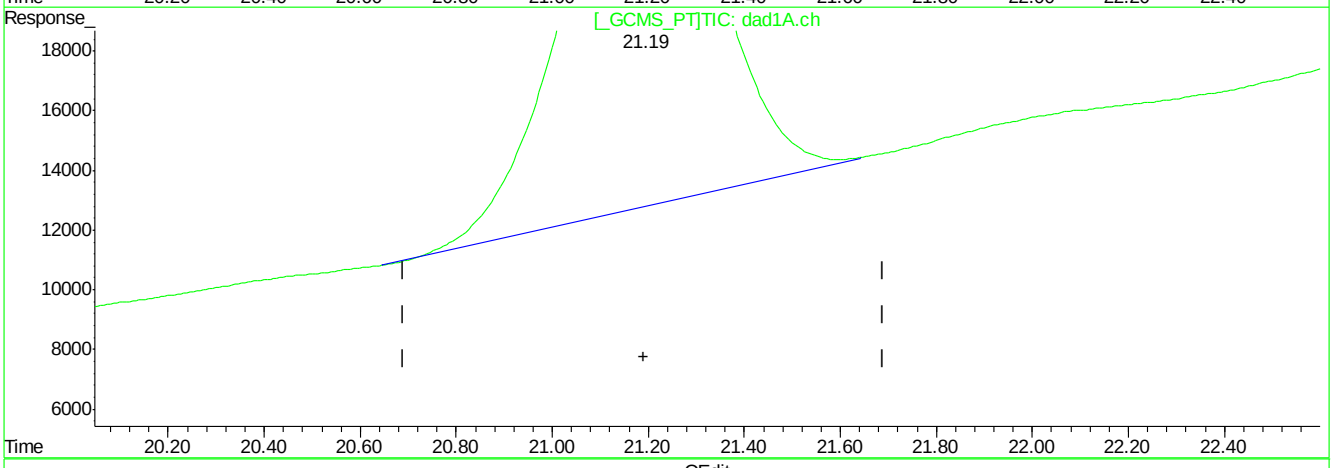
(+) = Expected Retention Time
GG622649.D GGG3047_092721.M Mon Nov 01 13:31:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622649.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622649.D\dad1A.ch
Acq On : 31-Oct-2021, 13:41:50 Operator: jamesb
Sample : icc3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.19min 904.383ppb m

response 2999470

(+) = Expected Retention Time
GG622649.D GGG3047_092721.M Mon Nov 01 13:31:29 2021

GG622650.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 11/01/21 16:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622650.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622650.D\dad1A.ch
Acq On : 31-Oct-2021, 14:13:17 Operator: jamesb
Sample : ic3059-2500 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 01 15:14:07 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.79	13.79	10450543	21128746	2542.967	2533.844
	Spiked Amount 500.000	Range 70 - 136		Recovery =		508.59%#	506.77%#
	Target Compounds						
1)	TNX	4.84	4.84	4348359	4348359	1166.374	1164.622
2)	HMX	5.25	5.25	7325960	7325960	2507.411	2507.411
3)	DNX	5.42	5.42	9993915	9993915	2613.601	2619.918
4)	MNX	6.51	6.51	18324604	18324604	2987.966	2987.966
5)	1,3,5-Trinitrobe	7.44	7.44	21177530	21177530	2541.995	2541.995
6)	RDX	7.75	7.75	10090347	10090347	2552.347	2552.347
7)	1,3-Dinitrobenze	9.64	9.64	28929347	22077679	2537.688	2510.403
8)	Nitrobenzene	10.54	10.54	18628549	17163838	2587.230	2498.853m
9)	2,4,6-Trinitroto	11.46	11.46	20391881	26219739	2543.464	2343.685m
10)	Nitroglycerin	0.00	12.22	0	6698934	N.D.	2321.016m#
11)	Tetryl	12.72	12.72	16493138	28376369	2591.528	2578.031
13)	2,6-Dinitrotolue	14.08	14.08	14298391	20458160	2546.166	2440.855
14)	2,4-Dinitrotolue	14.70	14.70	26268600	18787265	2555.469	2505.589
15)	3,5-Dinitroanili	15.34	15.34	22177789	36778901	2547.791	2613.354
16)	o-Nitrotoluene	16.17	16.17	11715472	17639289	2593.761	2510.780
17)	p-Nitrotoluene	17.13	17.13	24245506	44493709	5134.165	5374.113
18)	4-Amino-2,6-Dini	17.13	17.13	24245506	44493709	5134.165	5374.113
19)	m-Nitrotoluene	18.36	18.36	12819196	22218931	2537.519	2592.403
20)	2-Amino-4,6-Dini	18.93	18.93	19452495	27884165	2534.035	2618.413
21)	PETN	0.00	21.10	0	7602524	N.D. d	2507.590m

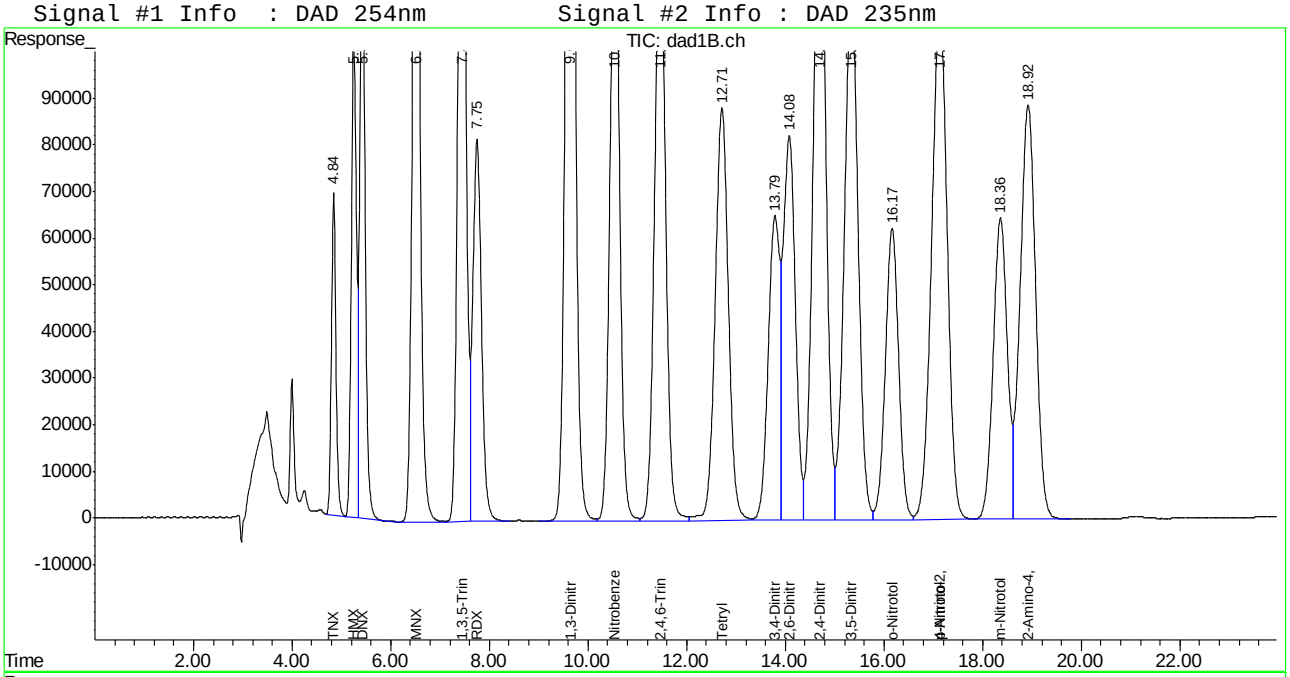
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

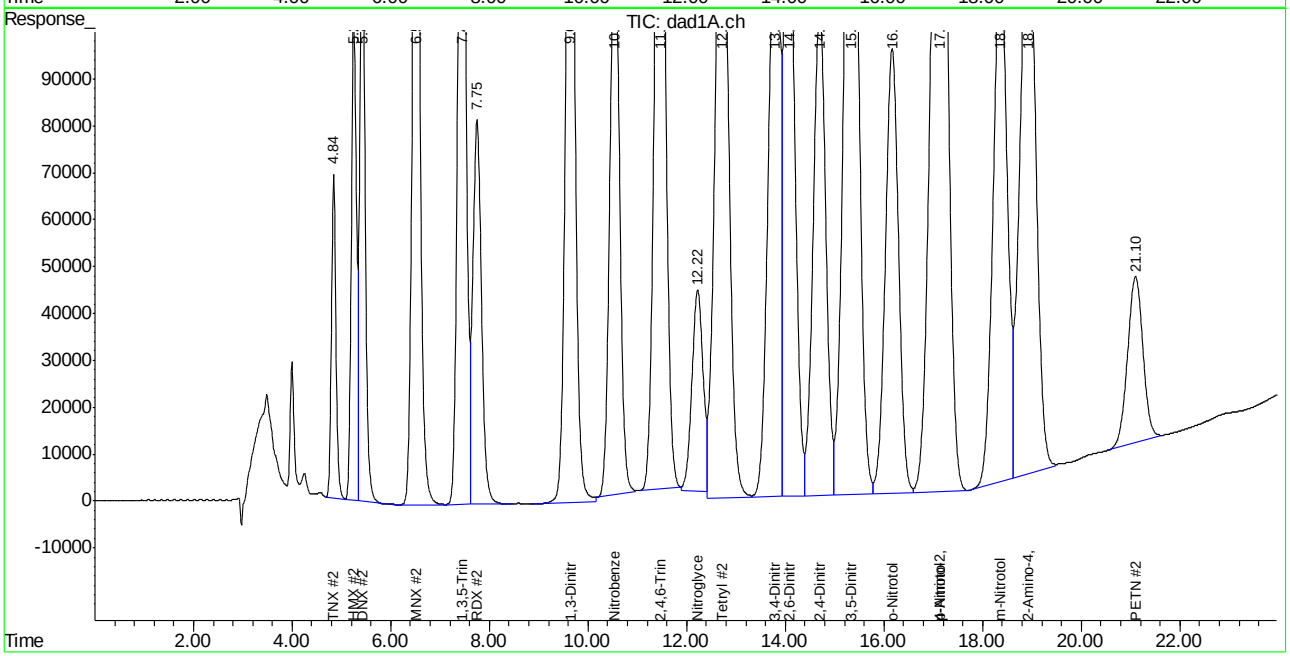
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622650.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622650.D\dad1A.ch
Acq On : 31-Oct-2021, 14:13:17 Operator: jamesb
Sample : ic3059-2500 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:15 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





GG622650.D GGG3059_103121.M Mon Nov 01 15:26:19 2021 Page 2

Manual Integration Approval Summary

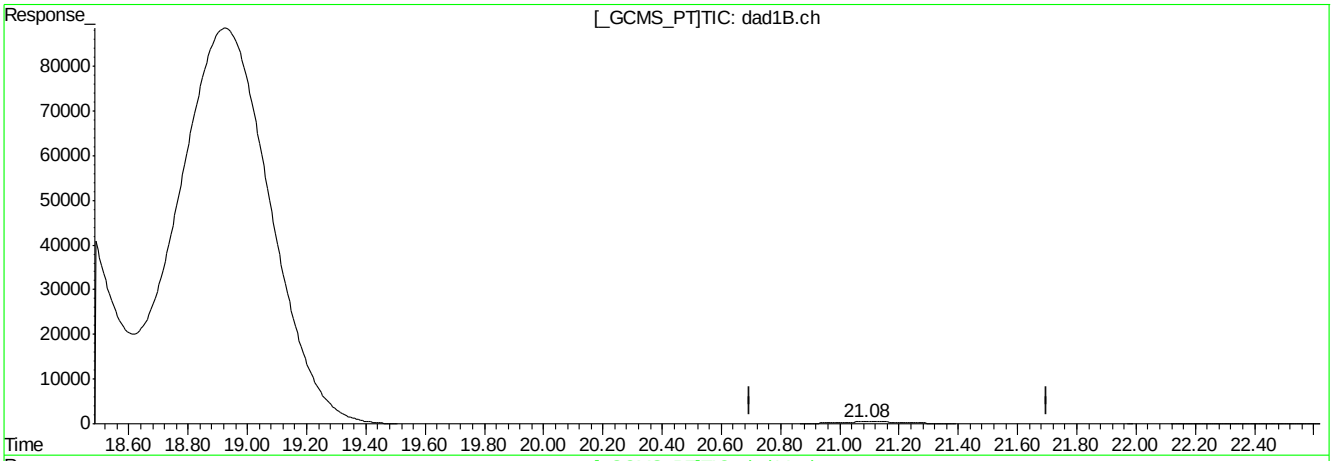
Sample Number: GGG3059-IC3059
Lab FileID: GG622650.D
Injection Time: 10/31/21 14:13
Method: SW846 8330A
Analyst approved: 11/01/21 16:29 James Boone
Supervisor approved: 11/01/21 16:46 Naresh Jiawan

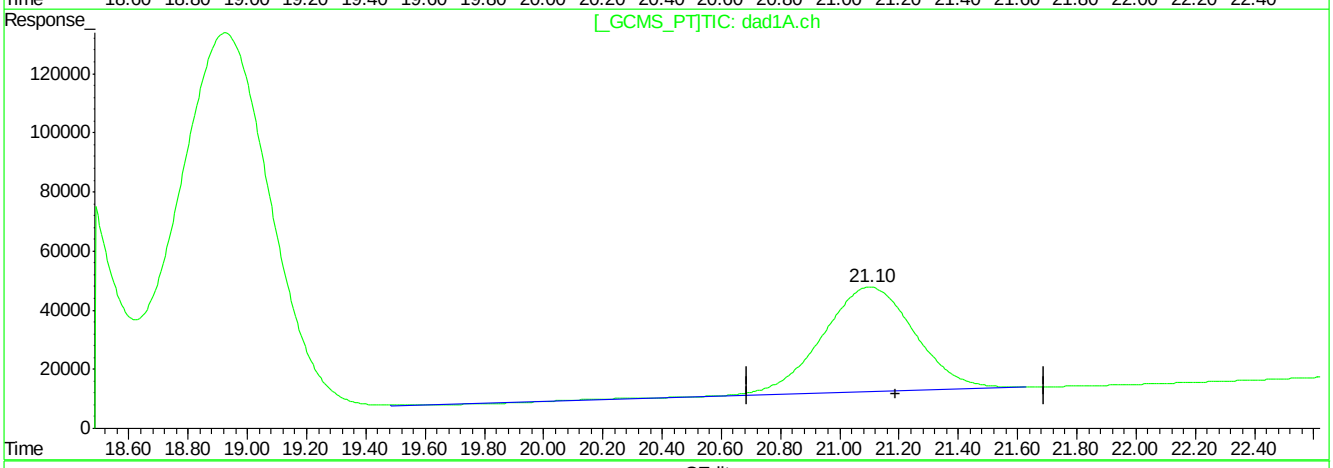
Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitrobenzene	98-95-3	2	10.54	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.46	Poor instrument integration
Nitroglycerine	55-63-0	2	12.22	Poor instrument integration
PETN	78-11-5	2	21.10	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622650.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622650.D\dad1A.ch
Acq On : 31-Oct-2021, 14:13:17 Operator: jamesb
Sample : ic3059-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.10min 0.000ppb

response 117416

(21) PETN #2

21.10min 2309.752ppb

response 7660504

(+) = Expected Retention Time
GG622650.D GGG3047_092721.M Mon Nov 01 13:30:26 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 16:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1A.ch
Acq On : 31-Oct-2021, 14:44:42 Operator: jamesb
Sample : ic3059-5000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 01 15:14:08 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.88	13.87	20764384	42224424	5052.670	5063.723
	Spiked Amount 500.000	Range 70 - 136		Recovery =		1010.53%#	1012.74%#
	Target Compounds						
1)	TNX	4.85	4.85	8693751	8693751	2331.951	2328.450
2)	HMX	5.26	5.26	14594422	14594422	4995.142	4995.142
3)	DNX	5.43	5.43	19987454	19987454	5227.104	5239.736
4)	MNX	6.52	6.52	36391214	36391214	5933.863	5933.863
5)	1,3,5-Trinitrobe	7.46	7.46	42309177	42309177	5078.482	5078.482
6)	RDX	7.77	7.77	20144108	20144108	5095.439	5095.439
7)	1,3-Dinitrobenze	9.68	9.68	57716101	43728853	5062.867	4972.308
8)	Nitrobenzene	10.58	10.58	37133411	34900503	5157.282	5081.103
9)	2,4,6-Trinitroto	11.52	11.52	40463021	53610736	5046.922	4792.065
10)	Nitroglycerin	0.00	12.28	0	14343756	N.D.	4969.760 #
11)	Tetryl	12.78	12.78	32529632	55800754	5111.305	5069.573
13)	2,6-Dinitrotolue	14.16	14.16	28742158	40579417	5118.220	4841.513
14)	2,4-Dinitrotolue	14.78	14.78	52532049	37442697	5110.437	4993.596
15)	3,5-Dinitroanili	15.43	15.43	44267097	73347389	5085.417	5211.757
16)	o-Nitrotoluene	16.28	16.28	23502556	35052319	5203.377	4989.354
17)	p-Nitrotoluene	17.26	17.26	48599162	89082308	10291.231	10759.687
18)	4-Amino-2,6-Dini	17.26	17.26	48599162	89082308	10291.231	10759.687
19)	m-Nitrotoluene	18.50	18.50	25769106	44639135	5100.912	5208.289
20)	2-Amino-4,6-Dini	19.06	19.06	38971255	56611306	5076.701	5315.983
21)	PETN	0.00	21.24	0	15296164	N.D. d	5045.233m

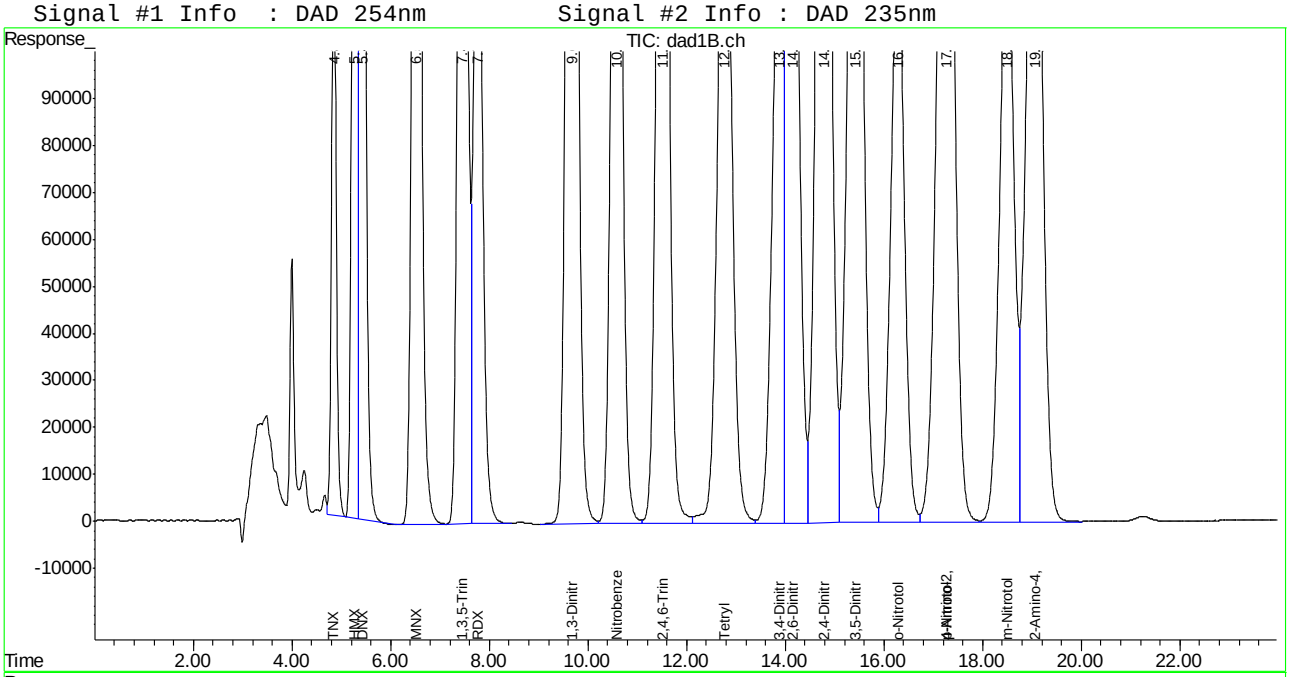
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

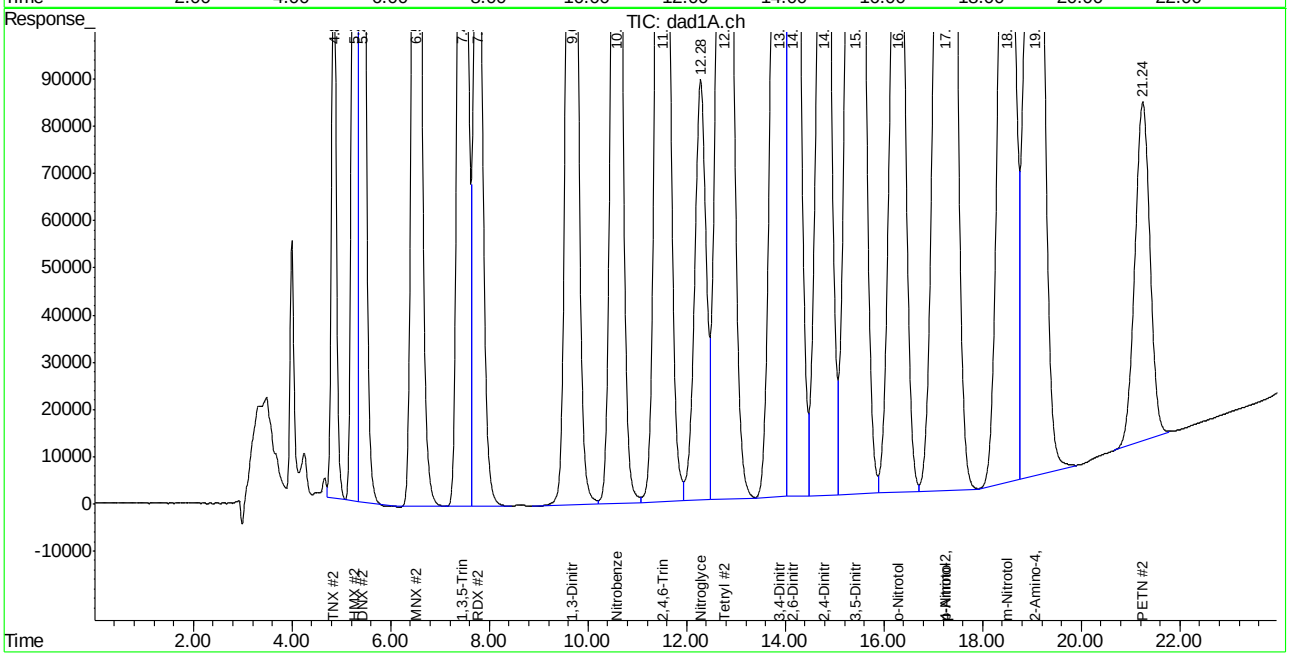
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1A.ch
Acq On : 31-Oct-2021, 14:44:42 Operator: jamesb
Sample : ic3059-5000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:14 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

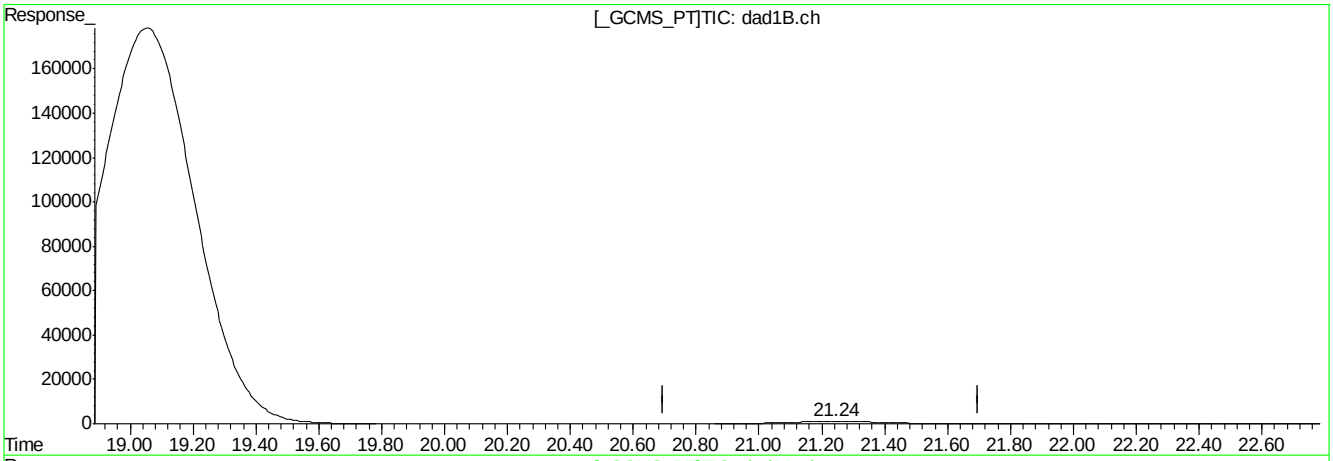
Sample Number: GGG3059-IC3059
Lab FileID: GG622651.D
Injection Time: 10/31/21 14:44
Method: SW846 8330A
Analyst approved: 11/01/21 16:29 James Boone
Supervisor approved: 11/01/21 16:46 Naresh Jiawan

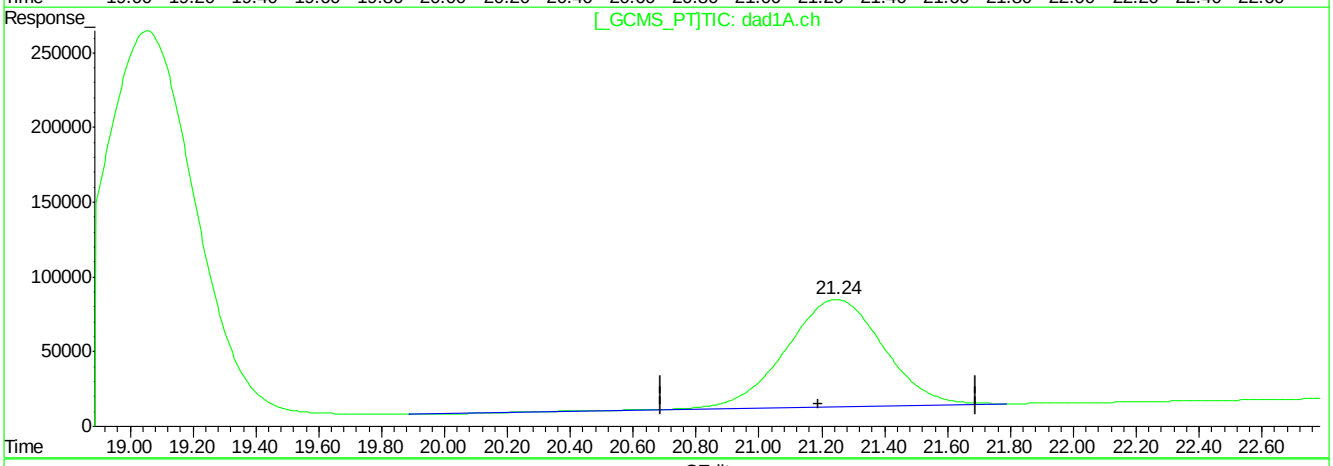
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.24	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1A.ch
Acq On : 31-Oct-2021, 14:44:42 Operator: jamesb
Sample : ic3059-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.25min 0.000ppb

response 231567

(21) PETN #2

21.25min 4641.691ppb

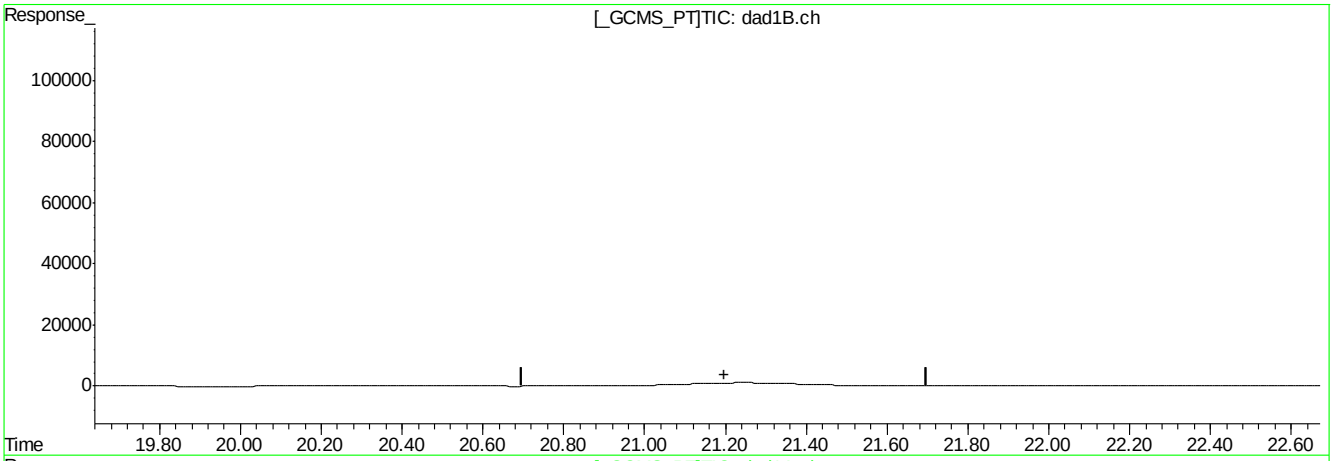
response 15394592

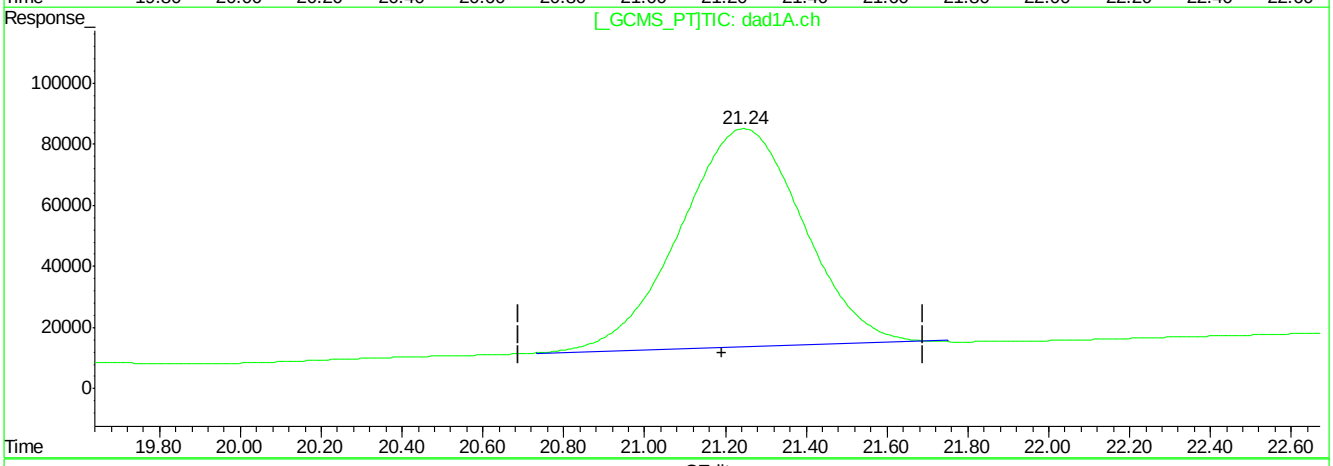
(+) = Expected Retention Time
GG622651.D GGG3047_092721.M Mon Nov 01 13:29:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1A.ch
Acq On : 31-Oct-2021, 14:44:42 Operator: jamesb
Sample : ic3059-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 13:29 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:28:55 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.24min 4558.443ppb m

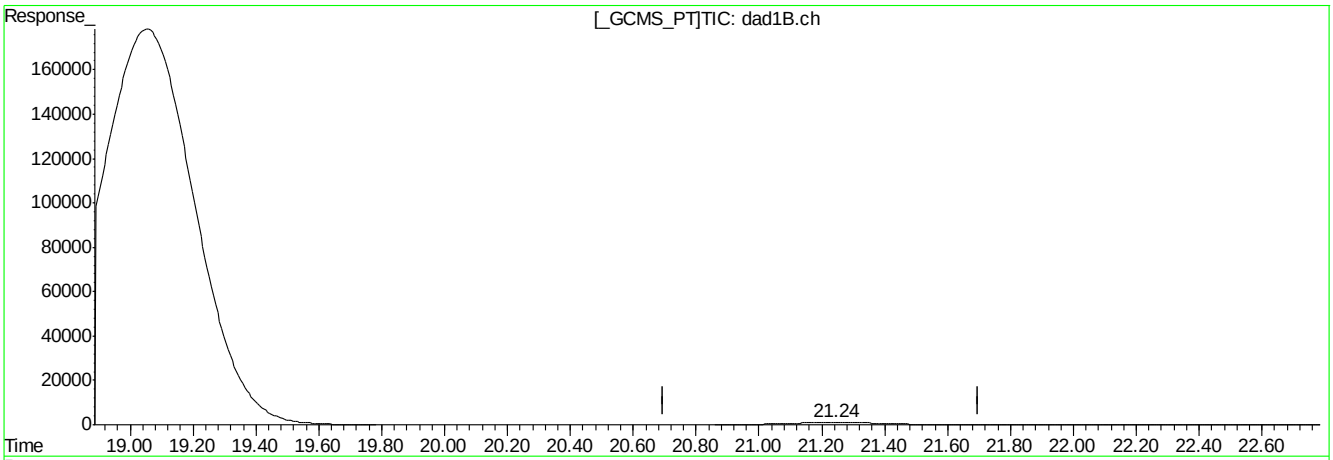
response 15118490

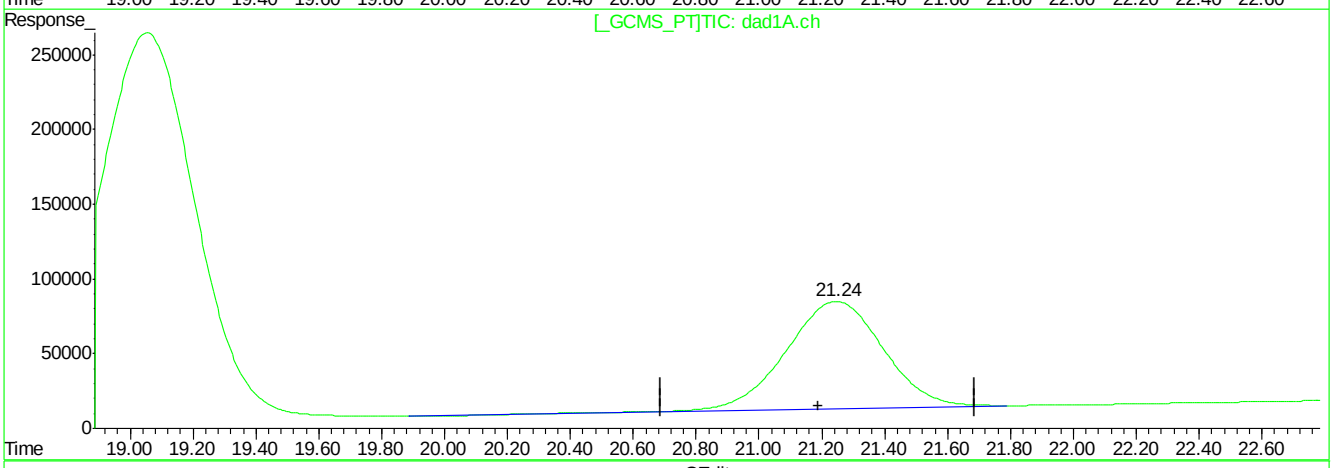
(+) = Expected Retention Time
GG622651.D GGG3047_092721.M Mon Nov 01 13:29:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1A.ch
Acq On : 31-Oct-2021, 14:44:42 Operator: jamesb
Sample : ic3059-5000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:14 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.25min 0.000ppb

response 231567

(21) PETN #2

21.25min 5077.699ppb

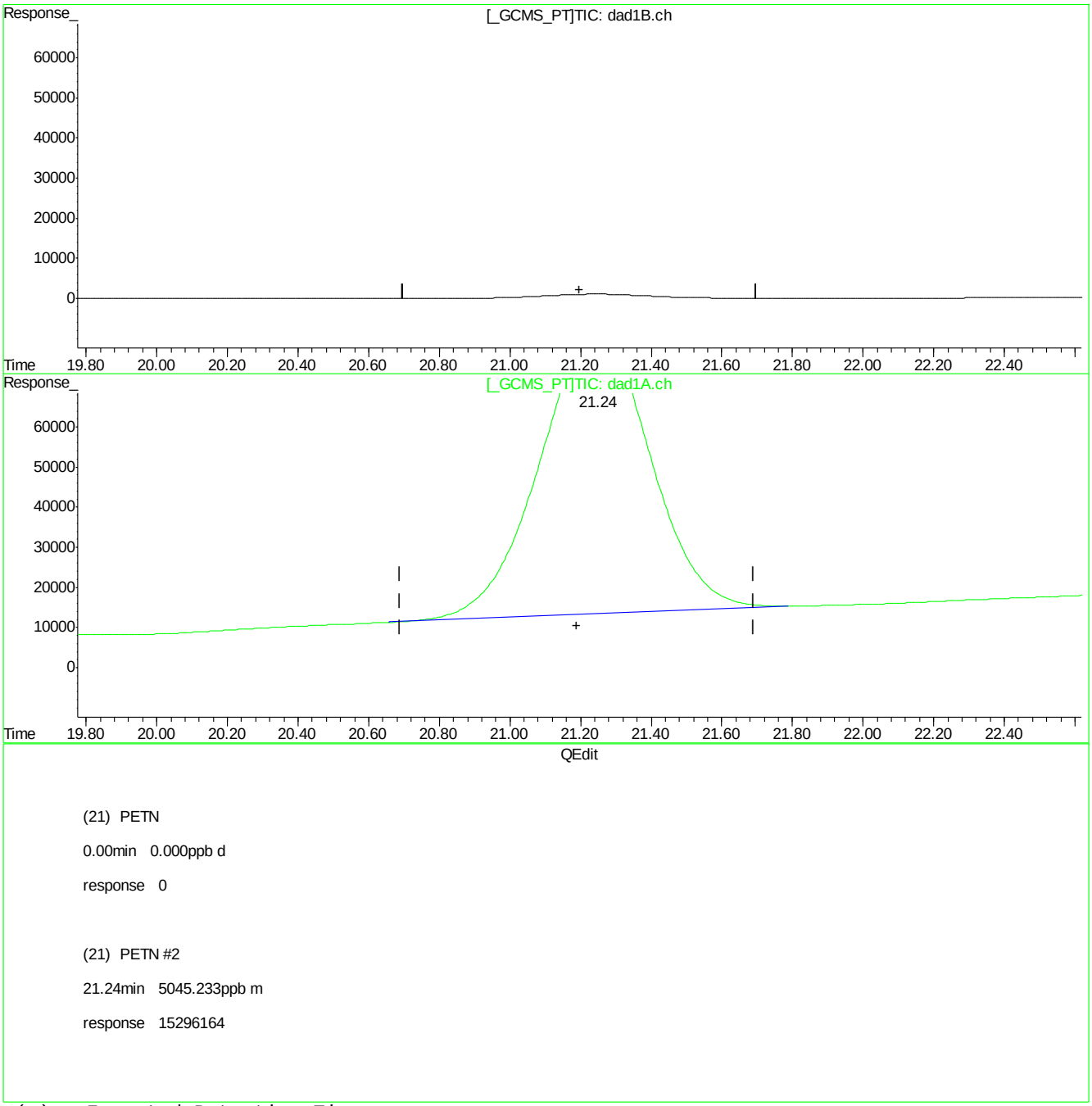
response 15394592

(+) = Expected Retention Time
GG622651.D GGG3059_103121.M Mon Nov 01 15:14:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622651.D\dad1A.ch
Acq On : 31-Oct-2021, 14:44:42 Operator: jamesb
Sample : ic3059-5000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:14 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
GG622651.D GGG3059_103121.M Mon Nov 01 15:14:26 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/01/21 16:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1A.ch
Acq On : 01-Nov-2021, 15:10:05 Operator: jamesb
Sample : icv3059-1000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 01 15:14:10 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	4.85	4.85	1860638	1860638	499.085	498.335
2)	HMX	5.27	5.27	3032929	3032929	1038.062	1038.062
3)	DNX	5.44	5.44	4218139	4218139	1103.125	1105.791
4)	MNX	6.55	6.55	7742311	7742311	1262.442	1262.442
5)	1,3,5-Trinitrobe	7.47	7.47	8847128	8847128	1061.944	1061.944
6)	RDX	7.80	7.80	4197538	4197538	1061.765	1061.765
7)	1,3-Dinitrobenze	9.70	9.70	12061152	9653577	1058.007	1097.686
8)	Nitrobenzene	10.60	10.60	7694820	7096709	1068.697	1033.197m
9)	2,4,6-Trinitroto	11.52	11.52	8393656	11678468	1046.934	1043.895
10)	Nitroglycerin	0.00	12.29	0	2875082	N.D.	996.145m#
11)	Tetryl	12.80	12.80	6752515	11936352	1061.007	1084.434
13)	2,6-Dinitrotolue	14.18	14.18	5735828	8847334	1021.400	1055.572
14)	2,4-Dinitrotolue	14.79	14.79	10904090	7927018	1060.775	1057.198
15)	3,5-Dinitroanili	15.49	15.49	9373065	15399580	1076.781	1094.229
16)	o-Nitrotoluene	16.28	16.28	4858725	7263862	1075.703	1033.940
17)	p-Nitrotoluene	17.28	17.28	10126974	18482051	2144.461	2232.330
18)	4-Amino-2,6-Dini	17.28	17.28	10126974	18482051	2144.461	2232.330
19)	m-Nitrotoluene	18.48	18.49	5323906	9168382	1053.850	1069.725
20)	2-Amino-4,6-Dini	19.09	19.09	8249341	11831163	1074.624	1110.984
21)	PETN	0.00	21.18	0	3215698	N.D. d	1060.655m

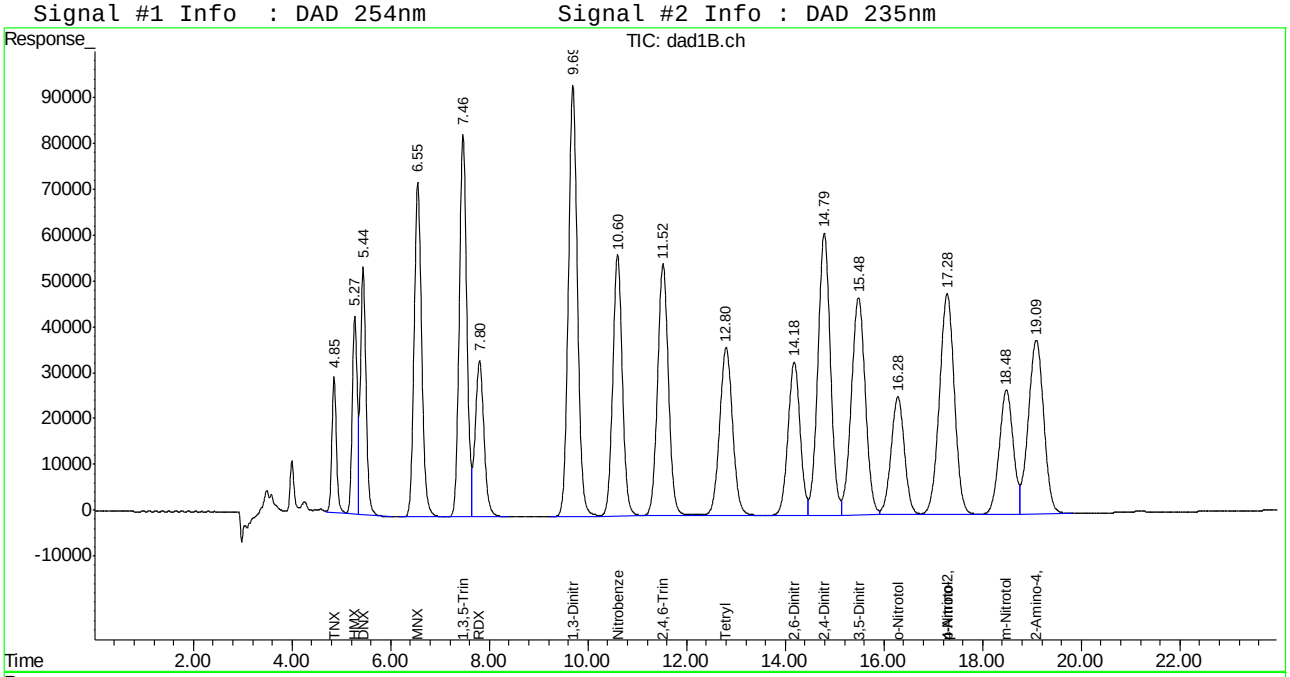
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622653.D GGG3059_103121.M Mon Nov 01 15:26:21 2021 Page 1

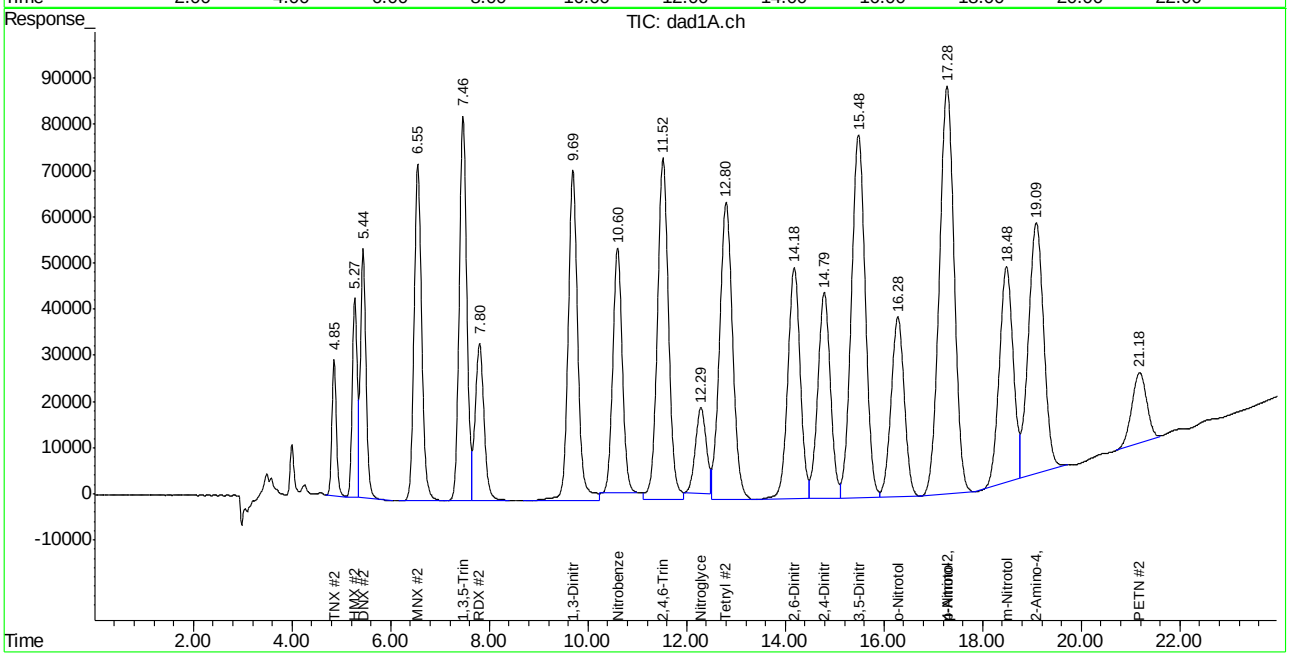
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1A.ch
Acq On : 01-Nov-2021, 15:10:05 Operator: jamesb
Sample : icv3059-1000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:25 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

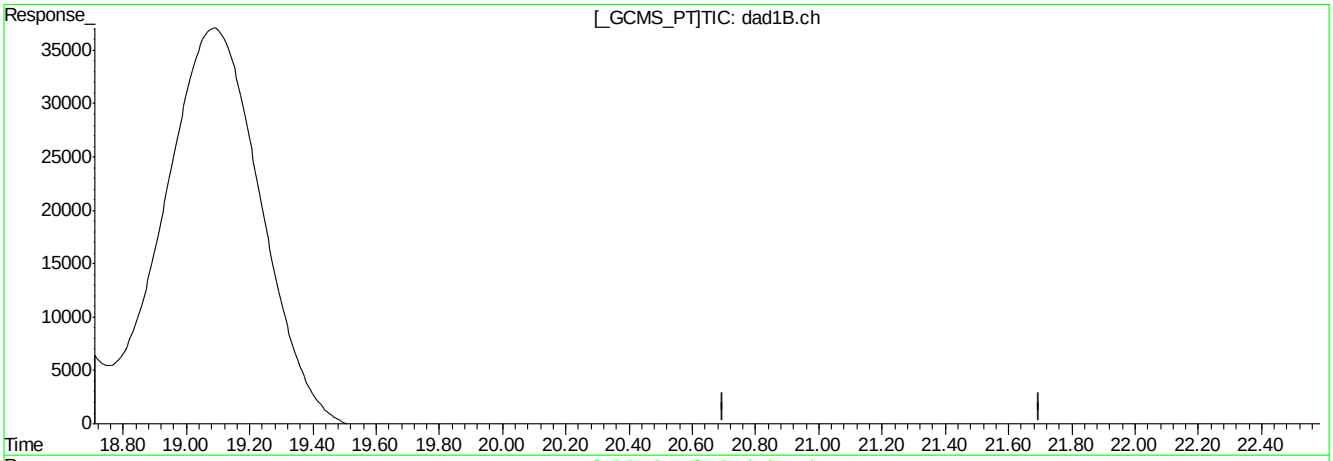
Sample Number: GGG3059-ICV3059
Lab FileID: GG622653.D
Injection Time: 11/01/21 15:10
Method: SW846 8330A
Analyst approved: 11/01/21 16:29 James Boone
Supervisor approved: 11/01/21 16:46 Naresh Jiawan

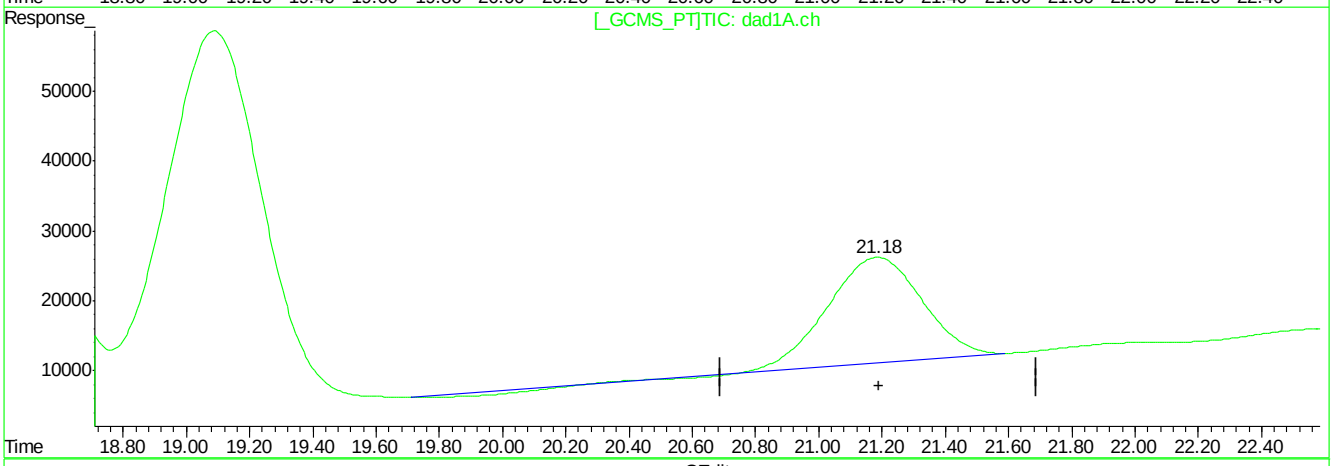
Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitrobenzene	98-95-3	2	10.60	Poor instrument integration
Nitroglycerine	55-63-0	2	12.29	Poor instrument integration
PETN	78-11-5	2	21.18	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1A.ch
Acq On : 01-Nov-2021, 15:10:05 Operator: jamesb
Sample : icv3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:08 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.20min 0.000ppb

response 73293

(21) PETN #2

21.19min 988.644ppb

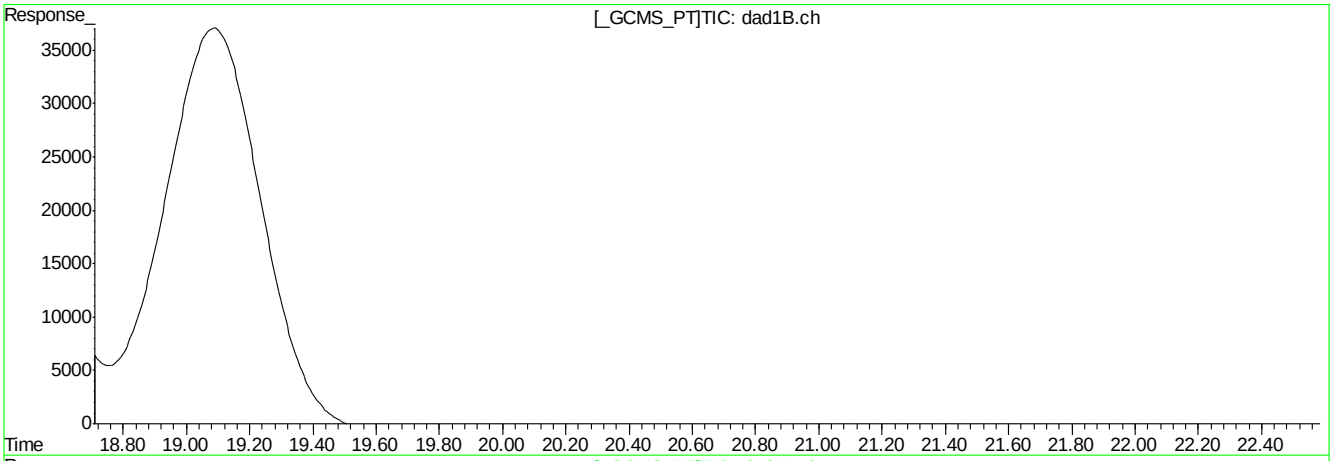
response 2997376

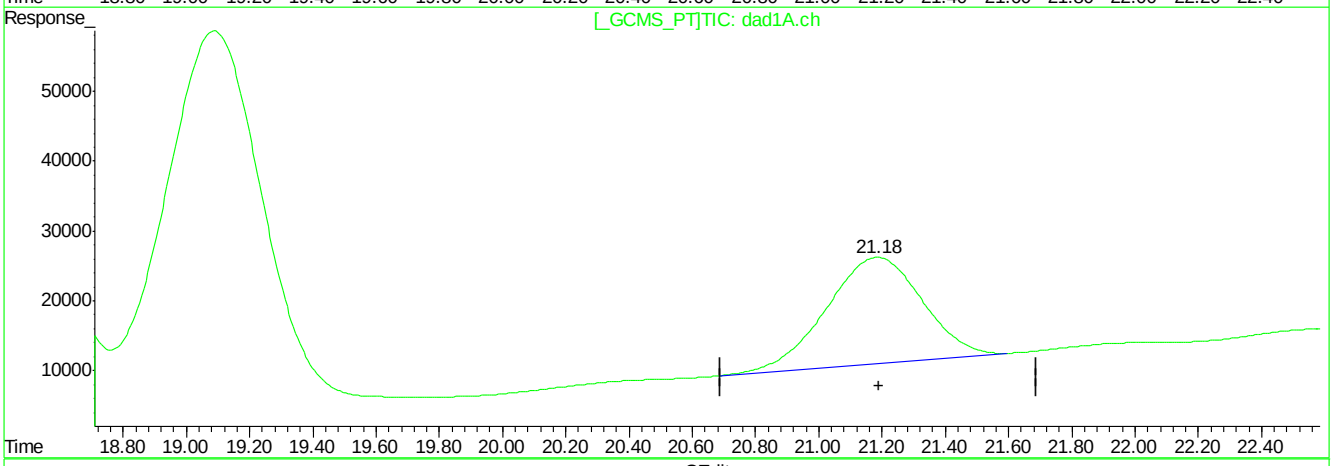
(+) = Expected Retention Time
GG622653.D GGG3047_092721.M Mon Nov 01 15:08:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1A.ch
Acq On : 01-Nov-2021, 15:10:05 Operator: jamesb
Sample : icv3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:08 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.18min 1067.025ppb m

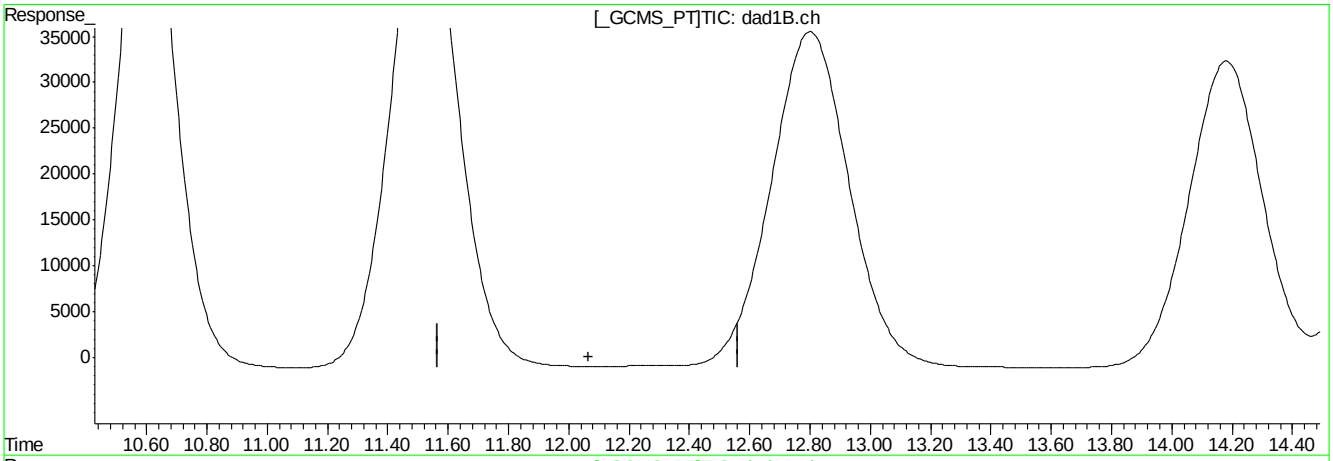
response 3235010

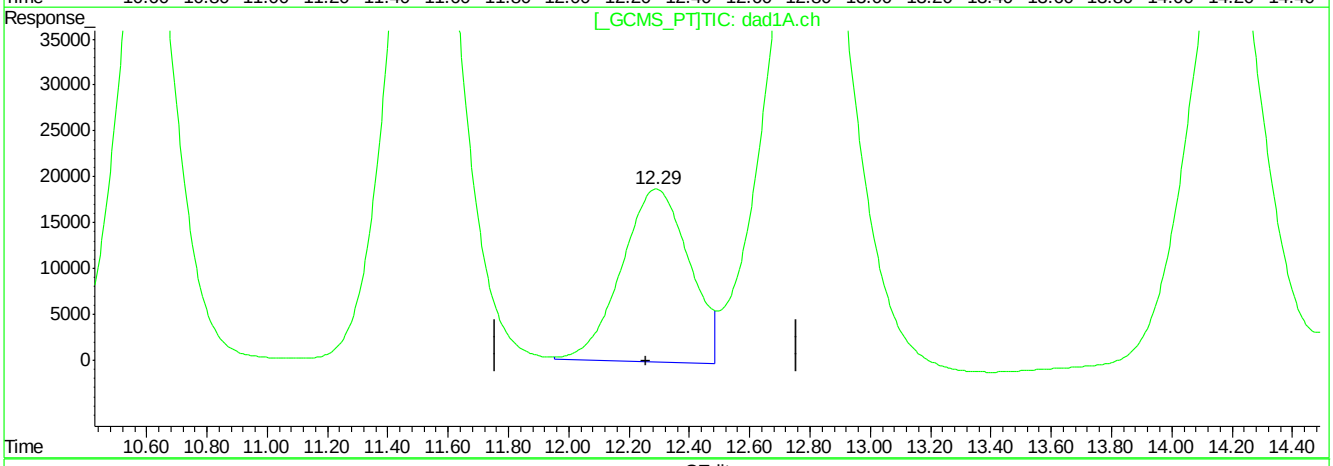
(+) = Expected Retention Time
GG622653.D GGG3047_092721.M Mon Nov 01 15:08:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1A.ch
Acq On : 01-Nov-2021, 15:10:05 Operator: jamesb
Sample : icv3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:08 2021 Quant Results File: GGG3047_092721.RES

Method : C:\MSDCHEM\1\METHODS\GGG3047_092721.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 13:46:01 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.29min 1020.387ppb m

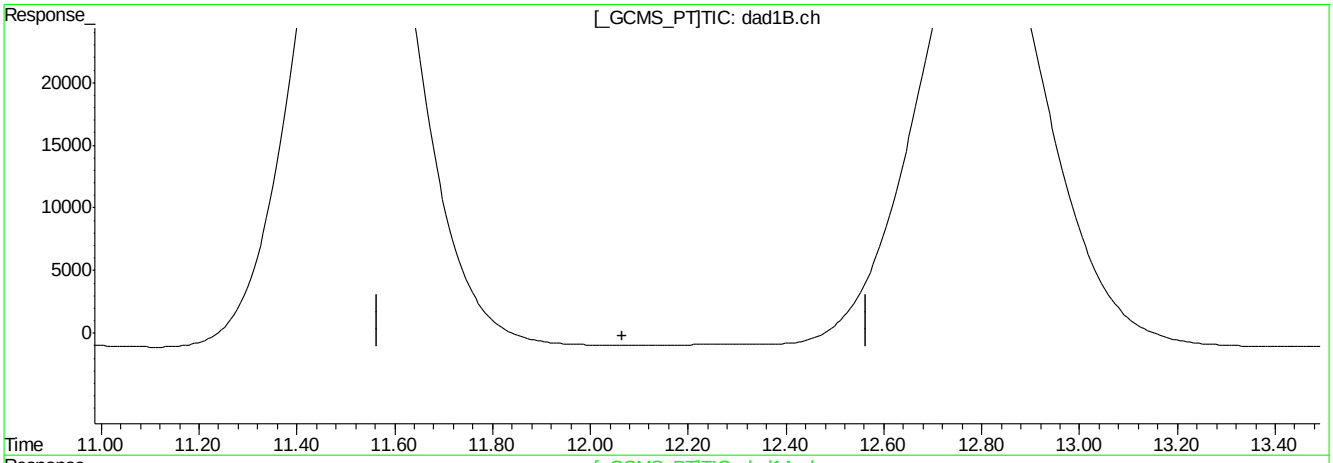
response 2945047

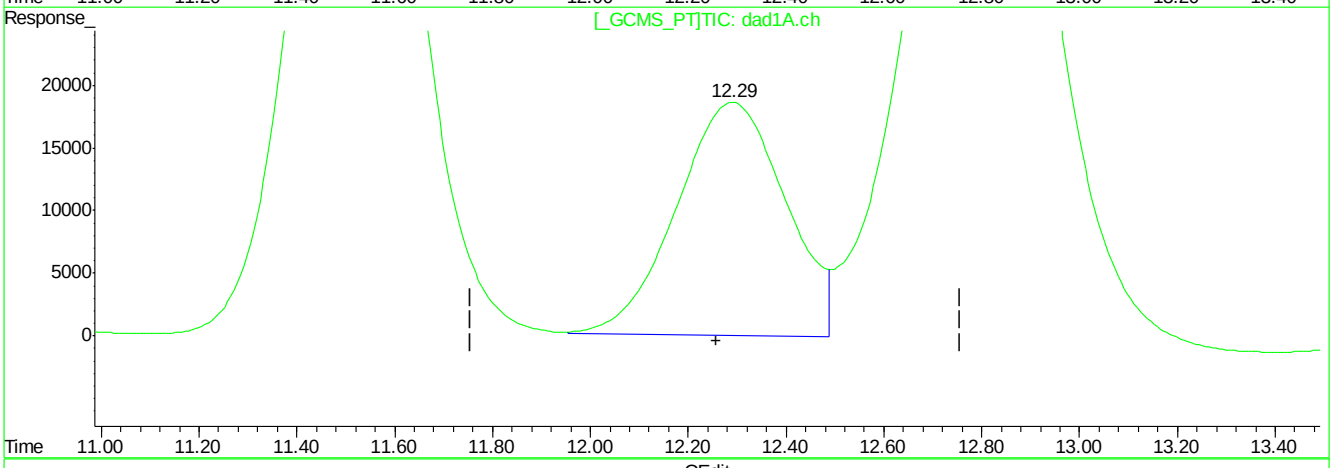
(+) = Expected Retention Time
GG622653.D GGG3047_092721.M Mon Nov 01 15:09:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3059\GG622653.D\dad1A.ch
Acq On : 01-Nov-2021, 15:10:05 Operator: jamesb
Sample : icv3059-1000 Inst : G1315B
Misc : op88045,GGG3059,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 1 15:14 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.29min 996.145ppb m

response 2875082

(+) = Expected Retention Time
GG622653.D GGG3059_103121.M Mon Nov 01 15:25:44 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 16:33

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1A.ch
Acq On : 04-Nov-2021, 14:56:28 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : op88132,GGG3062,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 05 09:16:54 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.82	13.82	4000969	8054469	973.570	965.924
	Spiked Amount 500.000	Range 70 - 136		Recovery =		194.71%#	193.18%#
	Target Compounds						
1)	TNX	4.84	4.84	1693503	1693503	466.064	465.005
2)	HMX	5.26	5.26	2818813	2818813	964.778	964.778
3)	DNX	5.42	5.42	3820022	3820022	1011.223	1004.148
4)	MNX	6.52	6.52	6937424	6937424	1131.200	1131.200
5)	1,3,5-Trinitrobe	7.44	7.44	8101902	8101902	972.493	972.493
6)	RDX	7.76	7.76	3838984	3838984	971.069	971.069
7)	1,3-Dinitrobenze	9.65	9.65	11010159	8610859	965.813	985.987
8)	Nitrobenzene	10.55	10.55	7102336	7184049	986.410	1065.082
9)	2,4,6-Trinitroto	11.47	11.47	7704766	10449883	961.010	958.529
10)	Nitroglycerin	0.00	12.24	0	2830706	N.D.	1001.981 #
11)	Tetryl	12.73	12.73	6081285	10598265	955.538	944.934
13)	2,6-Dinitrotolue	14.11	14.11	5431264	7695354	967.165	918.130
14)	2,4-Dinitrotolue	14.73	14.73	10000984	7047679	972.918	939.923
15)	3,5-Dinitroanili	15.39	15.39	8429628	13924438	968.398	989.412
16)	o-Nitrotoluene	16.22	16.22	4460078	6663637	990.644	948.495
17)	p-Nitrotoluene	17.18	17.18	9221240	17102187	1952.665	2065.665
18)	4-Amino-2,6-Dini	17.18	17.18	9221240	17102187	1952.665	2065.665
19)	m-Nitrotoluene	18.42	18.42	4911342	8493165	972.184	1004.389
20)	2-Amino-4,6-Dini	18.98	18.98	7422549	10552014	966.919	973.454
21)	PETN	0.00	21.11	0	2939581	N.D.	962.798m#

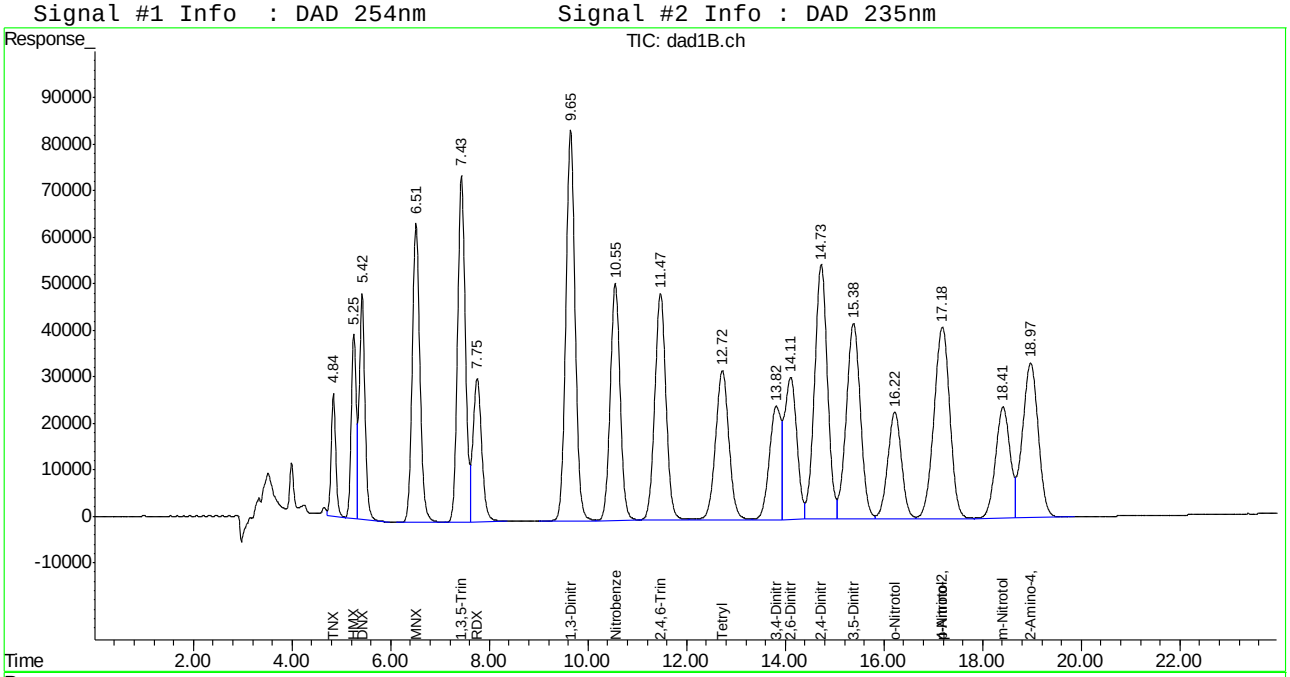
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

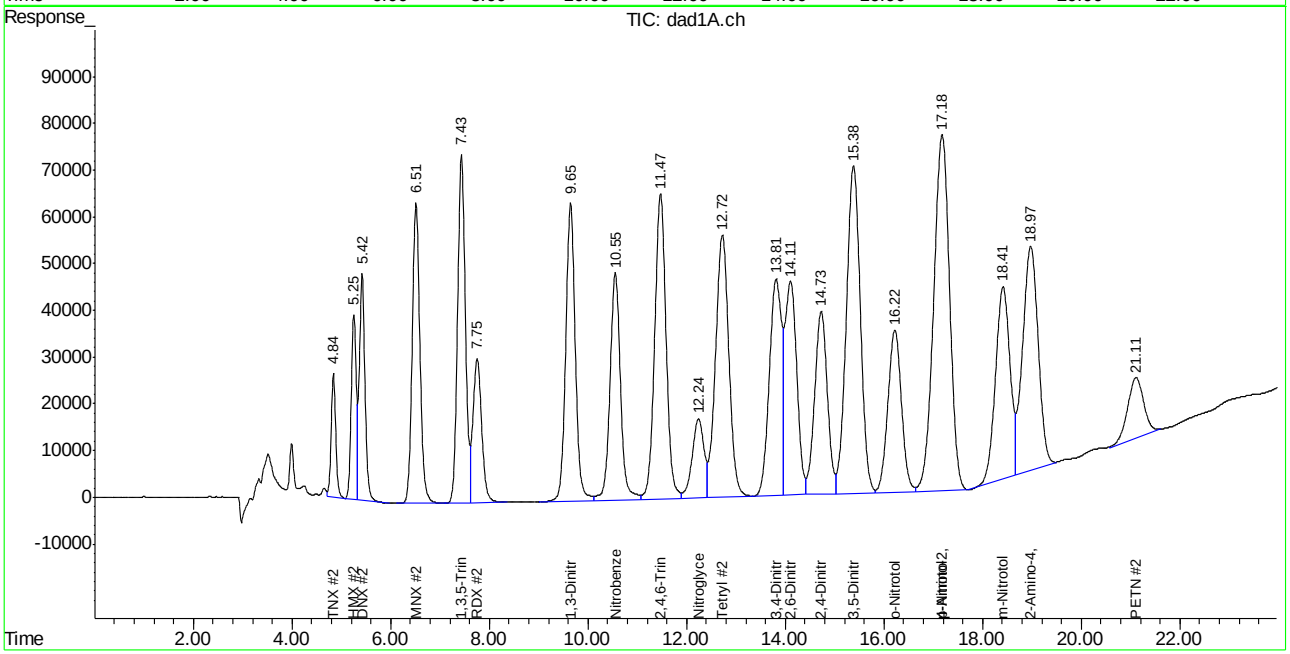
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1A.ch
Acq On : 04-Nov-2021, 14:56:28 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : op88132,GGG3062,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 8 9:29 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

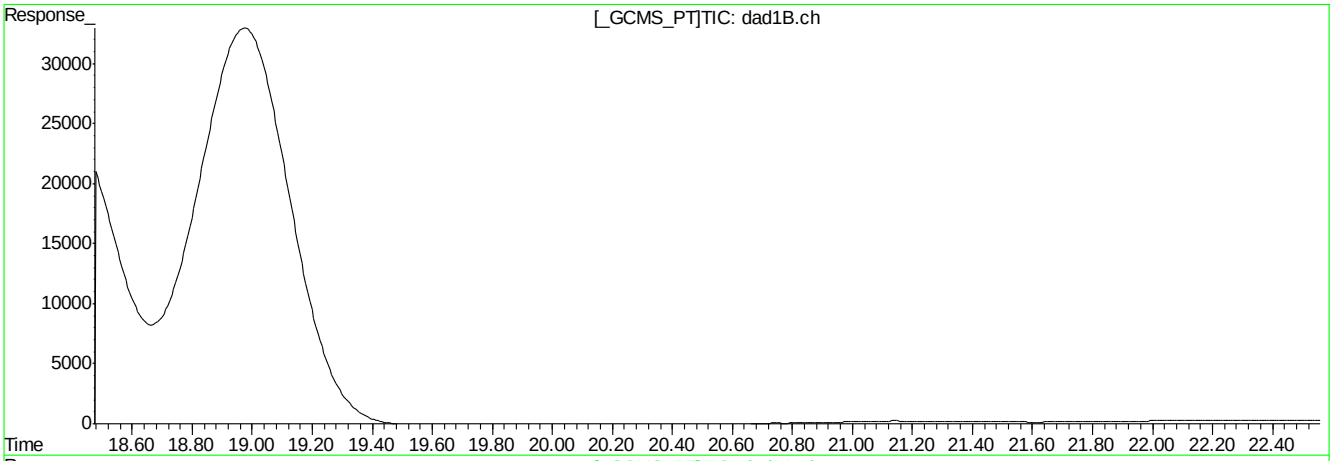
Sample Number: GGG3062-CC3059
Lab FileID: GG622714.D
Injection Time: 11/04/21 14:56
Method: SW846 8330B
Analyst approved: 11/08/21 09:34 James Boone
Supervisor approved: 11/08/21 16:33 Naresh Jiawan

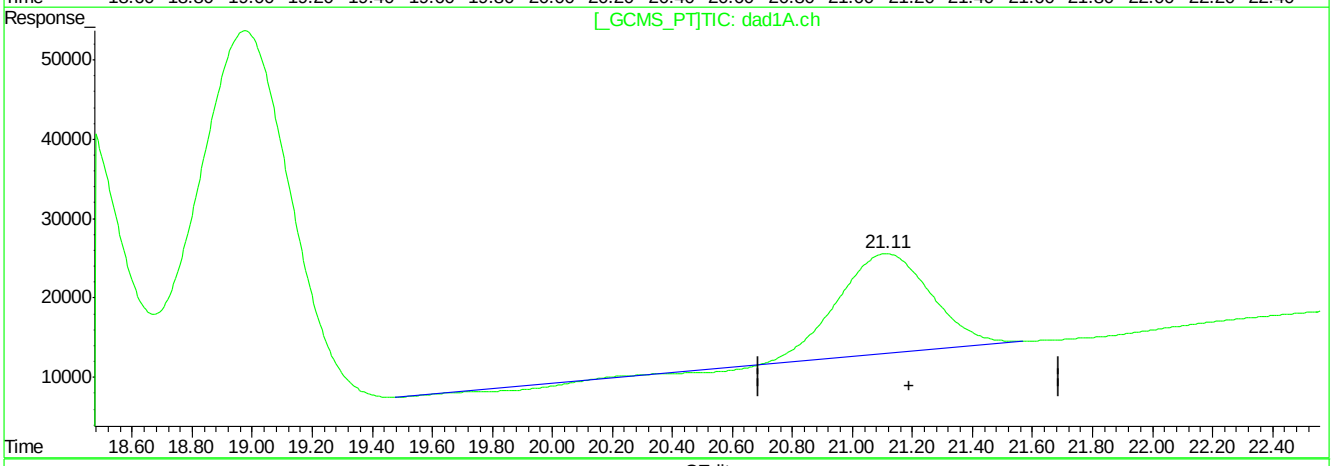
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.11	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1A.ch
Acq On : 04-Nov-2021, 14:56:28 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 5 9:16 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.11min 844.983ppb

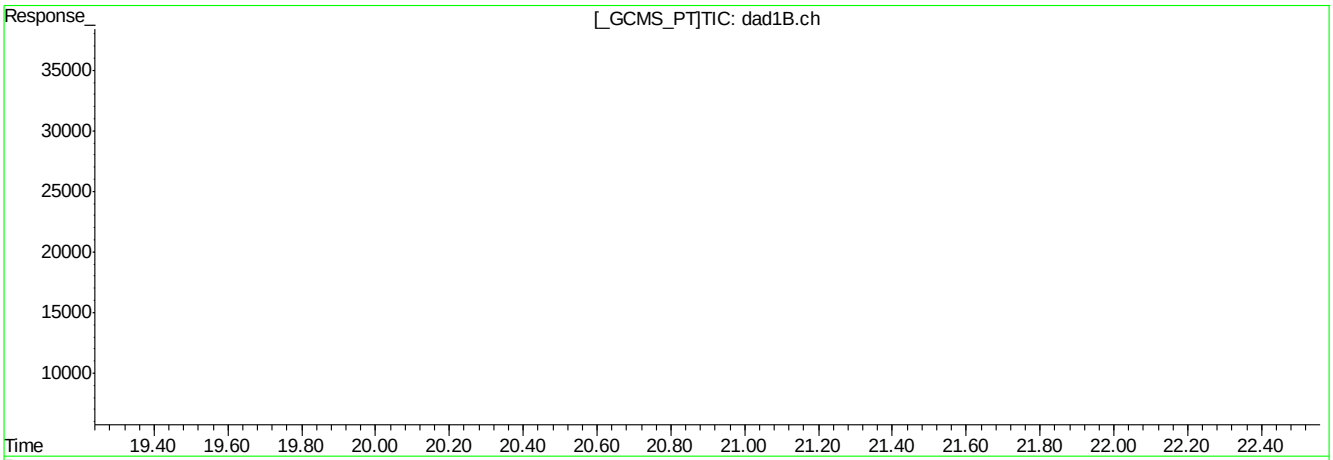
response 2579871

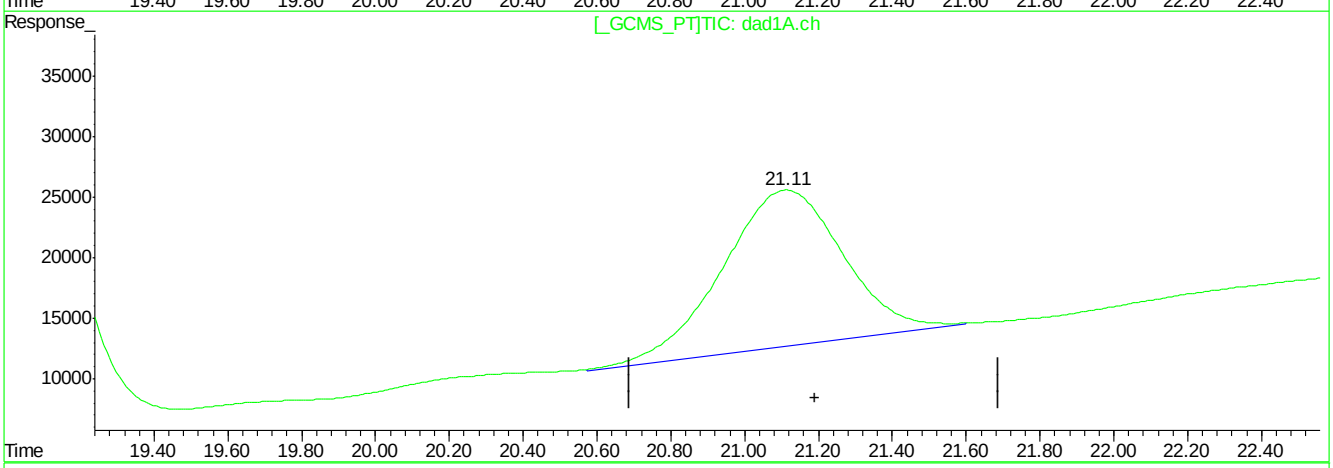
(+) = Expected Retention Time
GG622714.D GGG3059_103121.M Mon Nov 08 09:28:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622714.D\dad1A.ch
Acq On : 04-Nov-2021, 14:56:28 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 5 9:16 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.11min 962.798ppb m

response 2939581

(+) = Expected Retention Time
GG622714.D GGG3059_103121.M Mon Nov 08 09:29:04 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/08/21 16:33

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1A.ch
Acq On : 04-Nov-2021, 18:36:25 Operator: jamesb
Sample : ecc3059-1000 Inst : G1315B
Misc : op88132,GGG3062,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 05 09:17:01 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.81	13.81	3971347	8022037	966.362	962.035
	Spiked Amount 500.000	Range 70 - 136		Recovery =		193.27%#	192.41%#
	Target Compounds						
1)	TNX	4.84	4.84	1713353	1713353	471.527	470.456
2)	HMX	5.25	5.25	2834632	2834632	970.192	970.192
3)	DNX	5.42	5.42	3821016	3821016	1011.487	1004.409
4)	MNX	6.51	6.51	6921730	6921730	1128.641	1128.641
5)	1,3,5-Trinitrobe	7.44	7.44	8085138	8085138	970.480	970.480
6)	RDX	7.74	7.74	3801349	3801349	961.549	961.549
7)	1,3-Dinitrobenze	9.64	9.64	10987793	8847430	963.851	1013.076
8)	Nitrobenzene	10.55	10.55	7095168	7301565	985.414	1082.505
9)	2,4,6-Trinitroto	11.47	11.47	7708511	10893535	961.477	999.224
10)	Nitroglycerin	0.00	12.23	0	3029316	N.D.	1072.283 #
11)	Tetryl	12.71	12.71	6094211	10808617	957.569	963.688
13)	2,6-Dinitrotolue	14.10	14.10	5439757	7799456	968.677	930.550
14)	2,4-Dinitrotolue	14.72	14.72	9998232	7205662	972.651	960.993
15)	3,5-Dinitroanili	15.36	15.36	8431753	13992528	968.642	994.250
16)	o-Nitrotoluene	16.21	16.22	4473711	6757010	993.672	961.785
17)	p-Nitrotoluene	17.17	17.17	9262445	17095341	1961.391	2064.838
18)	4-Amino-2,6-Dini	17.17	17.17	9262445	17095341	1961.391	2064.838
19)	m-Nitrotoluene	18.41	18.41	4928948	8601686	975.669	1017.222
20)	2-Amino-4,6-Dini	18.95	18.95	7405198	10700506	964.659	987.152
21)	PETN	0.00	21.11	0	2831056	N.D. d	927.253m

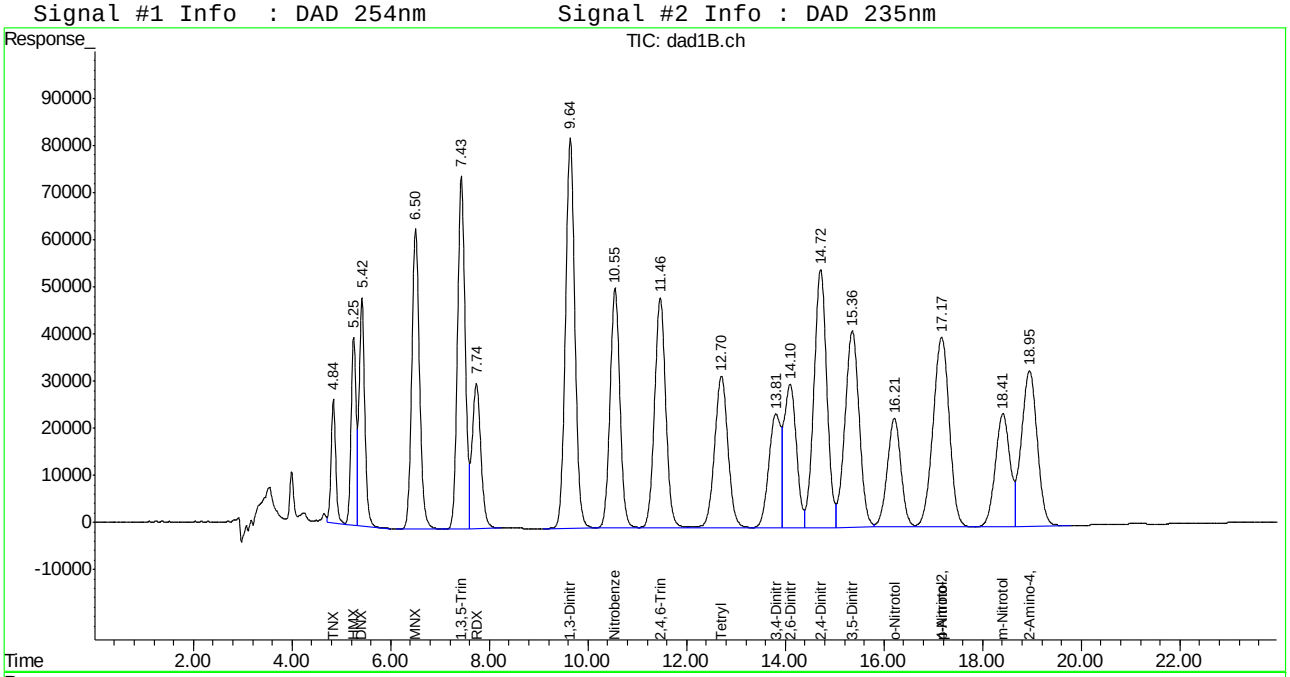
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

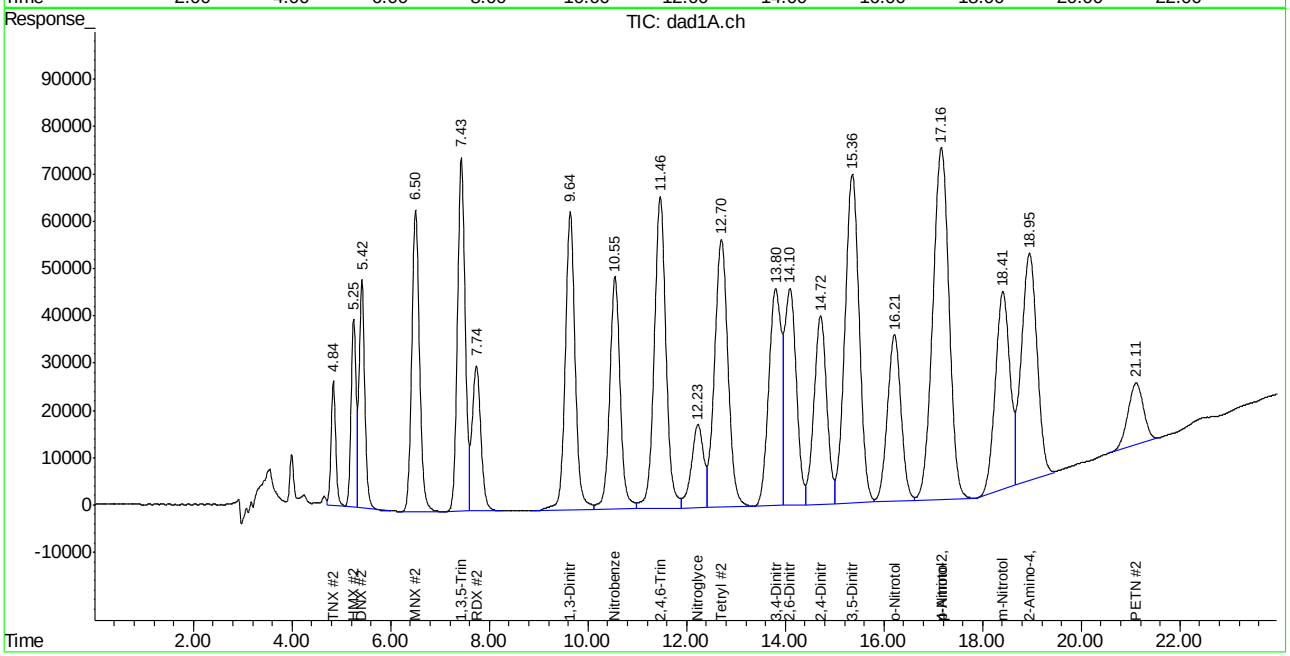
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1A.ch
Acq On : 04-Nov-2021, 18:36:25 Operator: jamesb
Sample : ecc3059-1000 Inst : G1315B
Misc : op88132,GGG3062,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 8 9:29 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

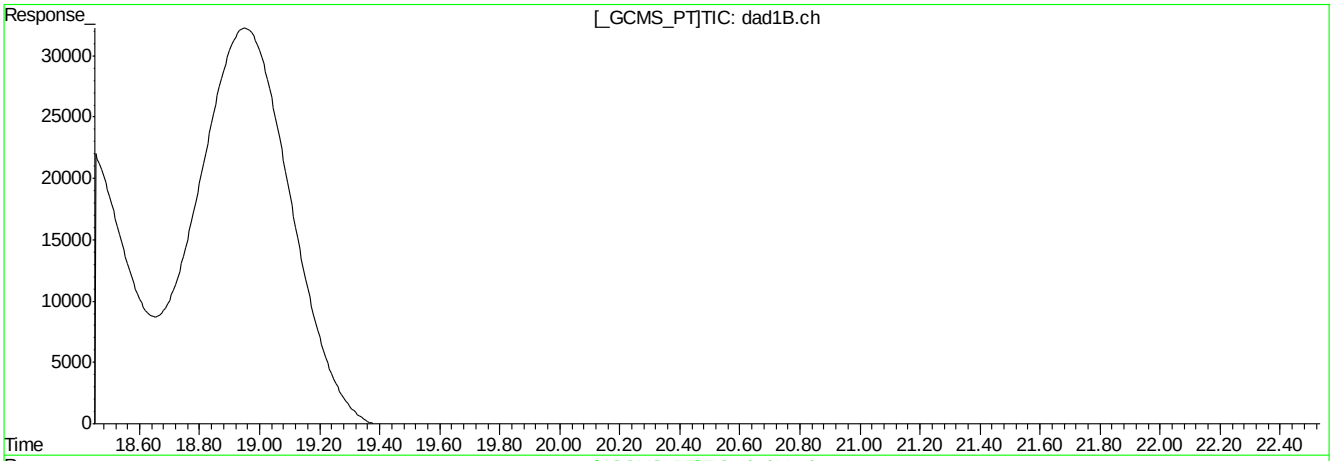
Sample Number: GGG3062-ECC3059 **Method:** SW846 8330B
Lab FileID: GG622721.D **Analyst approved:** 11/08/21 09:34 James Boone
Injection Time: 11/04/21 18:36 **Supervisor approved:** 11/08/21 16:33 Naresh Jiawan

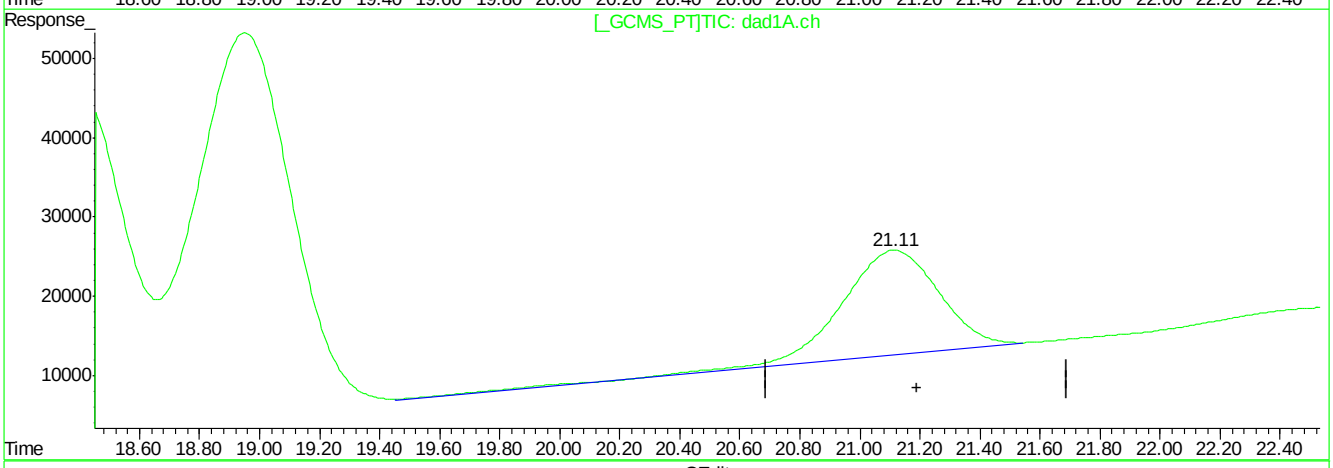
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.11	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1A.ch
Acq On : 04-Nov-2021, 18:36:25 Operator: jamesb
Sample : ecc3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 5 9:17 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.12min 964.834ppb

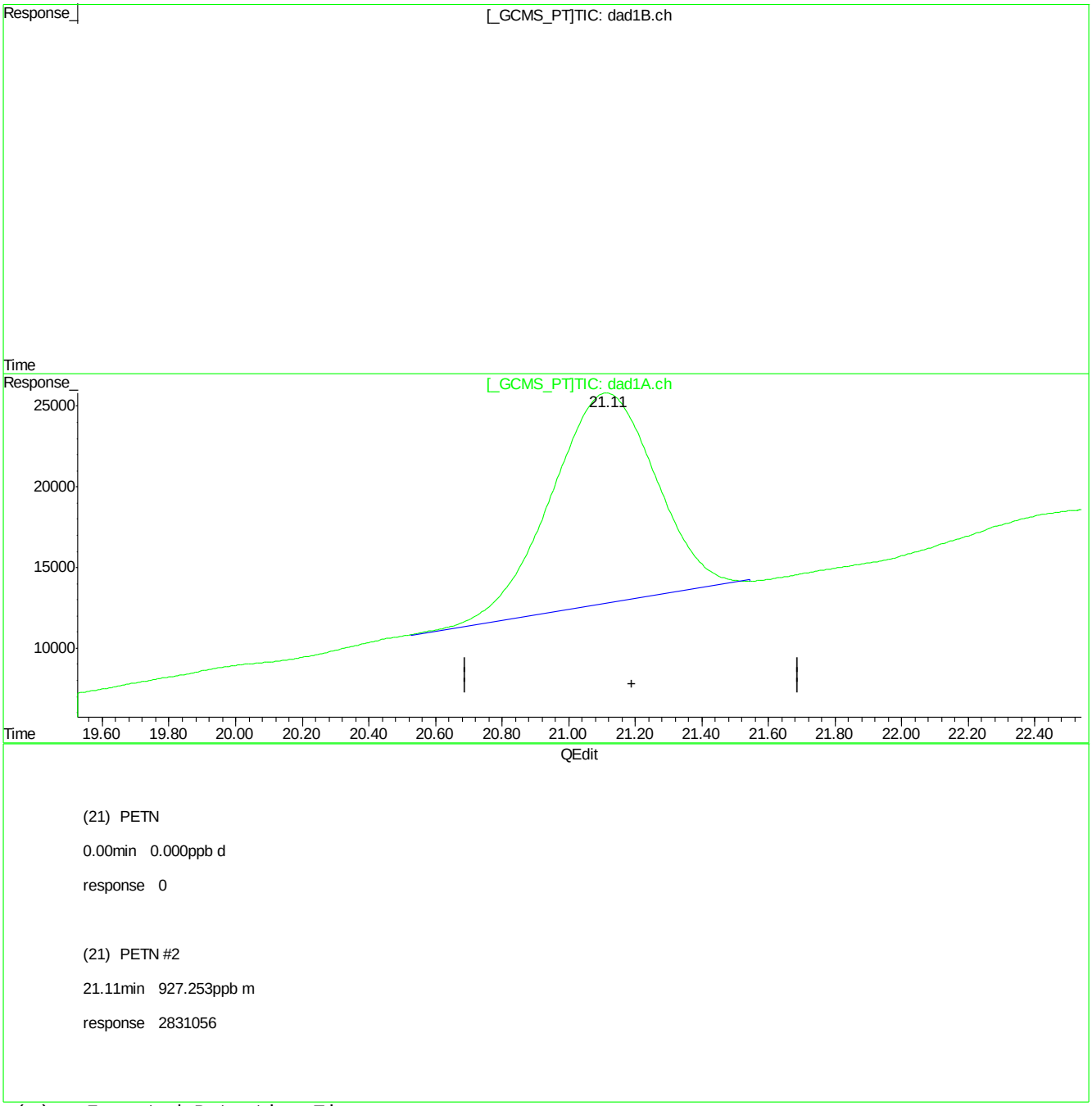
response 2945794

(+) = Expected Retention Time
GG622721.D GGG3059_103121.M Mon Nov 08 09:29:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3062\GG622721.D\dad1A.ch
Acq On : 04-Nov-2021, 18:36:25 Operator: jamesb
Sample : ecc3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 5 9:17 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.11min 927.253ppb m

response 2831056

(+) = Expected Retention Time
GG622721.D GGG3059_103121.M Mon Nov 08 09:29:51 2021

GG622721.D edits: PETN

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/08/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1A.ch
Acq On : 05-Nov-2021, 14:56:02 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : op88132,GGG3063,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 07 09:58:24 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.86	13.85	3684427	7344892	896.544	880.829
	Spiked Amount 500.000	Range 70 - 136		Recovery =		179.31%#	176.17%#
	Target Compounds						
1)	TNX	4.84	4.84	1562128	1562128	429.909	428.932
2)	HMX	5.26	5.26	2615249	2615249	895.105	895.105
3)	DNX	5.43	5.43	3558880	3558880	942.095	935.503
4)	MNX	6.53	6.53	6475790	6475790	1055.927	1055.927
5)	1,3,5-Trinitrobe	7.45	7.45	7544930	7544930	905.638	905.638
6)	RDX	7.78	7.78	3591395	3591395	908.441	908.441
7)	1,3-Dinitrobenze	9.67	9.67	10256949	7974076	899.742	913.072
8)	Nitrobenzene	10.58	10.58	6573417	6408160	912.951	950.052
9)	2,4,6-Trinitroto	11.50	11.49	7189216	10109615	896.705	927.318
10)	Nitroglycerin	0.00	12.26	0	2691948	N.D.	952.865 #
11)	Tetryl	12.76	12.76	5674177	9883782	891.570	881.231
13)	2,6-Dinitrotolue	14.15	14.14	5071946	7106192	903.180	847.837
14)	2,4-Dinitrotolue	14.77	14.77	9311752	6589079	905.868	878.761
15)	3,5-Dinitroanili	15.44	15.44	7846832	13101547	901.446	930.941
16)	o-Nitrotoluene	16.27	16.27	4128326	6354818	916.957	904.538
17)	p-Nitrotoluene	17.26	17.26	8569501	15656228	1814.655	1891.016
18)	4-Amino-2,6-Dini	17.26	17.26	8569501	15656228	1814.655	1891.016
19)	m-Nitrotoluene	18.47	18.47	4540350	7785749	898.748	920.731
20)	2-Amino-4,6-Dini	19.06	19.06	6889982	9987616	897.543	921.386
21)	PETN	0.00	21.15	0	2823642	N.D. d	924.825m

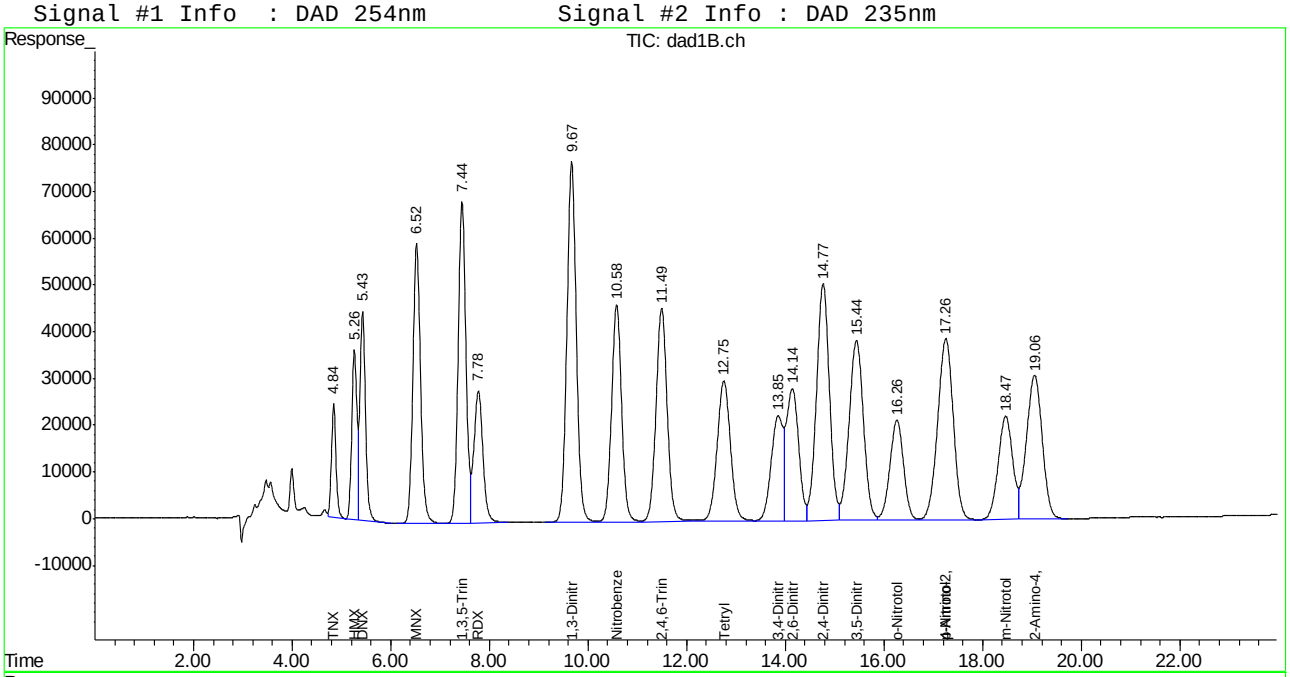
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622723.D GGG3059_103121.M Mon Nov 08 14:47:51 2021 Page 1

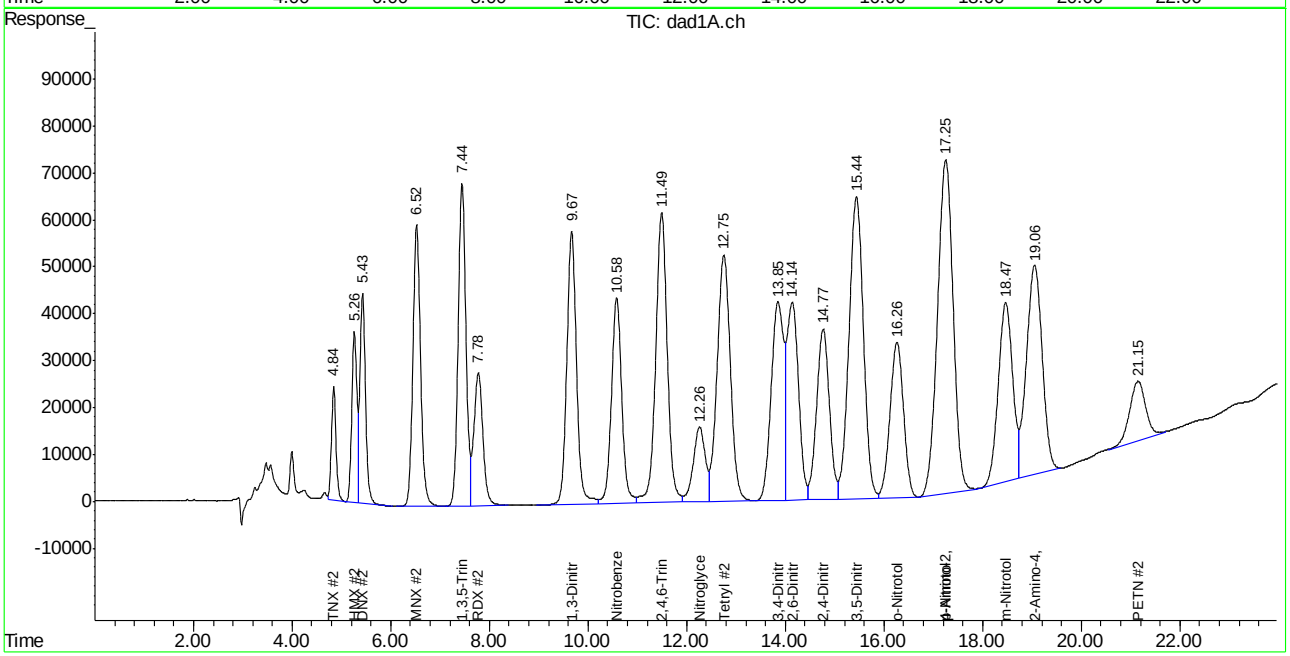
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1A.ch
Acq On : 05-Nov-2021, 14:56:02 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : op88132,GGG3063,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:59 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

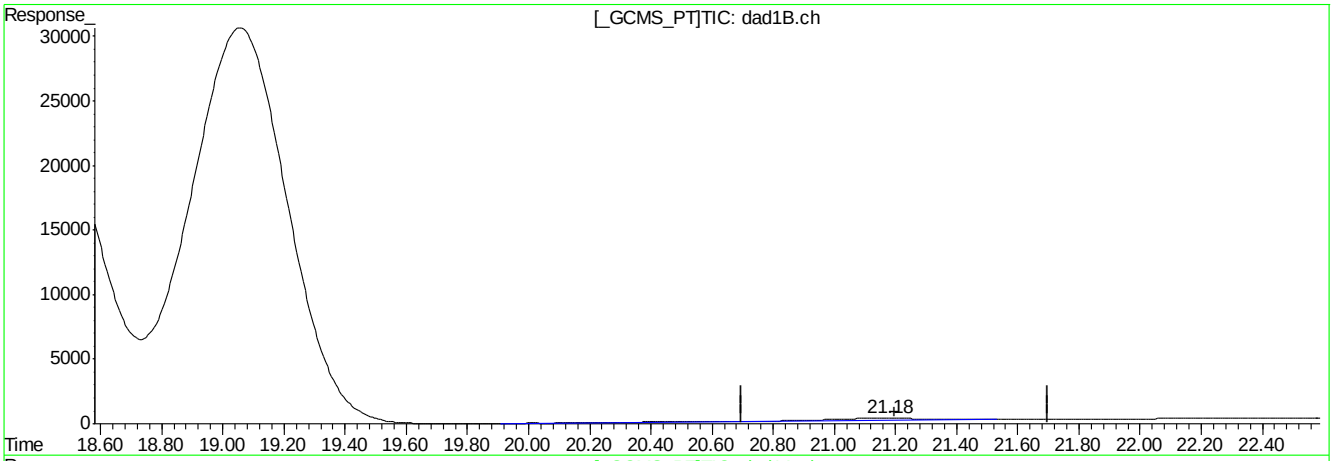
Sample Number: GGG3063-CC3059
Lab FileID: GG622723.D
Injection Time: 11/05/21 14:56
Method: SW846 8330B
Analyst approved: 11/07/21 10:05 James Boone
Supervisor approved: 11/08/21 16:38 Naresh Jiawan

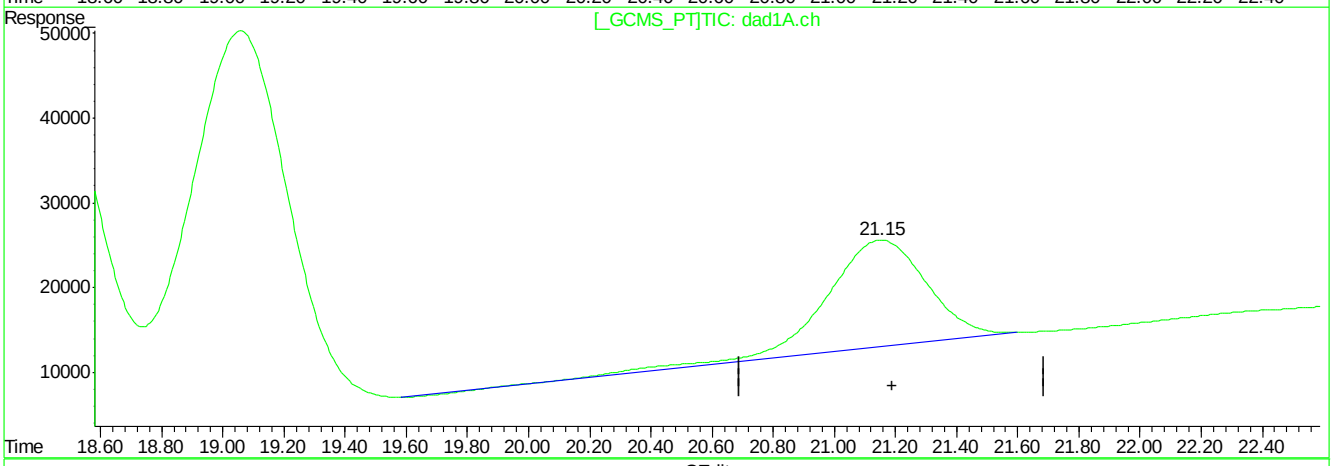
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.15	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1A.ch
Acq On : 05-Nov-2021, 14:56:02 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.18min 0.000ppb

response 47544

(21) PETN #2

21.15min 939.392ppb

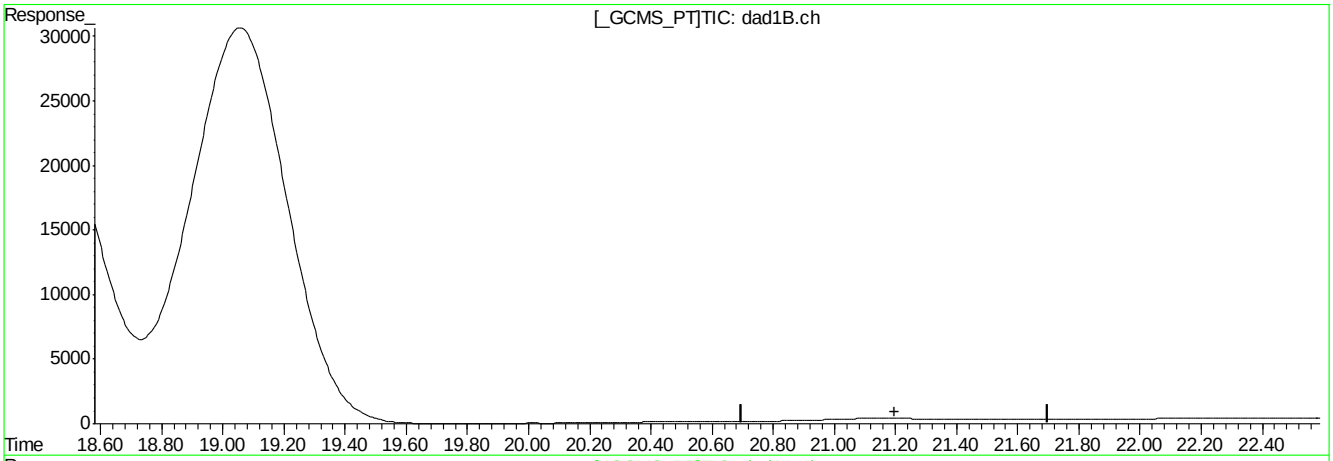
response 2868118

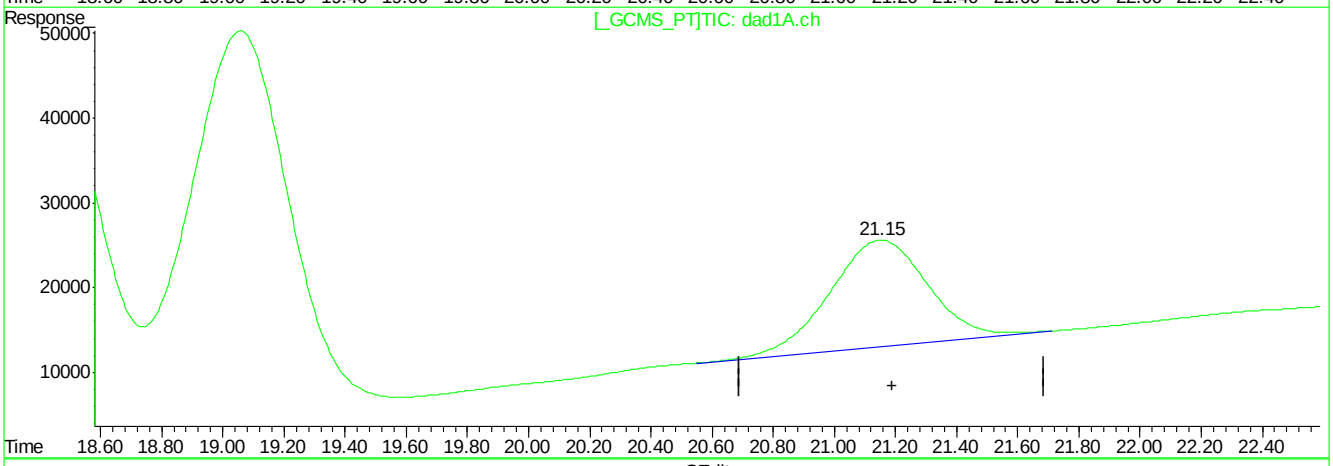
(+) = Expected Retention Time
GG622723.D GGG3059_103121.M Sun Nov 07 09:59:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622723.D\dad1A.ch
Acq On : 05-Nov-2021, 14:56:02 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.15min 924.825ppb m

response 2823642

(+) = Expected Retention Time
GG622723.D GGG3059_103121.M Sun Nov 07 09:59:24 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622735.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622735.D\dad1A.ch
Acq On : 05-Nov-2021, 21:13:09 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : op88132,GGG3063,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 07 09:58:36 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	3682236	7441407	896.011	892.403
	Spiked Amount 500.000	Range 70 - 136		Recovery =		179.20%#	178.48%#
	Target Compounds						
1)	TNX	4.85	4.85	1565795	1565795	430.918	429.939
2)	HMX	5.27	5.27	2603461	2603461	891.070	891.070
3)	DNX	5.43	5.43	3461449	3461449	916.303	909.891
4)	MNX	6.52	6.52	6445935	6445935	1051.059	1051.059
5)	1,3,5-Trinitrobe	7.45	7.45	7534461	7534461	904.381	904.381
6)	RDX	7.77	7.77	3582226	3582226	906.122	906.122
7)	1,3-Dinitrobenze	9.66	9.66	10212553	7870476	895.847	901.210
8)	Nitrobenzene	10.57	10.57	6513054	6251705	904.567	926.856
9)	2,4,6-Trinitroto	11.49	11.49	7094603	9595646	884.904	880.173
10)	Nitroglycerin	0.00	12.25	0	2495375	N.D.	883.284 #
11)	Tetryl	12.74	12.74	5578773	9709693	876.580	865.709
13)	2,6-Dinitrotolue	14.12	14.11	5013141	6946805	892.708	828.820
14)	2,4-Dinitrotolue	14.74	14.74	9245963	6227793	899.468	830.578
15)	3,5-Dinitroanili	15.39	15.39	7805299	12880316	896.675	915.221
16)	o-Nitrotoluene	16.24	16.24	4076719	5728493	905.494	815.387
17)	p-Nitrotoluene	17.20	17.20	8522639	15441794	1804.732	1865.116
18)	4-Amino-2,6-Dini	17.20	17.20	8522639	15441794	1804.732	1865.116
19)	m-Nitrotoluene	18.44	18.44	4548812	7875251	900.423	931.315
20)	2-Amino-4,6-Dini	18.99	18.99	6862627	9647450	893.980	890.005
21)	PETN	0.00	21.14	0	2598372	N.D.	851.043m#

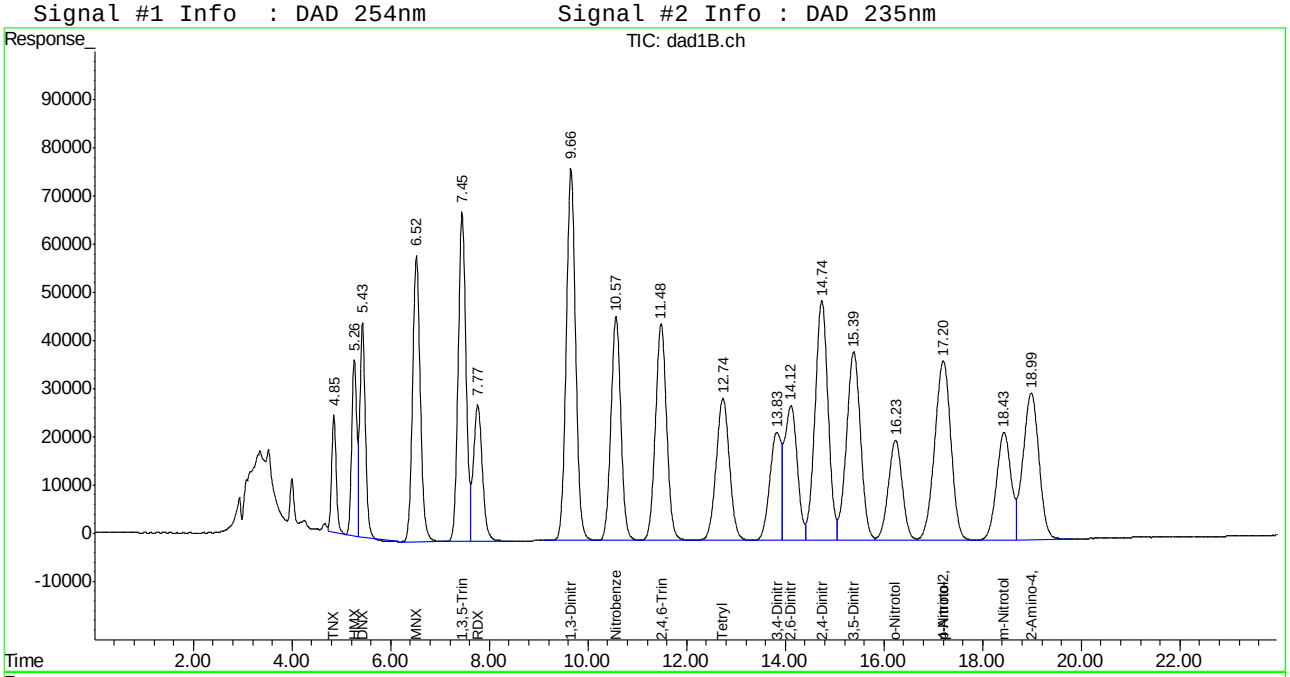
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

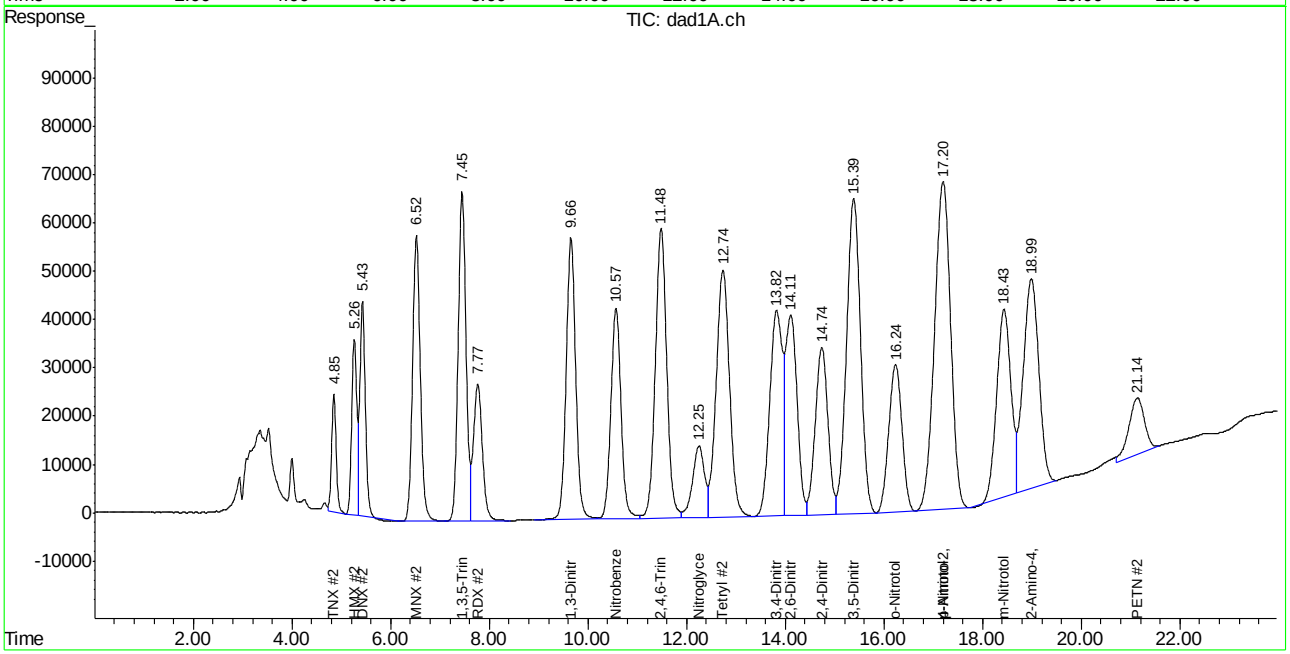
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622735.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622735.D\dad1A.ch
Acq On : 05-Nov-2021, 21:13:09 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : op88132,GGG3063,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 10:01 2021 Quant Results File: GGG3059_103121.RES

Quant Method : C:\MSDCHEM\1...\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

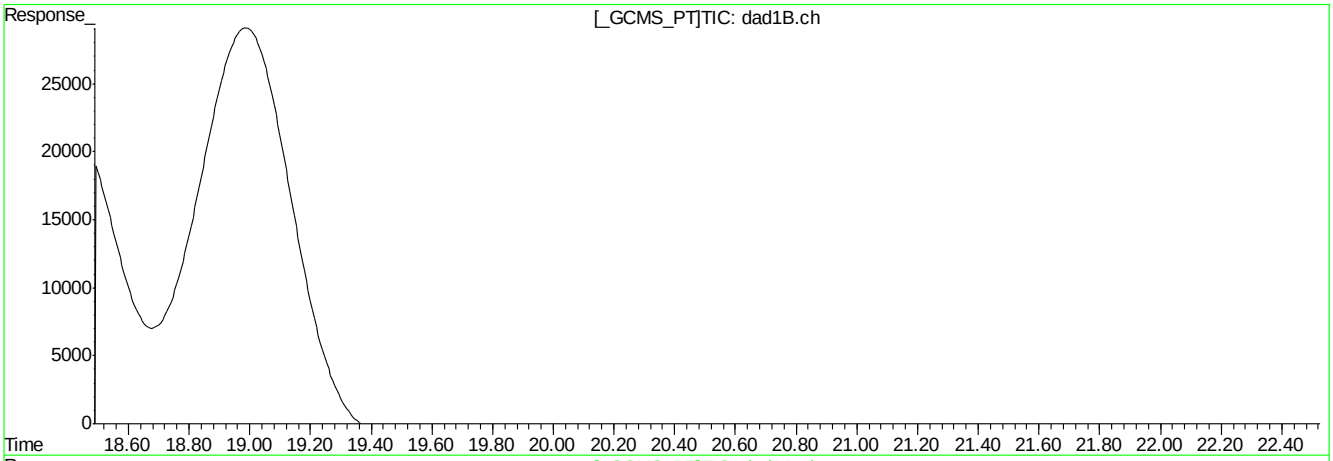
Sample Number: GGG3063-CC3059
Lab FileID: GG622735.D
Injection Time: 11/05/21 21:13
Method: SW846 8330B
Analyst approved: 11/07/21 10:05 James Boone
Supervisor approved: 11/08/21 16:38 Naresh Jiawan

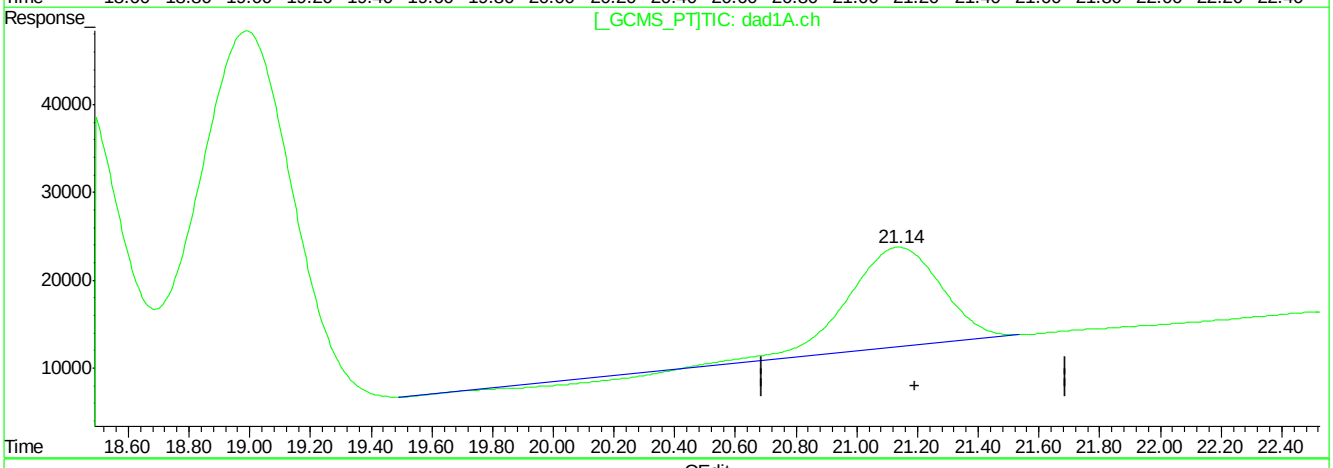
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.14	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3063\GG622735.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3063\GG622735.D\dad1A.ch
Acq On : 05-Nov-2021, 21:13:09 Operator: jamesb
Sample : cc3059-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 7 9:58 2021 Quant Results File: GGG3059_103121.RES

Method : C:\MSDCHEM\1\METHODS\GGG3059_103121.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 01 15:25:01 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.14min 758.845ppb

response 2316877

(+) = Expected Retention Time
GG622735.D GGG3059_103121.M Sun Nov 07 10:00:51 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/08/21 10:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391630.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391630.D\dad1A.ch
Acq On : 04-Nov-2021, 14:33:16 Operator: jamesb
Sample : ic2490-20 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 06 12:08:24 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.20	11.26	39244	47929	17.228m	11.854m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	3.45%#	2.37%#
	Target Compounds						
1)	TNX	1.32	1.32	6594	16087	4.786m	6.986m#
2)	HMX	1.45	1.45	45743	207076	27.901m	48.854 #
3)	DNX	1.68	1.68	35836	81089	18.296m	25.212m
4)	MNX	2.27	2.26	51306	77942	18.716	18.478m
5)	RDX	2.88	2.88	32281	47781	17.596m	16.057
6)	1,3,5-Trinitrobe	4.68	4.68	61519	112783	15.560m	14.597m
7)	1,3-Dinitrobenze	5.86	5.87	79785	49467	15.454m	12.858m
8)	3,5-Dinitroanili	6.22	6.21	70109	116895	17.350m	16.242m
9)	Nitrobenzene	7.46	7.43	45392	61228	14.651m	20.344m
10)	Nitroglycerin	0.00	9.00	0	24764	N.D.	18.856m#
11)	Tetryl	9.52	9.53	43181	70681	15.832m	16.151m
12)	2,4,6-Trinitroto	9.90	9.91	58538	65315	15.068m	14.817m
13)	2-Amino-4,6-Dini	10.26	10.23	69558	73066	19.357m	16.040m
14)	4-Amino-2,6-Dini	10.75	10.76	53099	58181	20.444m	11.910m#
16)	2,4-Dinitrotolue	11.88	12.14	73141	49304	16.011m	16.043m
17)	2,6-Dinitrotolue	12.34	12.44	48274	40113	17.020m	12.096m
18)	o-Nitrotoluene	15.39	15.66	42146	54225	18.541m	19.985m
19)	p-Nitrotoluene	16.00	15.95	56744	26483	16.649m	9.319m#
20)	m-Nitrotoluene	16.84	16.84	45815	48530	14.375m	13.361m
21)	PETN	0.00	18.61	0	25829	N.D.	19.099m#

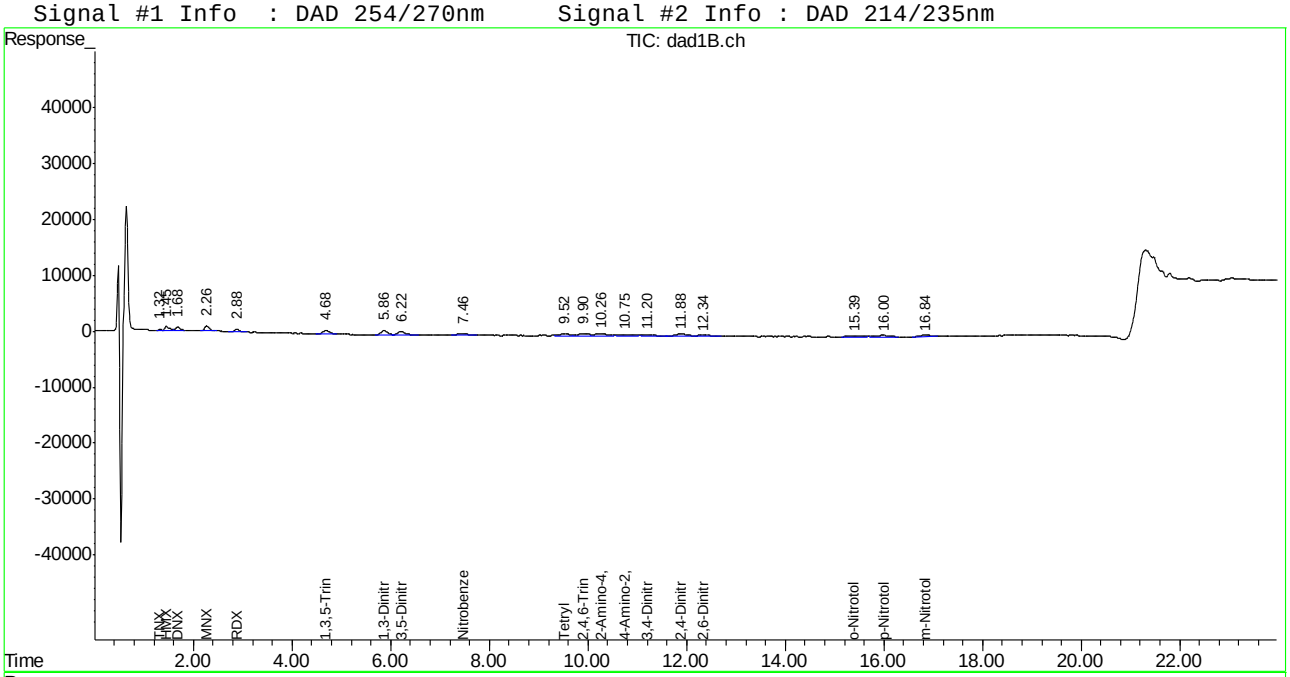
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

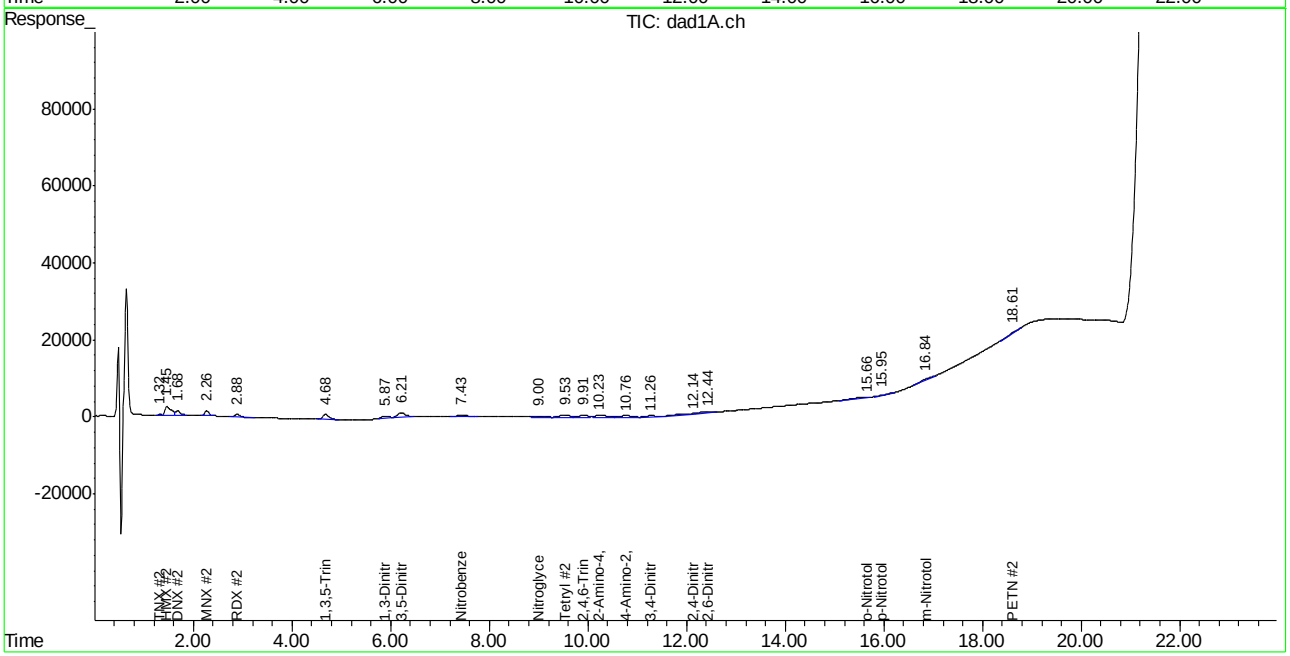
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391630.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391630.D\dad1A.ch
Acq On : 04-Nov-2021, 14:33:16 Operator: jamesb
Sample : ic2490-20 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:29 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

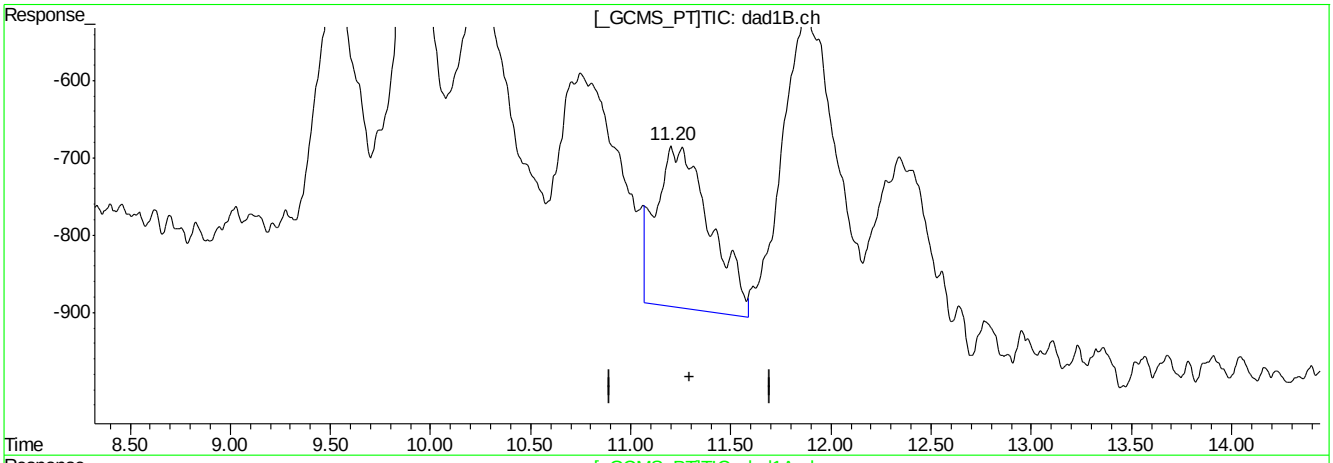
Sample Number: GPP2490-IC2490 **Method:** SW846 8330B
Lab FileID: PP391630.D **Analyst approved:** 11/06/21 13:36 James Boone
Injection Time: 11/04/21 14:33 **Supervisor approved:** 11/08/21 10:18 Naresh Jiawan

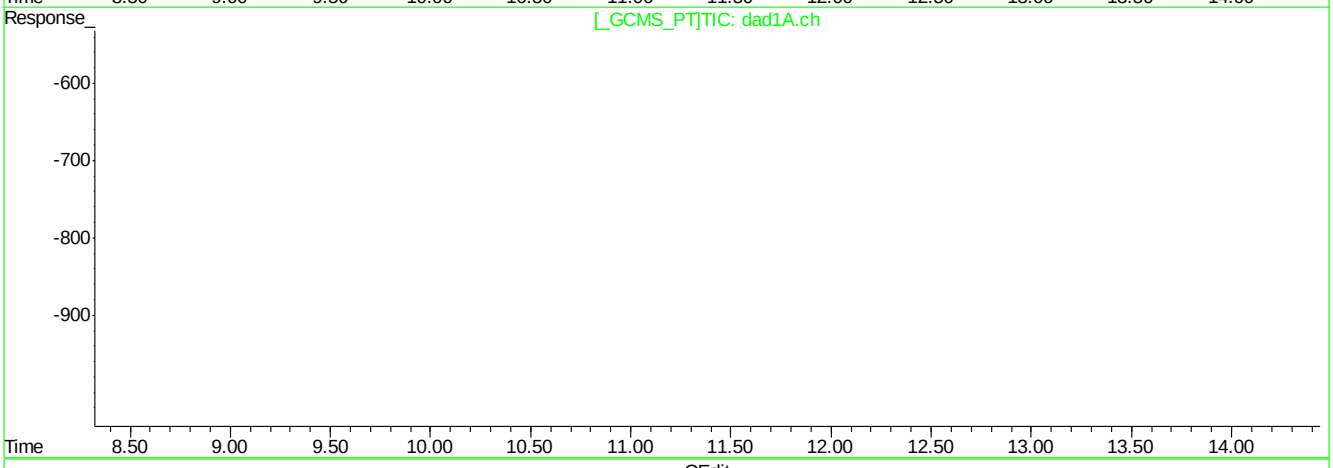
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.32	Poor instrument integration
TNX		2	1.32	Poor instrument integration
HMX	2691-41-0	1	1.45	Poor instrument integration
DNX		1	1.68	Poor instrument integration
DNX		2	1.68	Poor instrument integration
MNX		2	2.26	Poor instrument integration
RDX	121-82-4	1	2.88	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.68	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.68	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	5.86	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.87	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.21	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.22	Poor instrument integration
Nitrobenzene	98-95-3	2	7.43	Poor instrument integration
Nitrobenzene	98-95-3	1	7.46	Poor instrument integration
Nitroglycerine	55-63-0	2	9.00	Poor instrument integration
Tetryl	479-45-8	1	9.52	Poor instrument integration
Tetryl	479-45-8	2	9.53	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.90	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	9.91	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.23	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.26	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.75	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.76	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.20	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.26	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	11.88	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.14	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.34	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.44	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.39	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.66	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.95	Poor instrument integration
p-Nitrotoluene	99-99-0	1	16.00	Poor instrument integration
m-Nitrotoluene	99-08-1	1	16.84	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.84	Poor instrument integration
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391630.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391630.D\dad1A.ch
Acq On : 04-Nov-2021, 14:33:16 Operator: jamesb
Sample : ic2490-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.20min 17.228ppb m

response 39244

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

response 0

(+) = Expected Retention Time
PP391630.D GPP2490_110421.M Sat Nov 06 12:26:25 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 10:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1A.ch
Acq On : 04-Nov-2021, 15:04:16 Operator: jamesb
Sample : ic2490-50 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 06 12:08:25 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.28	11.30	105369	97259	46.256m	24.054 #
Spiked Amount	500.000	Range	70 - 136	Recovery	=	9.25%#	4.81%#
	Target Compounds						
1)	TNX	1.32	1.32	25093	50614	18.213m	21.978
2)	HMX	1.45	1.45	82018	320445	50.027	75.601 #
3)	DNX	1.69	1.69	84265	184462	43.022	57.352
4)	MNX	2.27	2.27	154193	240468	56.249m	57.008m
5)	RDX	2.89	2.89	85771	136359	46.753	45.822
6)	1,3,5-Trinitrobe	4.70	4.69	173841	342096	43.969	44.276
7)	1,3-Dinitrobenze	5.88	5.88	226387	166050	43.850	43.161m
8)	3,5-Dinitroanili	6.22	6.22	188031	330183	46.532	45.877m
9)	Nitrobenzene	7.47	7.46	131568	136381	42.465	45.315m
10)	Nitroglycerin	0.00	9.02	0	49361	N.D.	37.585m#
11)	Tetryl	9.55	9.56	132613	190035	48.623	43.424
12)	2,4,6-Trinitroto	9.94	9.95	163833	160747	42.171	36.466
13)	2-Amino-4,6-Dini	10.27	10.28	164770	191436	45.852m	42.025
14)	4-Amino-2,6-Dini	10.81	10.81	128103	149982	49.323m	30.702
16)	2,4-Dinitrotolue	11.92	11.92	218089	114723	47.741m	37.330m
17)	2,6-Dinitrotolue	12.39	12.41	130532	148083	46.021m	44.656m
18)	o-Nitrotoluene	15.46	15.47	98694	127779	43.417	47.094m
19)	p-Nitrotoluene	16.02	16.02	155342	46388	45.577	16.323m#
20)	m-Nitrotoluene	16.86	16.95	141856	143154	44.508	39.412m
21)	PETN	0.00	18.60	0	56080	N.D.	41.470m#

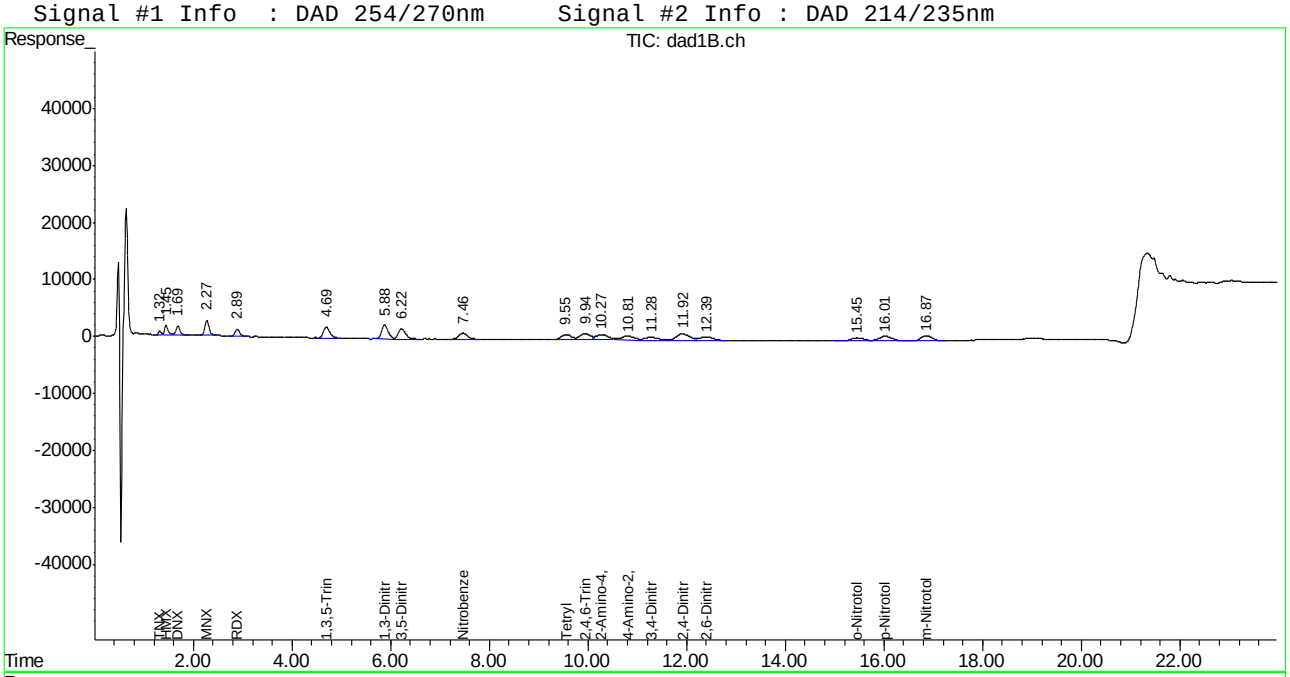
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391631.D GPP2490_110421.M Sat Nov 06 12:34:02 2021 Page 1

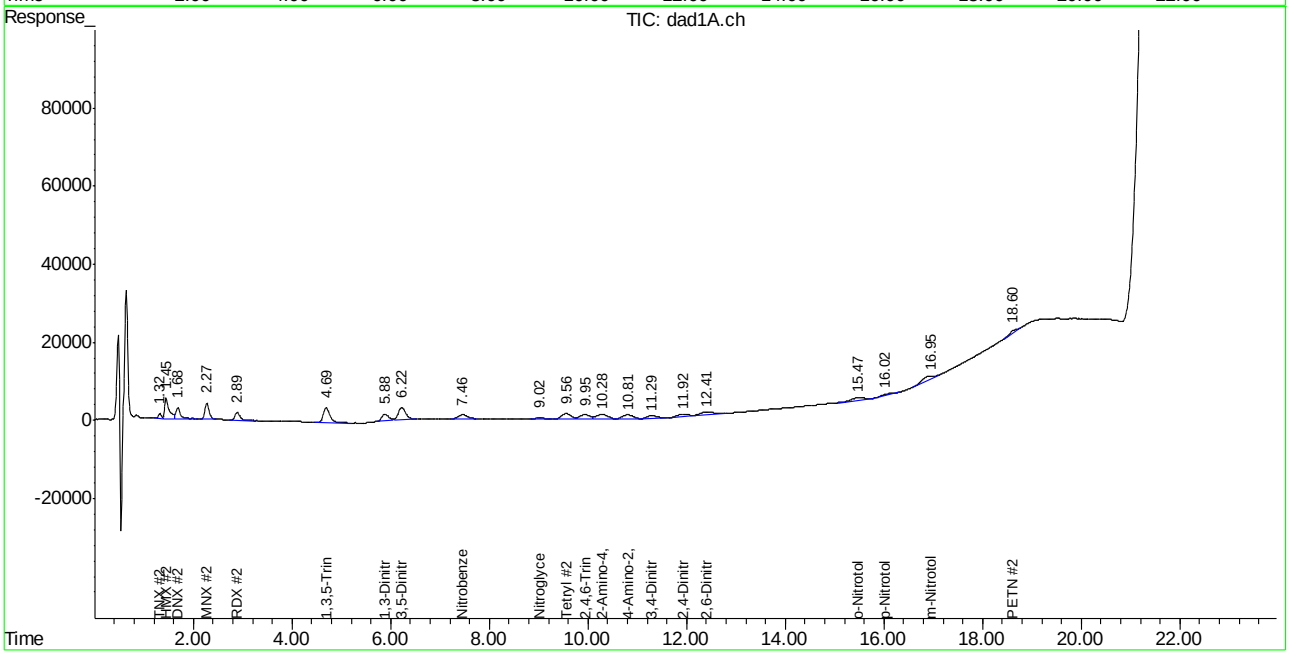
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1A.ch
Acq On : 04-Nov-2021, 15:04:16 Operator: jamesb
Sample : ic2490-50 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:25 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

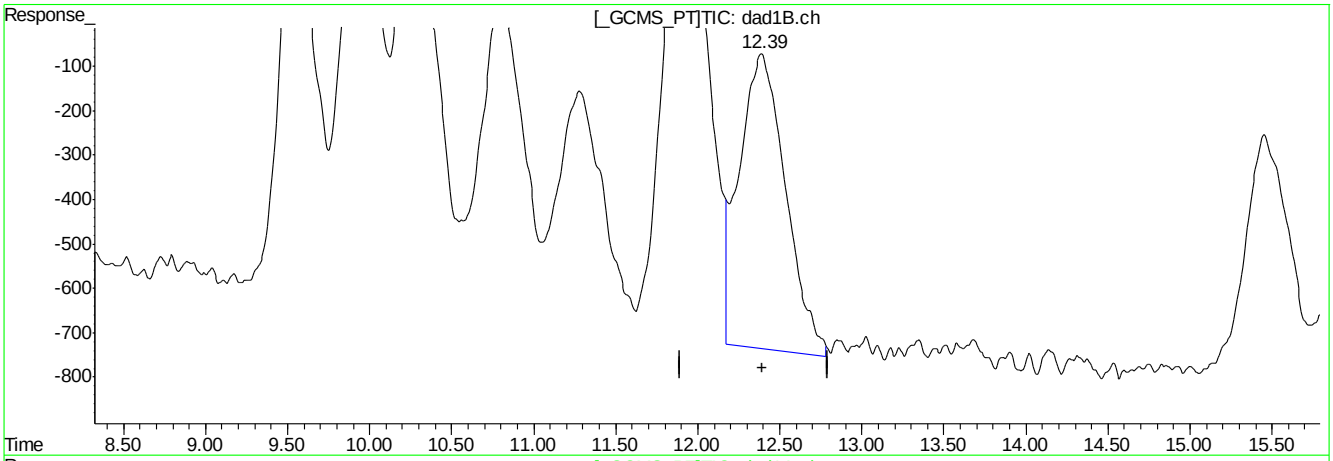
Sample Number: GPP2490-IC2490 **Method:** SW846 8330B
Lab FileID: PP391631.D **Analyst approved:** 11/06/21 13:36 James Boone
Injection Time: 11/04/21 15:04 **Supervisor approved:** 11/08/21 10:18 Naresh Jiawan

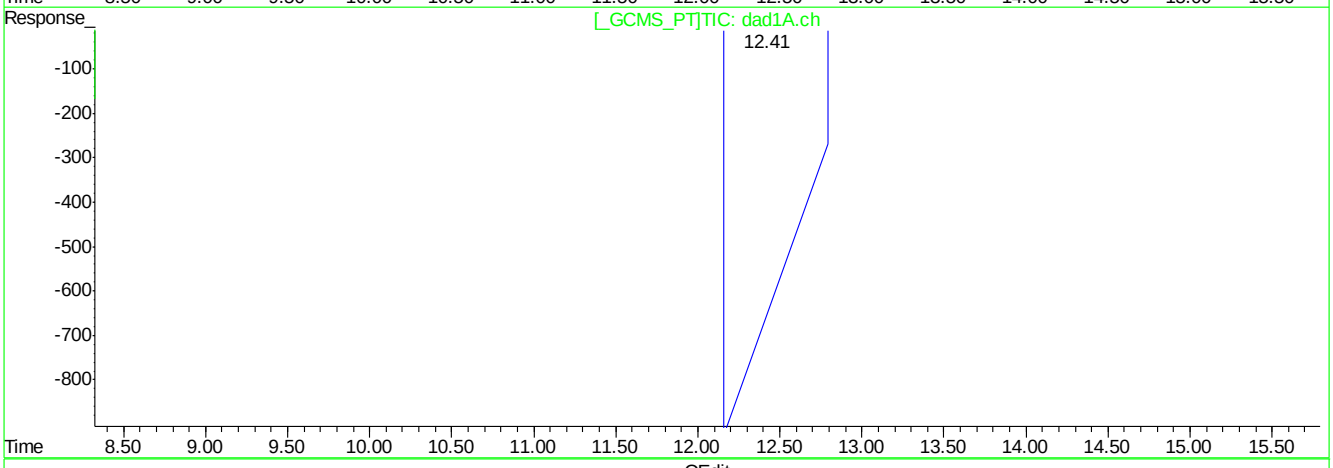
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.32	Poor instrument integration
MNX		1	2.27	Poor instrument integration
MNX		2	2.27	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.88	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.22	Poor instrument integration
Nitrobenzene	98-95-3	2	7.46	Poor instrument integration
Nitroglycerine	55-63-0	2	9.02	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.27	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.81	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.28	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	11.92	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.92	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.39	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.41	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.47	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.02	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.95	Poor instrument integration
PETN	78-11-5	2	18.60	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1A.ch
Acq On : 04-Nov-2021, 15:04:16 Operator: jamesb
Sample : ic2490-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.39min 46.021ppb m

response 130532

(17) 2,6-Dinitrotoluene #2

12.41min 44.656ppb m

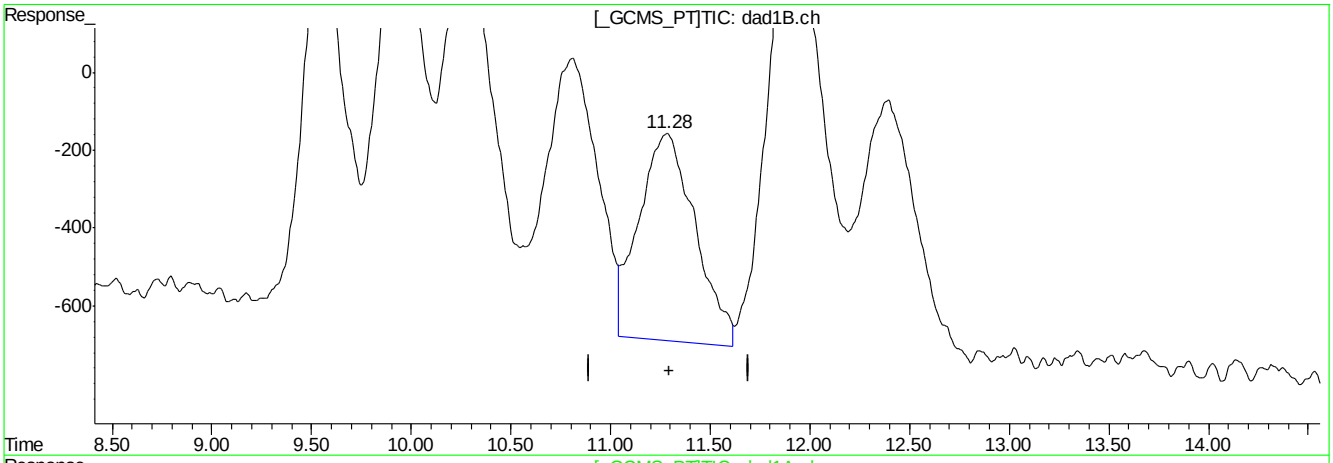
response 148083

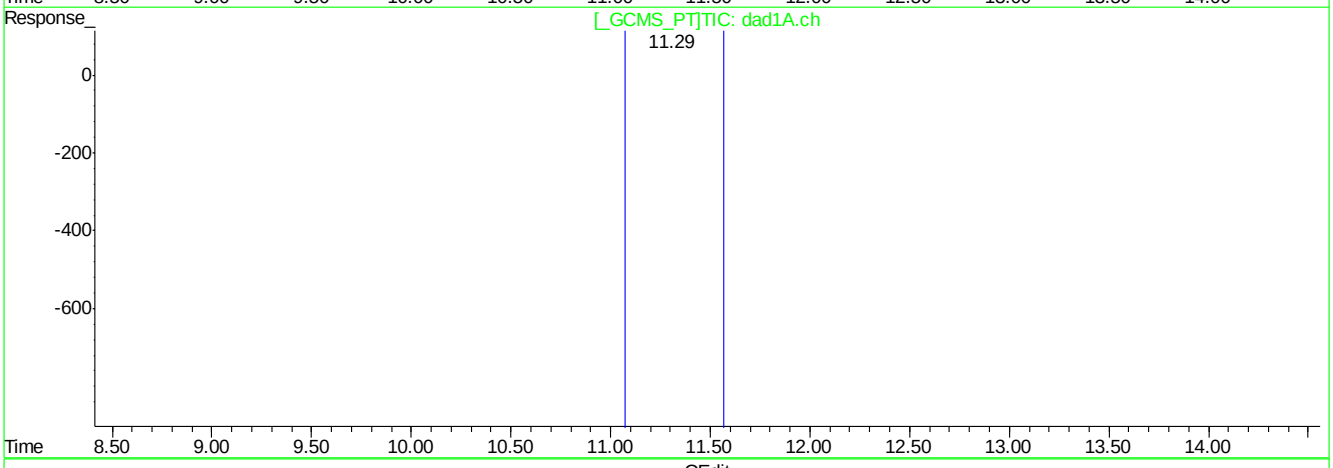
(+) = Expected Retention Time
PP391631.D GPP2490_110421.M Sat Nov 06 12:23:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1A.ch
Acq On : 04-Nov-2021, 15:04:16 Operator: jamesb
Sample : ic2490-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.28min 46.256ppb m

response 105369

(15) 3,4-Dinitrotoluene #2 (S)

11.30min 24.054ppb

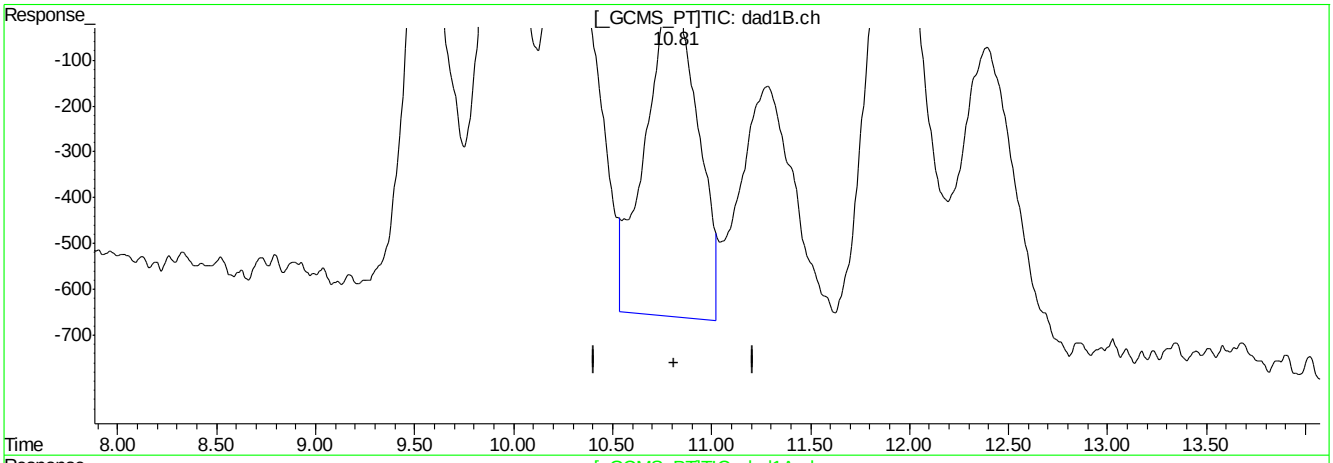
response 97259

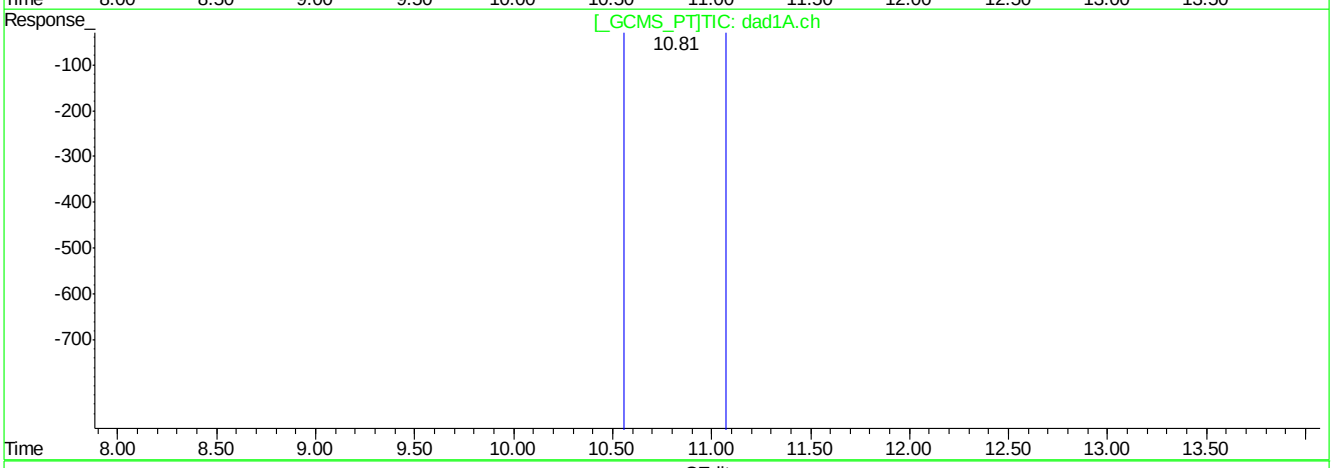
(+) = Expected Retention Time
PP391631.D GPP2490_110421.M Sat Nov 06 12:23:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1A.ch
Acq On : 04-Nov-2021, 15:04:16 Operator: jamesb
Sample : ic2490-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.81min 49.323ppb m

response 128103

(14) 4-Amino-2,6-Dinitrotoluene #2

10.81min 30.702ppb

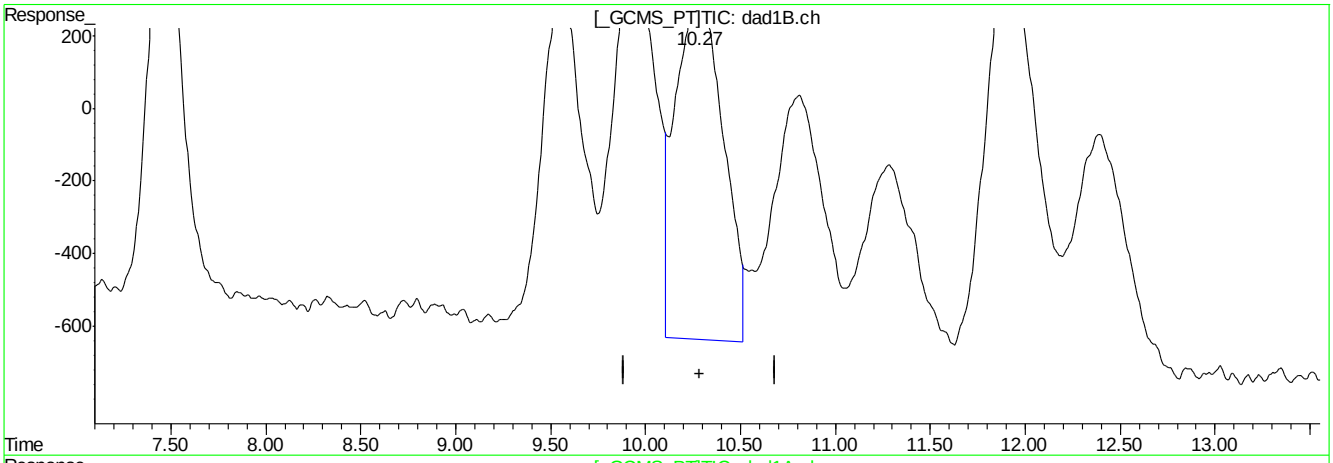
response 149982

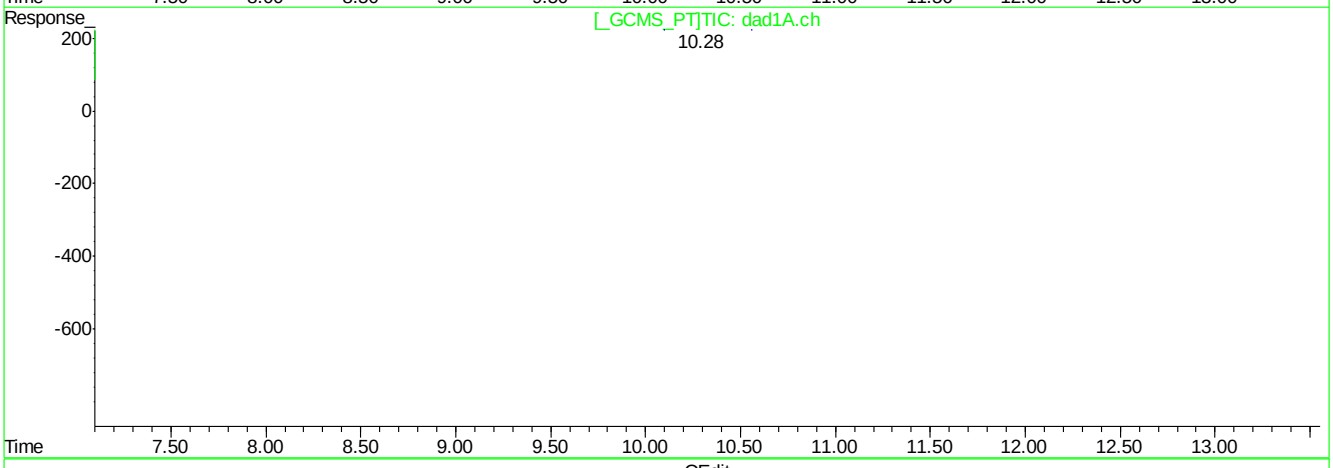
(+) = Expected Retention Time
PP391631.D GPP2490_110421.M Sat Nov 06 12:23:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391631.D\dad1A.ch
Acq On : 04-Nov-2021, 15:04:16 Operator: jamesb
Sample : ic2490-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.27min 45.852ppb m

response 164770

(13) 2-Amino-4,6-Dinitrotoluene #2

10.28min 42.025ppb

response 191436

(+) = Expected Retention Time
PP391631.D GPP2490_110421.M Sat Nov 06 12:24:05 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 10:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 06 12:08:26 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.30	11.29	191108	255036	83.895m	63.075
Spiked Amount	500.000	Range	70 - 136	Recovery	=	16.78%#	12.62%#
	Target Compounds						
1)	TNX	1.32	1.32	62323	114784	45.235m	49.842m
2)	HMX	1.45	1.45	164340	556144	100.241	131.208
3)	DNX	1.69	1.69	175333	334110	89.517	103.880
4)	MNX	2.28	2.28	337028	531446	122.947	125.990
5)	RDX	2.89	2.89	181718	294299	99.052	98.897
6)	1,3,5-Trinitrobe	4.70	4.70	390368	755750	98.735	97.814
7)	1,3-Dinitrobenze	5.89	5.89	507261	364915	98.253	94.851m
8)	3,5-Dinitroanili	6.23	6.23	399215	702283	98.794	97.578m
9)	Nitrobenzene	7.47	7.47	292976	295349	94.562	98.134
10)	Nitroglycerin	0.00	9.03	0	112690	N.D.	85.807m#
11)	Tetryl	9.56	9.56	281379	434898	103.168	99.377
12)	2,4,6-Trinitroto	9.94	9.94	355874	395004	91.602	89.607
13)	2-Amino-4,6-Dini	10.28	10.29	346528	451213	96.432	99.052
14)	4-Amino-2,6-Dini	10.80	10.81	248610	381990	95.721	78.196
16)	2,4-Dinitrotolue	11.92	11.94	437128	260810	95.691	84.865
17)	2,6-Dinitrotolue	12.40	12.41	268193	327153	94.554	98.657
18)	o-Nitrotoluene	15.47	15.48	213509	253874	93.926	93.567m
19)	p-Nitrotoluene	16.04	16.08	329914	156276	96.797	54.990m#
20)	m-Nitrotoluene	16.86	16.89	305388	335907	95.818	92.480m
21)	PETN	0.00	18.64	0	123491	N.D.	91.318m#

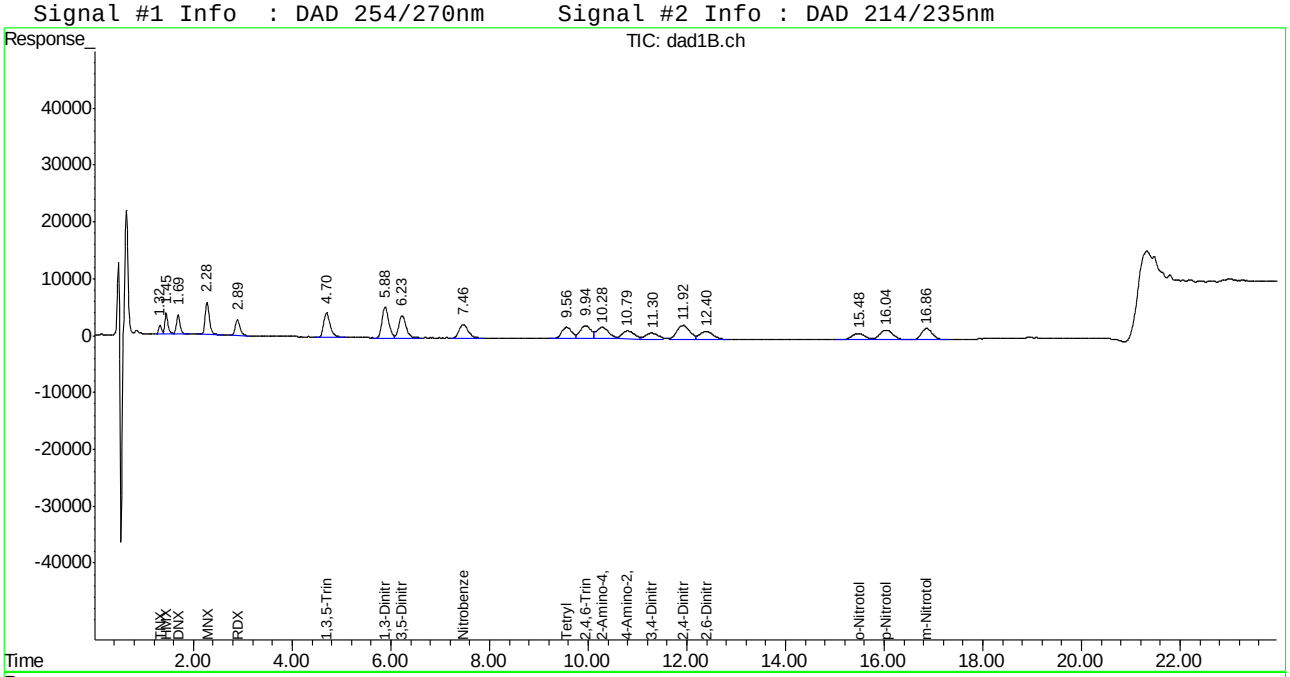
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391632.D GPP2490_110421.M Sat Nov 06 12:34:03 2021 Page 1

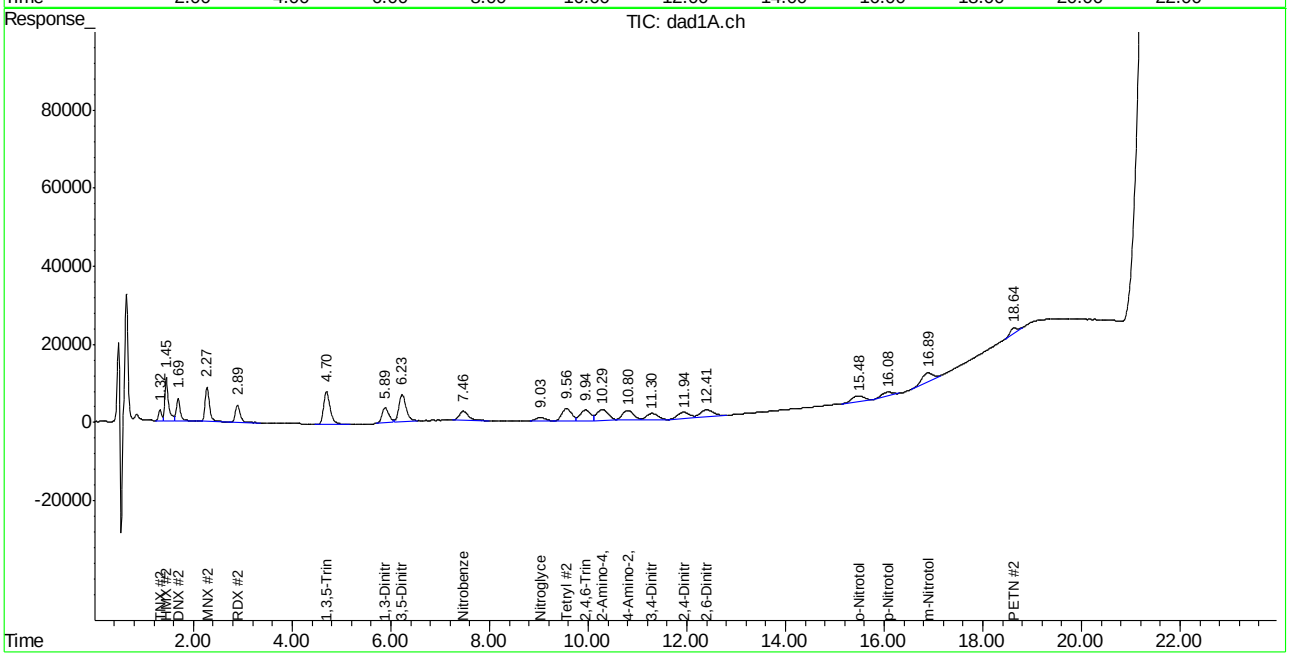
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:22 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

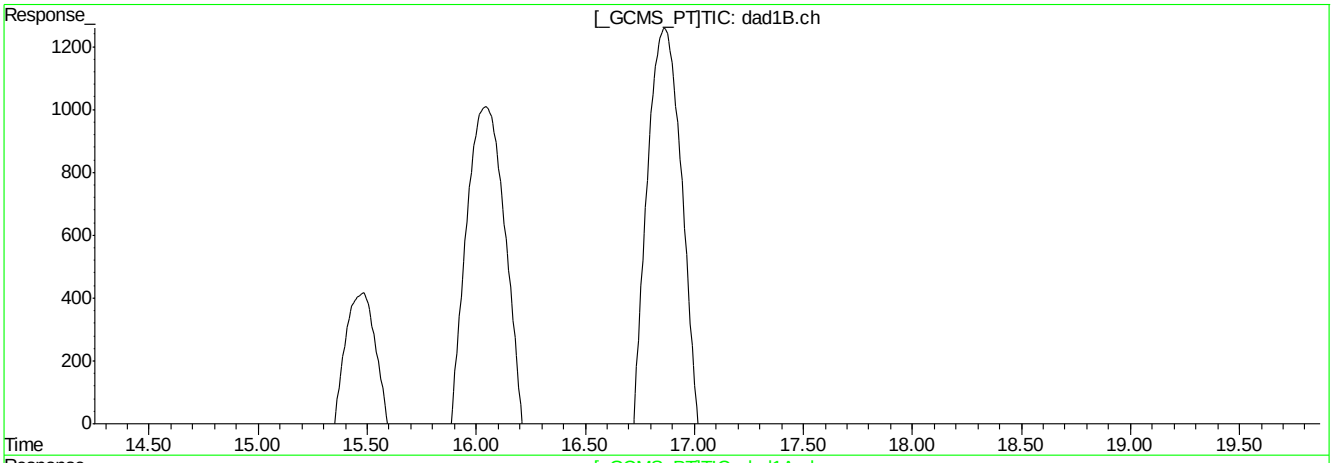
Sample Number: GPP2490-IC2490
Lab FileID: PP391632.D
Injection Time: 11/04/21 15:35
Method: SW846 8330B
Analyst approved: 11/06/21 13:36 James Boone
Supervisor approved: 11/08/21 10:18 Naresh Jiawan

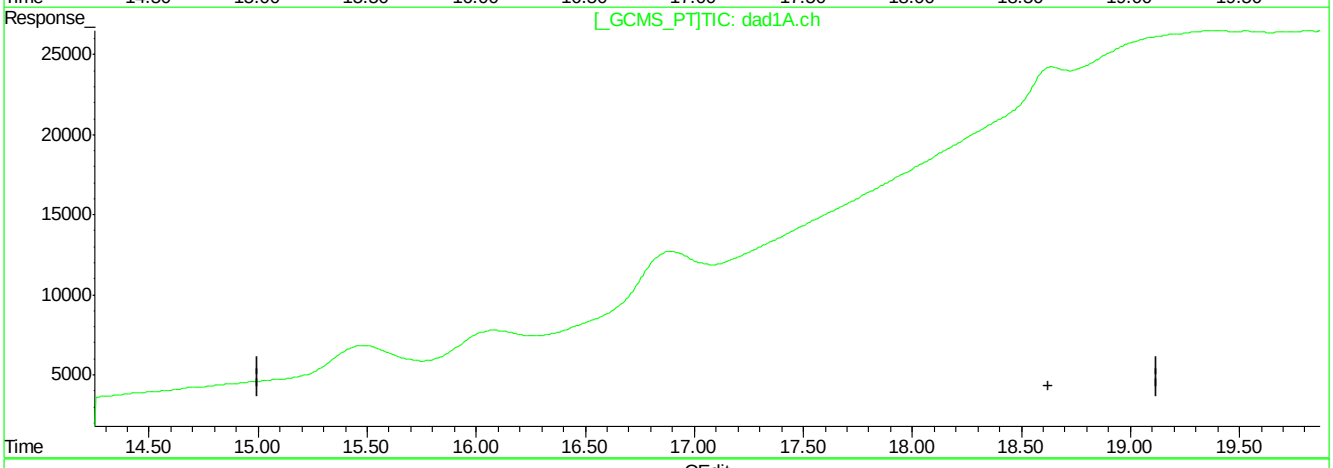
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.32	Poor instrument integration
TNX		2	1.32	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.89	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.23	Poor instrument integration
Nitroglycerine	55-63-0	2	9.03	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.30	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.08	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.89	Poor instrument integration
PETN	78-11-5	2	18.64	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

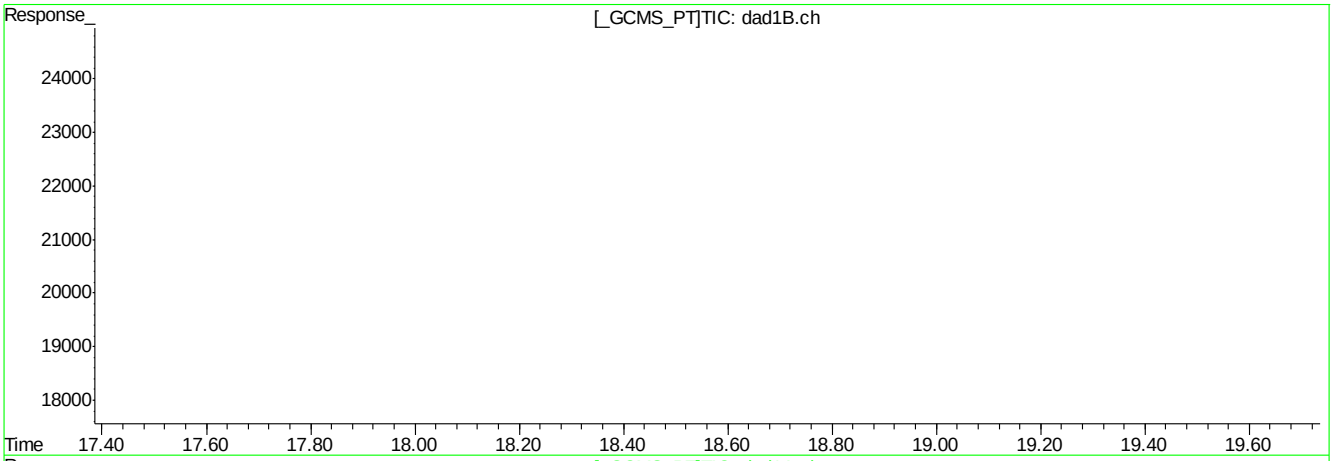
response 0

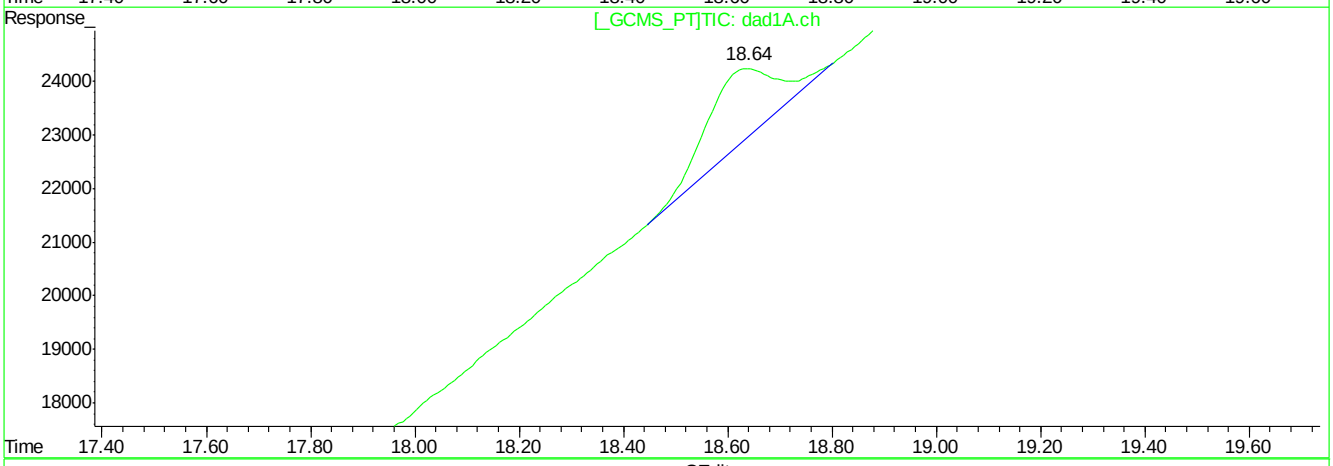
(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:20:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.64min 91.318ppb m

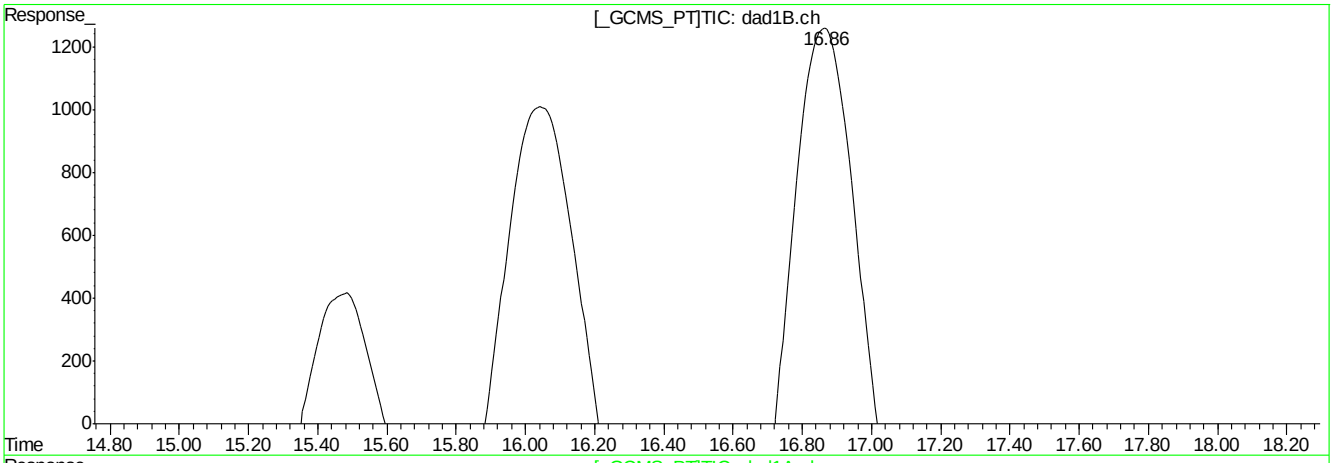
response 123491

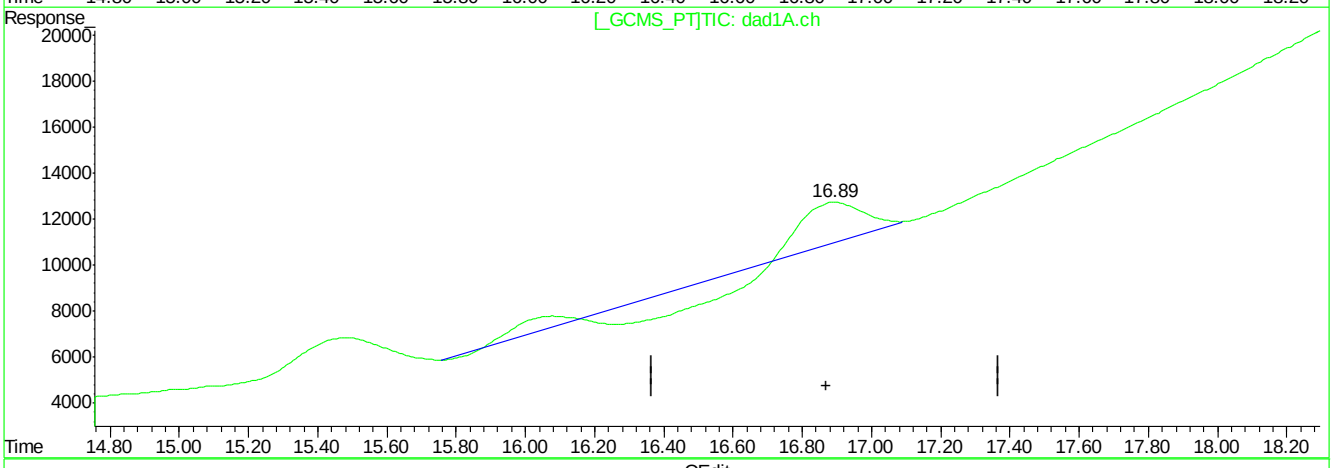
(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:20:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 95.818ppb

response 305388

(20) m-Nitrotoluene #2

16.90min 3.606ppb

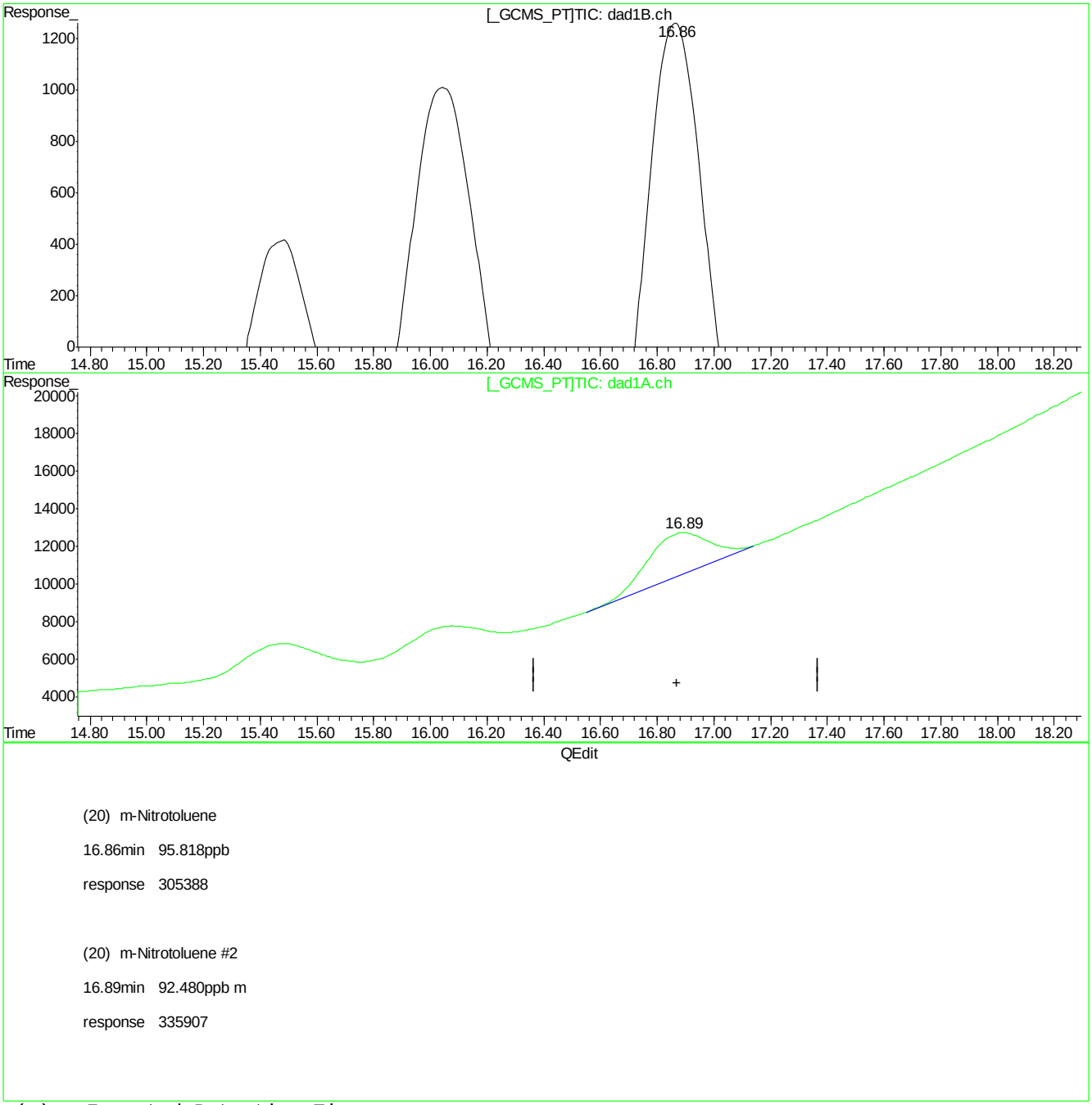
response 13098

(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:20:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration

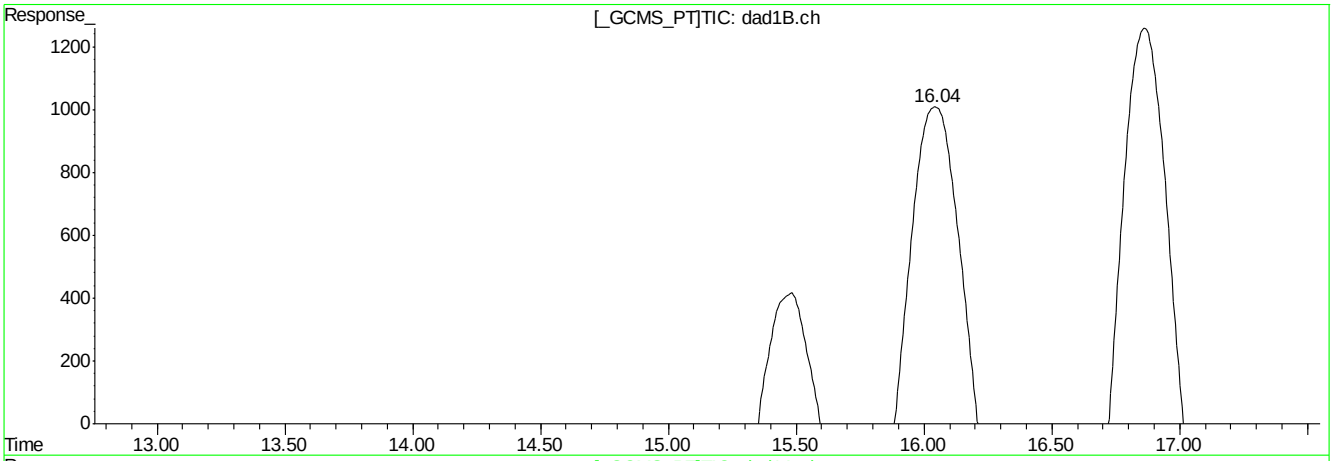


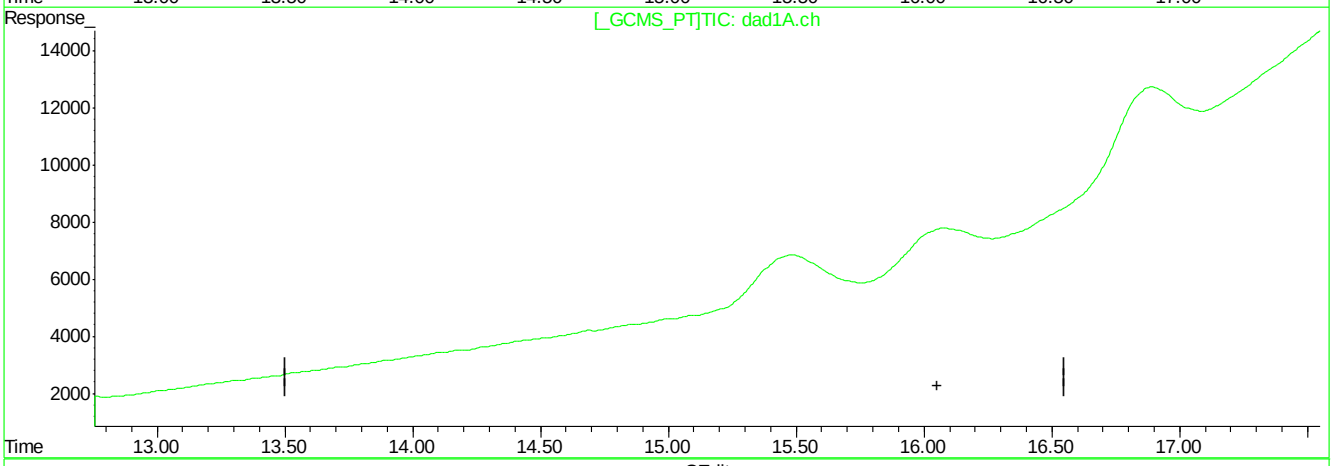
(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:20:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.04min 96.797ppb

response 329914

(19) p-Nitrotoluene #2

0.00min 0.000ppb

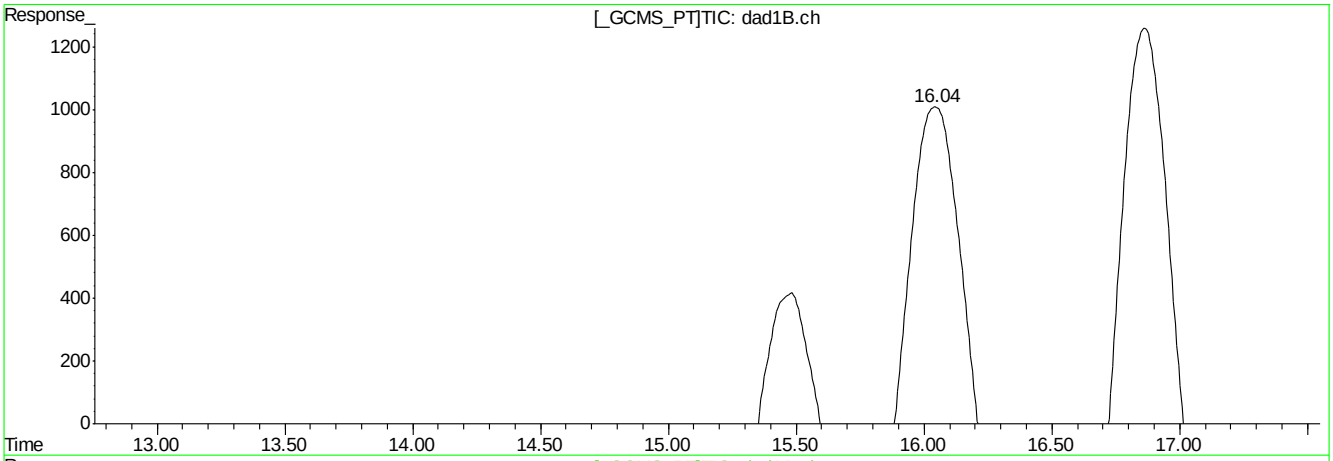
response 0

(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:20:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.04min 96.797ppb

response 329914

(19) p-Nitrotoluene #2

16.08min 54.990ppb m

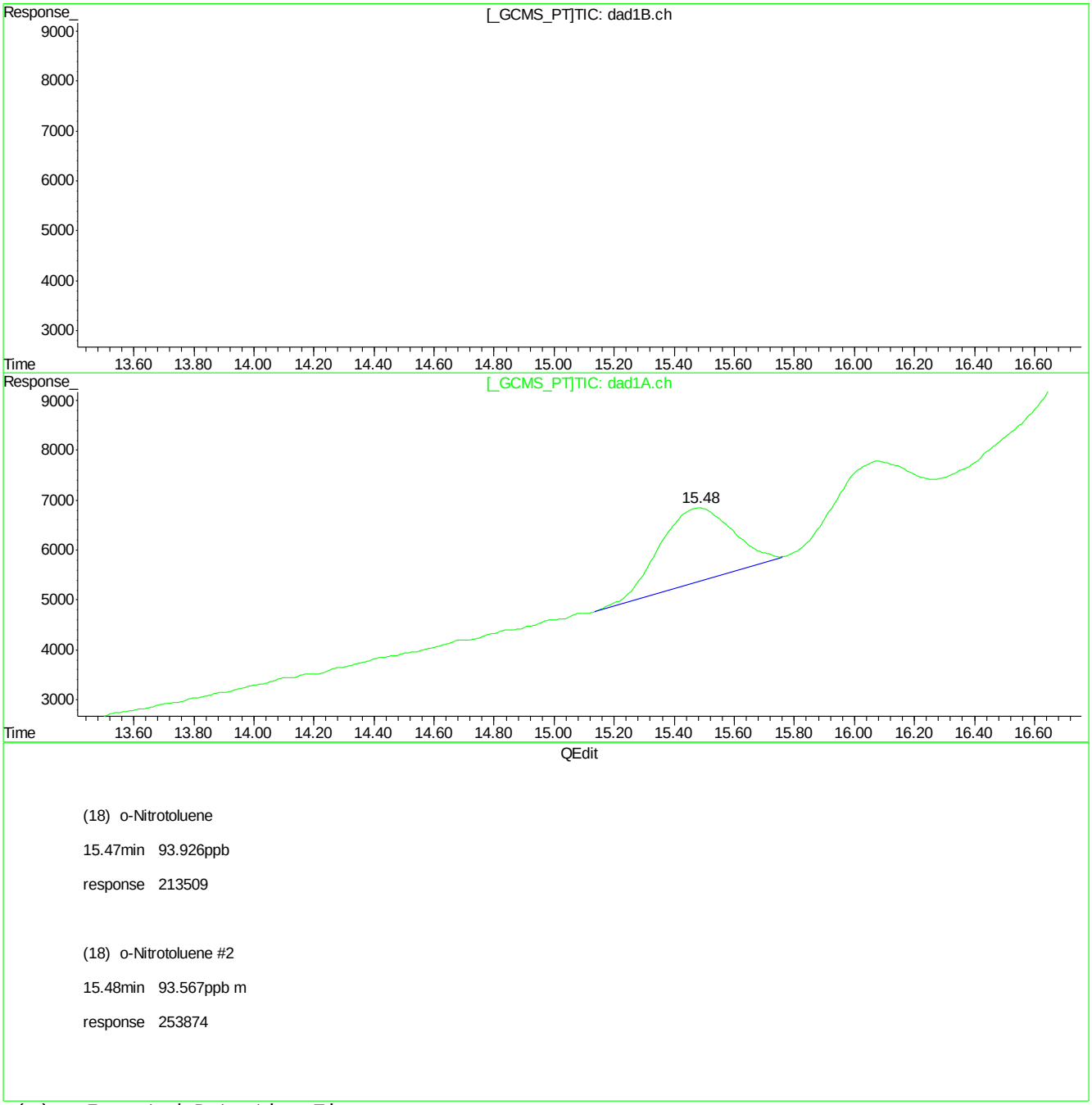
response 156276

(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:20:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration

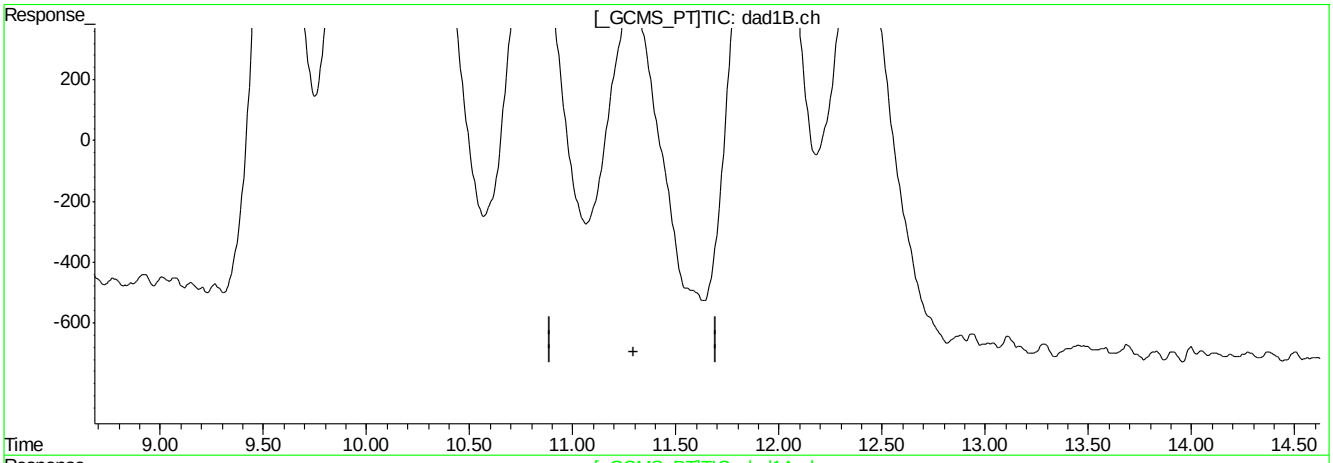


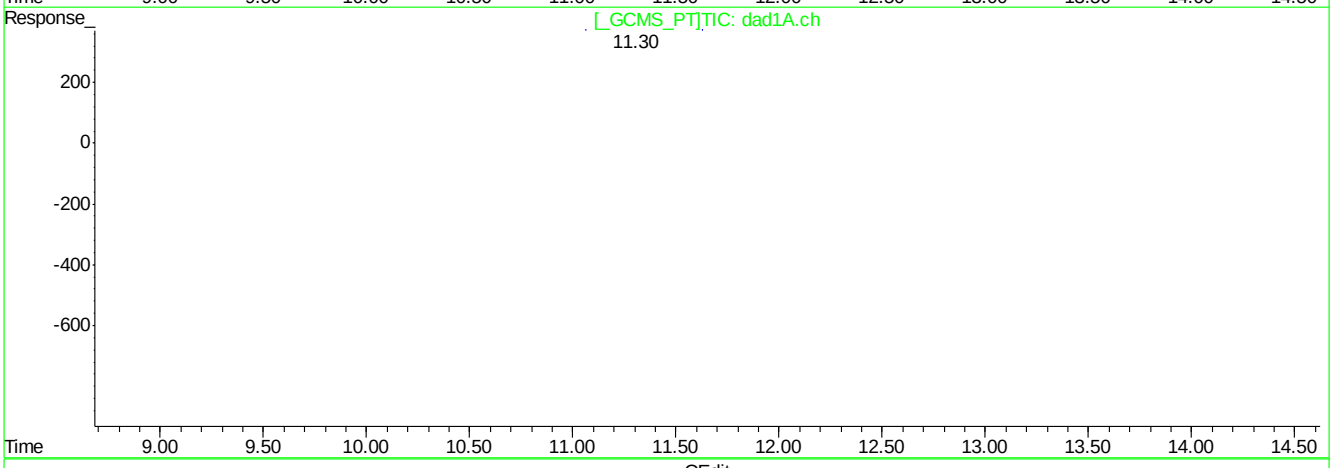
(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:20:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

0.00min 0.000ppb

response 0

(15) 3,4-Dinitrotoluene #2 (S)

11.29min 63.075ppb

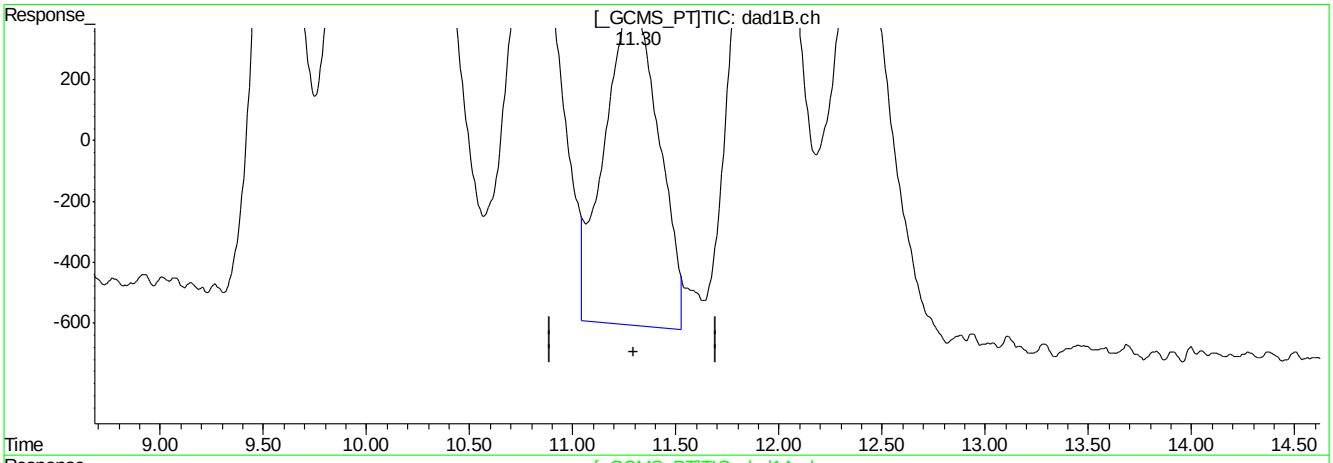
response 255036

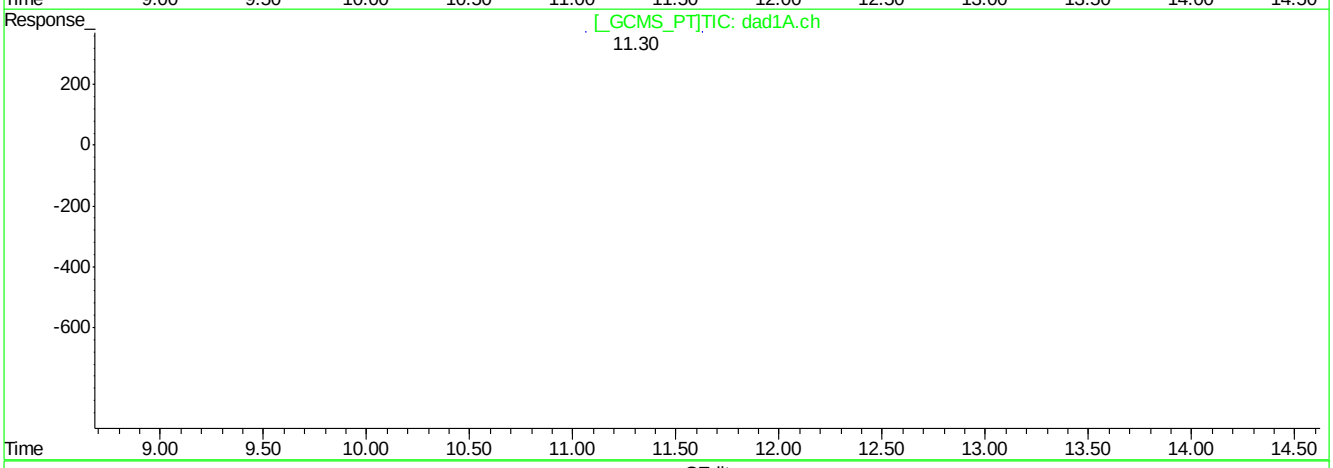
(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:21:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.30min 83.895ppb m

response 191108

(15) 3,4-Dinitrotoluene #2 (S)

11.29min 63.075ppb

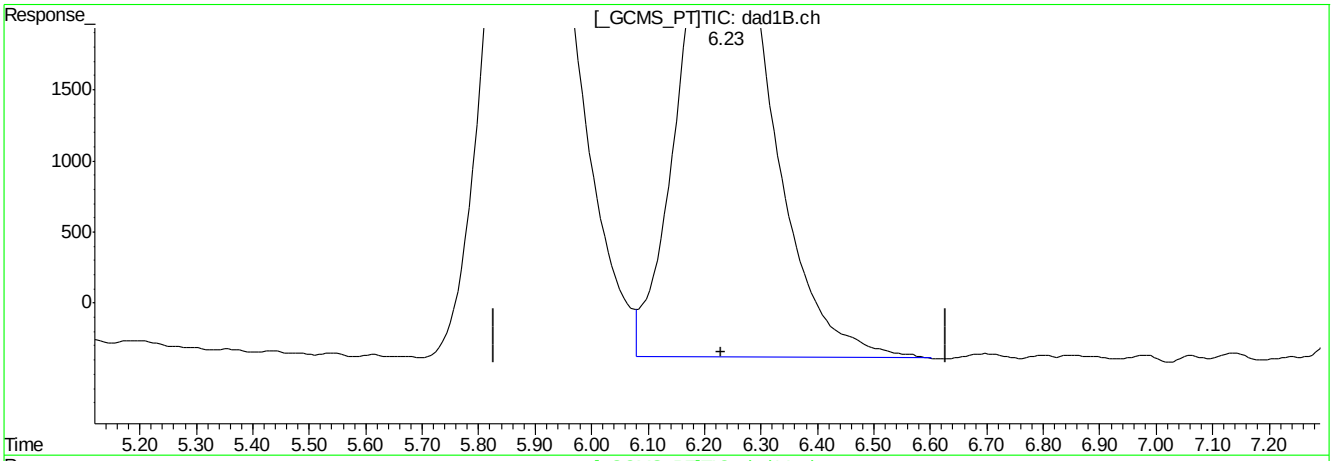
response 255036

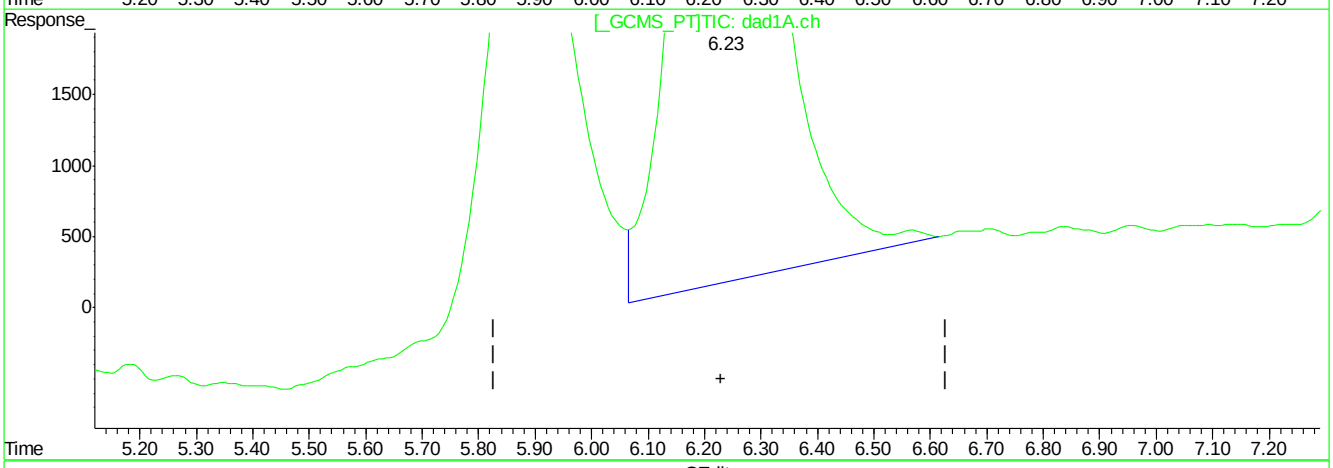
(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:21:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.23min 98.794ppb

response 399215

(8) 3,5-Dinitroaniline #2

6.23min 100.689ppb

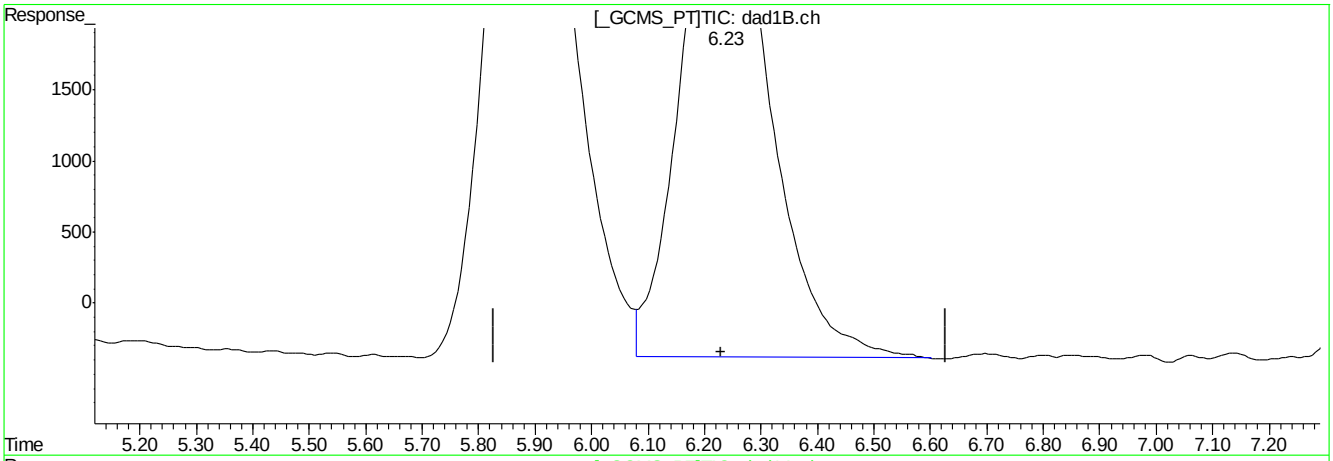
response 724670

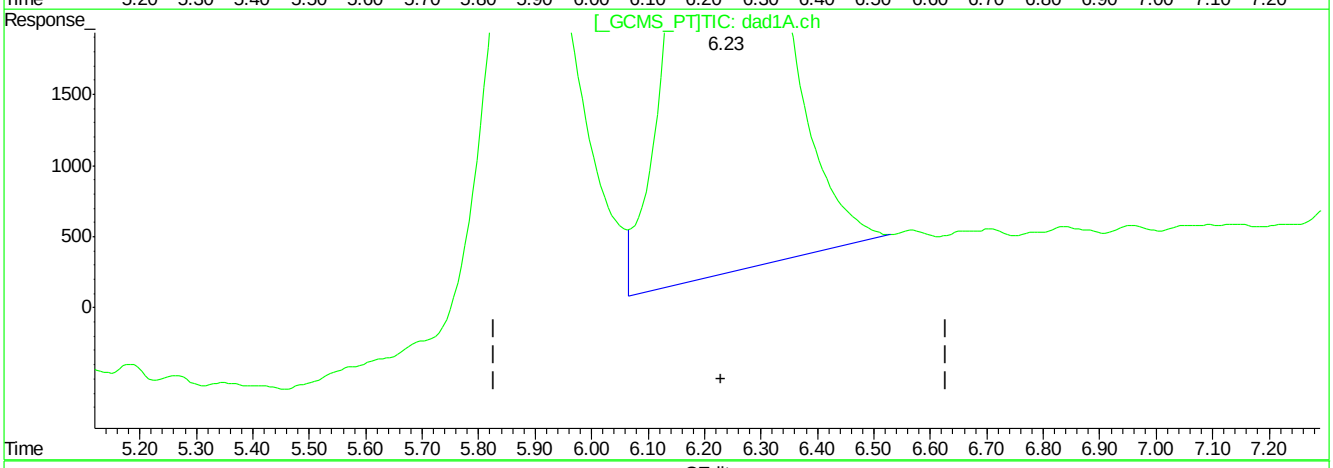
(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:21:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.23min 98.794ppb

response 399215

(8) 3,5-Dinitroaniline #2

6.23min 97.578ppb m

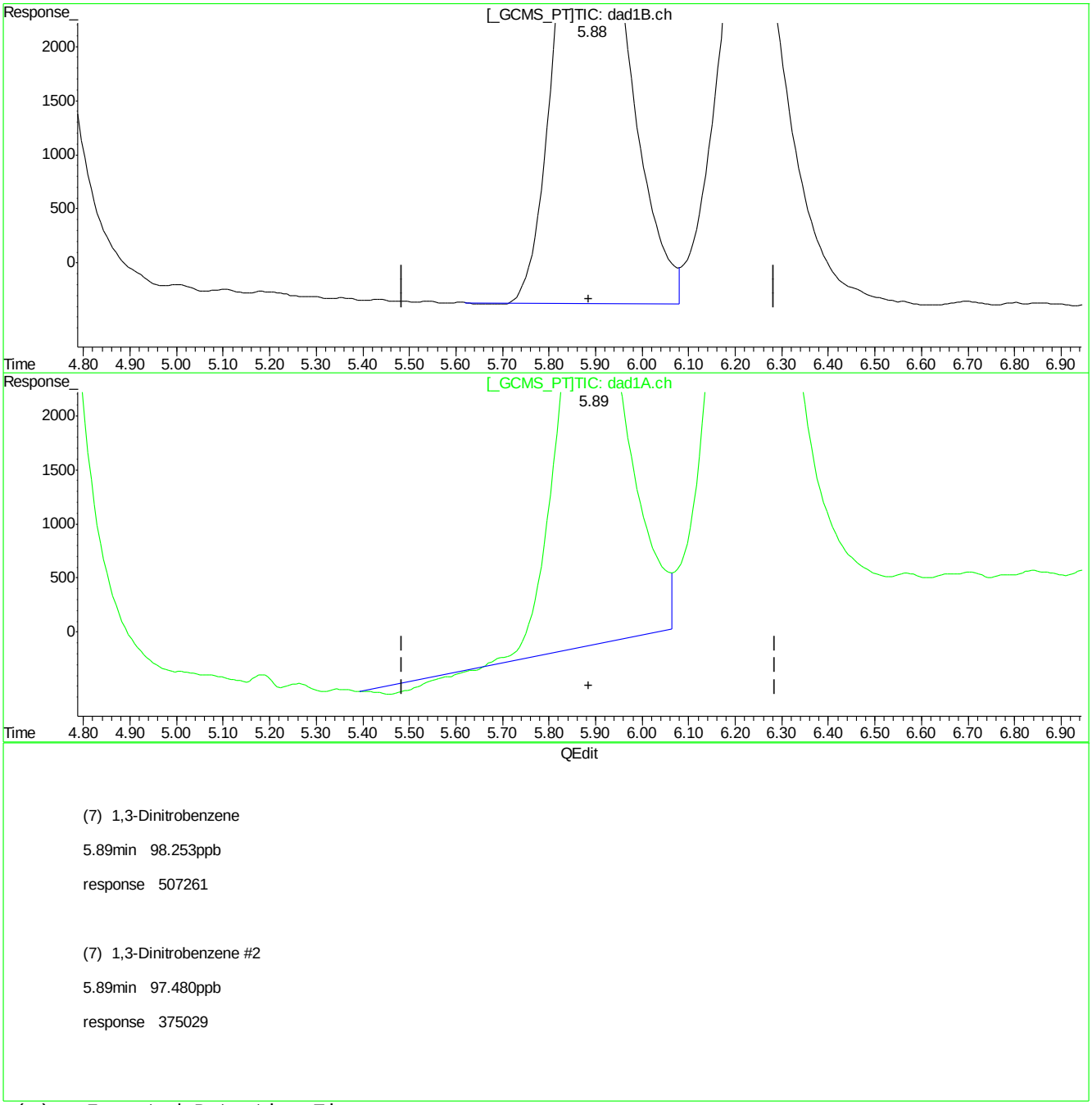
response 702283

(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:22:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.89min 98.253ppb

response 507261

(7) 1,3-Dinitrobenzene #2

5.89min 97.480ppb

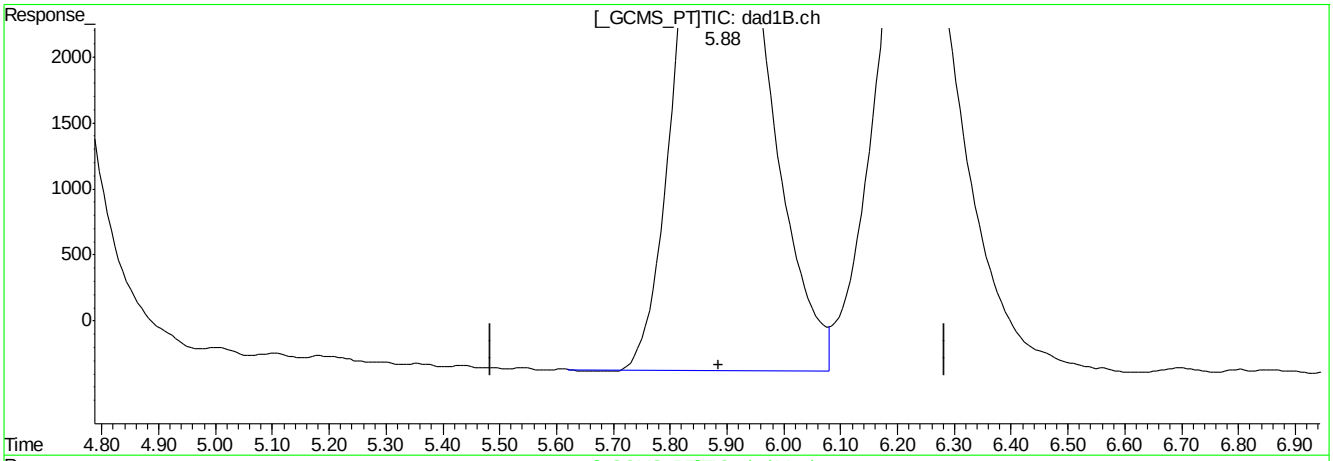
response 375029

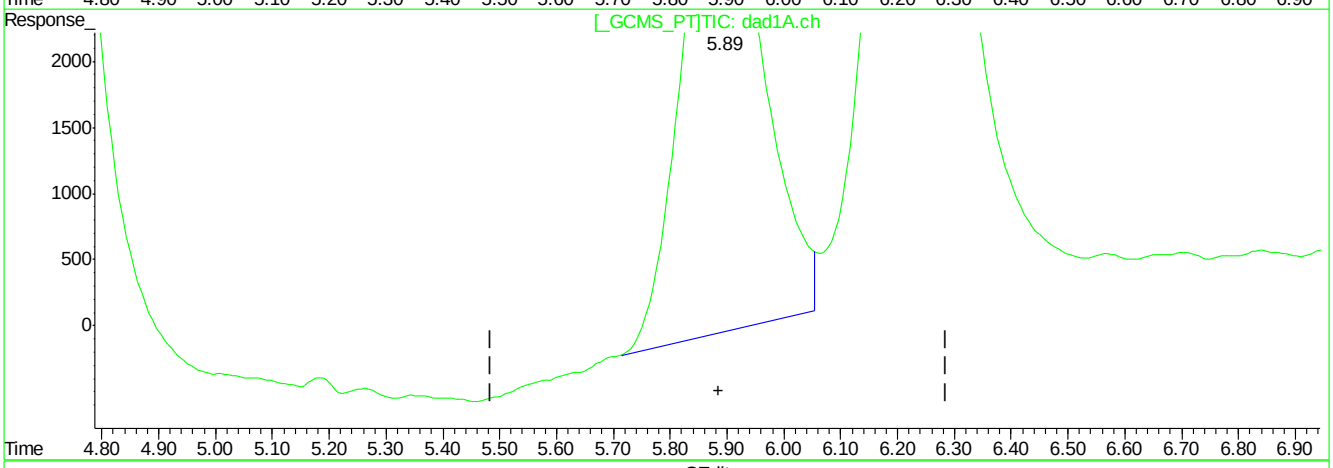
(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:22:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.89min 98.253ppb

response 507261

(7) 1,3-Dinitrobenzene #2

5.89min 94.851ppb m

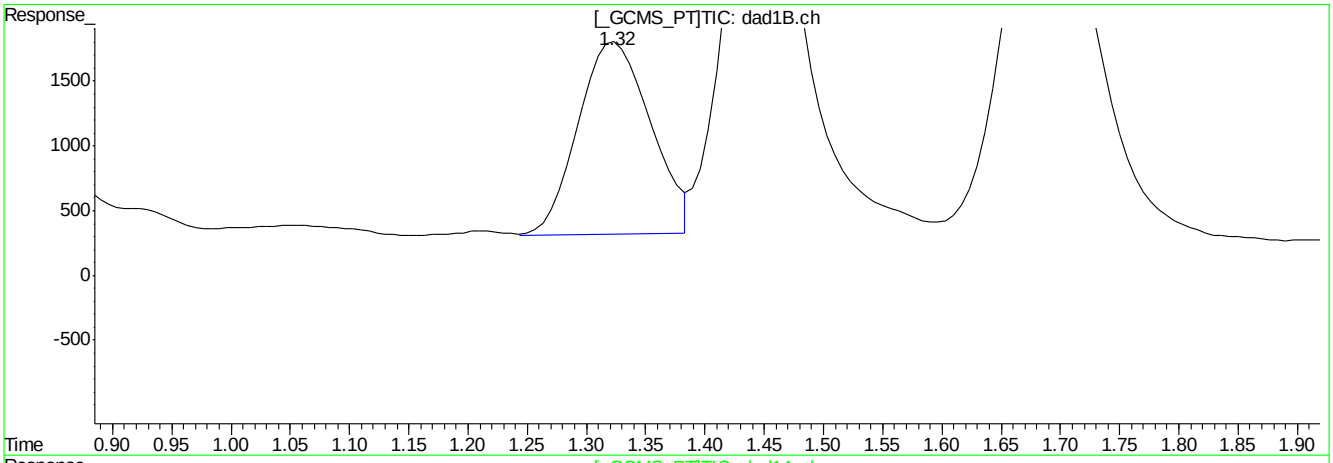
response 364915

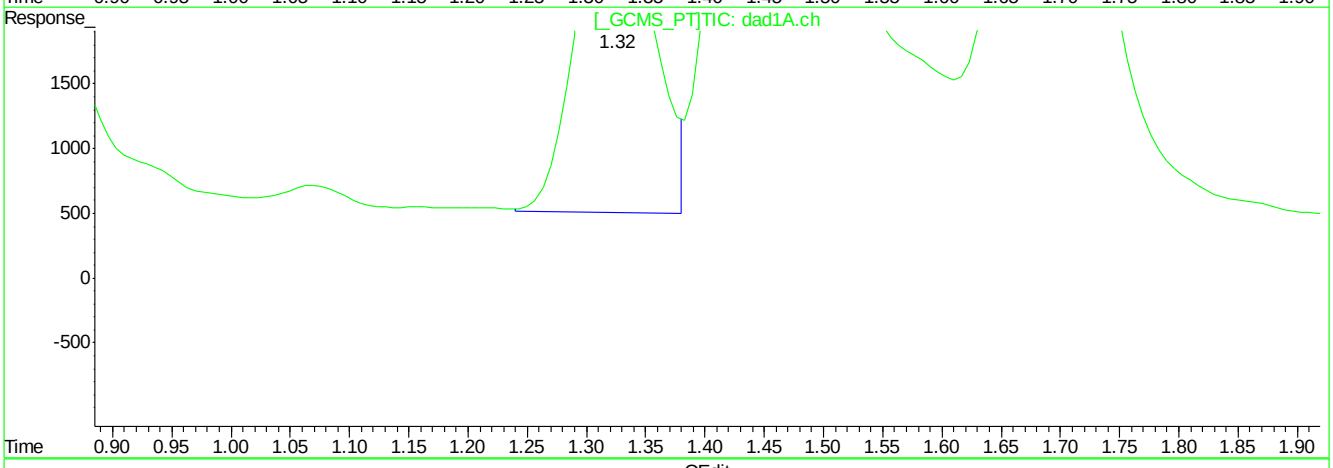
(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:22:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391632.D\dad1A.ch
Acq On : 04-Nov-2021, 15:35:21 Operator: jamesb
Sample : ic2490-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.32min 45.235ppb m

response 62323

(1) TNX #2

1.32min 49.842ppb m

response 114784

(+) = Expected Retention Time
PP391632.D GPP2490_110421.M Sat Nov 06 12:22:37 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 10:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 06 12:08:27 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.30	11.31	388434	554383	170.520	137.109
	Spiked Amount 500.000	Range 70 - 136		Recovery =		34.10%#	27.42%#
	Target Compounds						
1)	TNX	1.33	1.33	132979	231101	96.519	100.350
2)	HMX	1.45	1.45	306016	940459	186.656	221.878
3)	DNX	1.69	1.69	334389	579107	170.723	180.054m
4)	MNX	2.28	2.28	654855	1019145	238.889	241.609
5)	RDX	2.90	2.90	359092	577507	195.737	194.066
6)	1,3,5-Trinitrobe	4.70	4.70	751565	1479246	190.091	191.453
7)	1,3-Dinitrobenze	5.89	5.89	987758	698459	191.322	181.547m
8)	3,5-Dinitroanili	6.24	6.23	768090	1339170	190.080	186.070m
9)	Nitrobenzene	7.48	7.47	586807	576544	189.399	191.566m
10)	Nitroglycerin	0.00	9.05	0	220193	N.D.	167.664 #
11)	Tetryl	9.57	9.58	556040	867624	203.872	198.257
12)	2,4,6-Trinitroto	9.96	9.96	704366	784724	181.305	178.015
13)	2-Amino-4,6-Dini	10.30	10.30	669838	920688	186.403	202.113
14)	4-Amino-2,6-Dini	10.82	10.82	486301	810658	187.238	165.947
16)	2,4-Dinitrotolue	11.94	11.94	895738	523412	196.085	170.313
17)	2,6-Dinitrotolue	12.41	12.41	544838	668147	192.088	201.487
18)	o-Nitrotoluene	15.48	15.49	414929	508527	182.534	187.422m
19)	p-Nitrotoluene	16.06	16.08	648213	378678	190.185	133.248
20)	m-Nitrotoluene	16.87	16.88	605729	667977	190.052	183.904m
21)	PETN	0.00	18.63	0	244284	N.D.	180.640m#

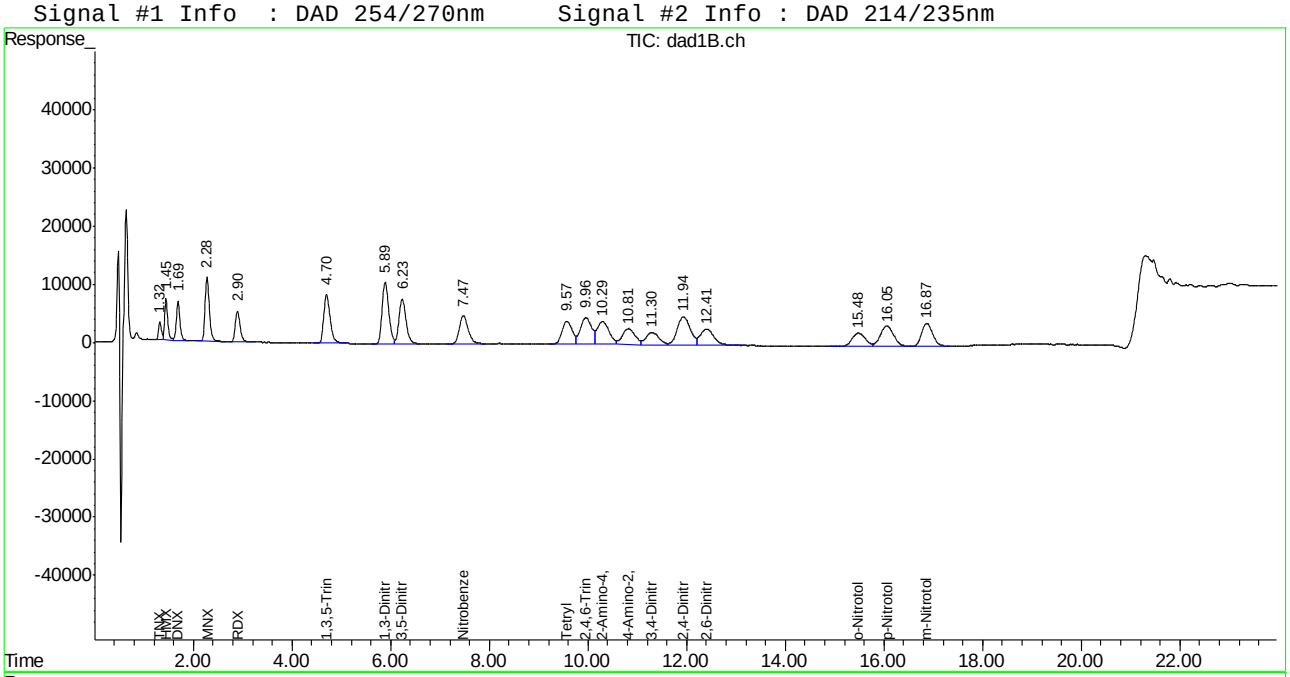
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391633.D GPP2490_110421.M Sat Nov 06 12:34:04 2021 Page 1

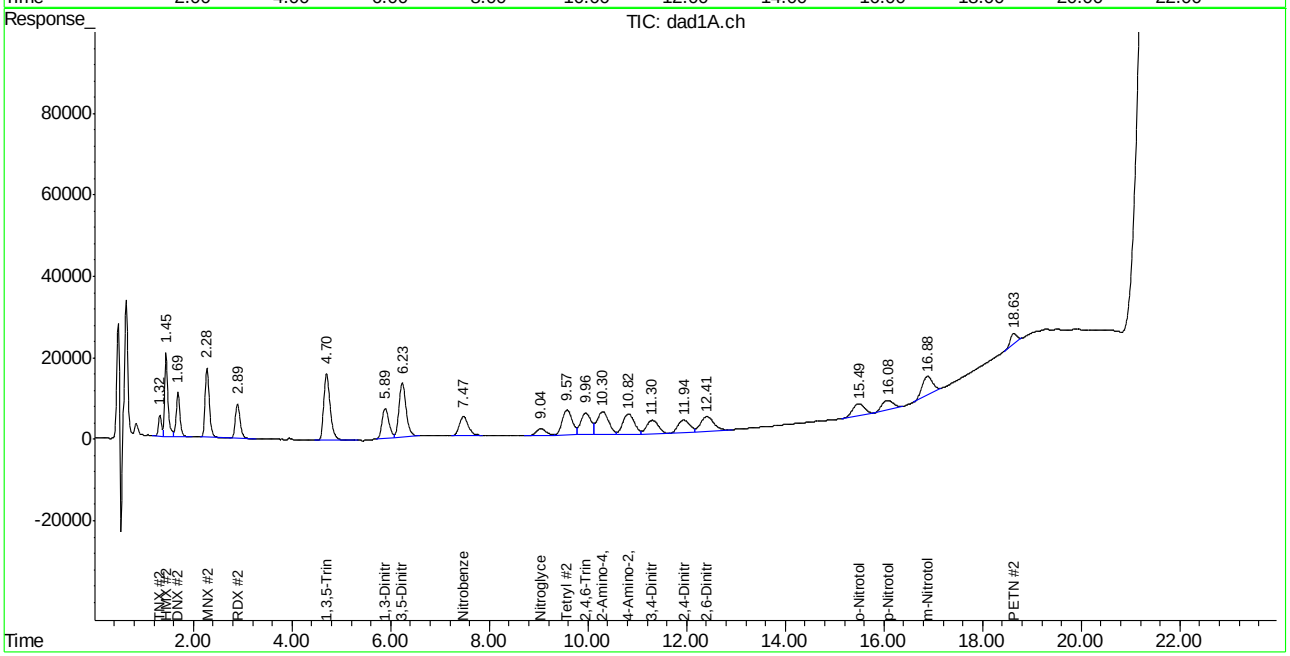
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:19 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

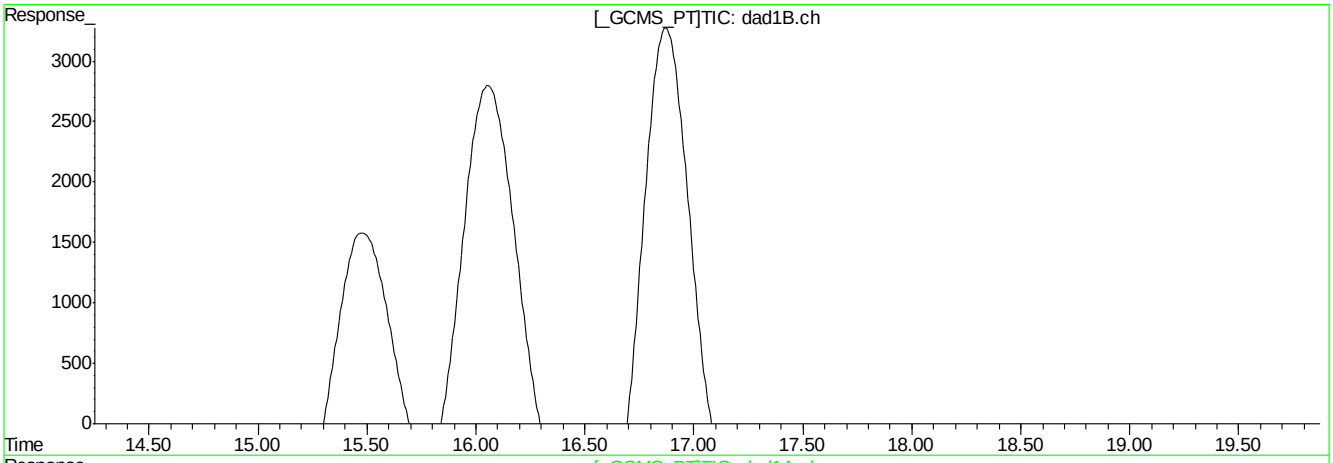
Sample Number: GPP2490-IC2490
Lab FileID: PP391633.D
Injection Time: 11/04/21 16:06
Method: SW846 8330B
Analyst approved: 11/06/21 13:36 James Boone
Supervisor approved: 11/08/21 10:18 Naresh Jiawan

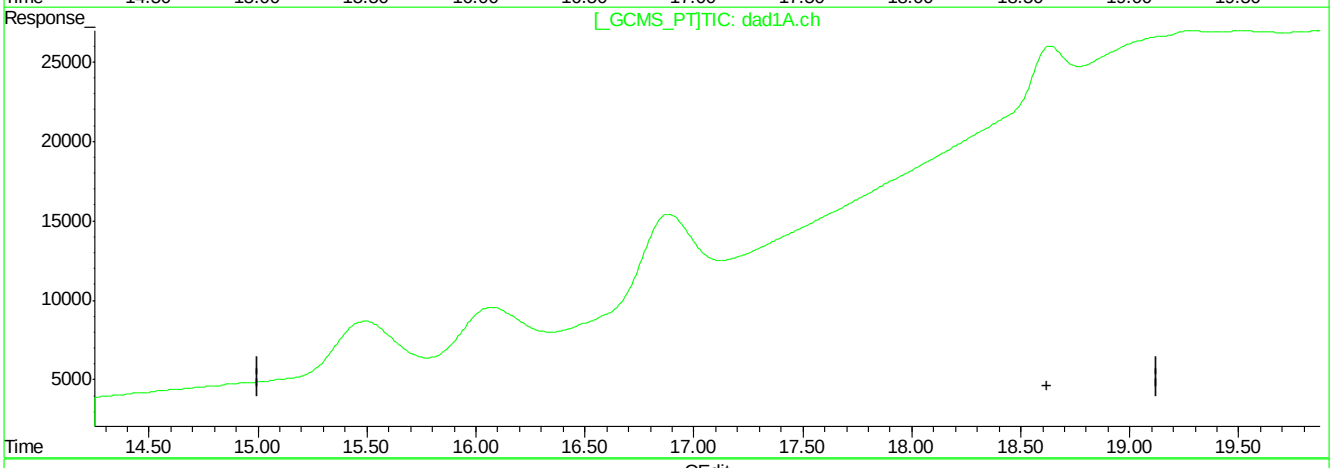
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		2	1.69	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.89	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.23	Poor instrument integration
Nitrobenzene	98-95-3	2	7.47	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.49	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.88	Poor instrument integration
PETN	78-11-5	2	18.63	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

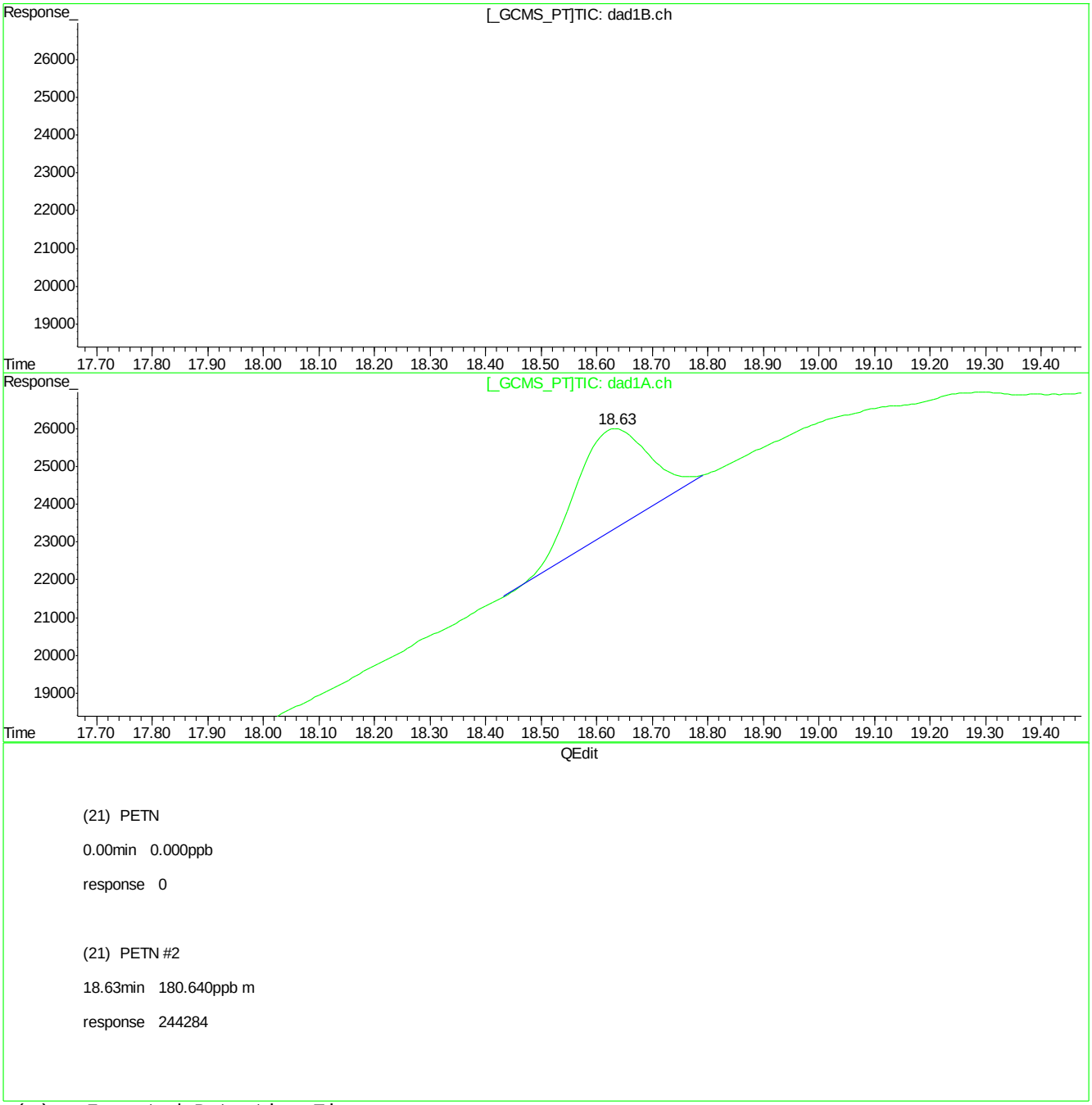
response 0

(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:14:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration

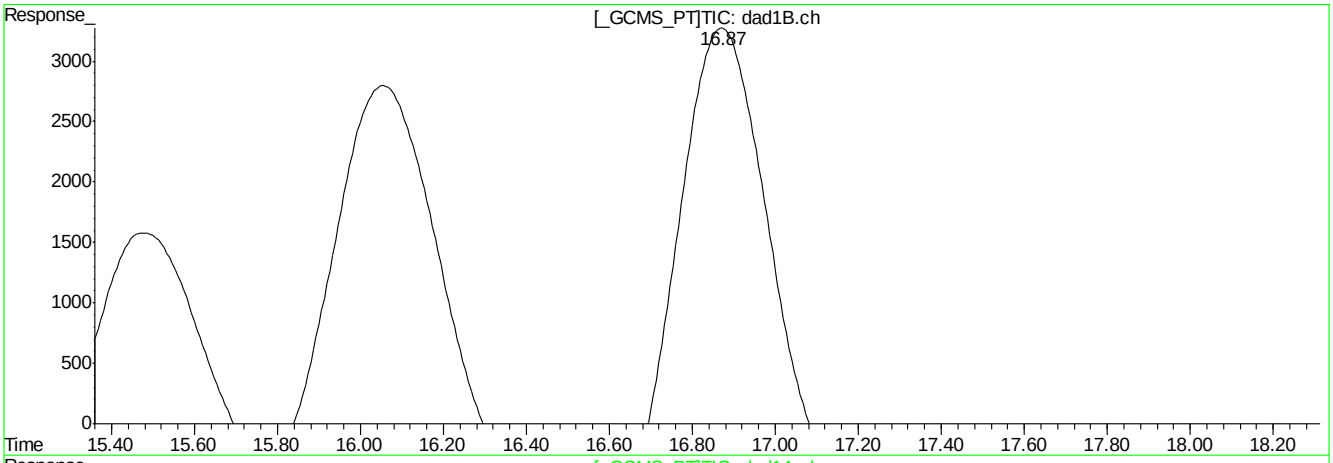


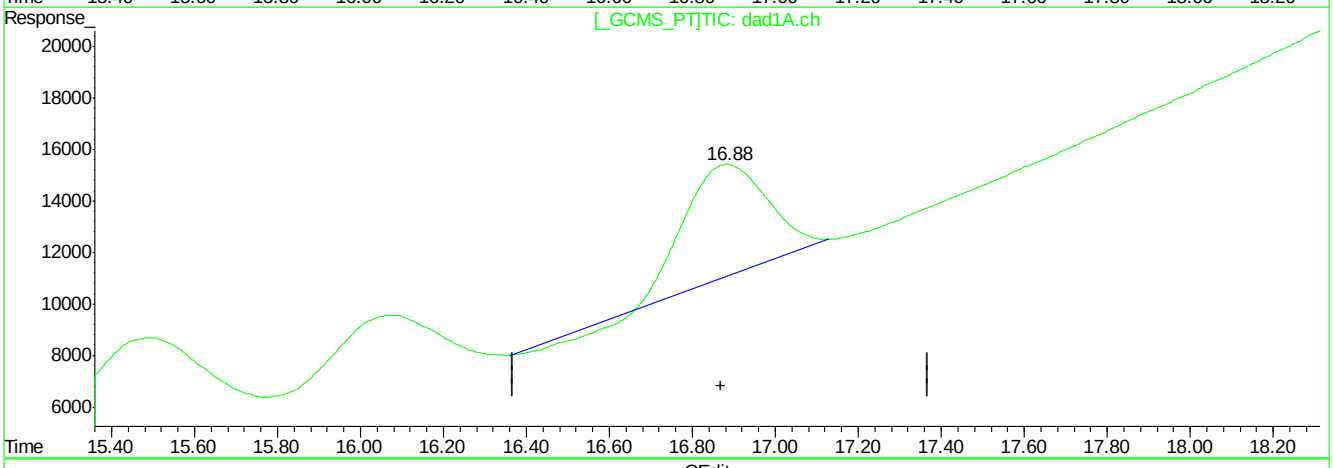
(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:14:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 190.052ppb

response 605729

(20) m-Nitrotoluene #2

16.89min 156.227ppb

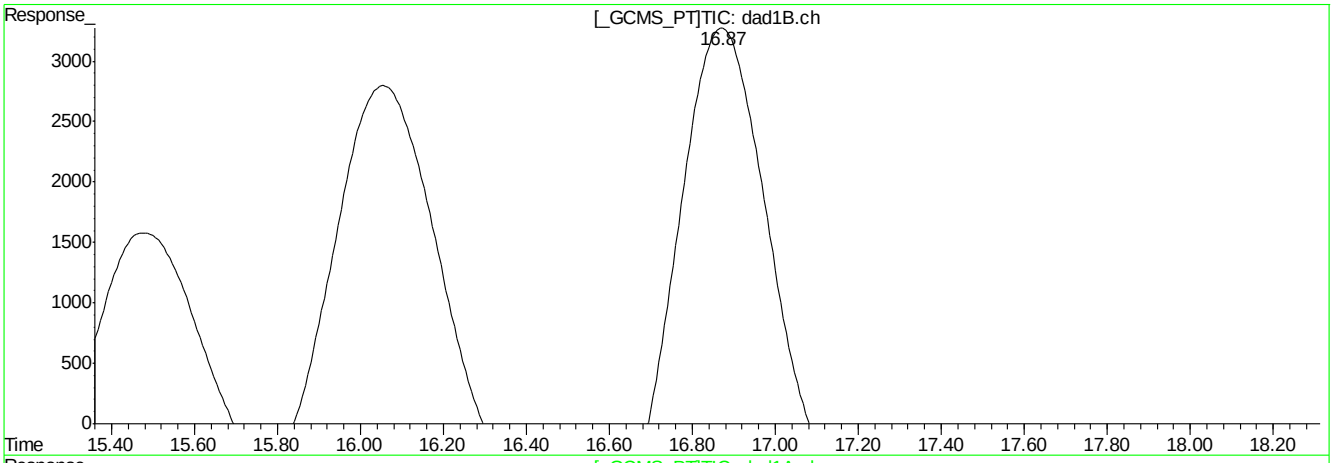
response 567450

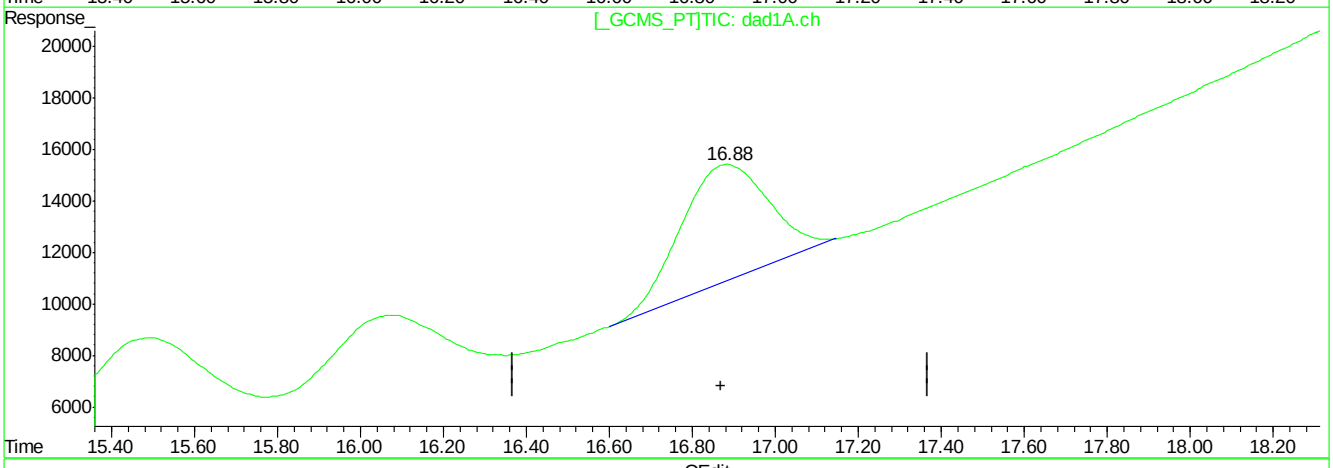
(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:14:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 190.052ppb

response 605729

(20) m-Nitrotoluene #2

16.88min 183.904ppb m

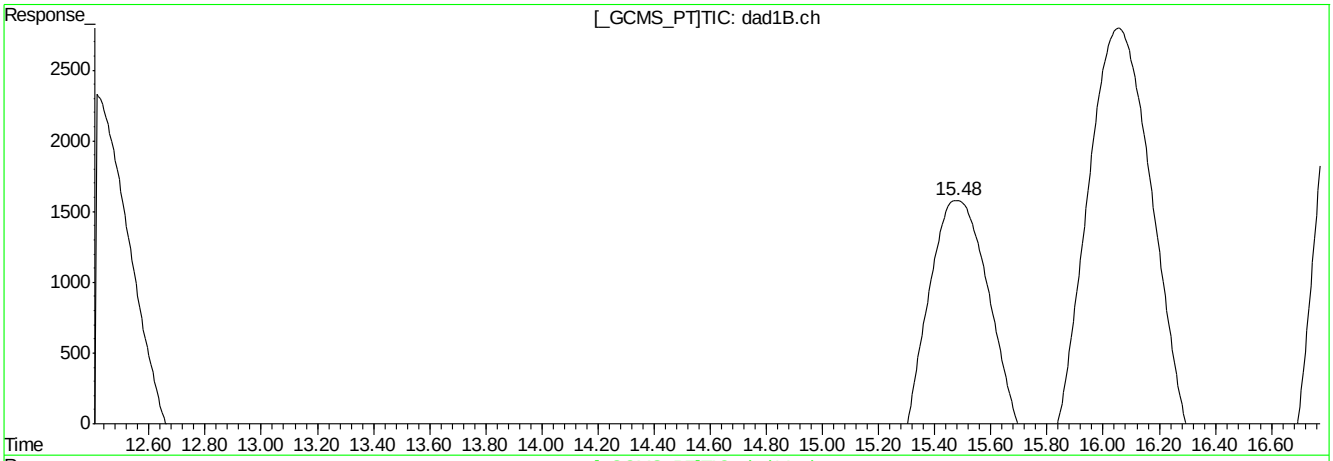
response 667977

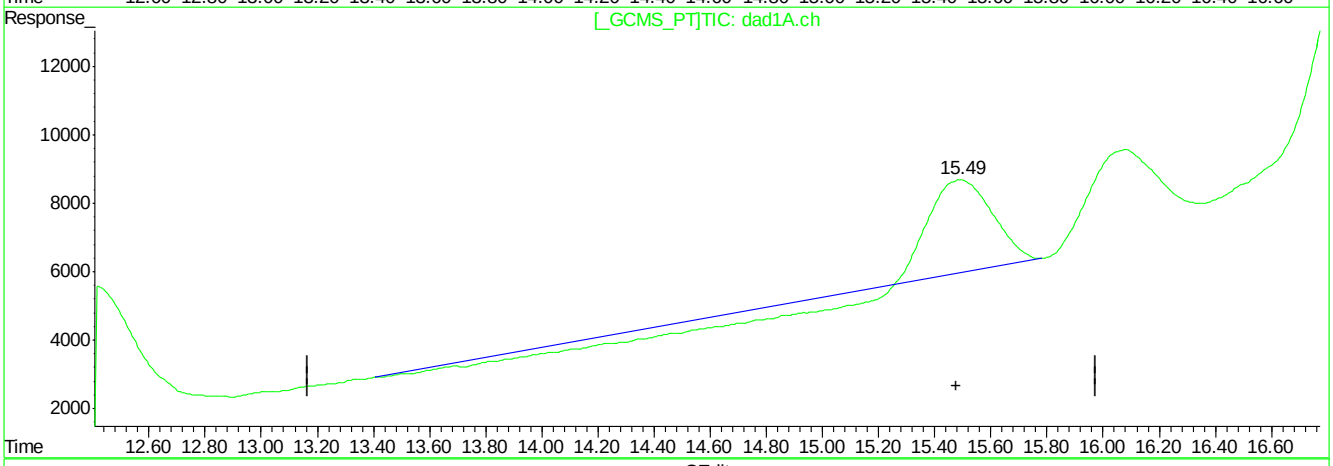
(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:14:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 182.534ppb

response 414929

(18) o-Nitrotoluene #2

15.49min 63.839ppb

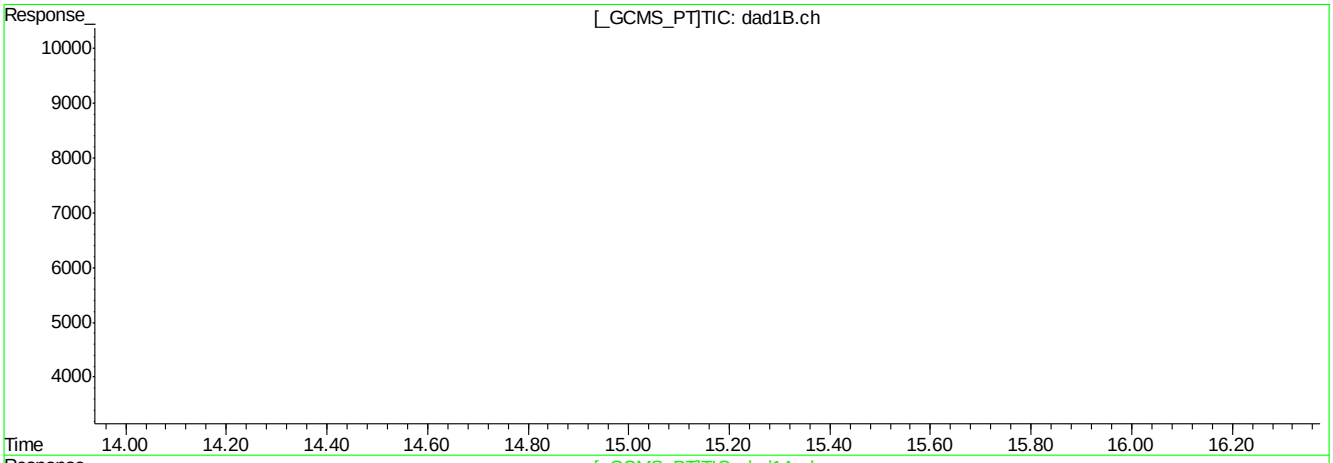
response 173211

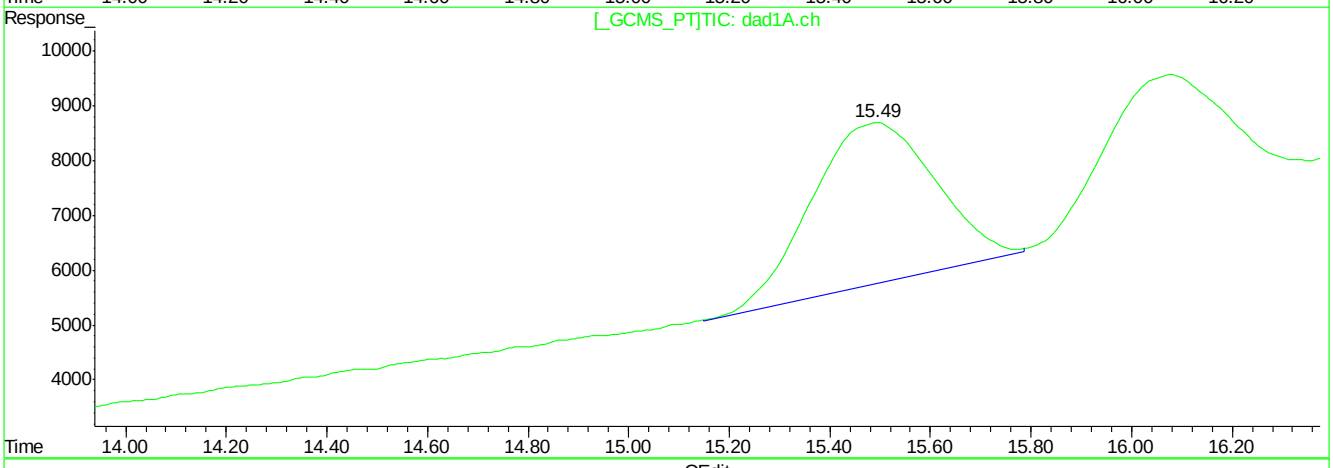
(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:14:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 182.534ppb

response 414929

(18) o-Nitrotoluene #2

15.49min 187.422ppb m

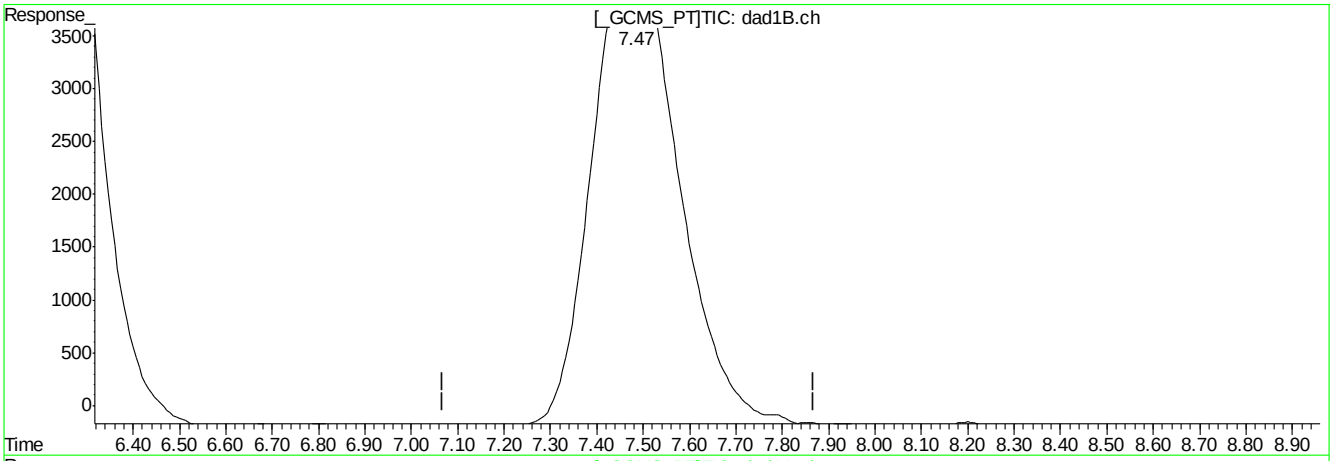
response 508527

(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:14:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.48min 189.399ppb

response 586807

(9) Nitrobenzene #2

7.48min 192.229ppb

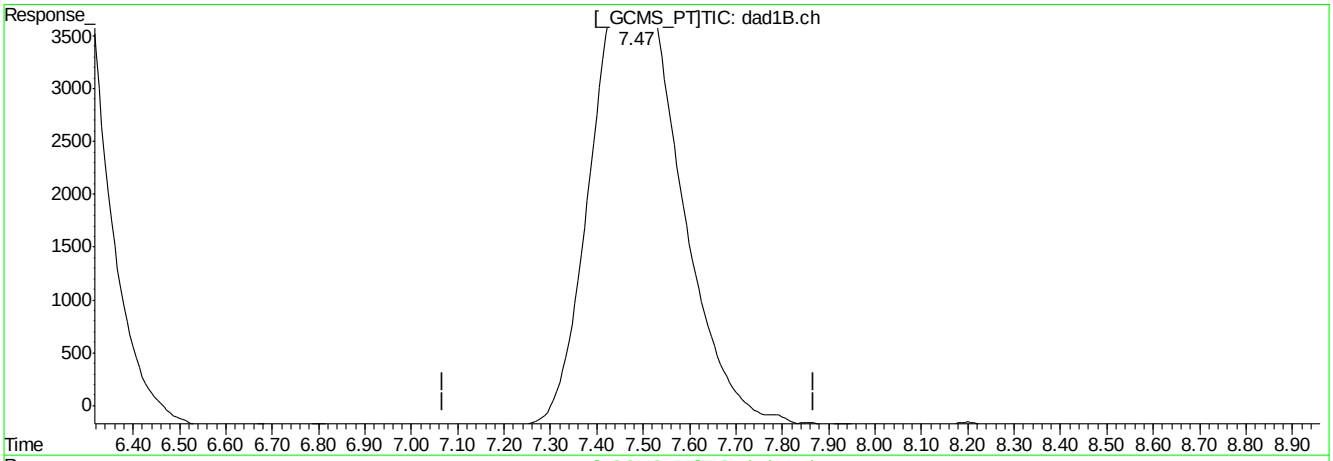
response 578542

(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:14:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.48min 189.399ppb

response 586807

(9) Nitrobenzene #2

7.47min 191.566ppb m

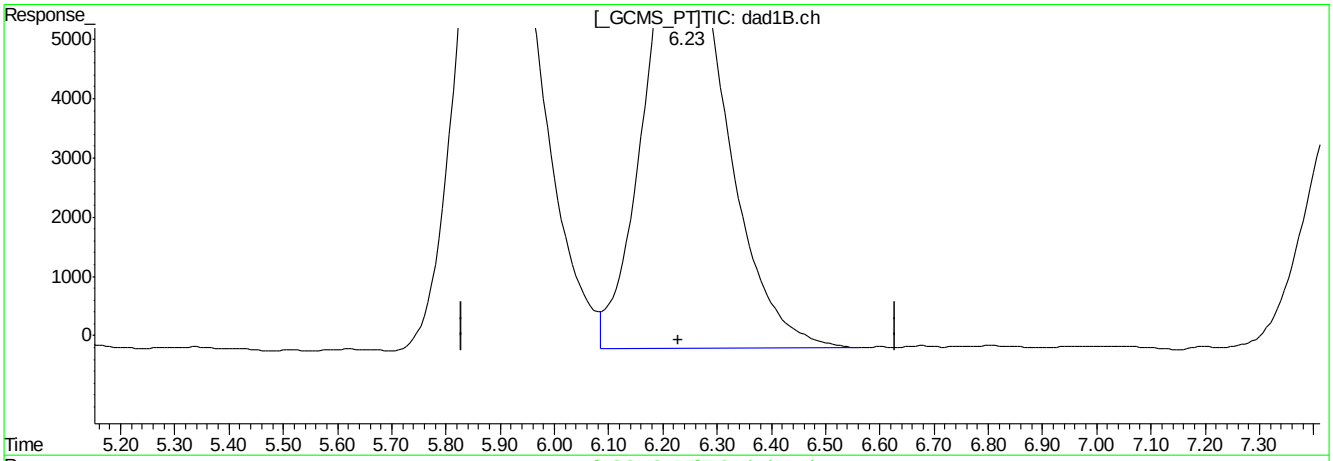
response 576544

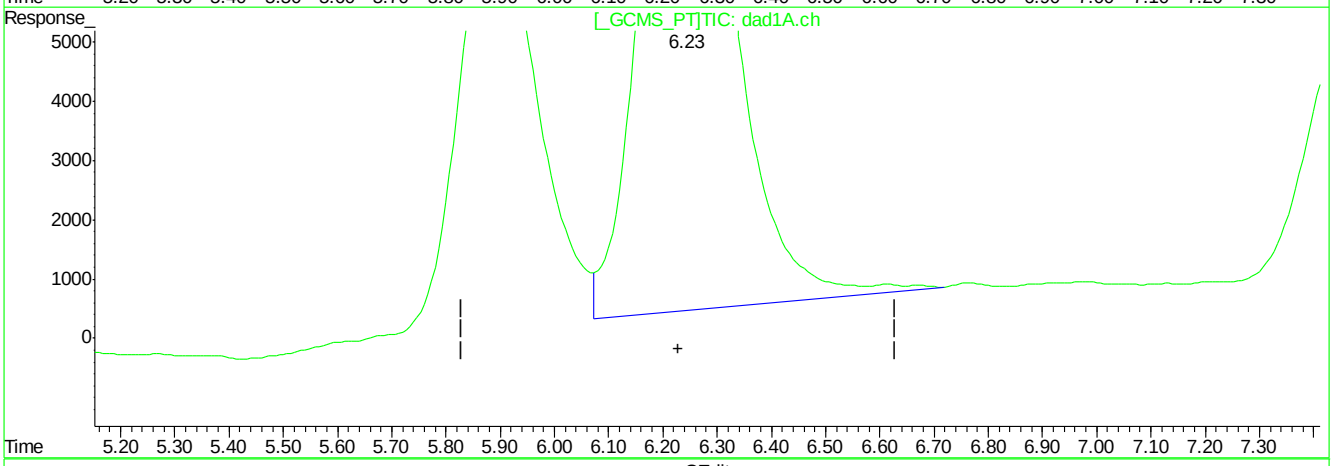
(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:14:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.24min 190.080ppb

response 768090

(8) 3,5-Dinitroaniline #2

6.24min 191.327ppb

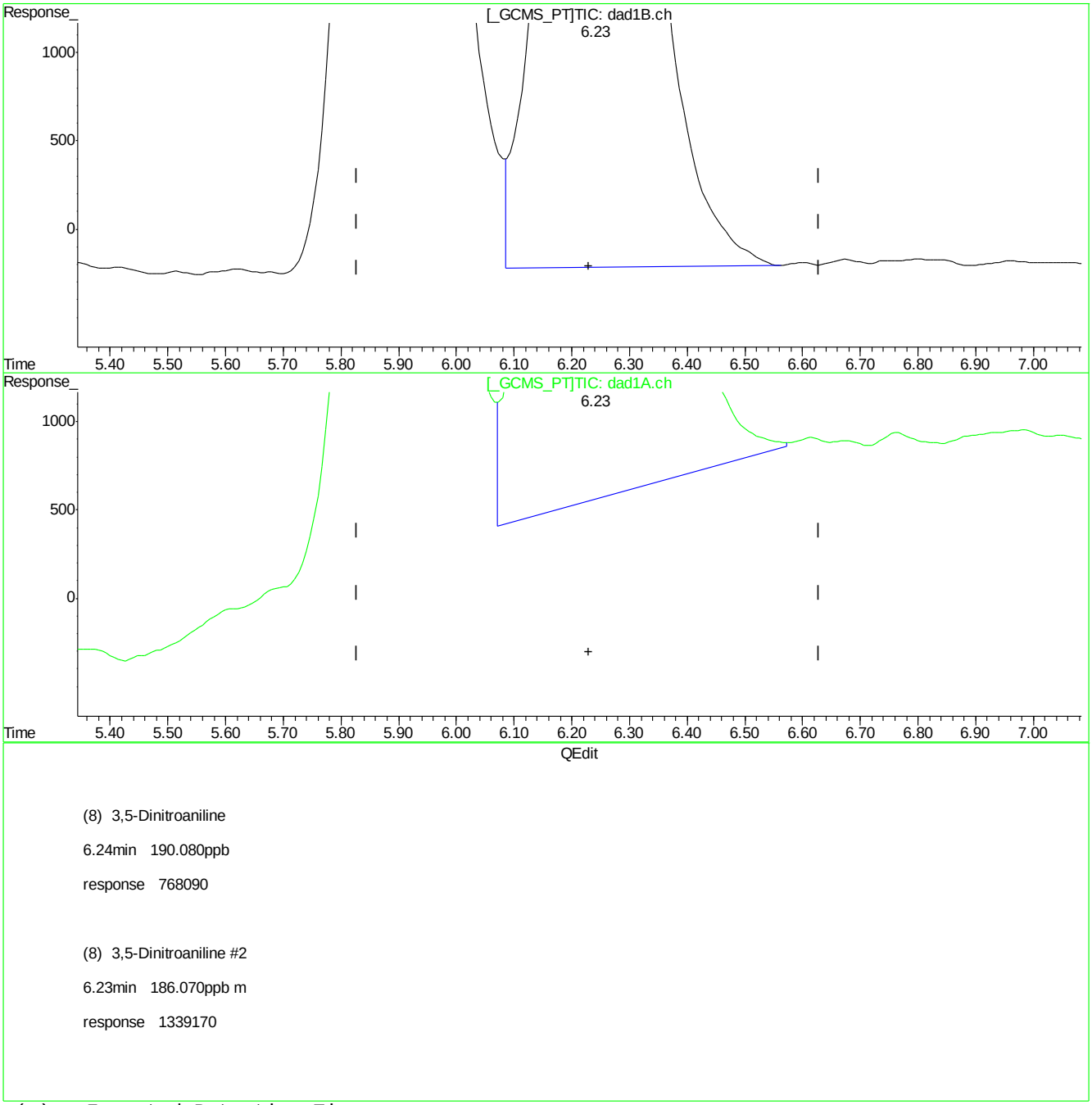
response 1377001

(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:14:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.24min 190.080ppb

response 768090

(8) 3,5-Dinitroaniline #2

6.23min 186.070ppb m

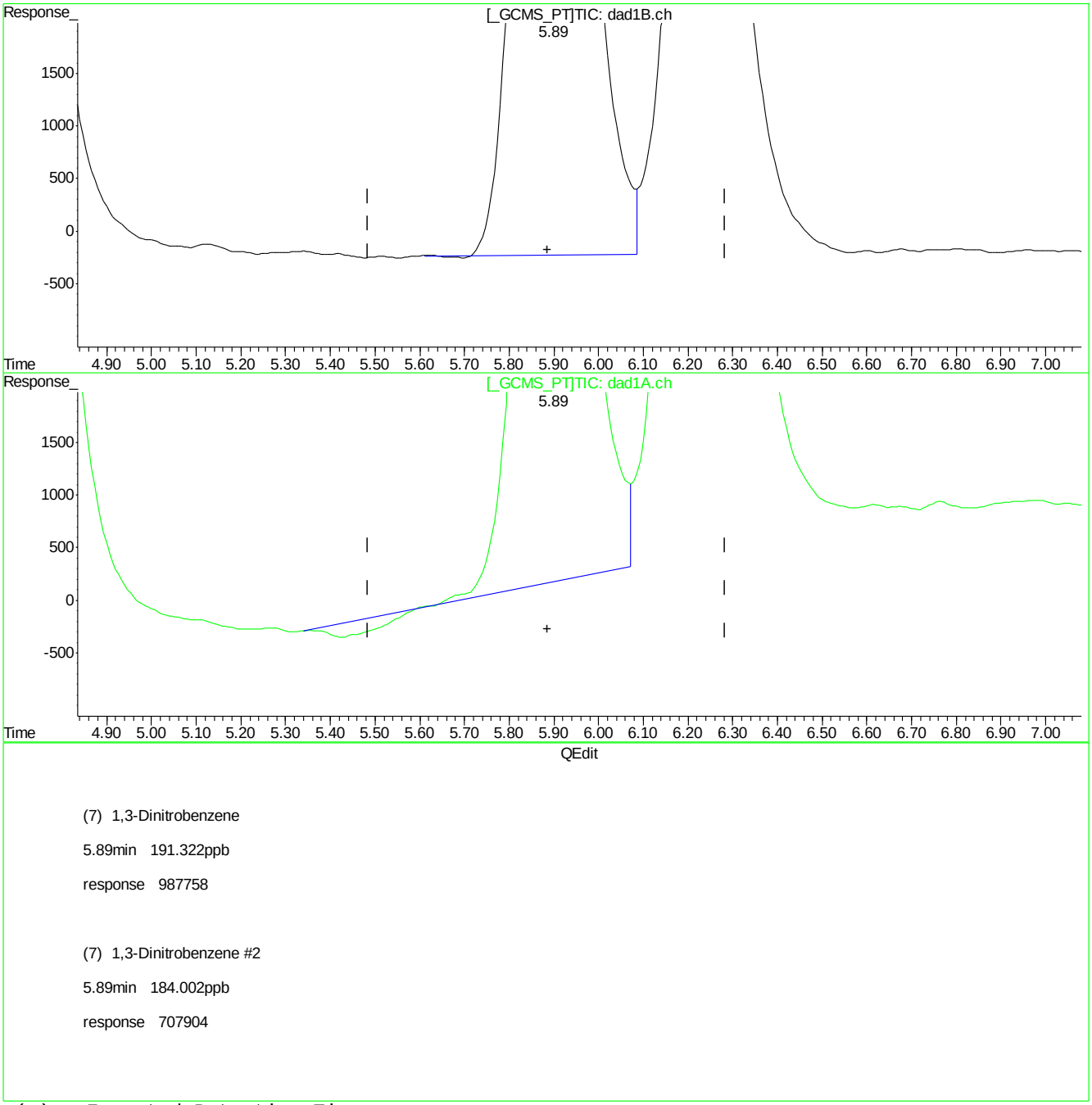
response 1339170

(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:15:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.89min 191.322ppb

response 987758

(7) 1,3-Dinitrobenzene #2

5.89min 184.002ppb

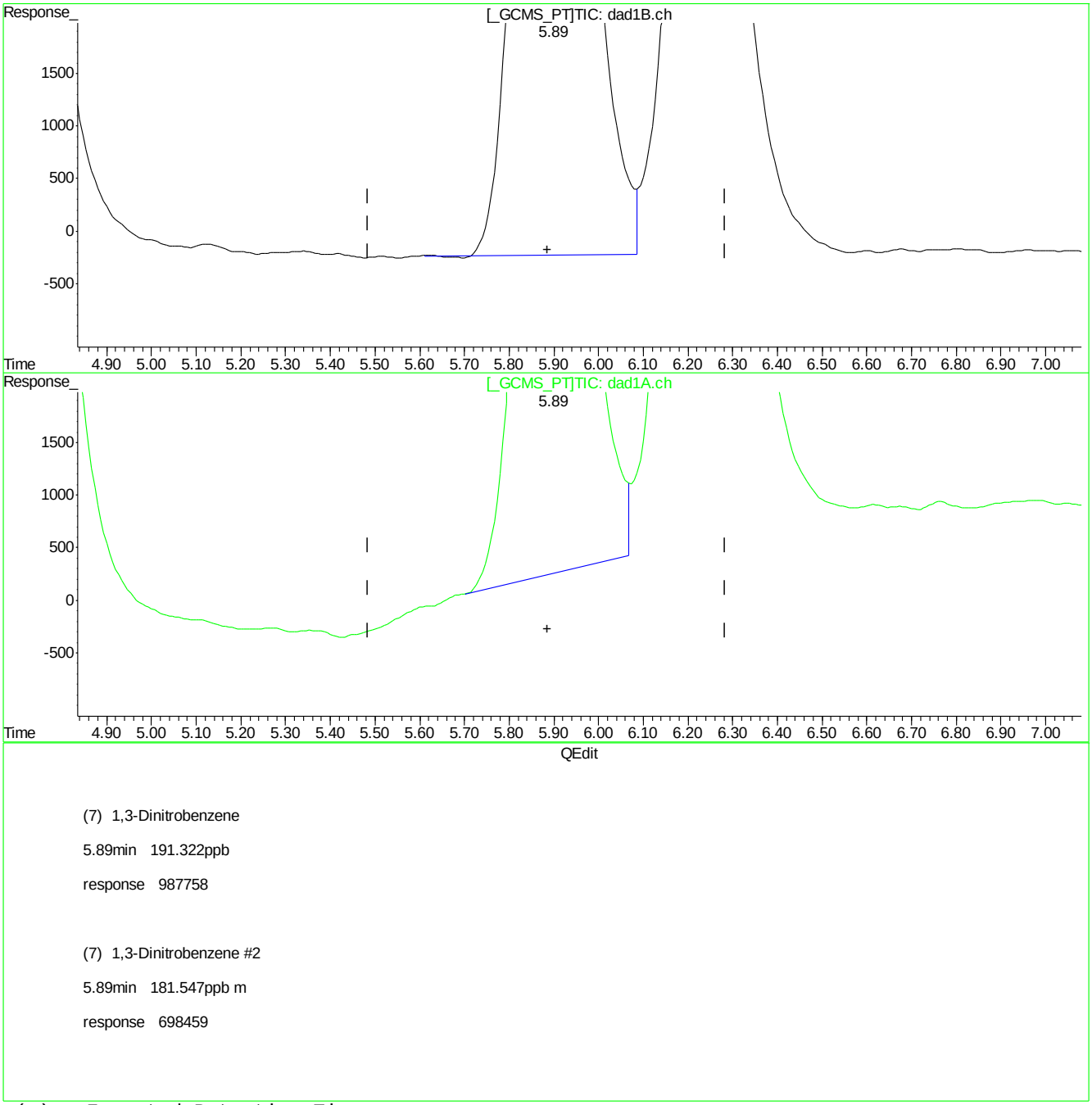
response 707904

(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:15:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391633.D\dad1A.ch
Acq On : 04-Nov-2021, 16:06:32 Operator: jamesb
Sample : ic2490-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.89min 191.322ppb

response 987758

(7) 1,3-Dinitrobenzene #2

5.89min 181.547ppb m

response 698459

(+) = Expected Retention Time
PP391633.D GPP2490_110421.M Sat Nov 06 12:15:15 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 10:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 06 12:08:28 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.30	11.30	920855	1438463	404.248	355.759
	Spiked Amount 500.000	Range 70 - 136		Recovery =		80.85%	71.15%
	Target Compounds						
1)	TNX	1.33	1.33	344589	577173	250.108	250.623
2)	HMX	1.45	1.45	724222	2107873	441.744	497.300
3)	DNX	1.69	1.69	813117	1336062	415.139	415.403
4)	MNX	2.28	2.28	1577476	2454749	575.458	581.948
5)	RDX	2.90	2.90	861896	1394383	469.808	468.571
6)	1,3,5-Trinitrobe	4.70	4.70	1828549	3604661	462.490	466.538
7)	1,3-Dinitrobenze	5.89	5.89	2409709	1695922	466.744	440.813m
8)	3,5-Dinitroanili	6.24	6.24	1855706	3220517	459.235	447.473
9)	Nitrobenzene	7.47	7.47	1424805	1431434	459.874	475.615
10)	Nitroglycerin	0.00	9.04	0	544319	N.D.	414.466m#
11)	Tetryl	9.57	9.57	1331246	2119459	488.102	484.309
12)	2,4,6-Trinitroto	9.96	9.96	1692796	1972181	435.728	447.391
13)	2-Amino-4,6-Dini	10.29	10.30	1616979	2321167	449.974	509.550
14)	4-Amino-2,6-Dini	10.82	10.82	1150110	2117067	442.821	433.377
16)	2,4-Dinitrotolue	11.93	11.94	2149993	1272026	470.652	413.903
17)	2,6-Dinitrotolue	12.41	12.41	1289120	1585480	454.493	478.119
18)	o-Nitrotoluene	15.48	15.48	1006133	1294806	442.614	477.213m
19)	p-Nitrotoluene	16.06	16.06	1578480	1124564	463.125	395.708m
20)	m-Nitrotoluene	16.87	16.88	1482136	1737806	465.031	478.443m
21)	PETN	0.00	18.63	0	611376	N.D.	452.094m#

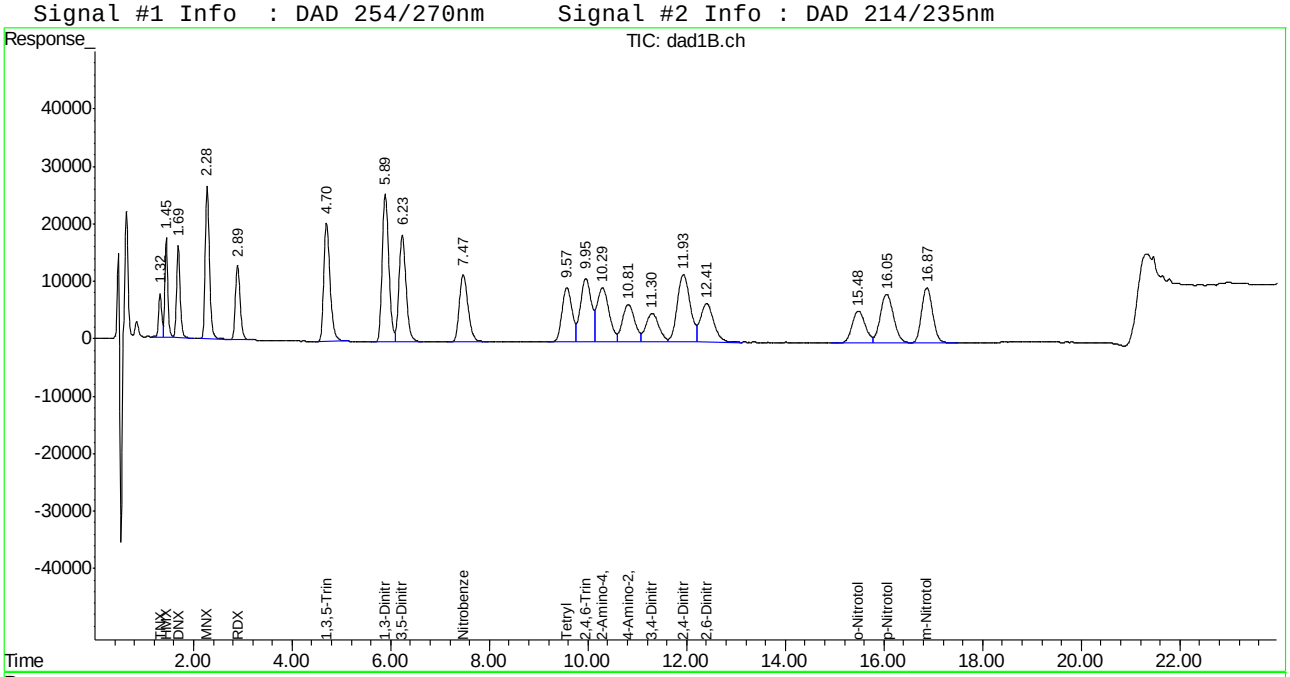
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391634.D GPP2490_110421.M Sat Nov 06 12:34:05 2021 Page 1

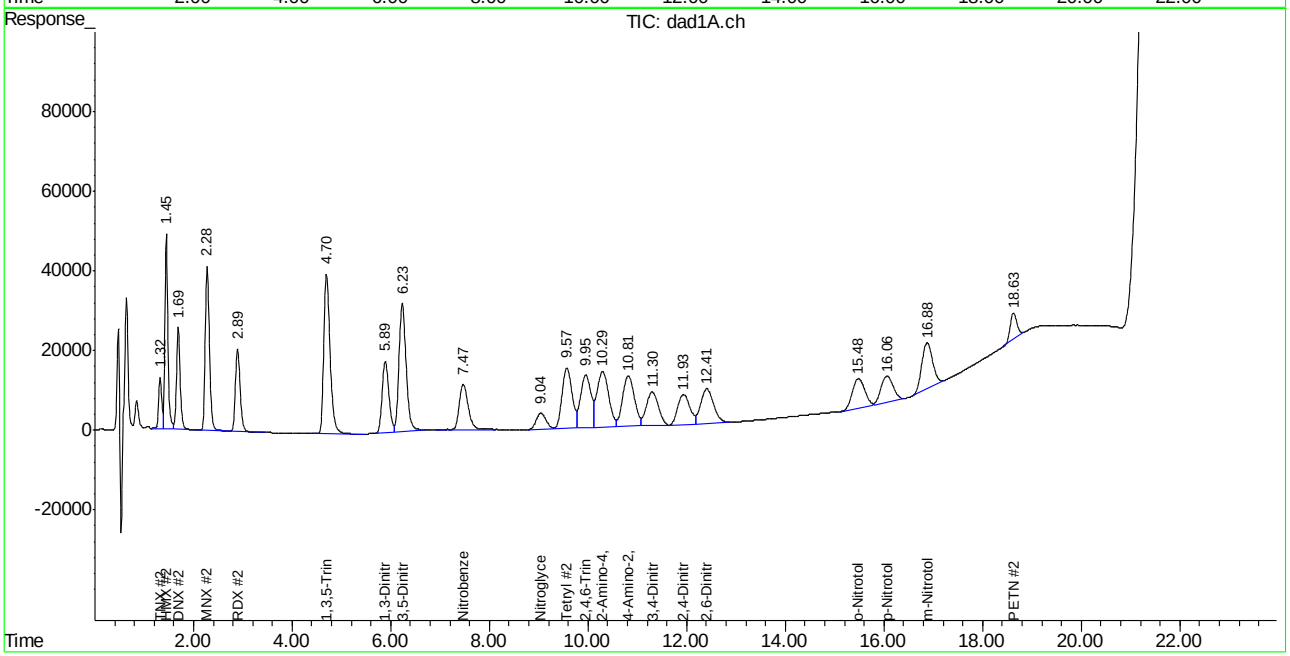
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:13 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





FA90260

Manual Integration Approval Summary

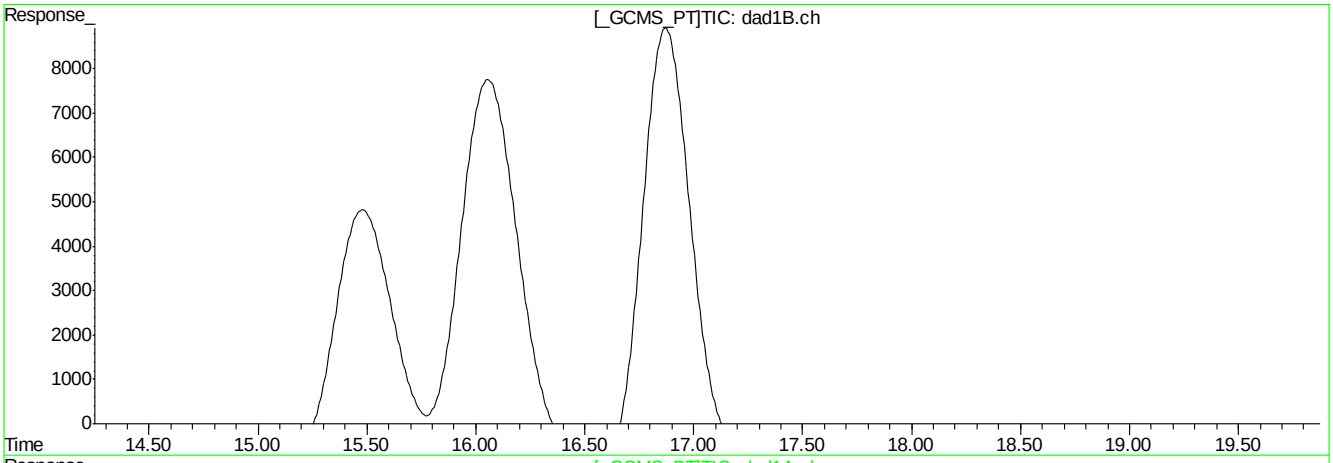
Sample Number: GPP2490-IC2490
Lab FileID: PP391634.D
Injection Time: 11/04/21 16:37
Method: SW846 8330B
Analyst approved: 11/06/21 13:36 James Boone
Supervisor approved: 11/08/21 10:18 Naresh Jiawan

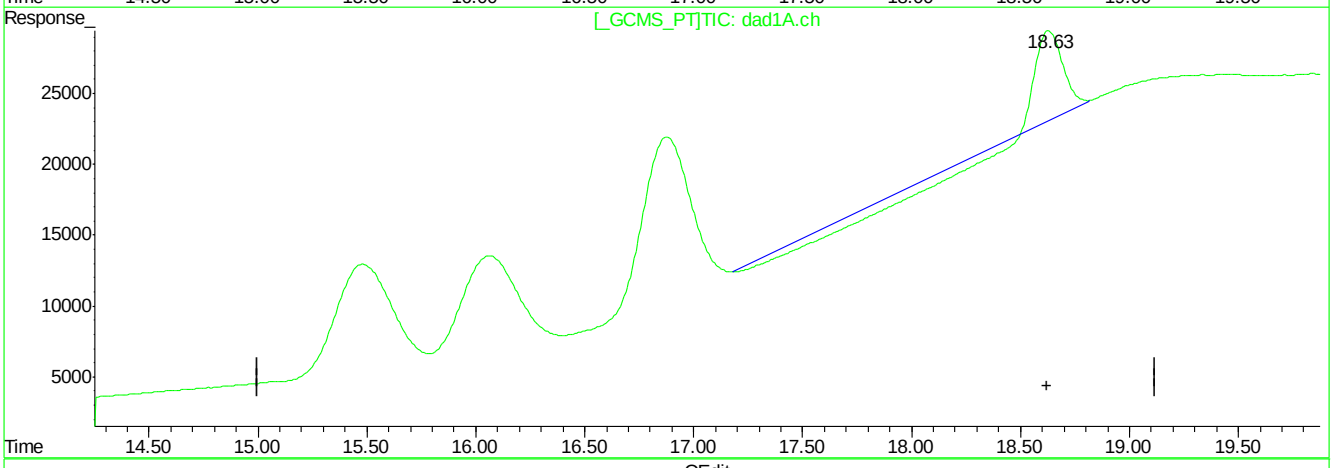
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	5.89	Poor instrument integration
Nitroglycerine	55-63-0	2	9.04	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.06	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.88	Poor instrument integration
PETN	78-11-5	2	18.63	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.63min 36.047ppb

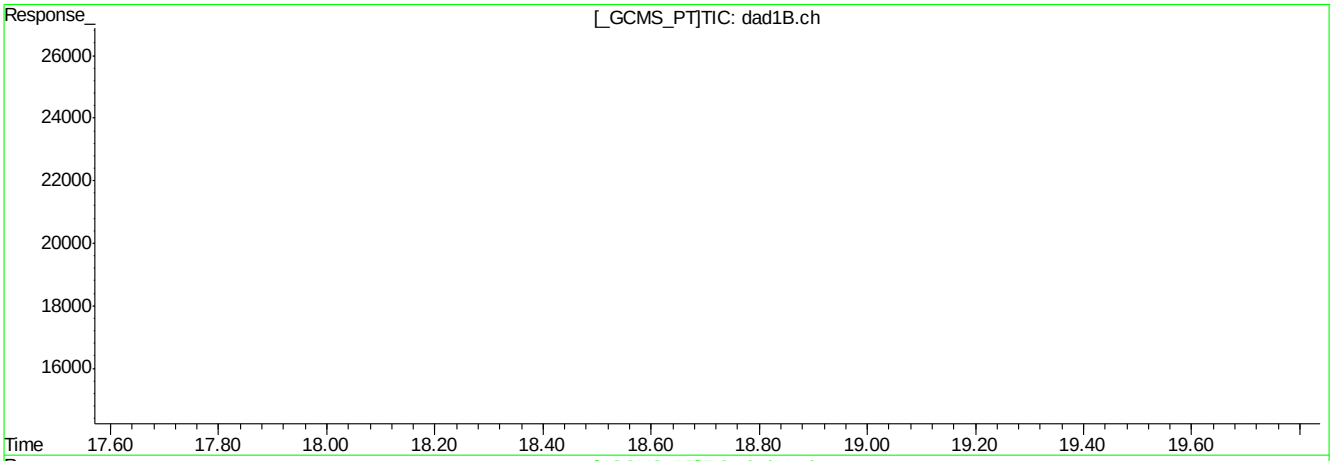
response 48747

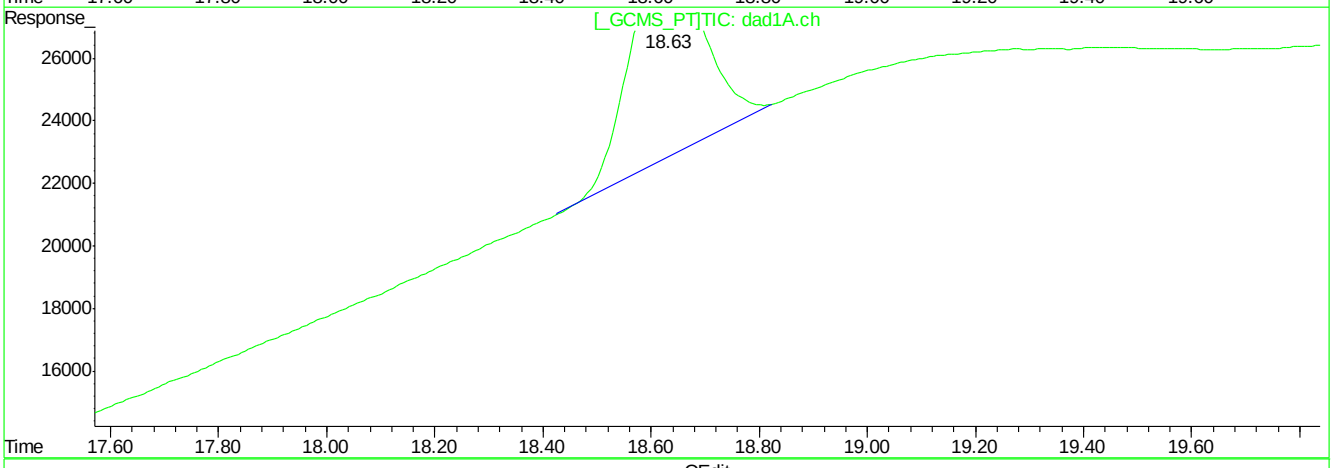
(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:12:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.63min 452.094ppb m

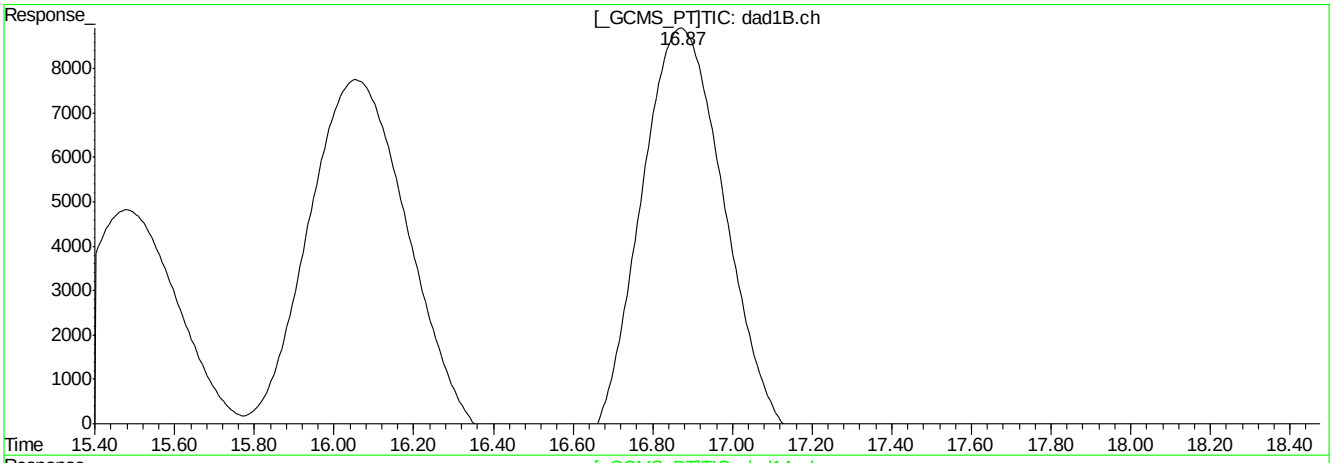
response 611376

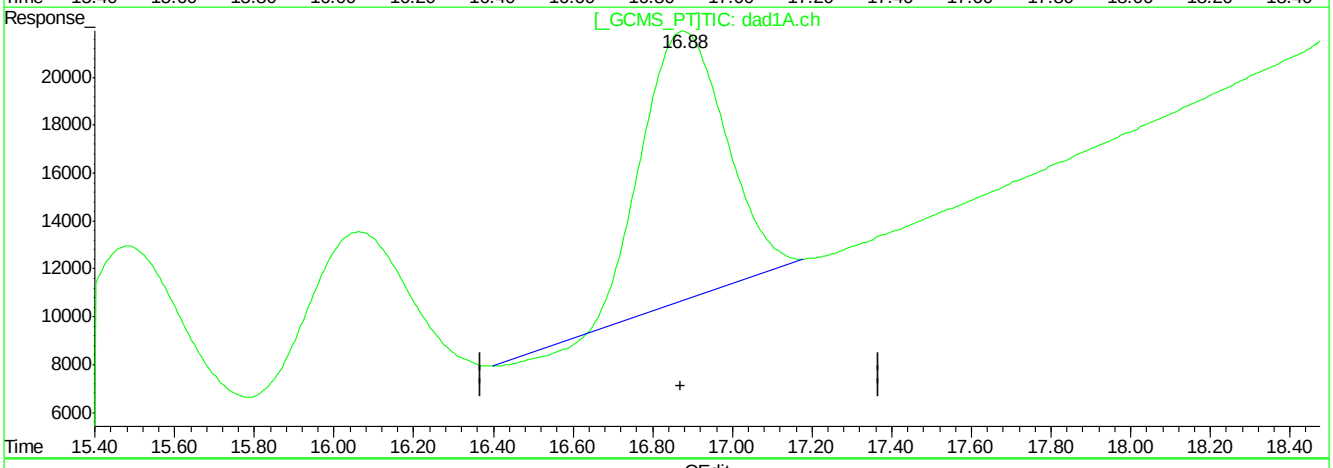
(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 465.031ppb

response 1482136

(20) m-Nitrotoluene #2

16.88min 447.358ppb

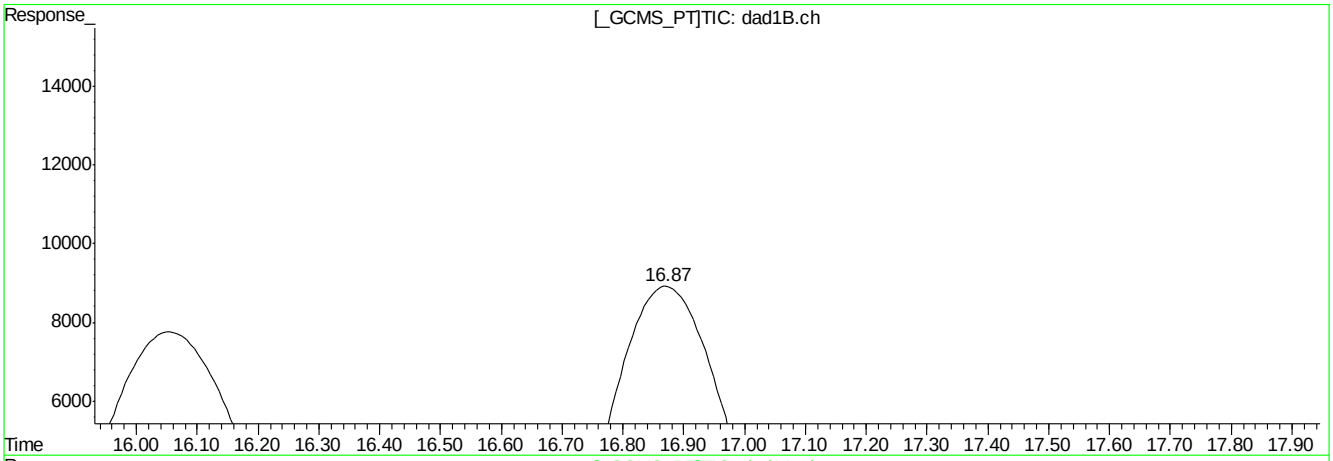
response 1624898

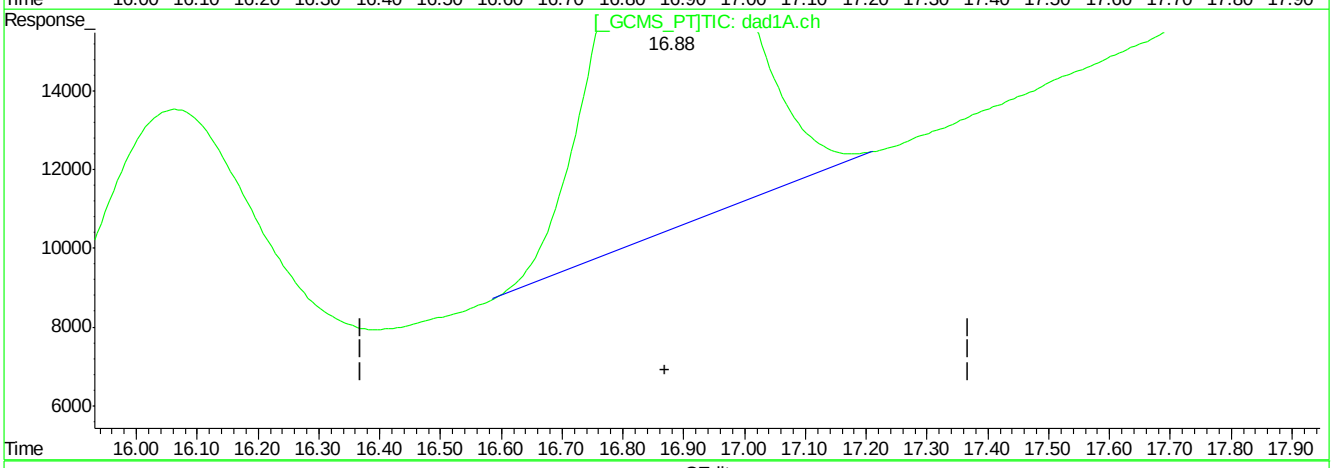
(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 465.031ppb

response 1482136

(20) m-Nitrotoluene #2

16.88min 478.443ppb m

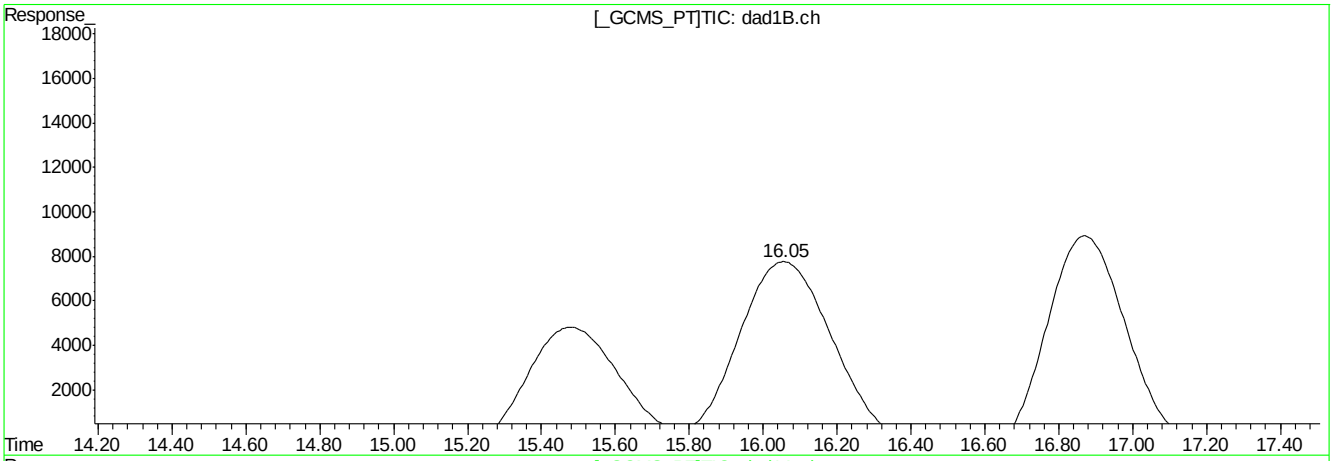
response 1737806

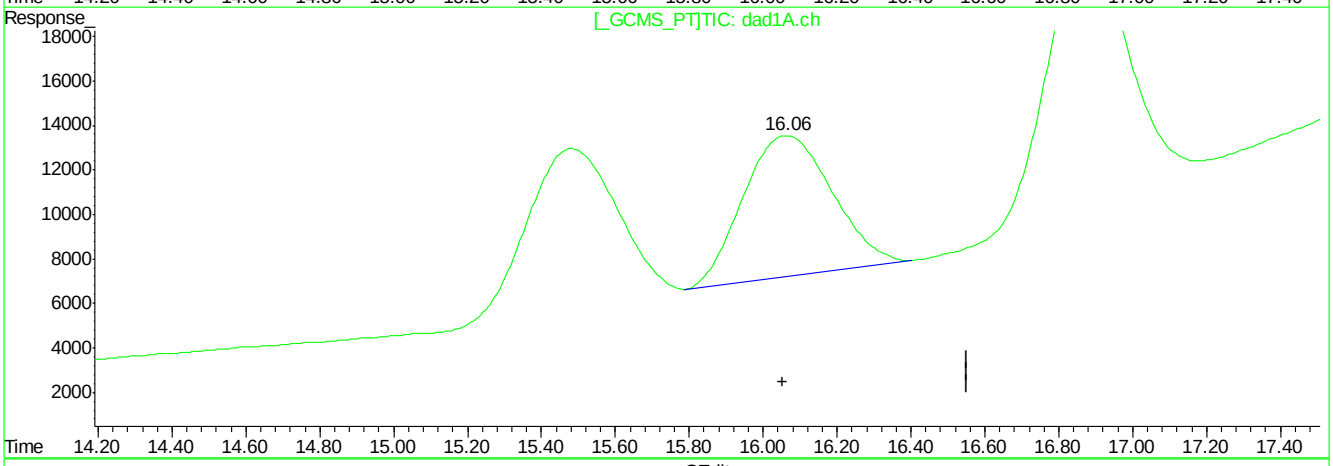
(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.06min 463.125ppb

response 1578480

(19) p-Nitrotoluene #2

16.07min 370.998ppb

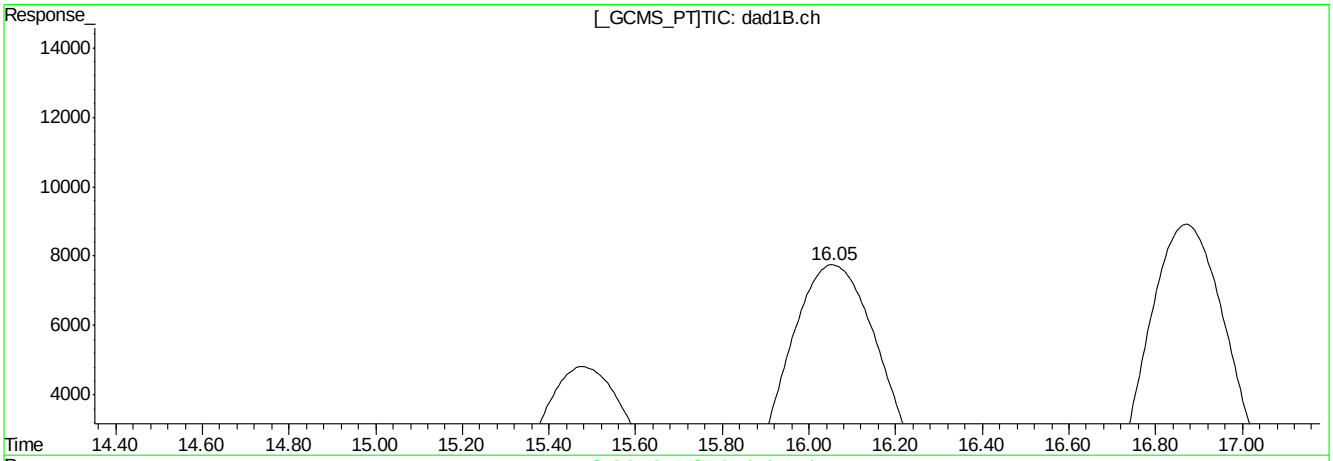
response 1054340

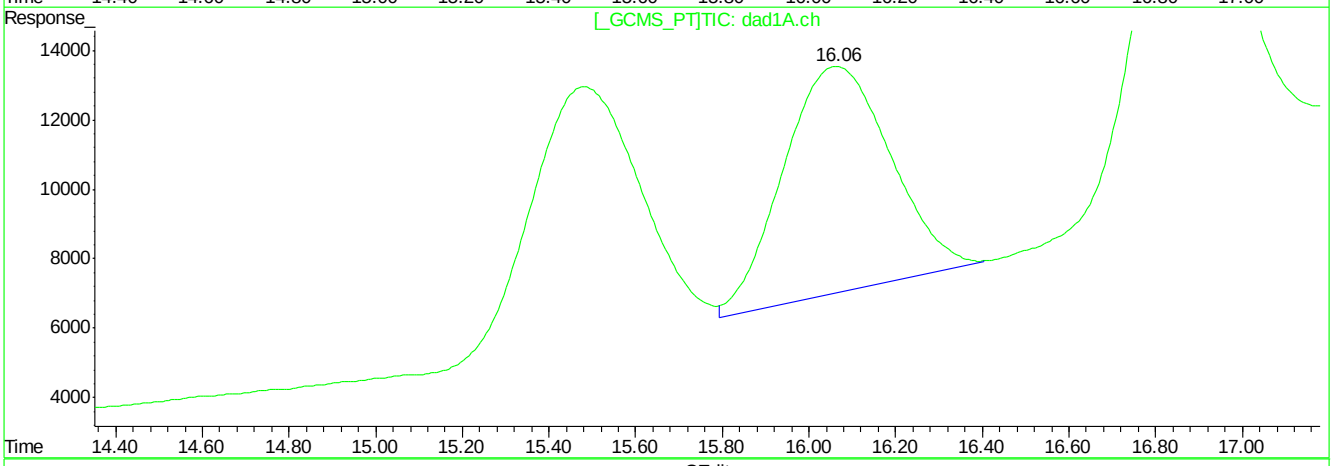
(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.06min 463.125ppb

response 1578480

(19) p-Nitrotoluene #2

16.06min 395.708ppb m

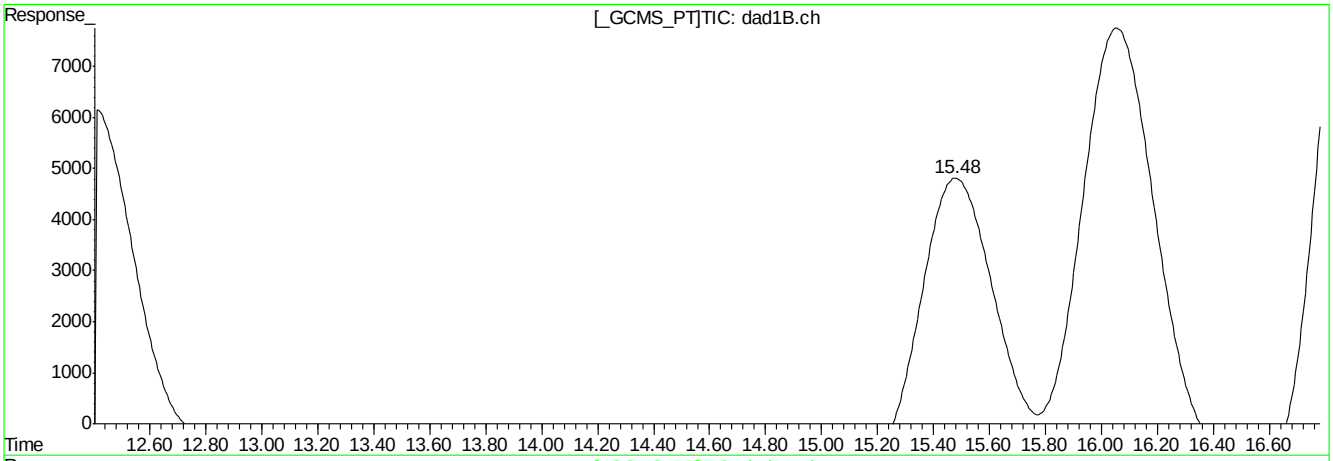
response 1124564

(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.48min 442.614ppb

response 1006133

(18) o-Nitrotoluene #2

15.48min 229.112ppb

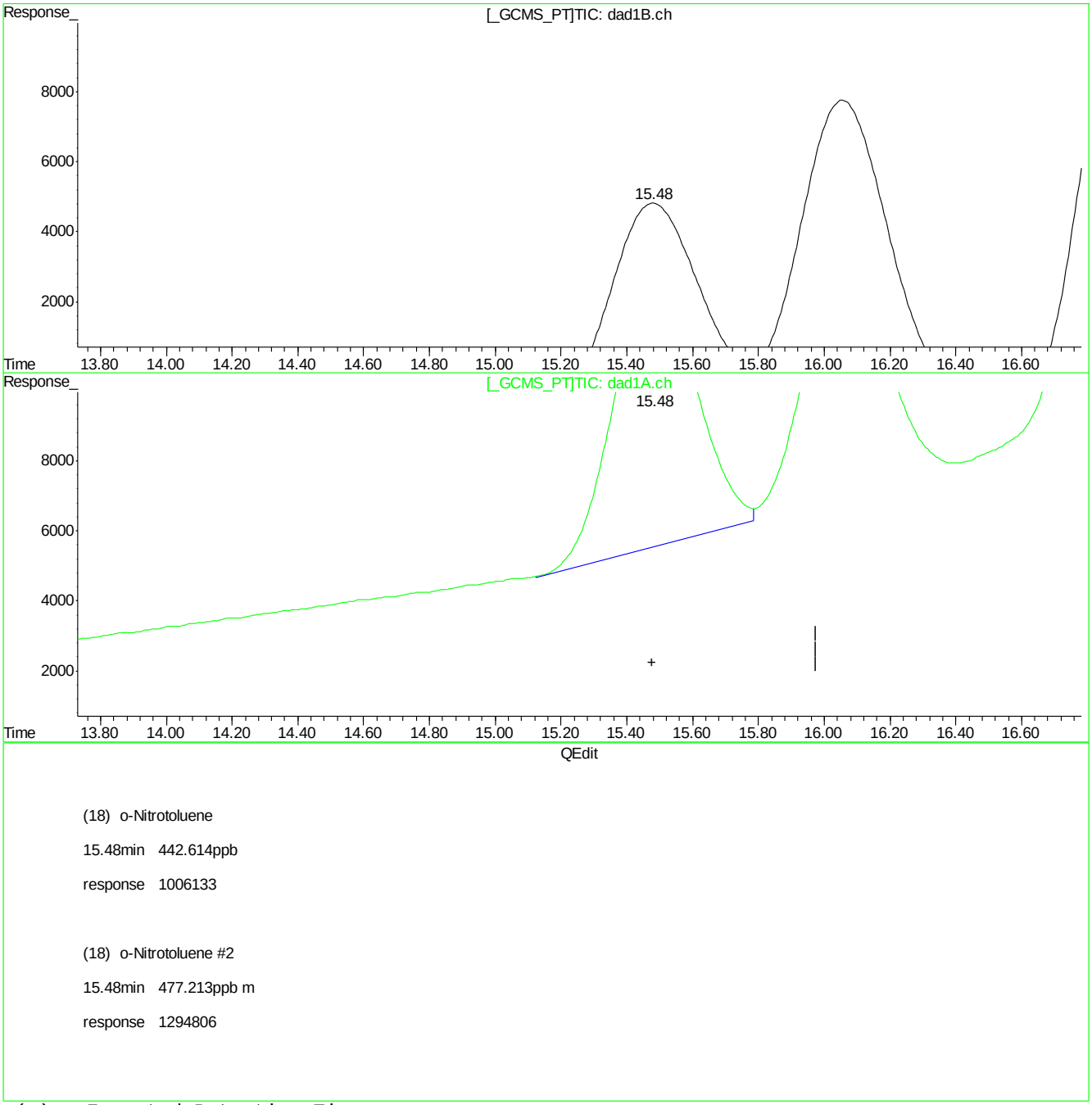
response 621642

(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.48min 442.614ppb

response 1006133

(18) o-Nitrotoluene #2

15.48min 477.213ppb m

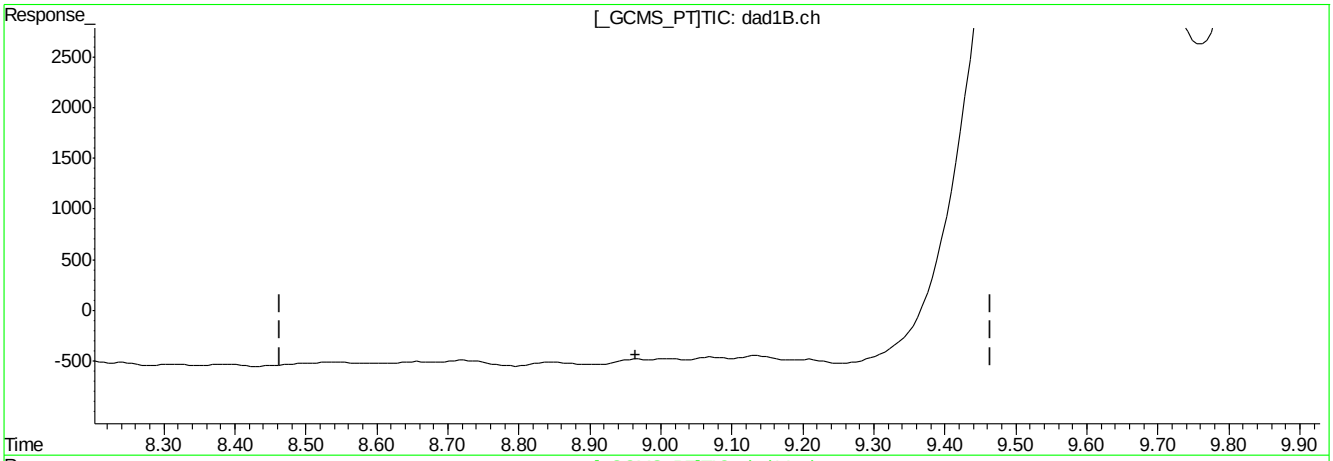
response 1294806

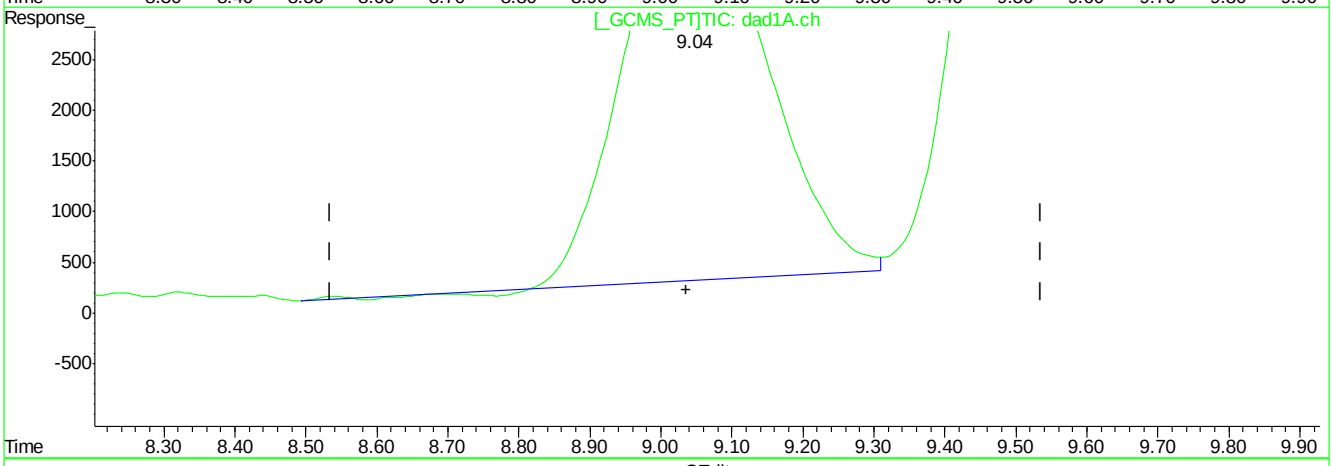
(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.04min 403.701ppb

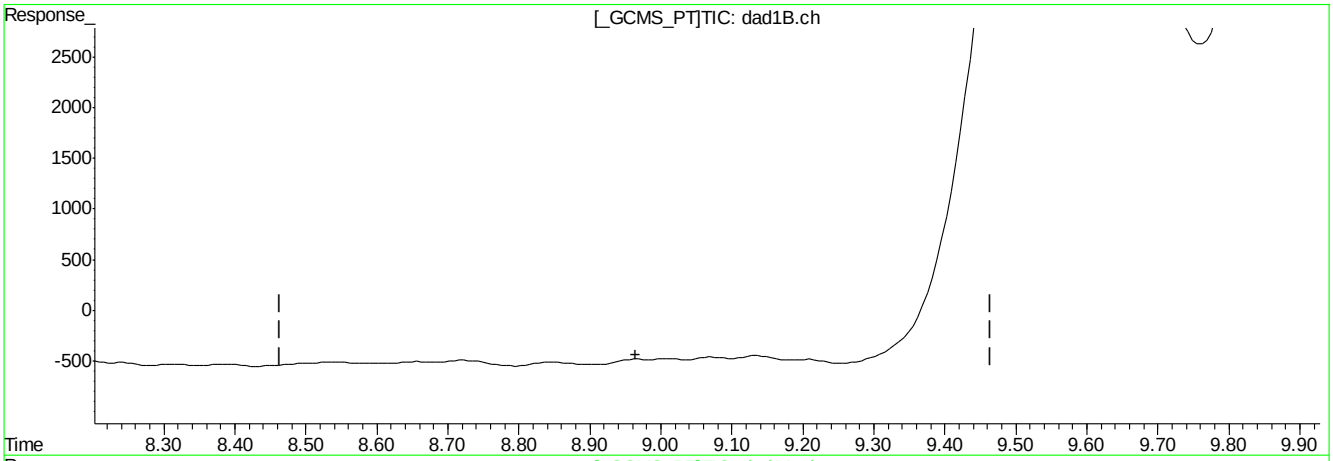
response 530182

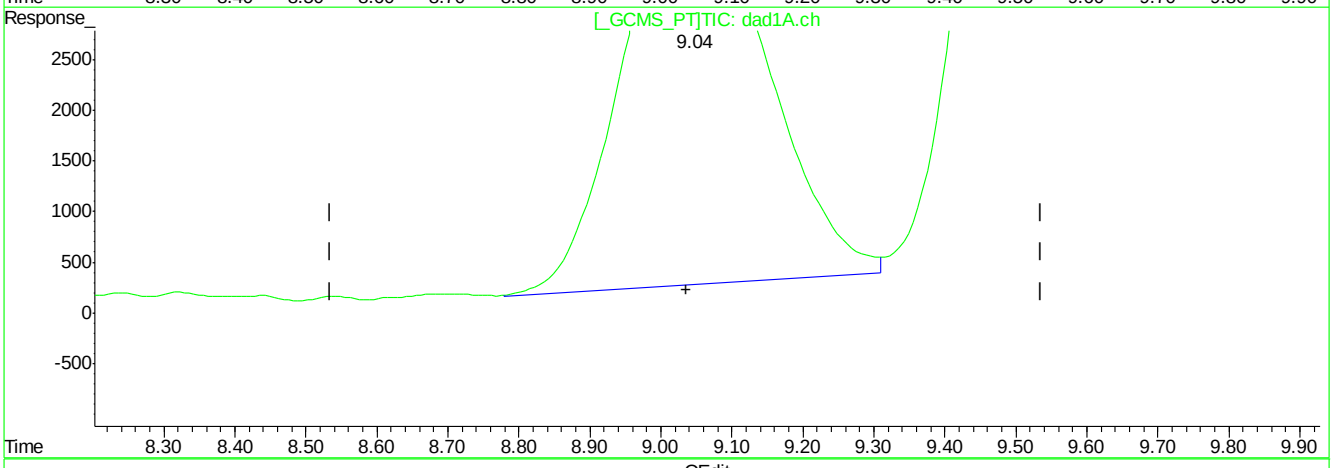
(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.04min 414.466ppb m

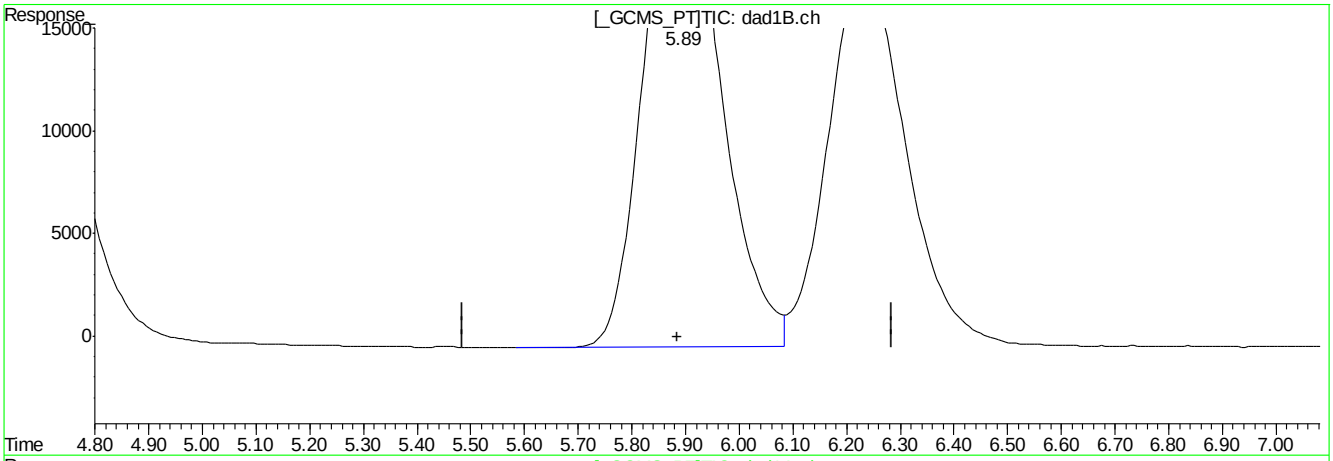
response 544319

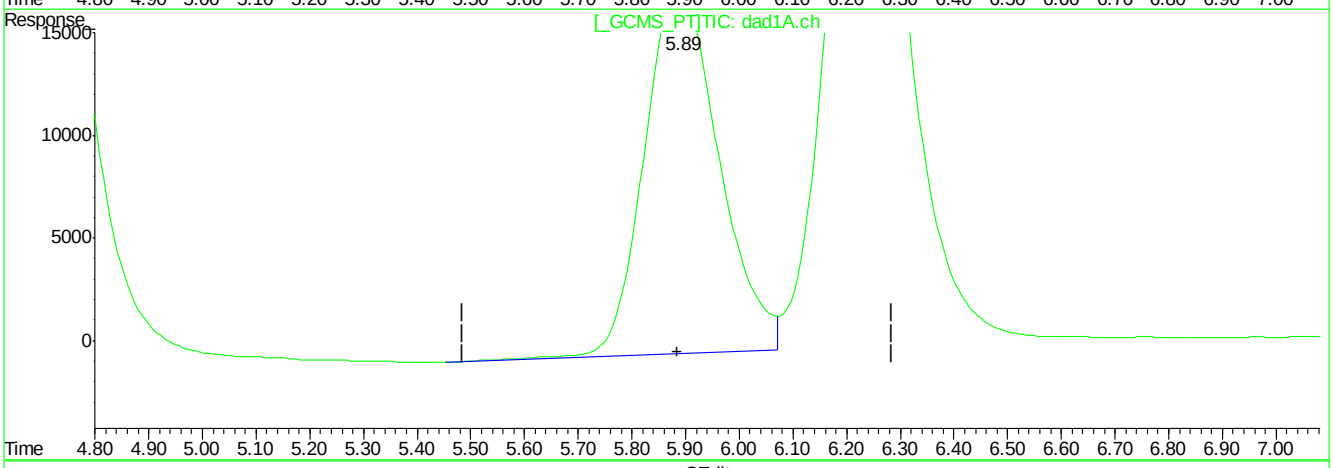
(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.89min 466.744ppb

response 2409709

(7) 1,3-Dinitrobenzene #2

5.89min 444.118ppb

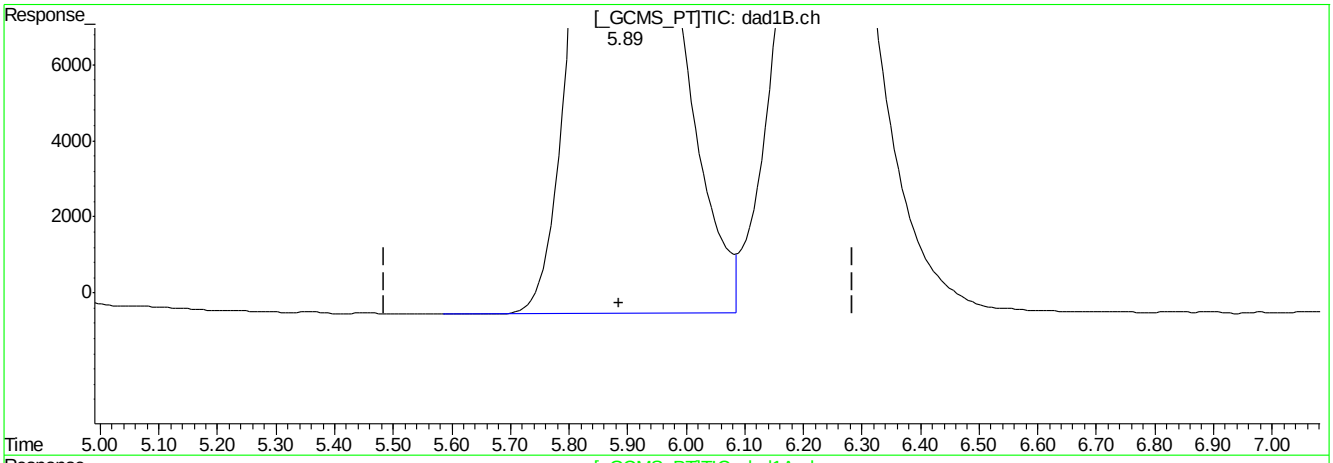
response 1708636

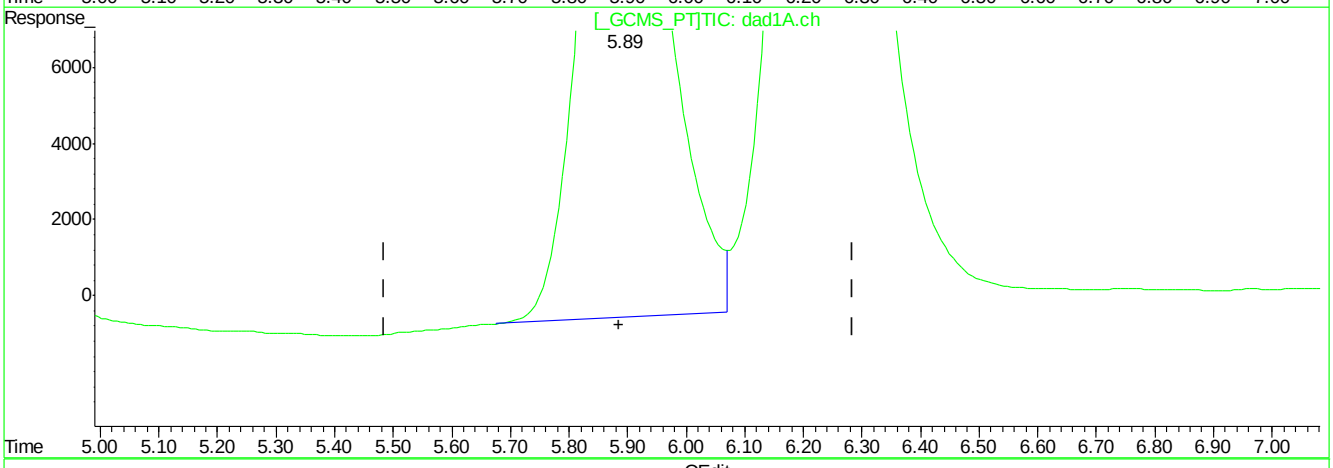
(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391634.D\dad1A.ch
Acq On : 04-Nov-2021, 16:37:29 Operator: jamesb
Sample : ic2490-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.89min 466.744ppb

response 2409709

(7) 1,3-Dinitrobenzene #2

5.89min 440.813ppb m

response 1695922

(+) = Expected Retention Time
PP391634.D GPP2490_110421.M Sat Nov 06 12:13:56 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 10:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 06 12:08:29 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.30	11.30	1866559	3137252	819.405	775.901
	Spiked Amount 500.000	Range 70 - 136		Recovery =		163.88%#	155.18%#
	Target Compounds						
1)	TNX	1.33	1.33	707203	1186459	513.299	515.190
2)	HMX	1.45	1.45	1457356	4166462	888.925	982.973
3)	DNX	1.69	1.69	1651055	2650558	842.951	824.101
4)	MNX	2.28	2.28	3204127	4988301	1168.855	1182.577
5)	RDX	2.89	2.89	1760604	2828706	959.683	950.563
6)	1,3,5-Trinitrobe	4.70	4.70	3778240	7364390	955.620	953.147
7)	1,3-Dinitrobenze	5.89	5.89	4913903	3448087	951.789	896.246
8)	3,5-Dinitroanili	6.23	6.23	3786751	6455850	937.114	897.005m
9)	Nitrobenzene	7.47	7.47	2904035	2824717	937.314	938.555
10)	Nitroglycerin	0.00	9.04	0	1126881	N.D.	858.052m#
11)	Tetryl	9.57	9.57	2717433	4391579	996.348	1003.502
12)	2,4,6-Trinitroto	9.95	9.95	3440321	4079682	885.543	925.480
13)	2-Amino-4,6-Dini	10.29	10.29	3294298	4891626	916.740	1073.826
14)	4-Amino-2,6-Dini	10.81	10.81	2323178	4525397	894.481	926.378
16)	2,4-Dinitrotolue	11.93	11.93	4374175	2719380	957.544	884.857
17)	2,6-Dinitrotolue	12.40	12.40	2611086	3313885	920.567	999.338
18)	o-Nitrotoluene	15.48	15.48	2044226	2745893	899.288	1012.024m
19)	p-Nitrotoluene	16.05	16.05	3236248	2541697	949.512	894.364m
20)	m-Nitrotoluene	16.87	16.87	3041042	3604550	954.149	992.385m
21)	PETN	0.00	18.62	0	1306812	N.D. d	966.347m

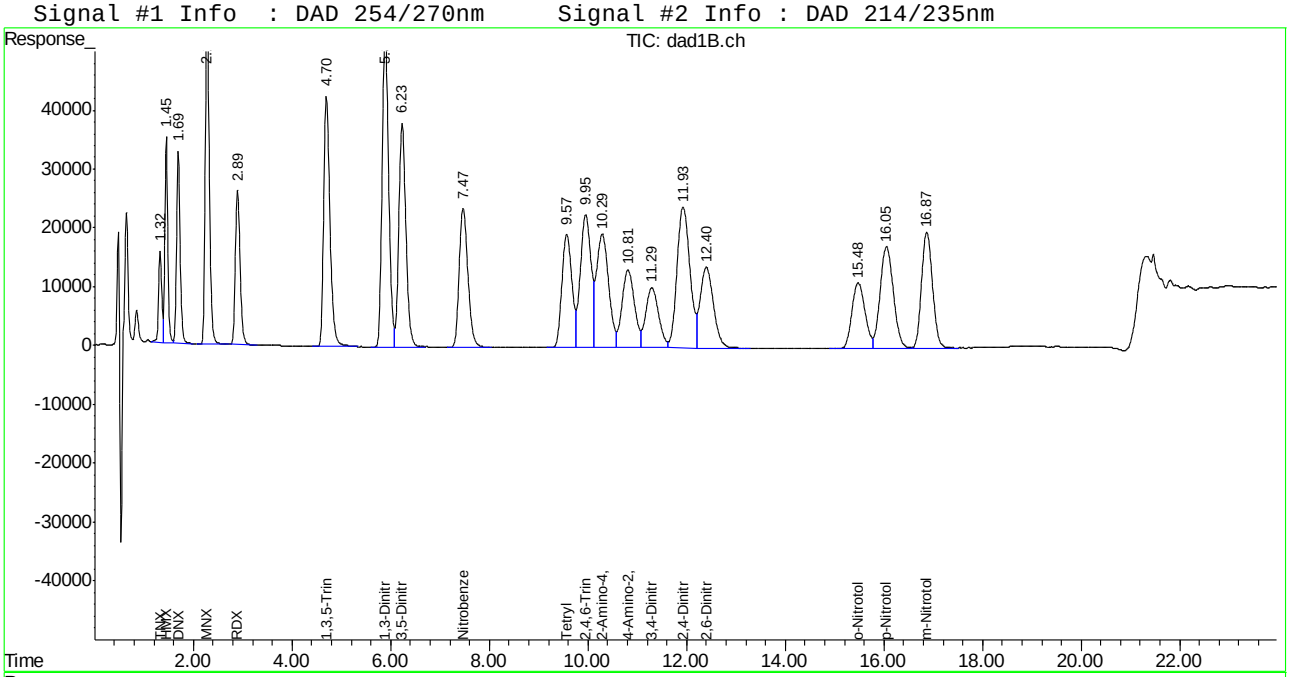
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391635.D GPP2490_110421.M Sat Nov 06 12:34:06 2021 Page 1

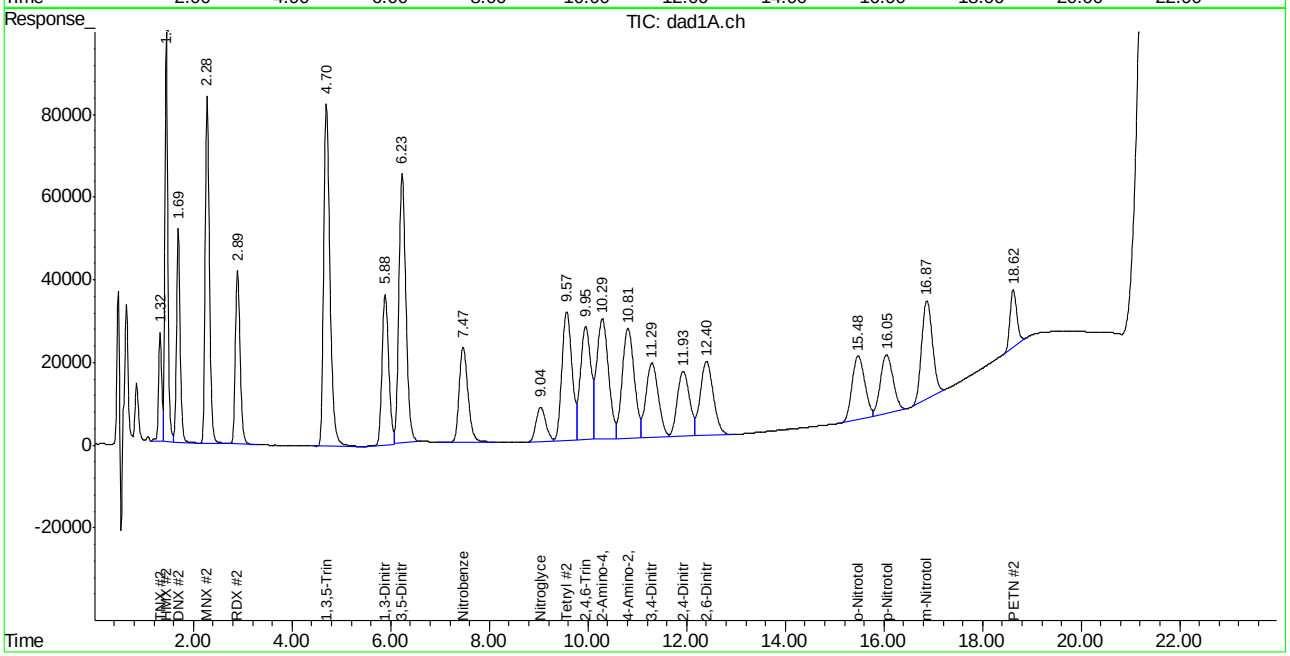
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:12 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





FA90260

Manual Integration Approval Summary

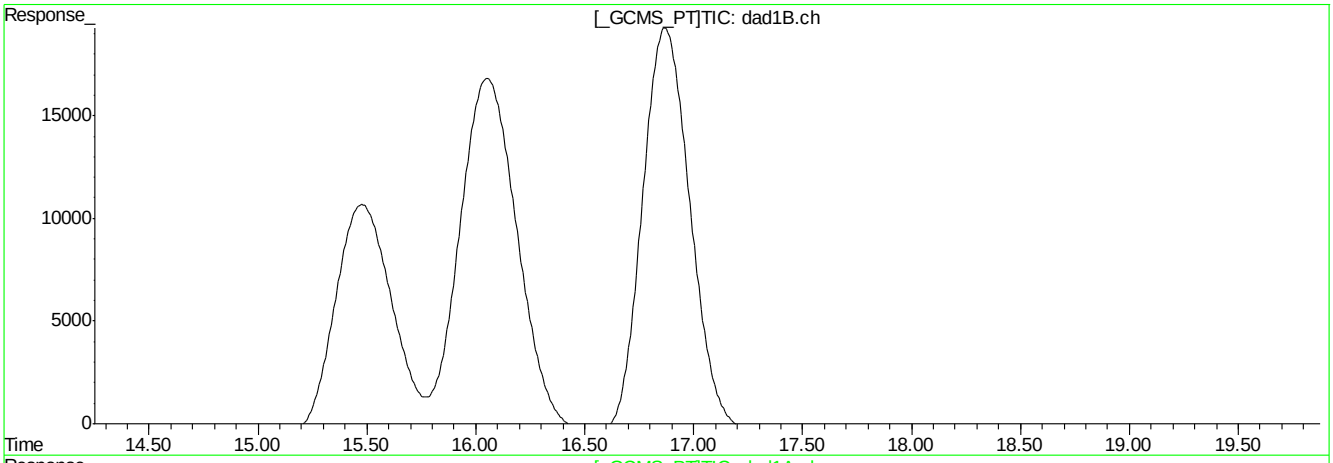
Sample Number: GPP2490-ICC2490 **Method:** SW846 8330B
Lab FileID: PP391635.D **Analyst approved:** 11/06/21 13:36 James Boone
Injection Time: 11/04/21 17:08 **Supervisor approved:** 11/08/21 10:18 Naresh Jiawan

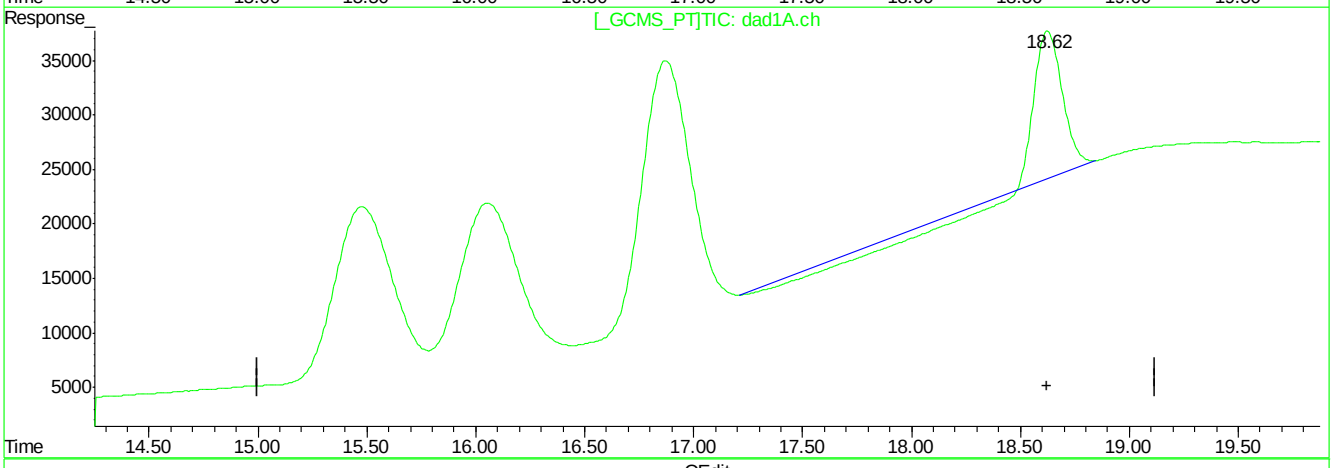
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	2	6.23	Poor instrument integration
Nitroglycerine	55-63-0	2	9.04	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.05	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.87	Poor instrument integration
PETN	78-11-5	2	18.62	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.63min 553.078ppb

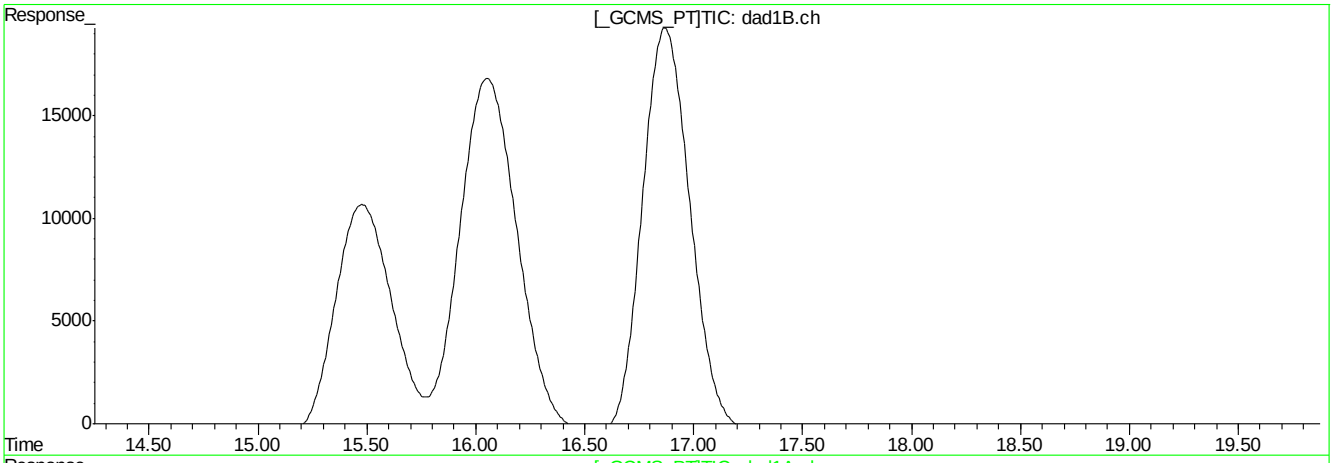
response 747940

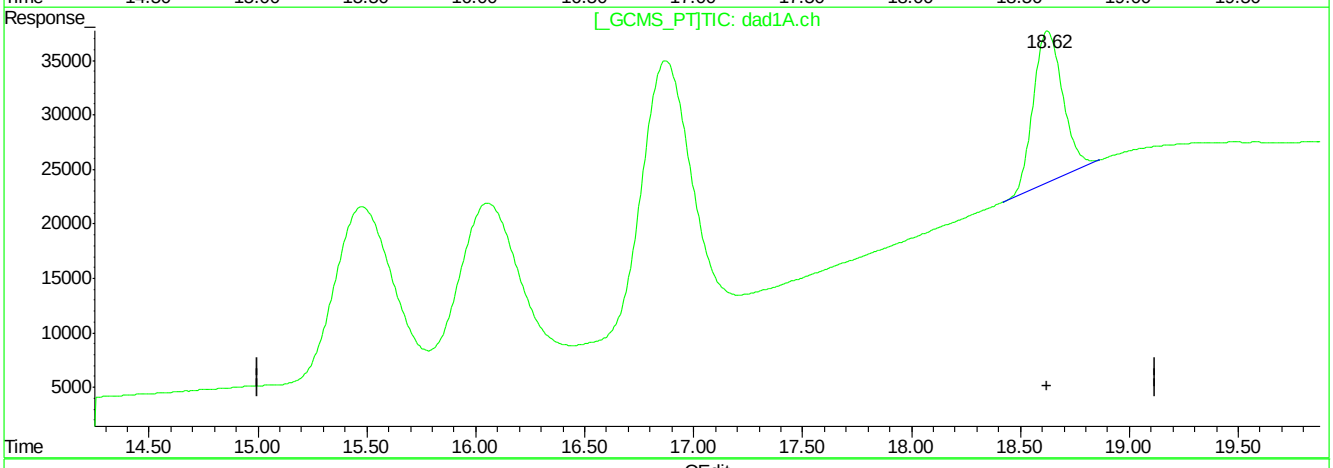
(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.62min 966.347ppb m

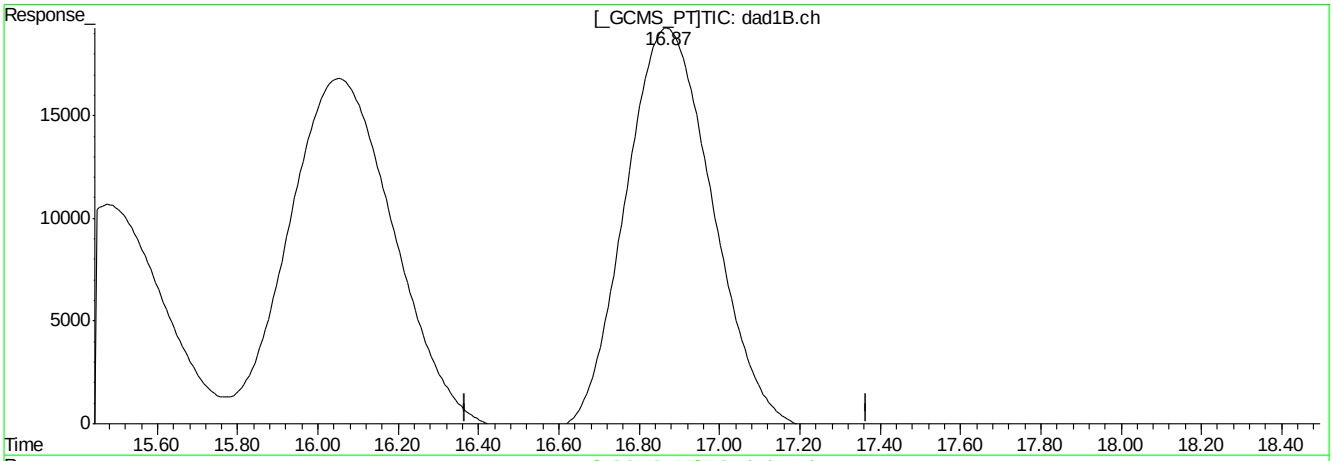
response 1306812

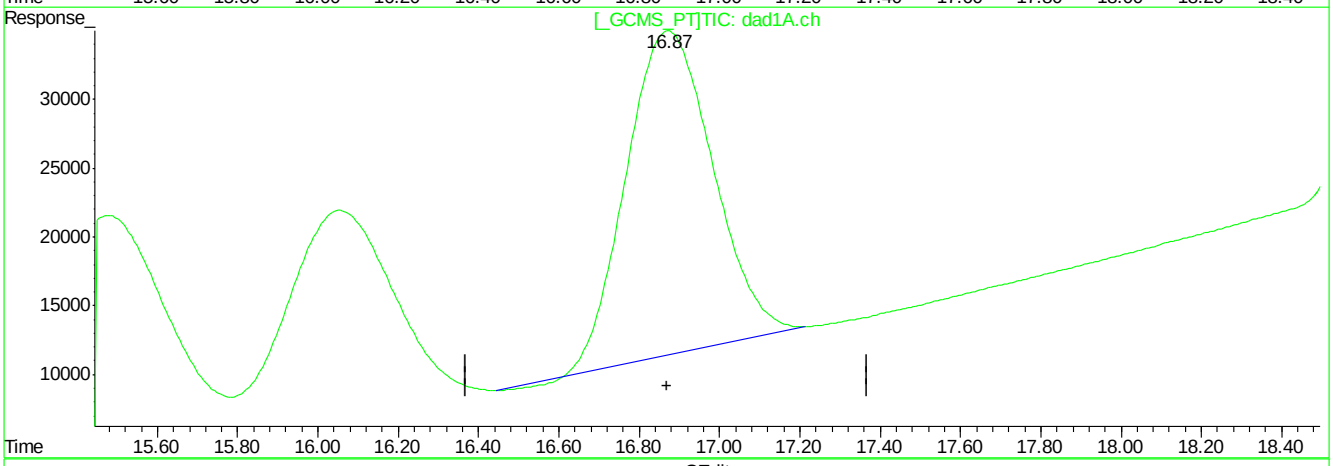
(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 954.149ppb

response 3041042

(20) m-Nitrotoluene #2

16.87min 968.387ppb

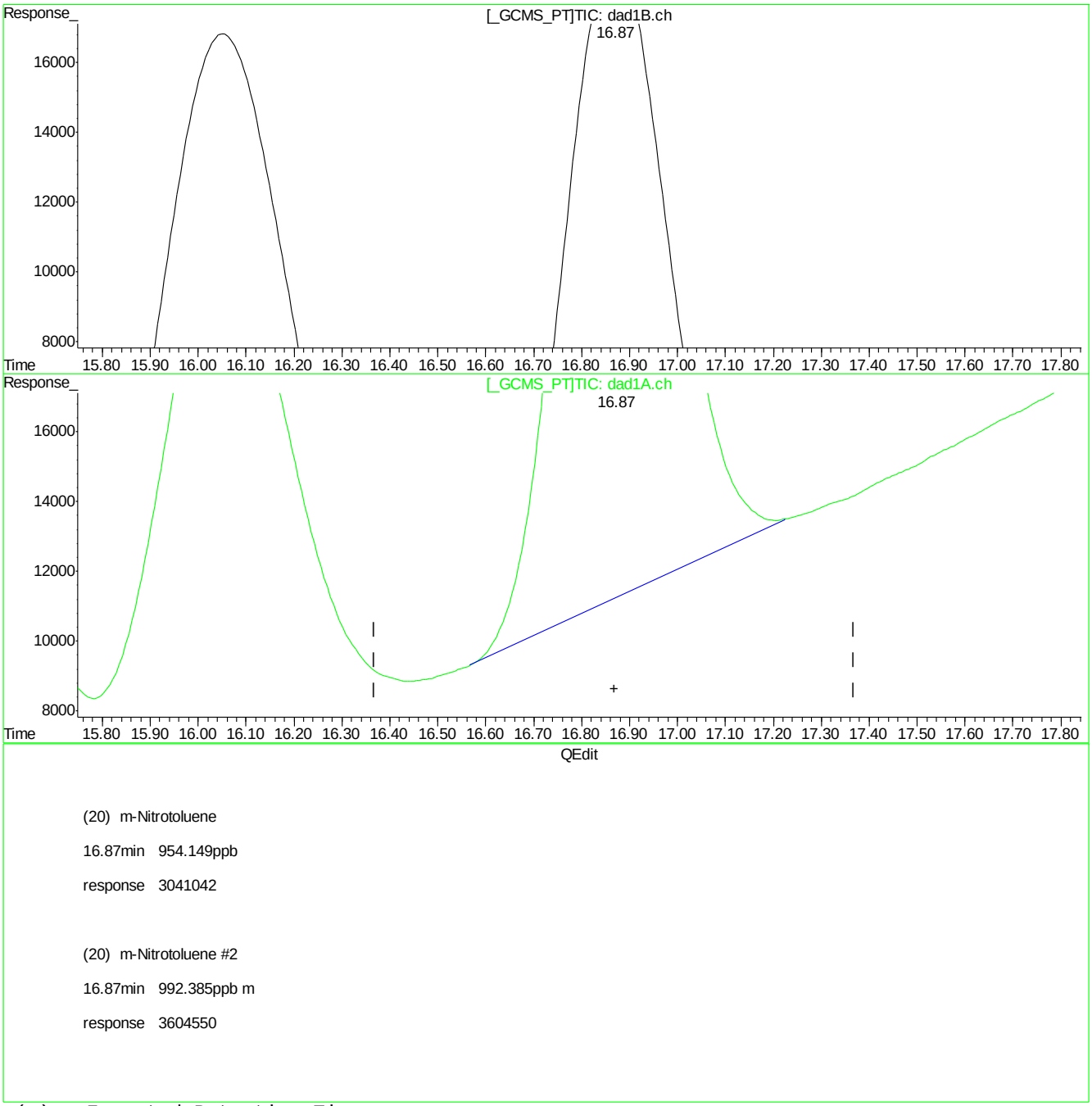
response 3517384

(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration

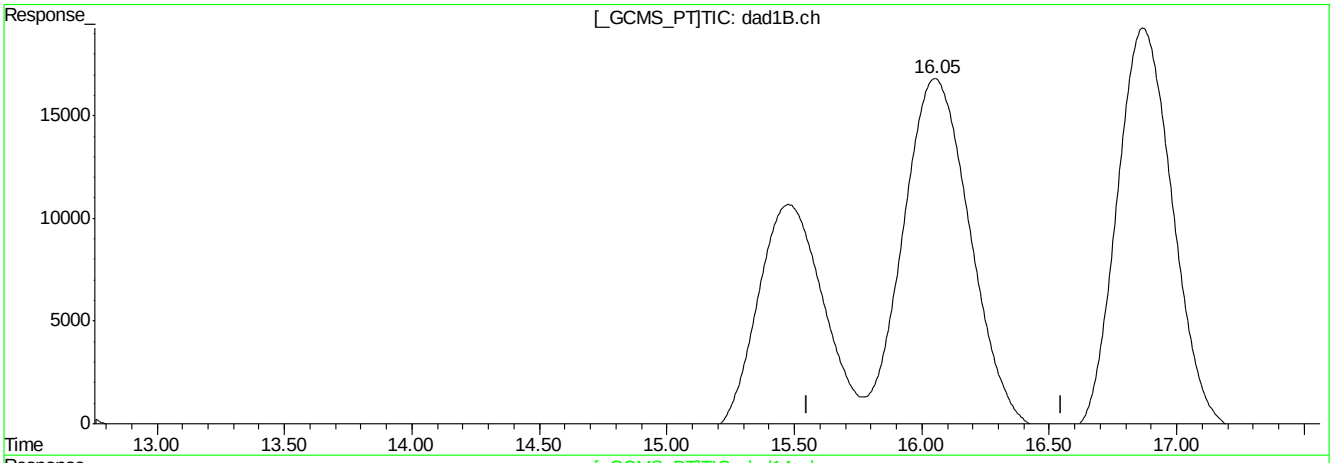


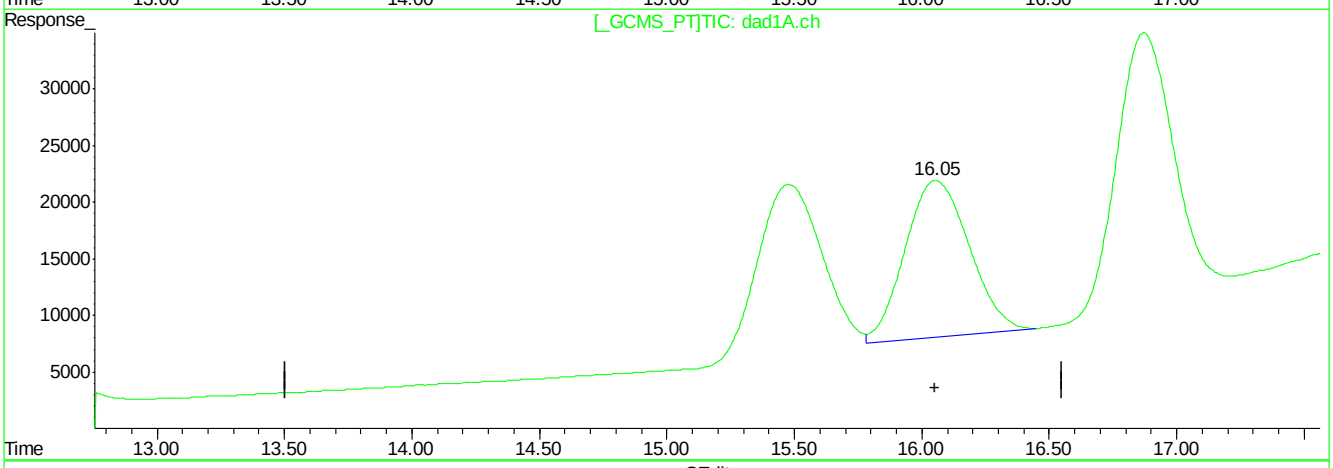
(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.05min 949.512ppb

response 3236248

(19) p-Nitrotoluene #2

16.06min 849.953ppb

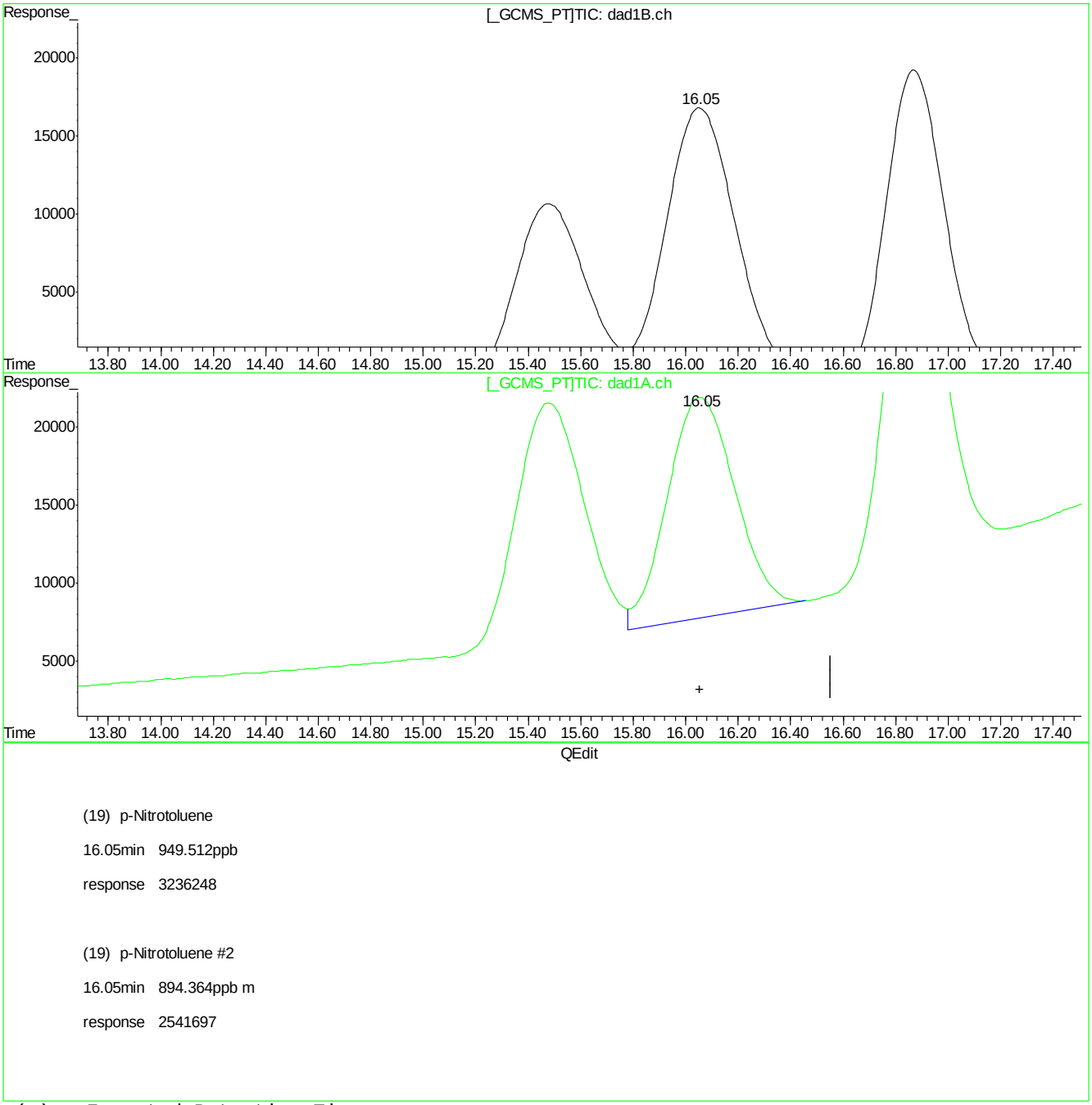
response 2415485

(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.05min 949.512ppb

response 3236248

(19) p-Nitrotoluene #2

16.05min 894.364ppb m

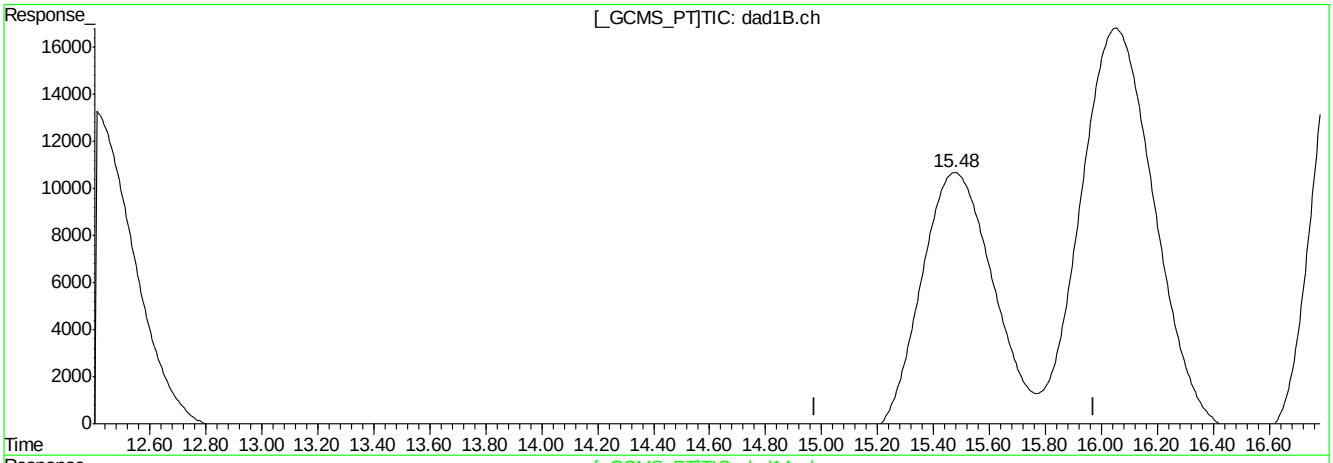
response 2541697

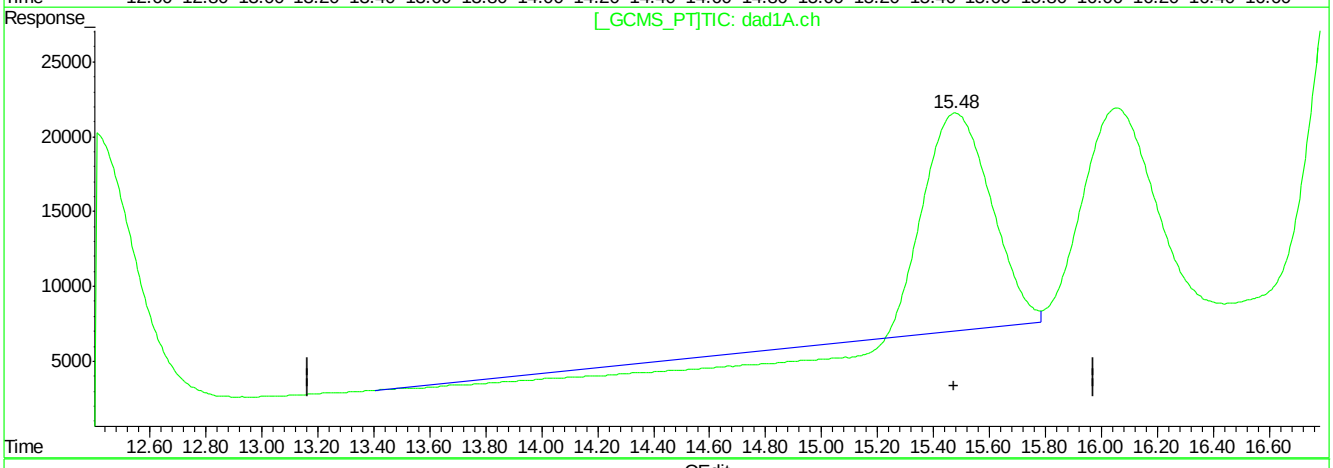
(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 899.288ppb

response 2044226

(18) o-Nitrotoluene #2

15.48min 684.301ppb

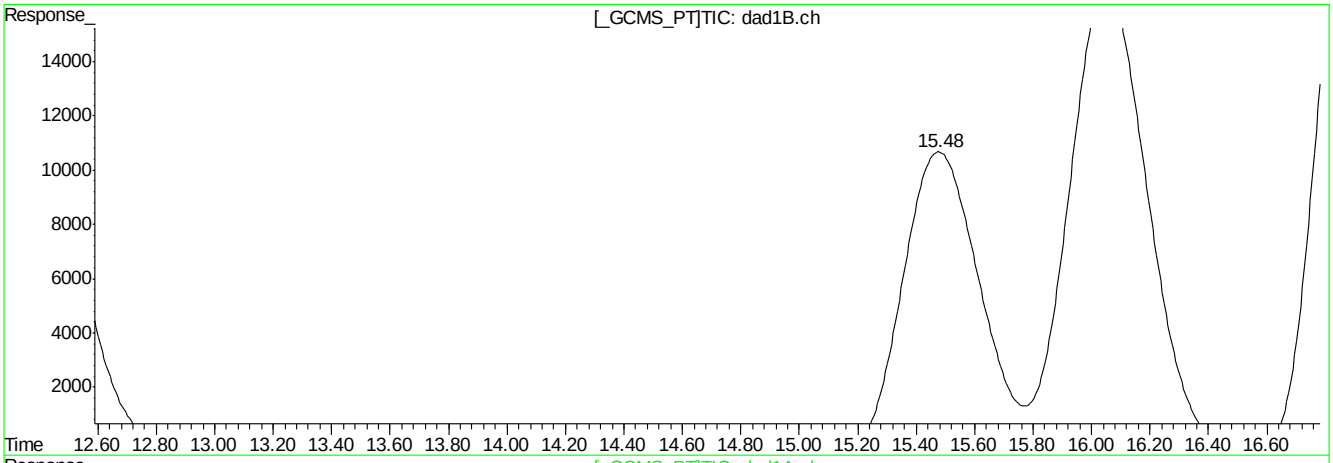
response 1856693

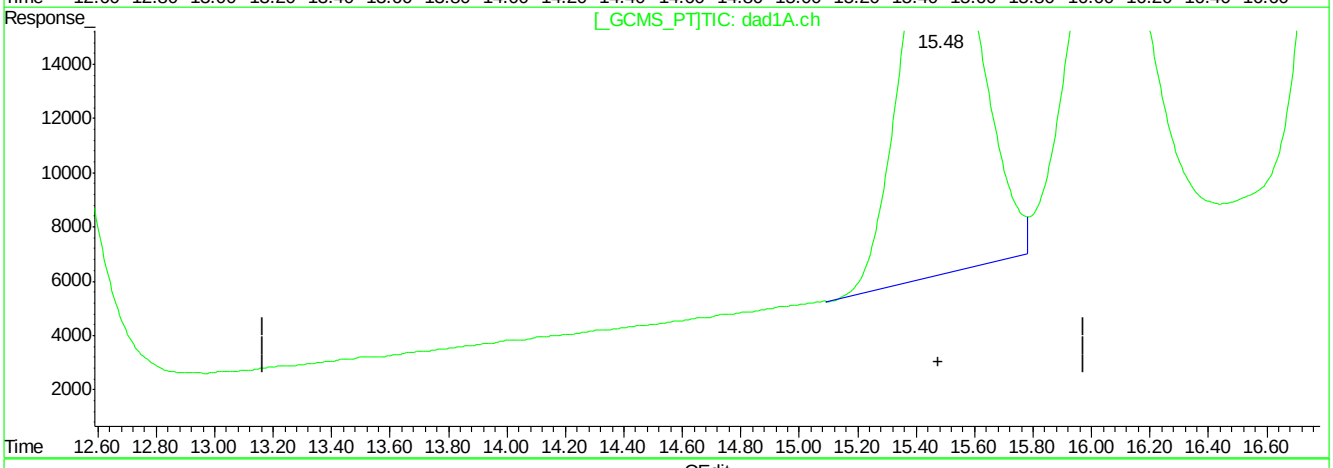
(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 899.288ppb

response 2044226

(18) o-Nitrotoluene #2

15.48min 1012.024ppb m

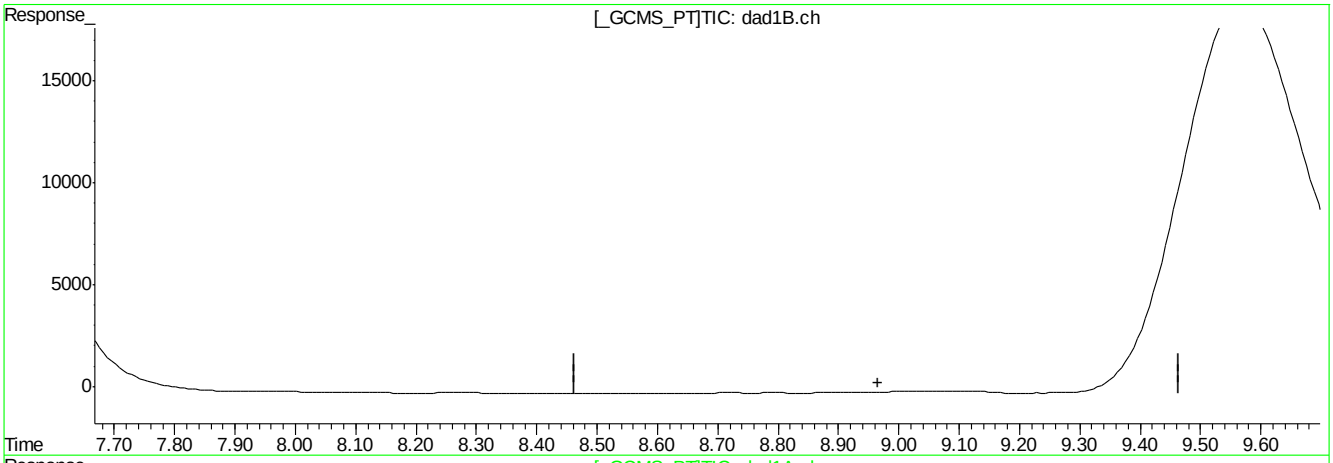
response 2745893

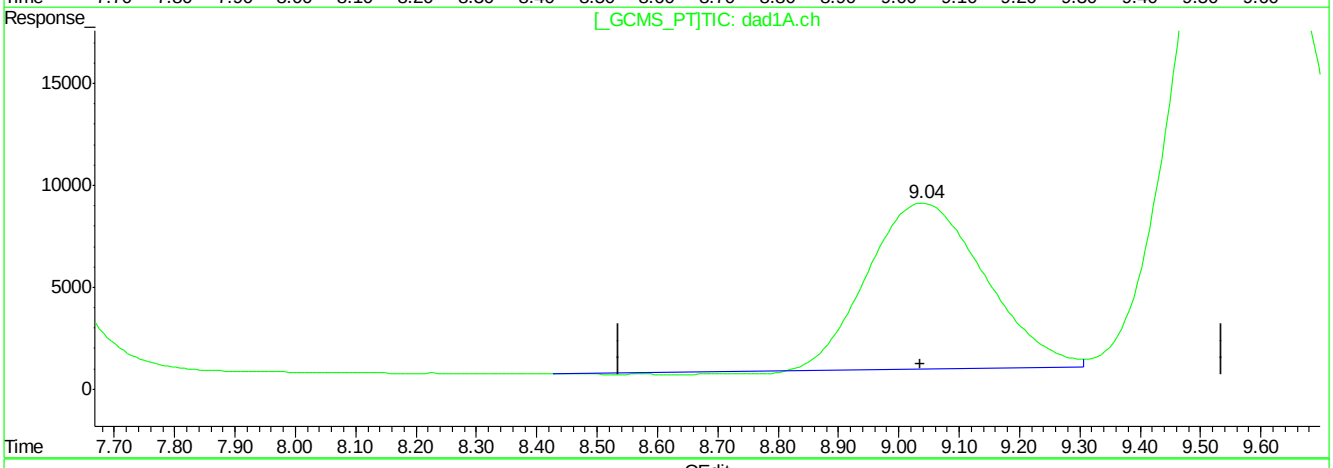
(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.04min 823.208ppb

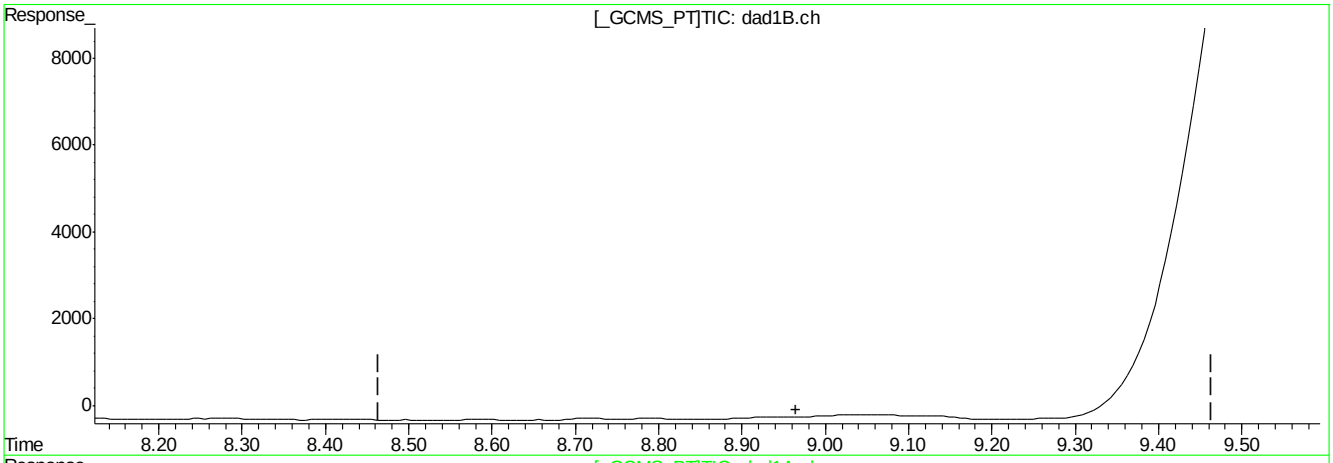
response 1081120

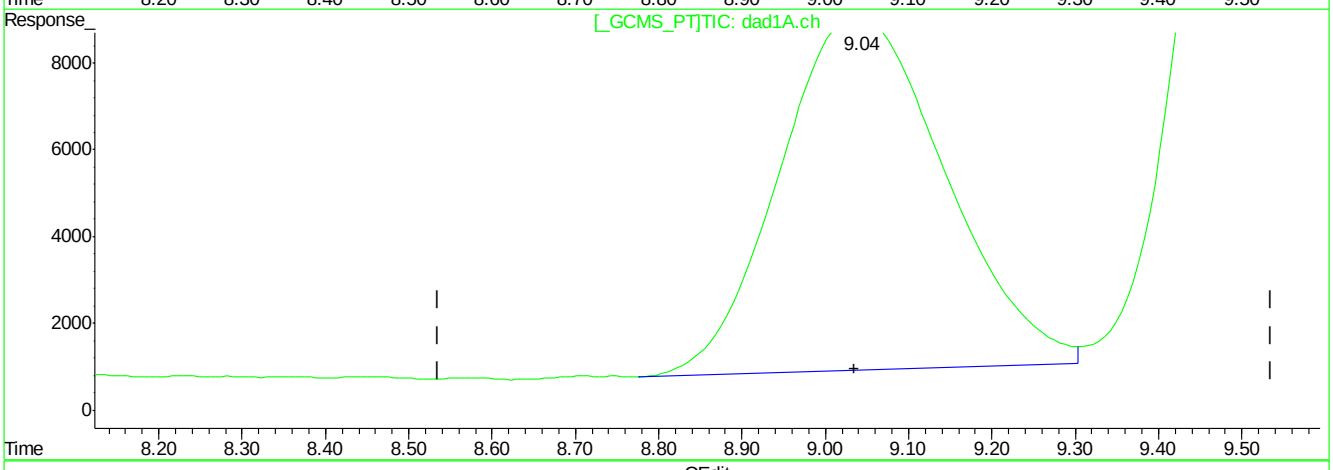
(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.04min 858.052ppb m

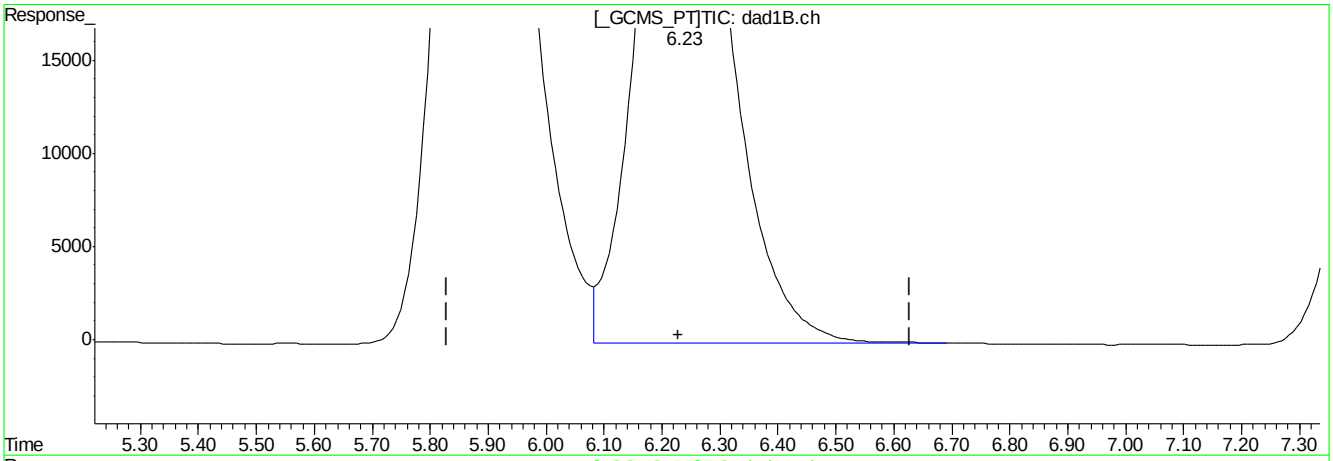
response 1126881

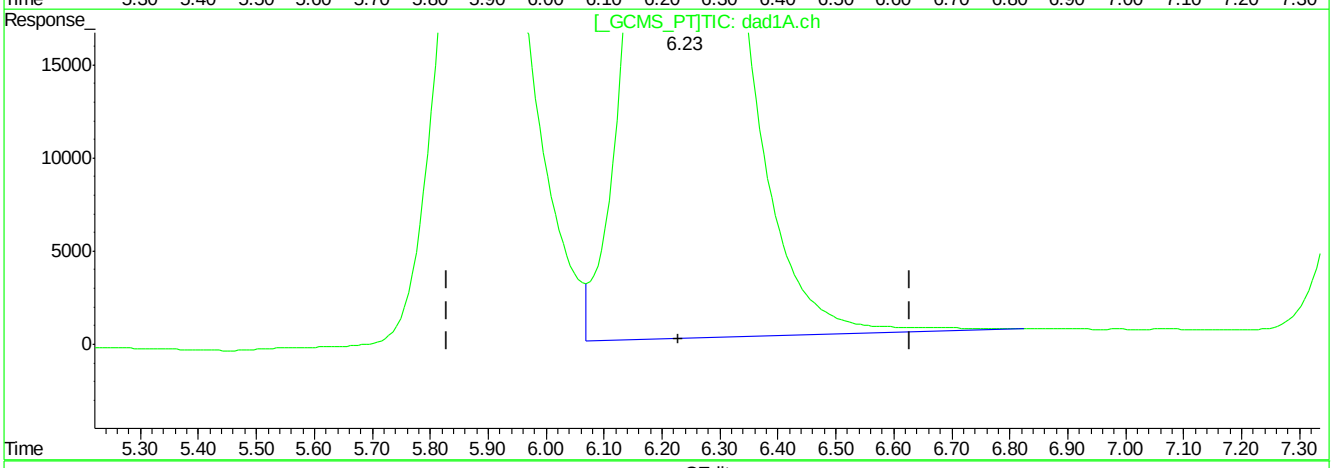
(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.23min 937.114ppb

response 3786751

(8) 3,5-Dinitroaniline #2

6.23min 910.765ppb

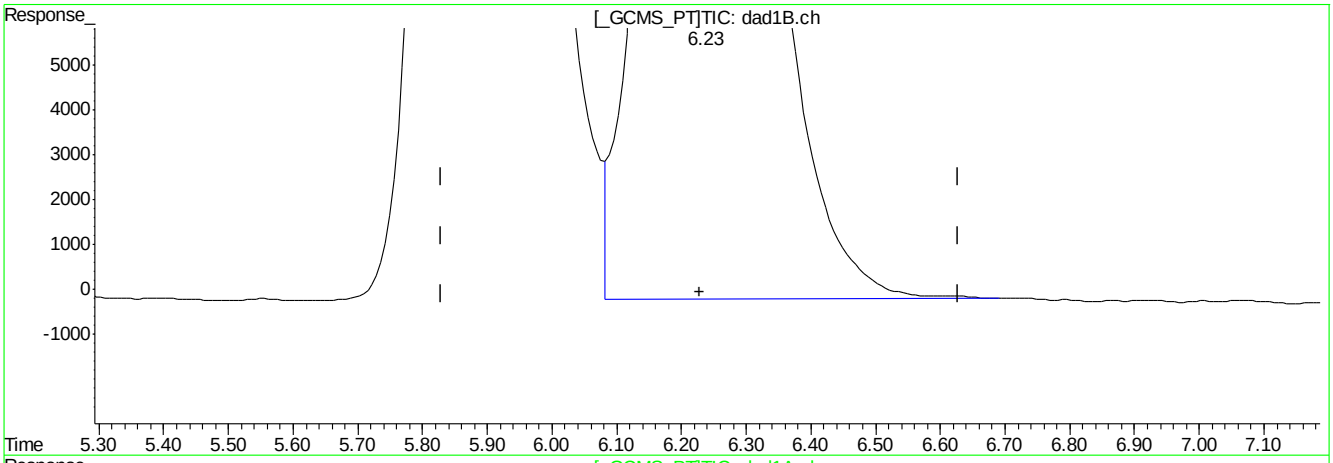
response 6554883

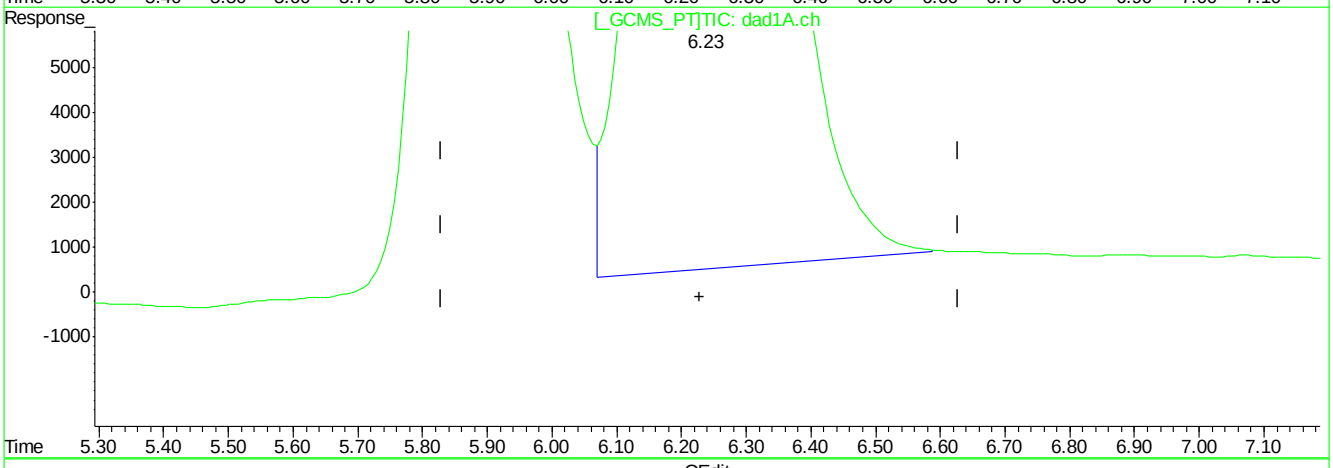
(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:11:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391635.D\dad1A.ch
Acq On : 04-Nov-2021, 17:08:29 Operator: jamesb
Sample : icc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.23min 937.114ppb

response 3786751

(8) 3,5-Dinitroaniline #2

6.23min 897.005ppb m

response 6455850

(+) = Expected Retention Time
PP391635.D GPP2490_110421.M Sat Nov 06 12:12:05 2021

PP391636.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 11/08/21 10:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 06 12:08:30 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.31	11.31	4584521	8218607	2012.569	2032.615
	Spiked Amount 500.000	Range 70 - 136		Recovery =		402.51%#	406.52%#
	Target Compounds						
1)	TNX	1.33	1.33	1750016	2918379	1270.188	1267.234
2)	HMX	1.45	1.45	3544825	10037414	2162.192	2368.078
3)	DNX	1.69	1.69	4032467	6386772	2058.788	1985.751
4)	MNX	2.28	2.28	7851097	12211695	2864.055	2895.029
5)	RDX	2.90	2.90	4310521	6936456	2349.609	2330.938
6)	1,3,5-Trinitrobe	4.70	4.70	9287664	18084778	2349.103	2340.648
7)	1,3-Dinitrobenze	5.89	5.89	12063563	8361569	2336.628	2173.385
8)	3,5-Dinitroanili	6.24	6.23	9314011	15811700	2304.955	2196.949m
9)	Nitrobenzene	7.47	7.47	7168663	6961755	2313.777	2313.147
10)	Nitroglycerin	0.00	9.05	0	2838969	N.D.	2161.704 #
11)	Tetryl	9.58	9.58	6680817	10990864	2449.525	2511.478
12)	2,4,6-Trinitroto	9.97	9.97	8450885	10220225	2175.269	2318.468
13)	2-Amino-4,6-Dini	10.30	10.30	8100022	12367460	2254.081	2714.947
14)	4-Amino-2,6-Dini	10.83	10.83	5691540	11570611	2191.384	2368.578
16)	2,4-Dinitrotolue	11.94	11.94	10743910	7035364	2351.932	2289.231
17)	2,6-Dinitrotolue	12.42	12.42	6411413	8321277	2260.413	2509.373
18)	o-Nitrotoluene	15.49	15.49	5039762	6917248	2217.072	2549.415m
19)	p-Nitrotoluene	16.06	16.06	8003008	6621958	2348.075	2330.113m
20)	m-Nitrotoluene	16.88	16.88	7536883	8923691	2364.752	2456.821
21)	PETN	0.00	18.63	0	3258486	N.D. d	2409.549m

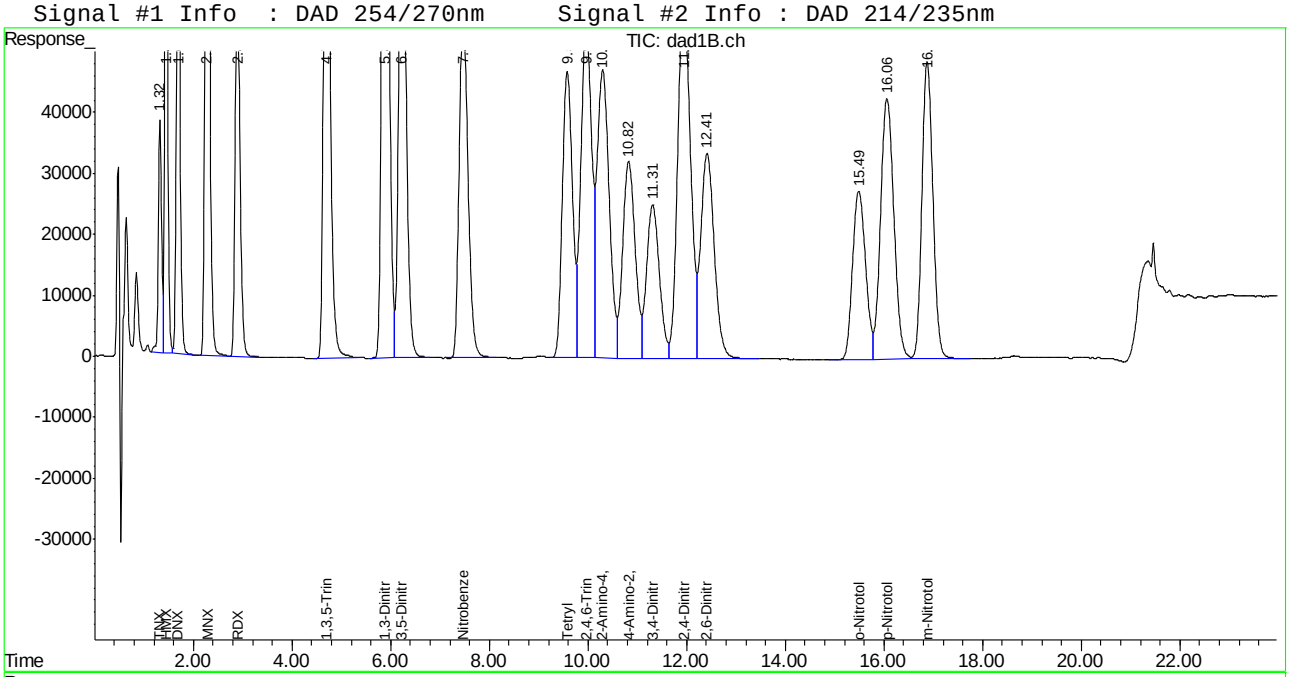
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

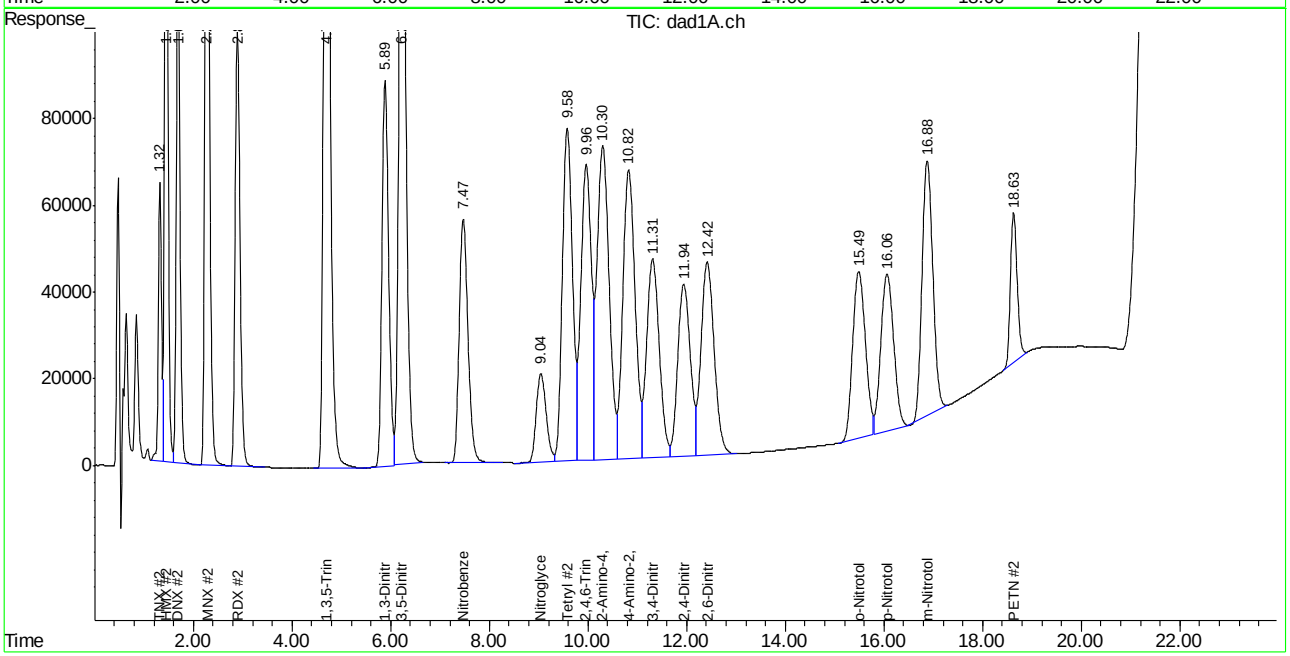
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:12 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

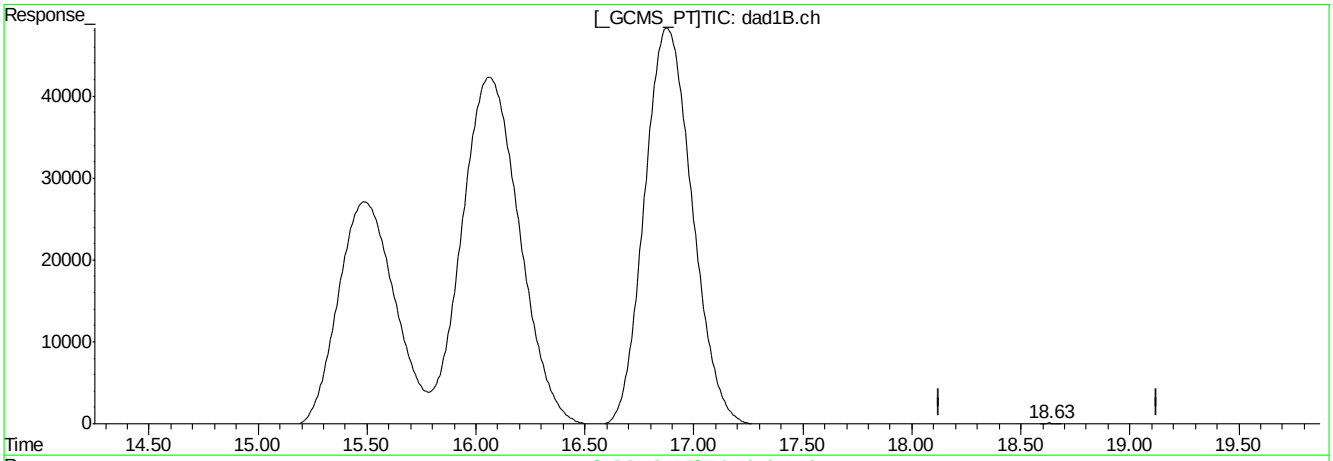
Sample Number: GPP2490-IC2490 **Method:** SW846 8330B
Lab FileID: PP391636.D **Analyst approved:** 11/06/21 13:36 James Boone
Injection Time: 11/04/21 17:39 **Supervisor approved:** 11/08/21 10:18 Naresh Jiawan

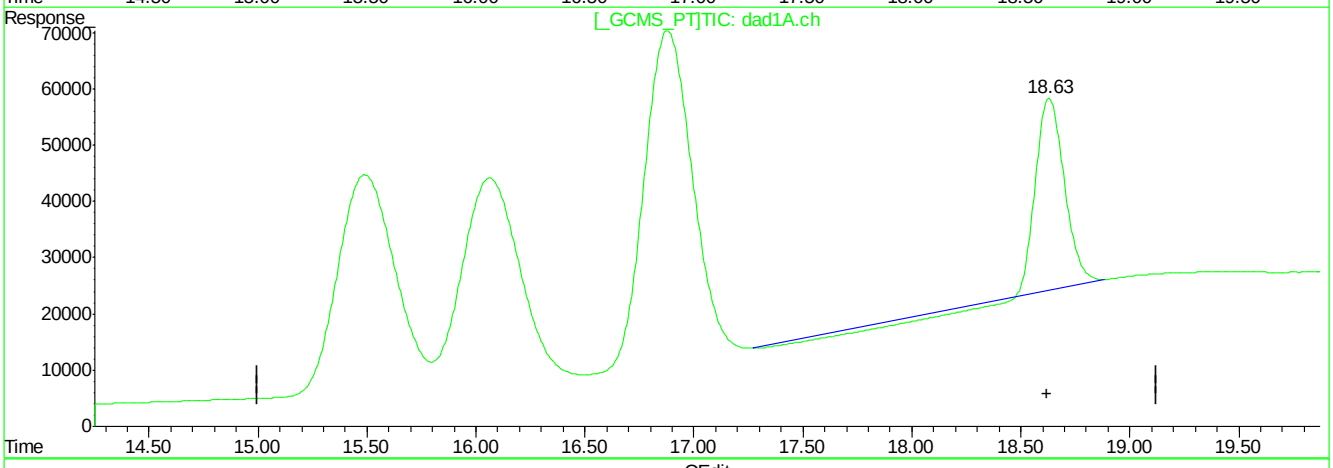
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	2	6.23	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.49	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.06	Poor instrument integration
PETN	78-11-5	2	18.63	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.63min 0.000ppb

response 29677

(21) PETN #2

18.63min 1991.146ppb

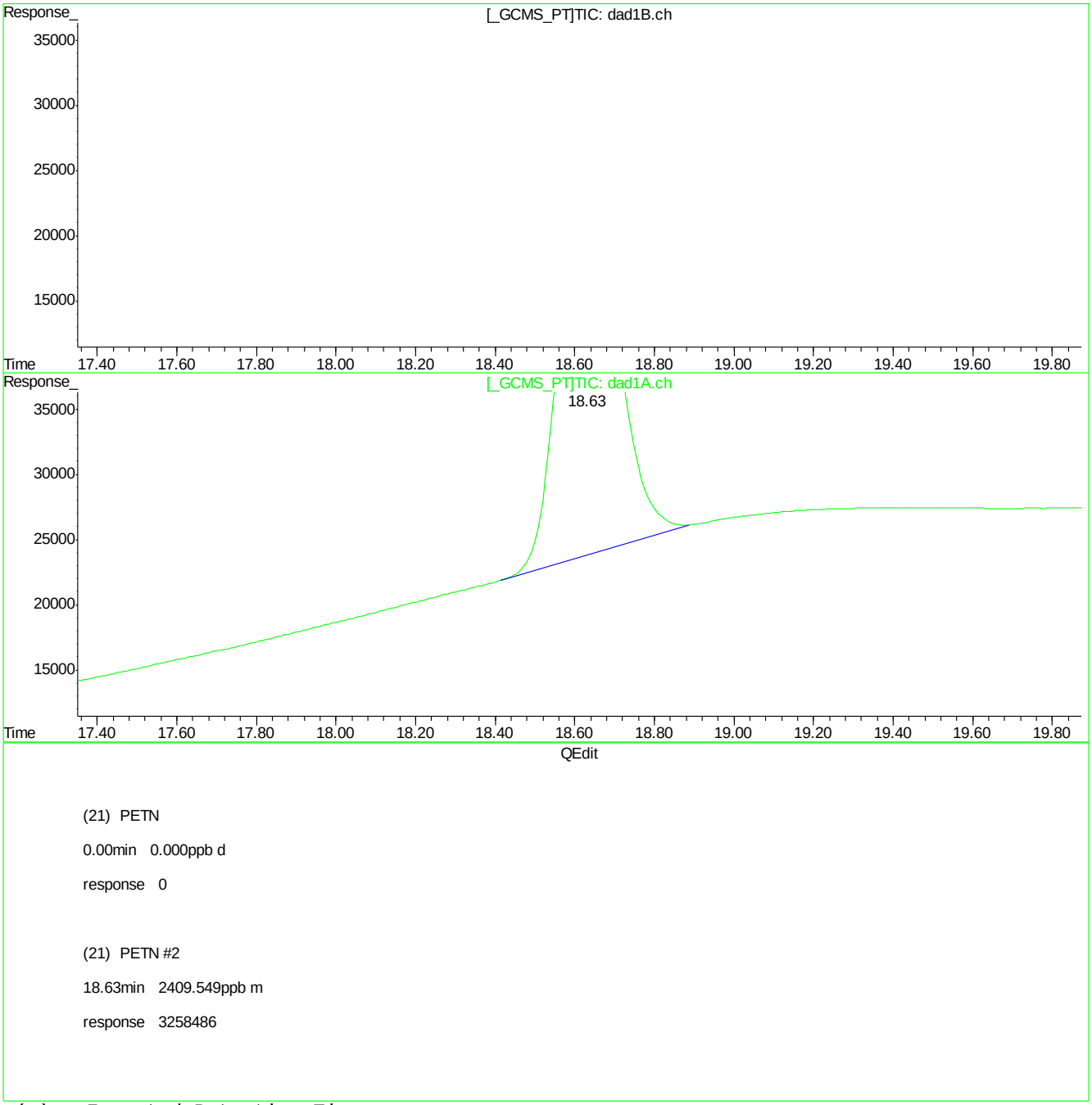
response 2692670

(+) = Expected Retention Time
PP391636.D GPP2490_110421.M Sat Nov 06 12:09:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration

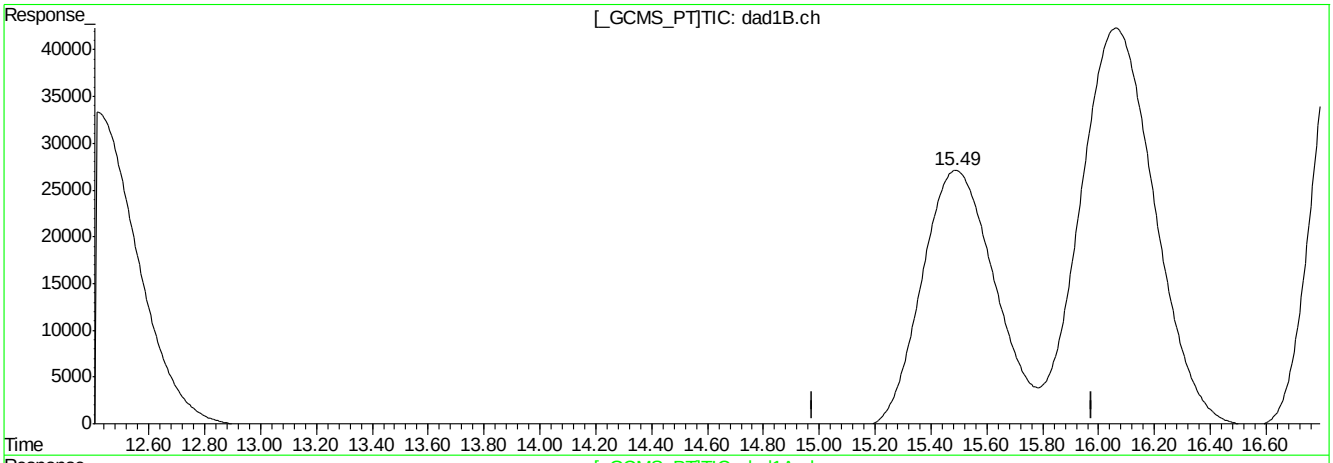


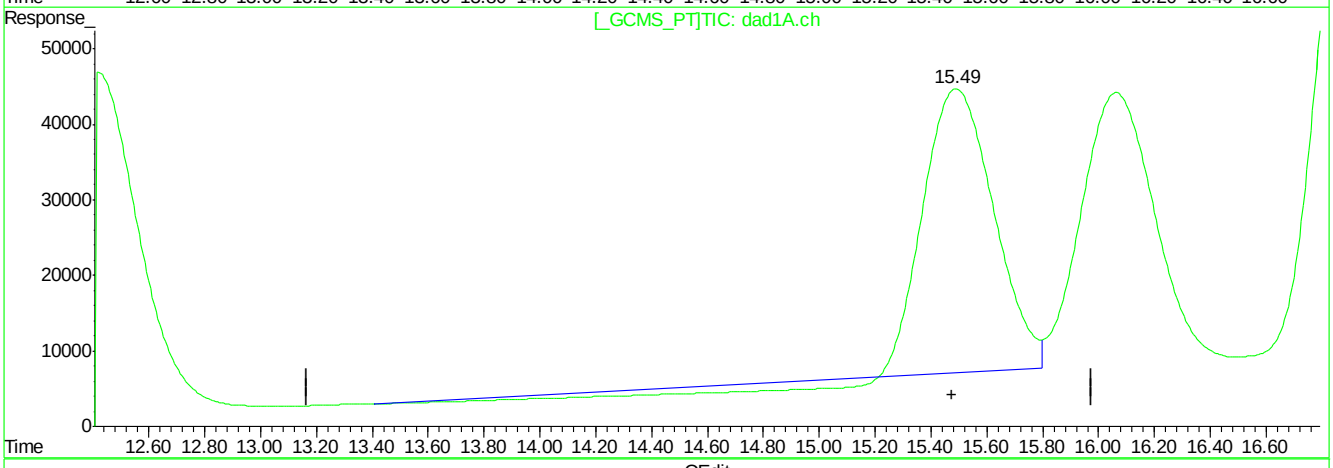
(+) = Expected Retention Time
PP391636.D GPP2490_110421.M Sat Nov 06 12:10:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.49min 2217.072ppb

response 5039762

(18) o-Nitrotoluene #2

15.49min 2165.321ppb

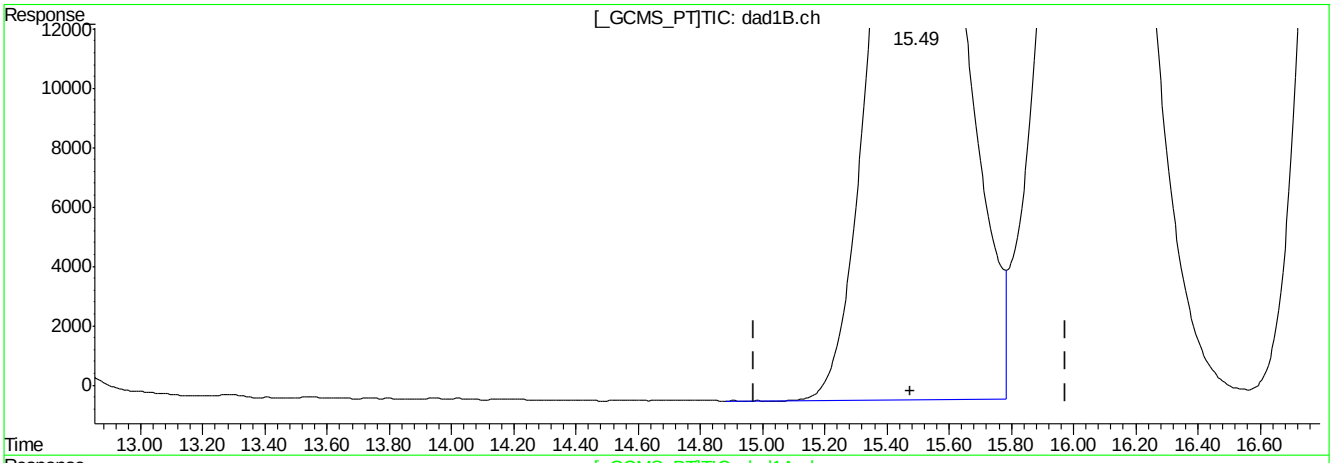
response 5875098

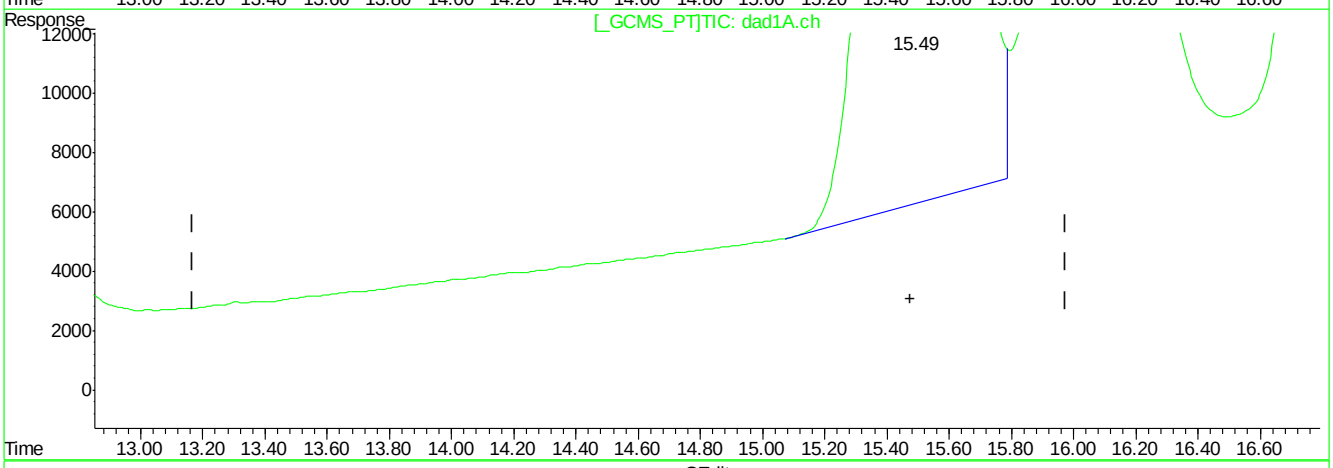
(+) = Expected Retention Time
PP391636.D GPP2490_110421.M Sat Nov 06 12:10:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.49min 2217.072ppb

response 5039762

(18) o-Nitrotoluene #2

15.49min 2549.415ppb m

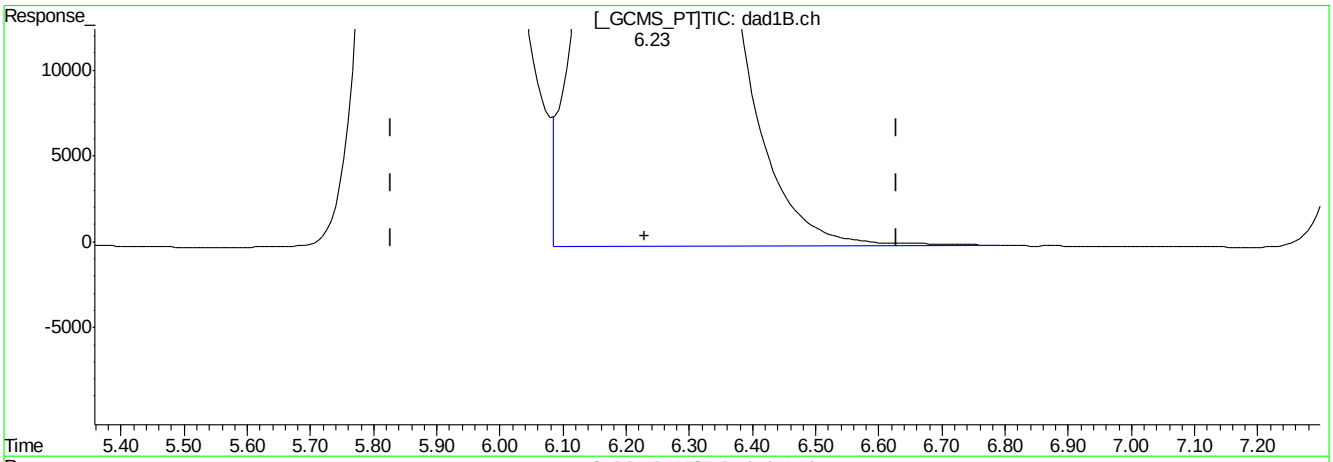
response 6917248

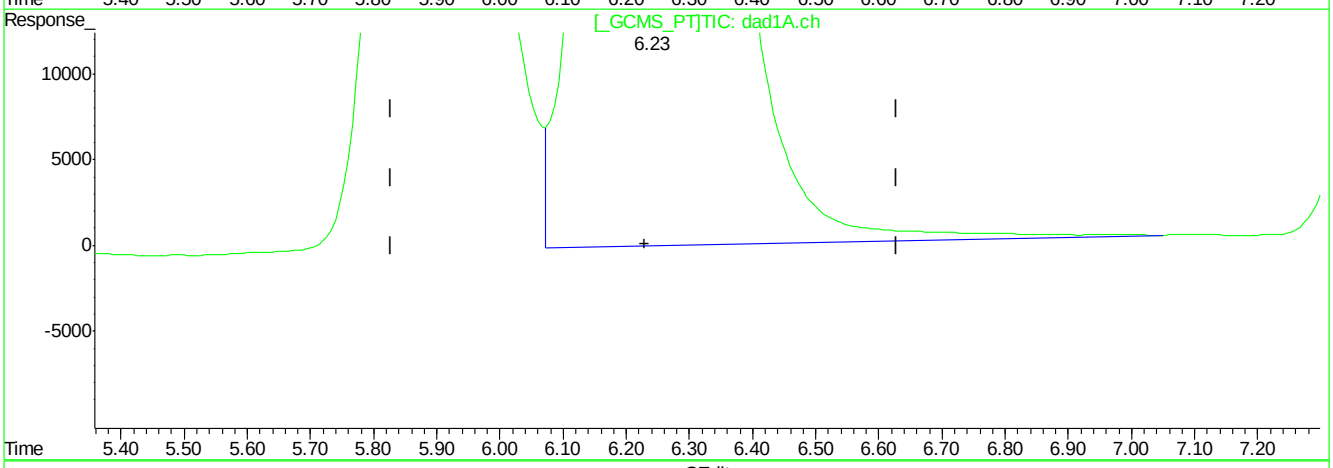
(+) = Expected Retention Time
PP391636.D GPP2490_110421.M Sat Nov 06 12:10:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.24min 2304.955ppb

response 9314011

(8) 3,5-Dinitroaniline #2

6.24min 2222.795ppb

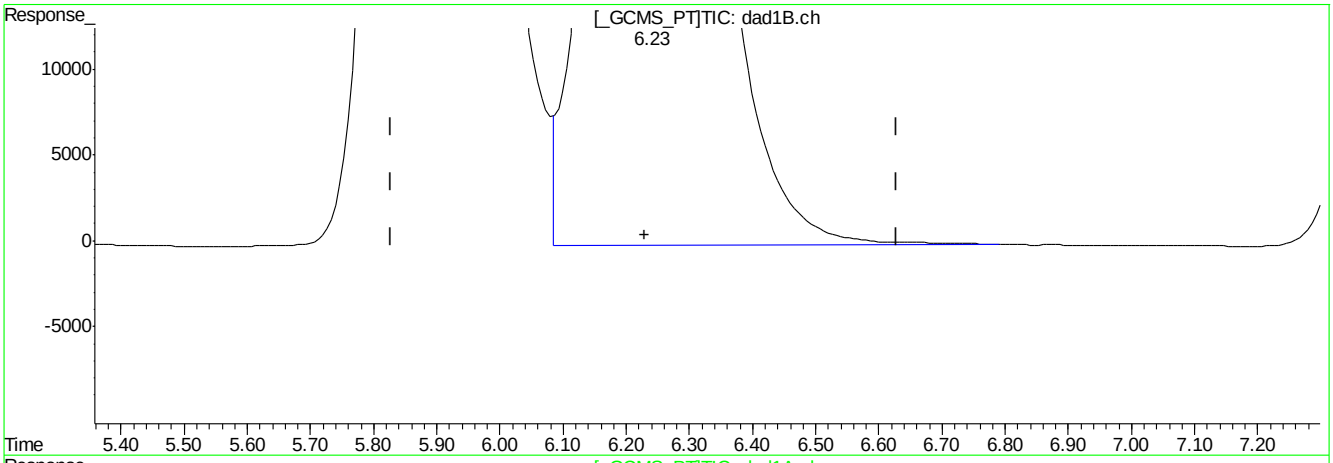
response 15997717

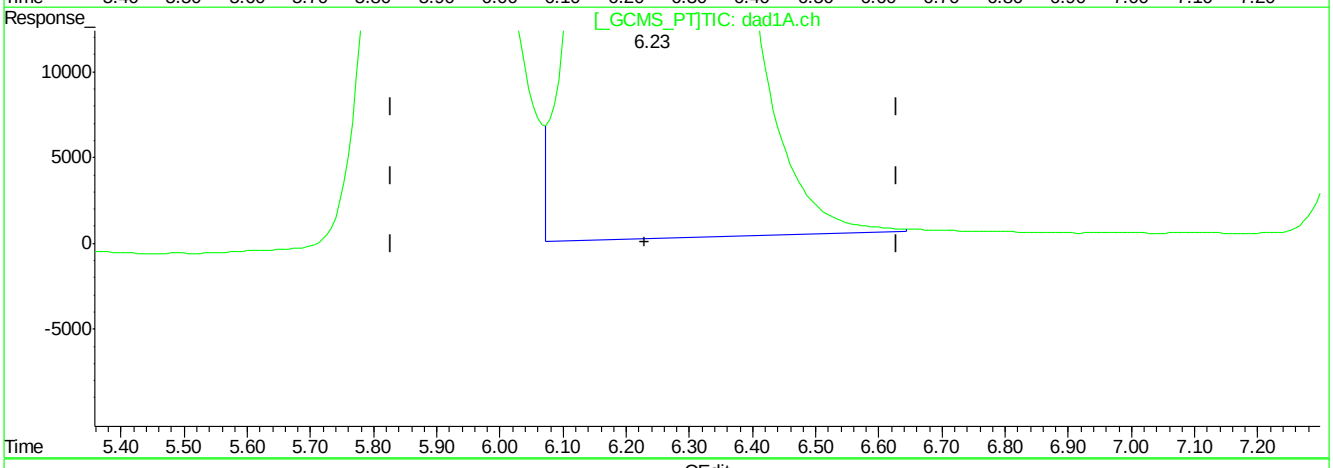
(+) = Expected Retention Time
PP391636.D GPP2490_110421.M Sat Nov 06 12:10:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.24min 2304.955ppb

response 9314011

(8) 3,5-Dinitroaniline #2

6.23min 2196.949ppb m

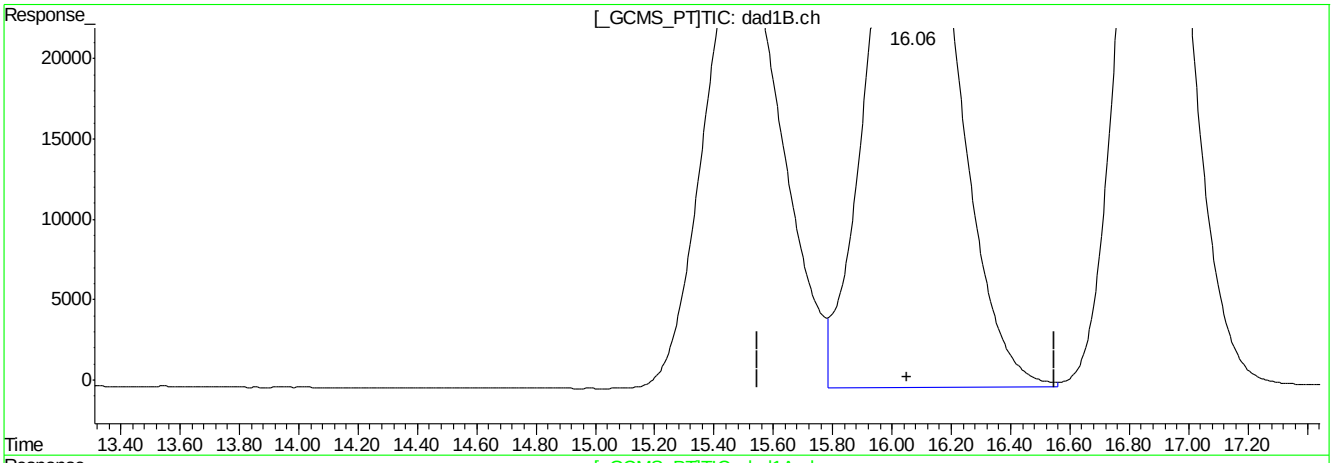
response 15811700

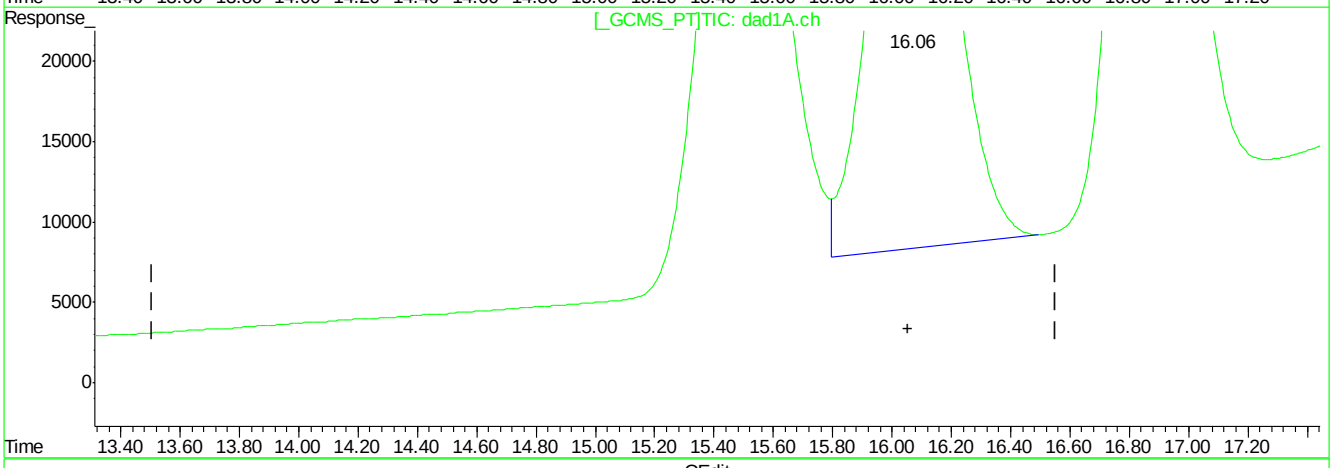
(+) = Expected Retention Time
PP391636.D GPP2490_110421.M Sat Nov 06 12:10:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:10 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.06min 2348.075ppb

response 8003008

(19) p-Nitrotoluene #2

16.06min 2277.240ppb

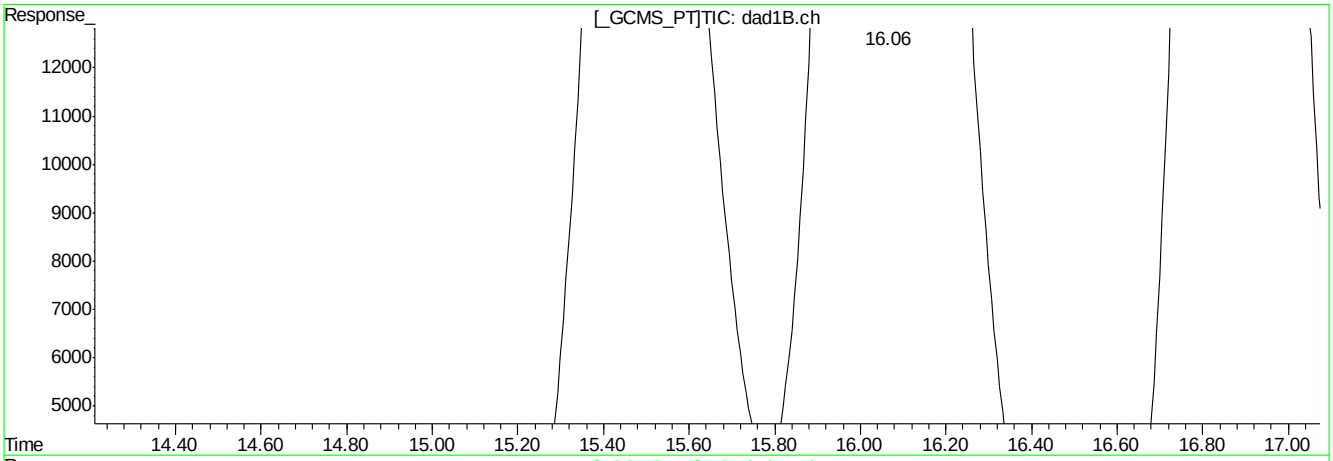
response 6471697

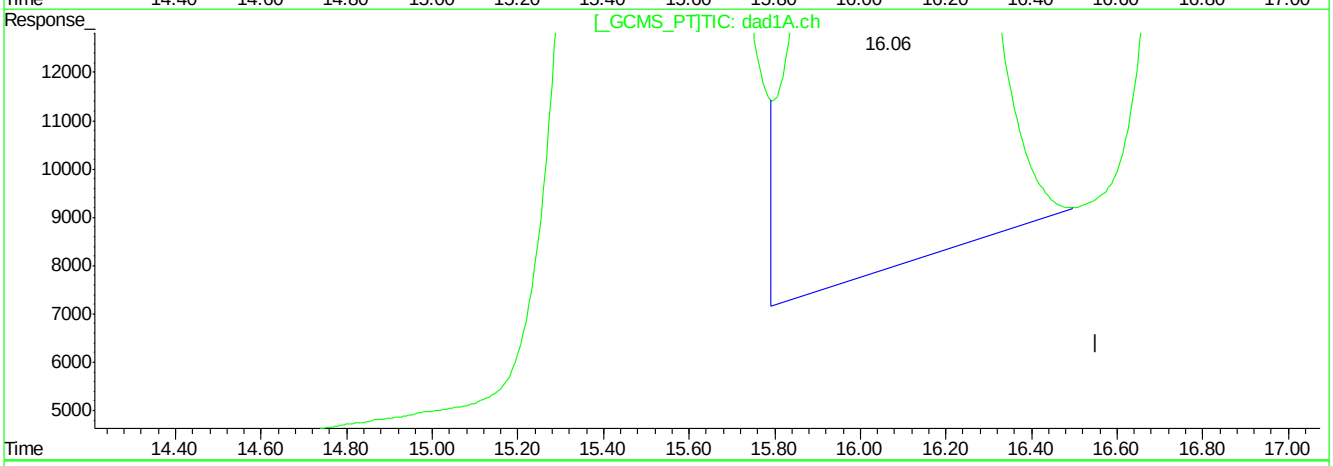
(+) = Expected Retention Time
PP391636.D GPP2490_110421.M Sat Nov 06 12:12:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391636.D\dad1A.ch
Acq On : 04-Nov-2021, 17:39:33 Operator: jamesb
Sample : ic2490-2500 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:10 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.06min 2348.075ppb

response 8003008

(19) p-Nitrotoluene #2

16.06min 2330.113ppb m

response 6621958

(+) = Expected Retention Time
PP391636.D GPP2490_110421.M Sat Nov 06 12:12:47 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/08/21 10:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1A.ch
Acq On : 04-Nov-2021, 18:10:34 Operator: jamesb
Sample : ic2490-5000 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 06 12:08:31 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.32	11.32	8779222	16012679	3854.011	3960.235
	Spiked Amount 500.000	Range 70 - 136		Recovery =		770.80%#	792.05%#
	Target Compounds						
1)	TNX	1.33	1.32	3282199	5404530	2382.270	2346.783
2)	HMX	1.45	1.45	6787970	18996072	4140.372	4481.650
3)	DNX	1.69	1.69	7507447	11856974	3832.950	3686.525
4)	MNX	2.28	2.28	14776502	22980953	5390.421	5448.098
5)	RDX	2.89	2.89	8209684	13224851	4474.992	4444.101
6)	1,3,5-Trinitrobe	4.70	4.70	17716042	34450052	4480.870	4458.747
7)	1,3-Dinitrobenze	5.89	5.89	23119132	16003056	4478.014	4159.603
8)	3,5-Dinitroanili	6.23	6.23	17755500	30553079	4393.985	4245.184
9)	Nitrobenzene	7.47	7.47	13754983	13618975	4439.596	4525.108
10)	Nitroglycerin	0.00	9.05	0	5455775	N.D.	4154.243 #
11)	Tetryl	9.58	9.58	12462889	20553206	4569.525	4696.531
12)	2,4,6-Trinitroto	9.97	9.97	16051175	19478287	4131.594	4418.669
13)	2-Amino-4,6-Dini	10.30	10.30	15479317	23831226	4307.596	5231.511
14)	4-Amino-2,6-Dini	10.83	10.83	10825201	22281395	4167.971	4561.145
16)	2,4-Dinitrotolue	11.95	11.95	20581637	13683589	4505.493	4452.492
17)	2,6-Dinitrotolue	12.42	12.42	12334307	16149589	4348.594	4870.086
18)	o-Nitrotoluene	15.49	15.49	9661351	13412792	4250.183	4943.407m
19)	p-Nitrotoluene	16.06	16.06	15342981	12762179	4501.617	4490.714
20)	m-Nitrotoluene	16.88	16.88	14450172	17214836	4533.848	4739.492
21)	PETN	0.00	18.63	0	6222342	N.D. d	4601.229m

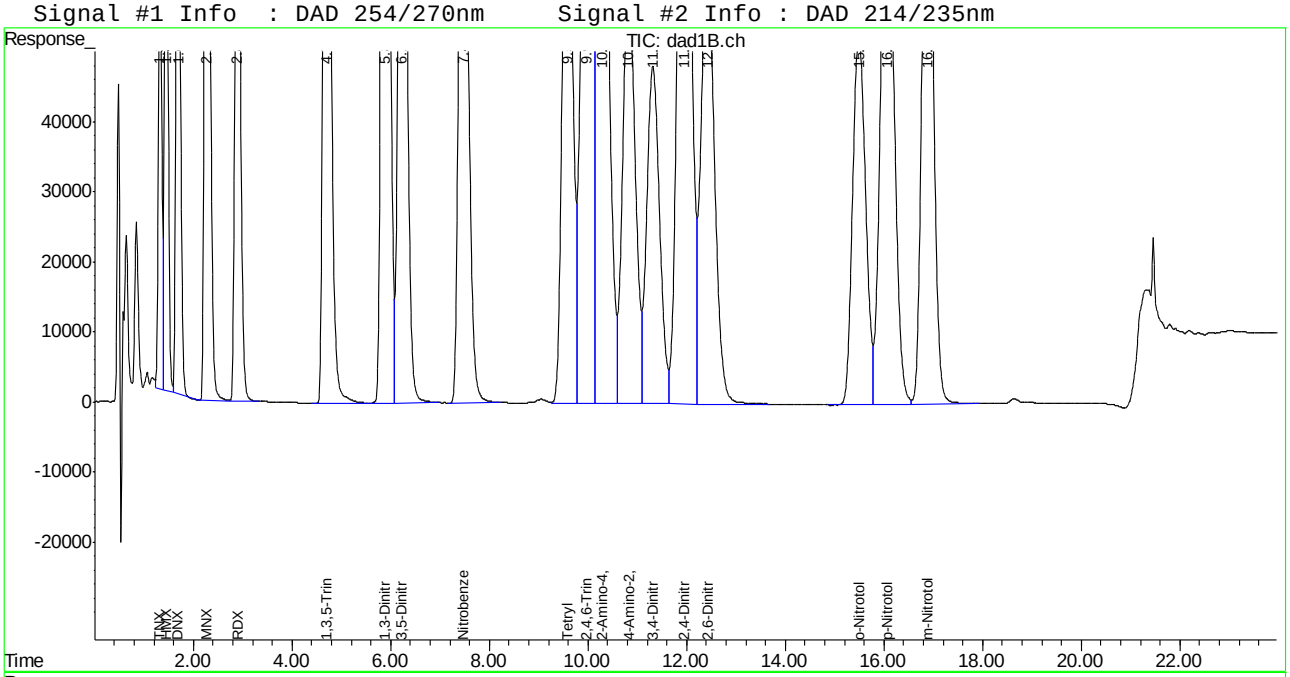
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

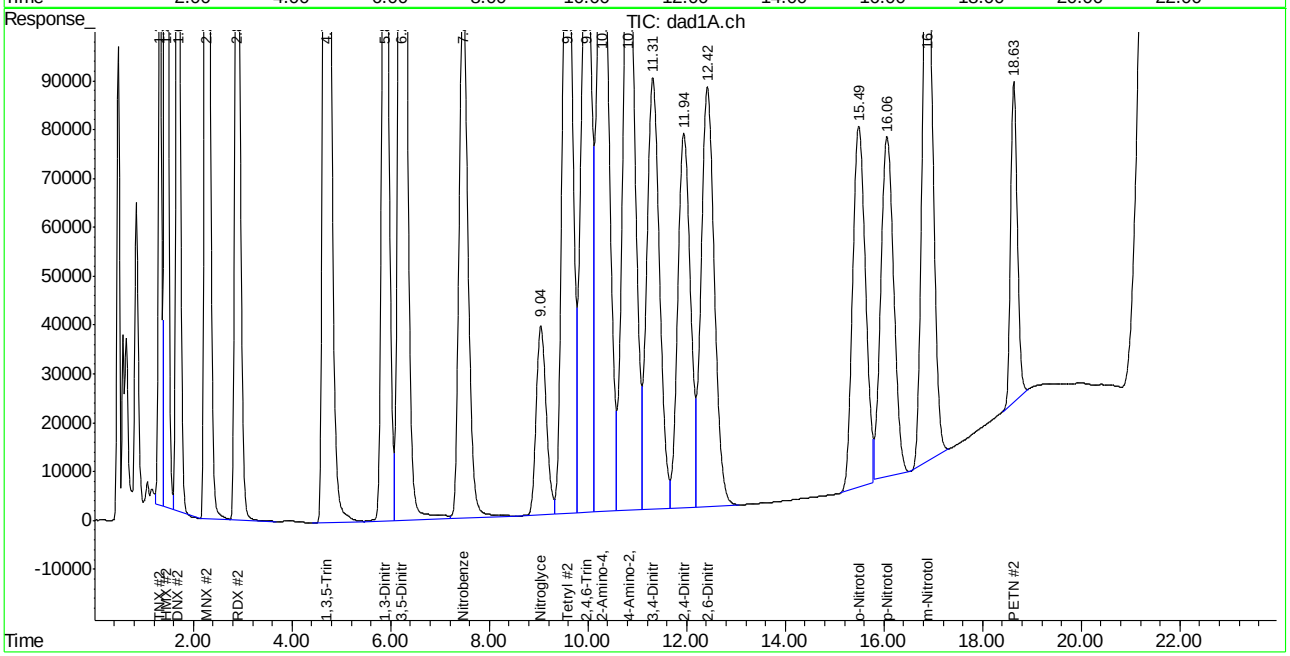
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1A.ch
Acq On : 04-Nov-2021, 18:10:34 Operator: jamesb
Sample : ic2490-5000 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:09 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

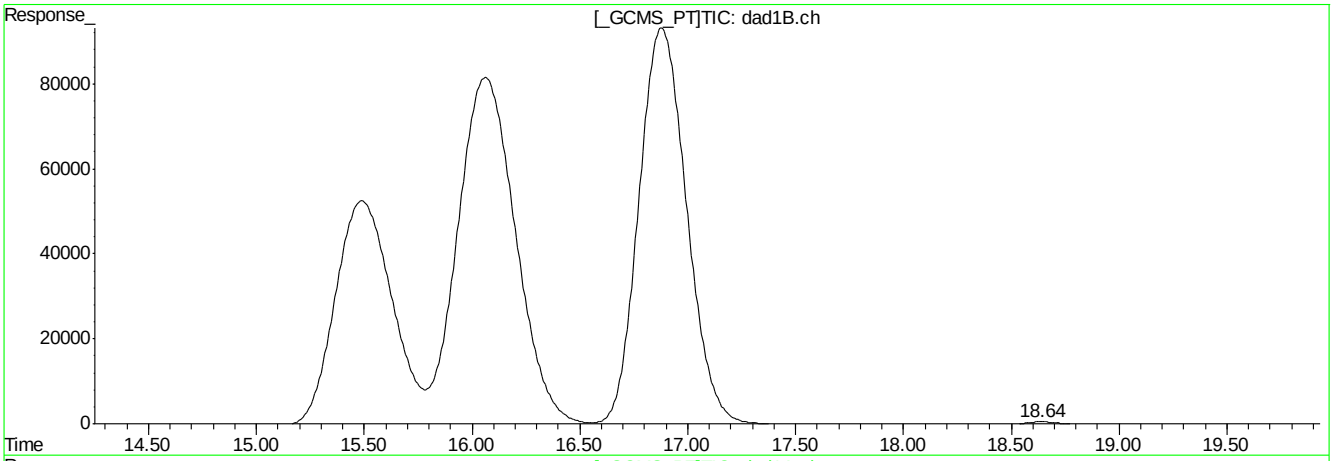
Sample Number: GPP2490-IC2490
Lab FileID: PP391637.D
Injection Time: 11/04/21 18:10
Method: SW846 8330B
Analyst approved: 11/06/21 13:36 James Boone
Supervisor approved: 11/08/21 10:18 Naresh Jiawan

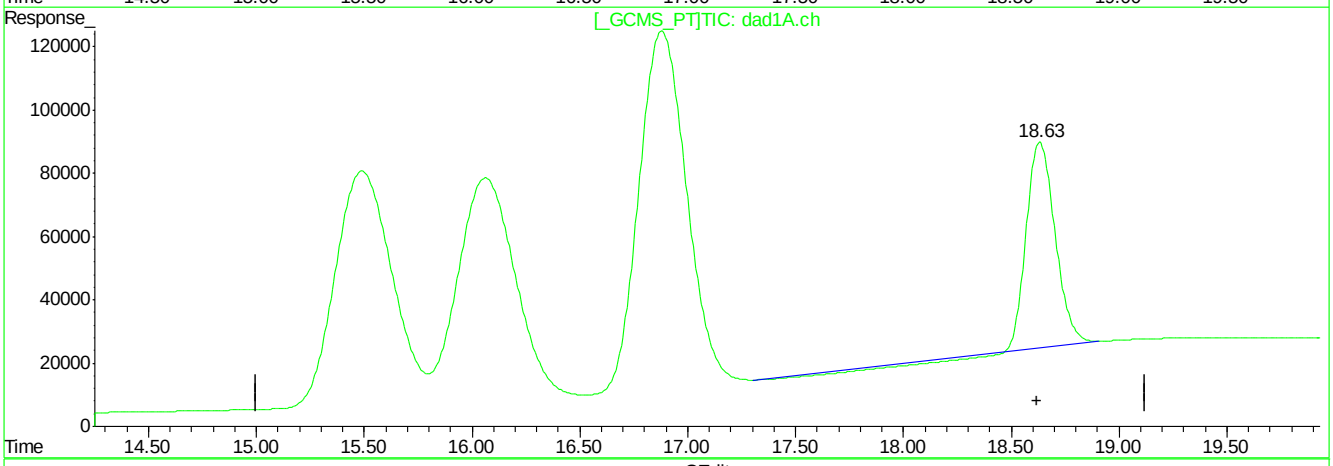
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.49	Poor instrument integration
PETN	78-11-5	2	18.63	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1A.ch
Acq On : 04-Nov-2021, 18:10:34 Operator: jamesb
Sample : ic2490-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.64min 0.000ppb

response 62777

(21) PETN #2

18.63min 4137.881ppb

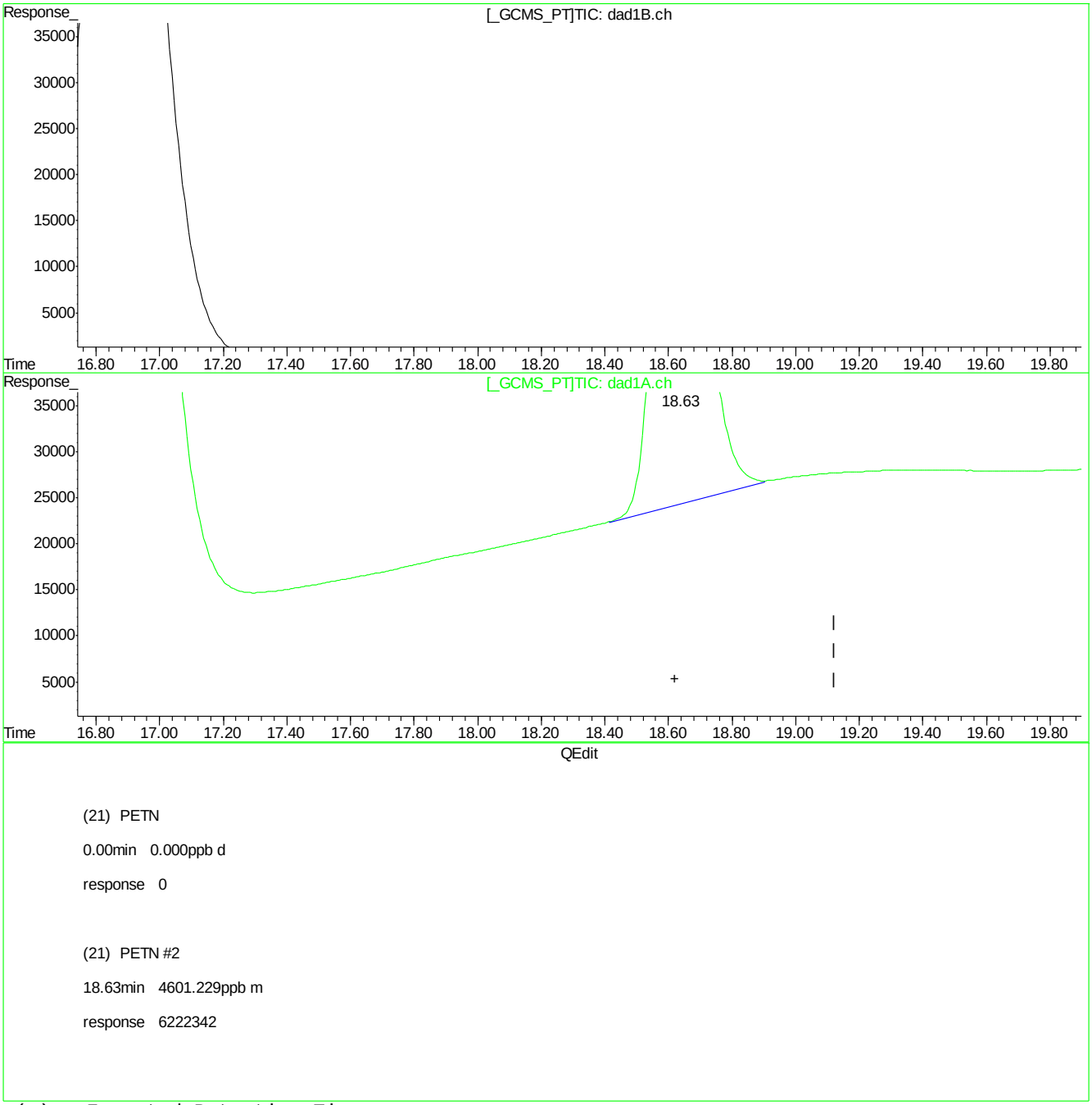
response 5595745

(+) = Expected Retention Time
PP391637.D GPP2490_110421.M Sat Nov 06 12:08:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1A.ch
Acq On : 04-Nov-2021, 18:10:34 Operator: jamesb
Sample : ic2490-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration

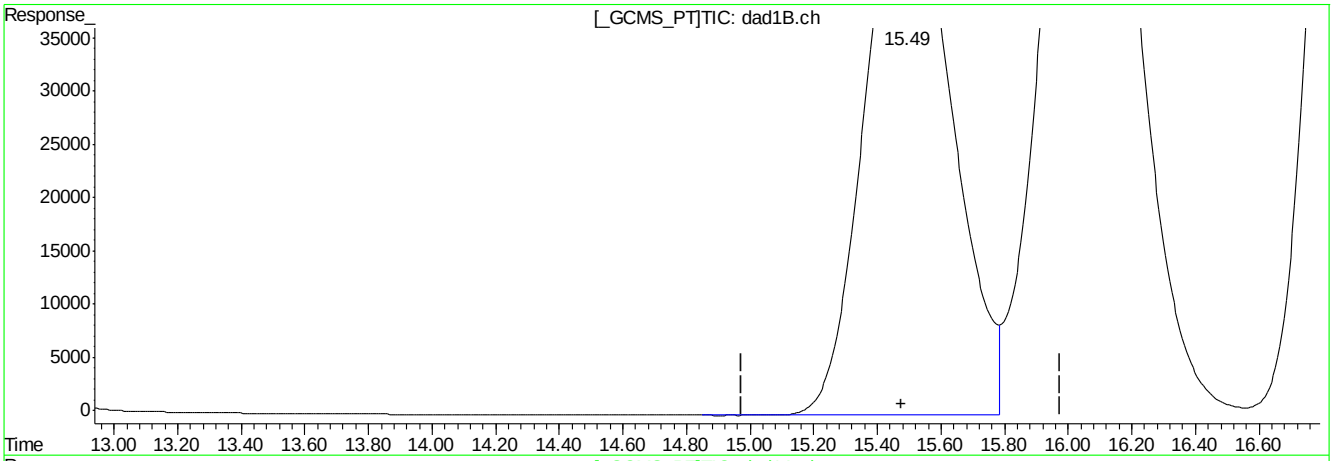


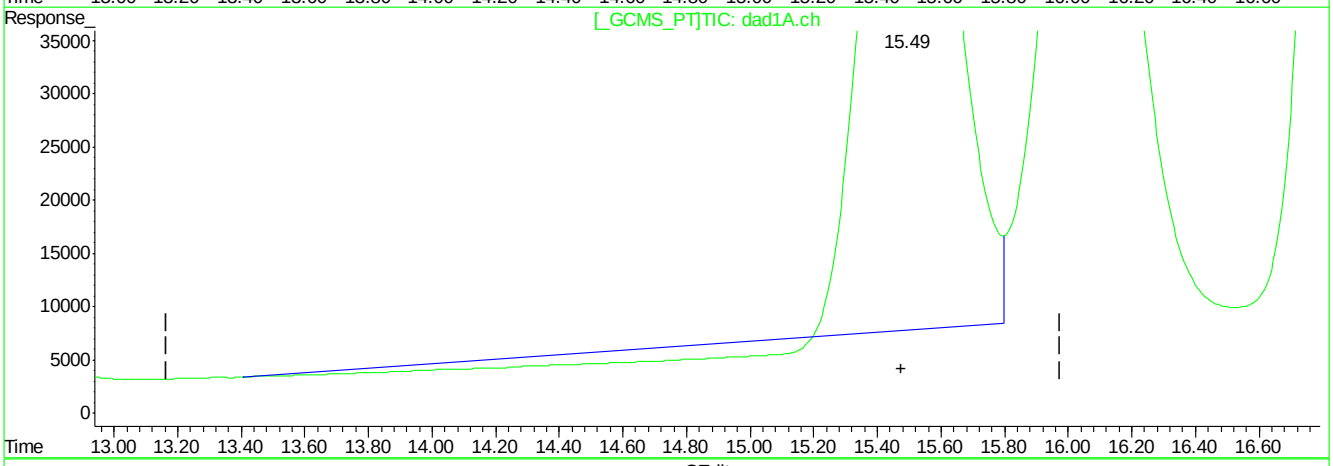
(+) = Expected Retention Time
PP391637.D GPP2490_110421.M Sat Nov 06 12:08:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1A.ch
Acq On : 04-Nov-2021, 18:10:34 Operator: jamesb
Sample : ic2490-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.49min 4250.183ppb

response 9661351

(18) o-Nitrotoluene #2

15.49min 4496.046ppb

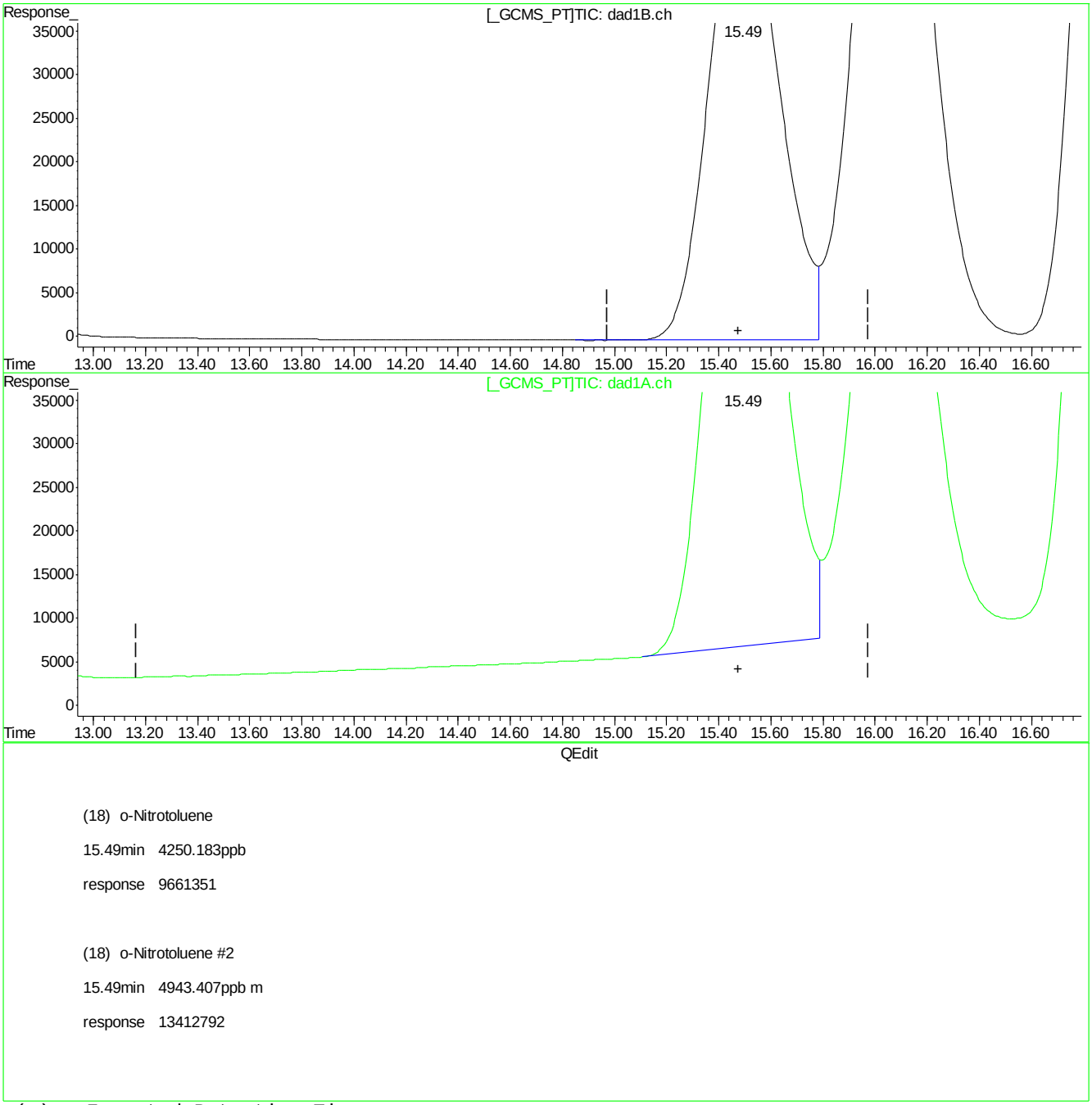
response 12198981

(+) = Expected Retention Time
PP391637.D GPP2490_110421.M Sat Nov 06 12:08:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391637.D\dad1A.ch
Acq On : 04-Nov-2021, 18:10:34 Operator: jamesb
Sample : ic2490-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:08 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.49min 4250.183ppb

response 9661351

(18) o-Nitrotoluene #2

15.49min 4943.407ppb m

response 13412792

(+) = Expected Retention Time
PP391637.D GPP2490_110421.M Sat Nov 06 12:09:06 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/08/21 10:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391638.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391638.D\dad1A.ch
Acq On : 04-Nov-2021, 18:41:38 Operator: jamesb
Sample : icv2490-1000 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 06 12:08:32 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.32	1.32	746220	1222609	541.618m	530.888m
2)	HMX	1.45	1.45	1494397	4207408	911.518	992.633
3)	DNX	1.69	1.69	1684361	2684857	859.956m	834.765m
4)	MNX	2.28	2.28	3279272	5094625	1196.268	1207.784
5)	RDX	2.90	2.90	1787295	2875470	974.231	966.278
6)	1,3,5-Trinitrobe	4.70	4.70	3817462	7462868	965.540	965.892
7)	1,3-Dinitrobenze	5.89	5.89	5000511	3484167	968.564	905.624
8)	3,5-Dinitroanili	6.24	6.24	3931610	6803215	972.962	945.270
9)	Nitrobenzene	7.48	7.48	2951529	2888949	952.643	959.896
10)	Nitroglycerin	0.00	9.05	0	1237537	N.D.	942.310 #
11)	Tetryl	9.59	9.59	2692766	4458290	987.304	1018.746
12)	2,4,6-Trinitroto	9.97	9.97	3479296	4235121	895.576	960.741
13)	2-Amino-4,6-Dini	10.31	10.31	3413870	5231417	950.014	1148.418
14)	4-Amino-2,6-Dini	10.83	10.83	2446709	4962085	942.044	1015.771
16)	2,4-Dinitrotolue	11.95	11.95	4424279	2923774	968.512	951.365
17)	2,6-Dinitrotolue	12.42	12.42	2675113	3513093	943.140	1059.412
18)	o-Nitrotoluene	15.50	15.50	2089259	2809384	919.099	1035.424m
19)	p-Nitrotoluene	16.07	16.07	3361810	2658886	986.352	935.600m
20)	m-Nitrotoluene	16.88	16.89	3100231	3596720	972.720	990.229
21)	PETN	0.00	18.63	0	1363590	N.D.	1008.332m#

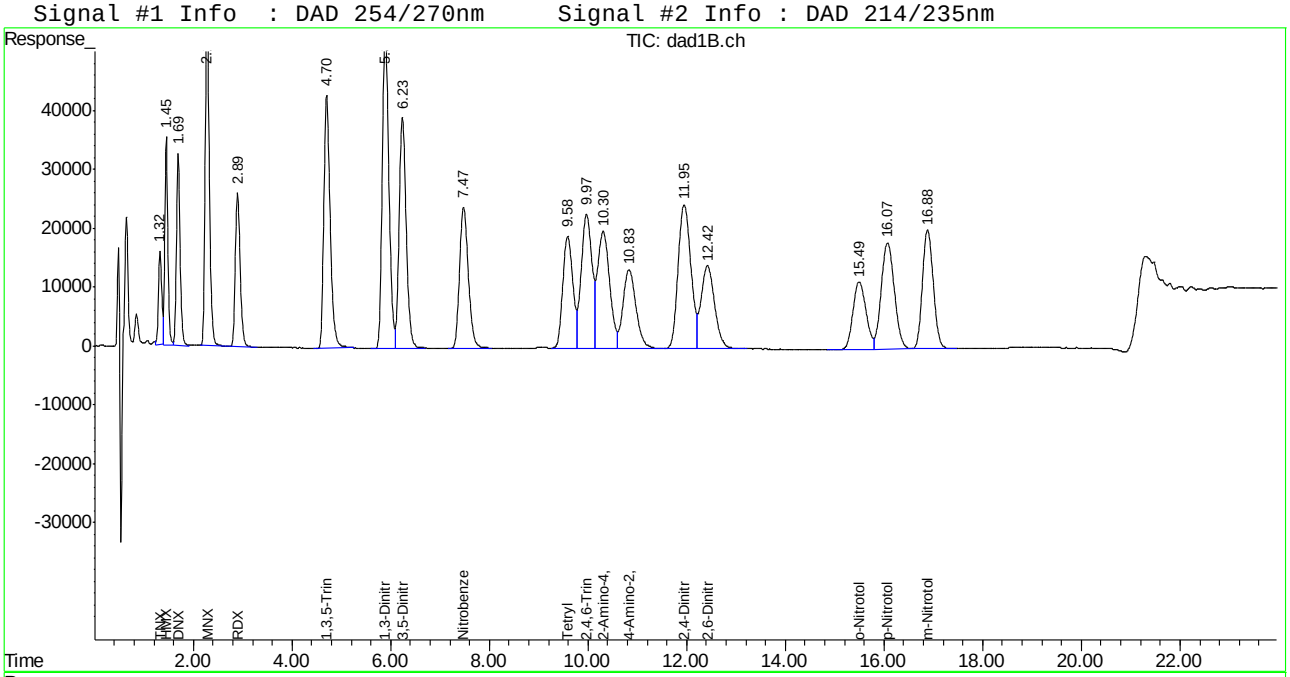
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391638.D GPP2490_110421.M Mon Nov 08 10:13:24 2021 Page 1

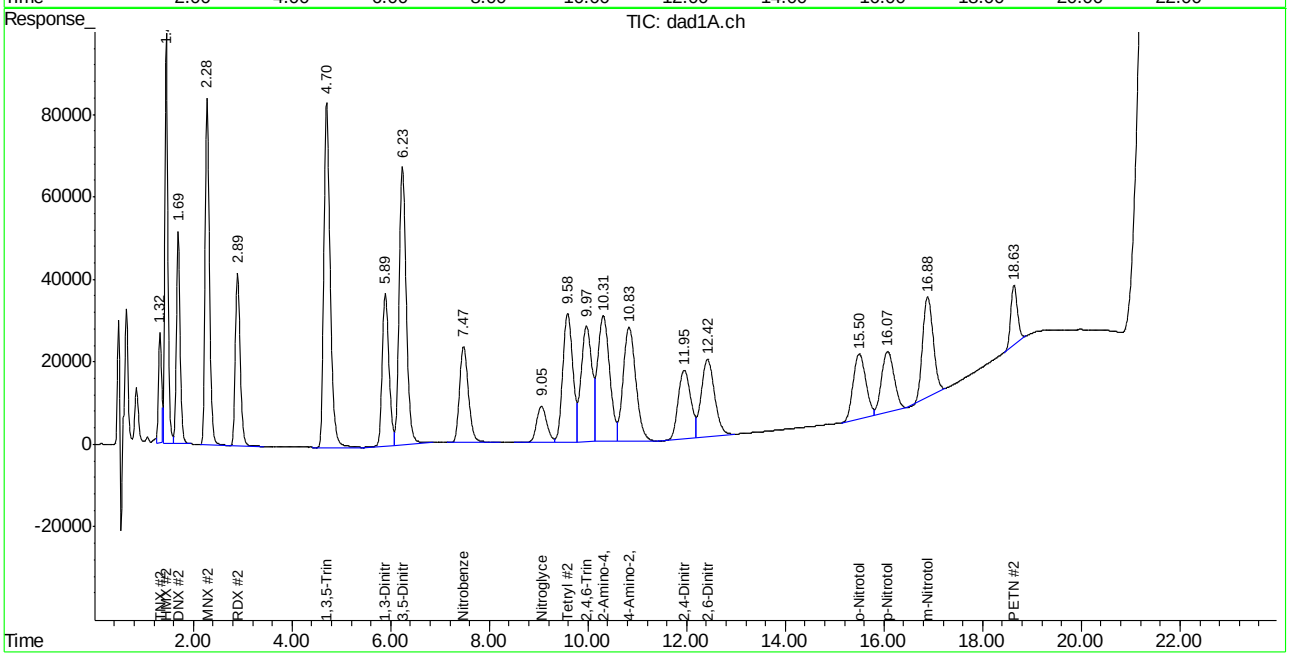
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2490\PP391638.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2490\PP391638.D\dad1A.ch
Acq On : 04-Nov-2021, 18:41:38 Operator: jamesb
Sample : icv2490-1000 Inst : G1315B
Misc : op88132,GPP2490,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 6 12:32 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Nov 06 12:08:11 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

Sample Number: GPP2490-ICV2490 **Method:** SW846 8330B
Lab FileID: PP391638.D **Analyst approved:** 11/08/21 10:13 James Boone
Injection Time: 11/04/21 18:41 **Supervisor approved:** 11/08/21 10:18 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.32	Poor instrument integration
TNX		2	1.32	Poor instrument integration
DNX		1	1.69	Poor instrument integration
DNX		2	1.69	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.50	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.07	Poor instrument integration
PETN	78-11-5	2	18.63	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/21 15:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1A.ch
Acq On : 11-Nov-2021, 10:51:07 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : op88250,GPP2493,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 11 11:21:22 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.24	11.24	2069961	3520434	1087.968	1095.515
	Spiked Amount 500.000	Range 70 - 136		Recovery =		217.59%#	219.10%#
	Target Compounds						
1)	TNX	1.32	1.32	704220	1155091	498.636	501.514
2)	HMX	1.44	1.44	1411974	3961351	1028.181	1027.042
3)	DNX	1.68	1.68	1498940	2445660	902.015	1011.213
4)	MNX	2.27	2.27	3013672	4693385	1133.919	1135.353
5)	RDX	2.88	2.88	1653069	2671605	958.812	972.209
6)	1,3,5-Trinitrobe	4.68	4.68	3542941	6931267	980.477	987.845
7)	1,3-Dinitrobenze	5.86	5.86	4645228	3243025	985.439	985.687
8)	3,5-Dinitroanili	6.20	6.20	3568526	6155584	955.635	956.221
9)	Nitrobenzene	7.44	7.44	2812220	2745958	1016.303	962.593
10)	Nitroglycerin	0.00	9.00	0	1031992	N.D.	928.097 #
11)	Tetryl	9.52	9.52	2483595	4033152	948.383	973.036
12)	2,4,6-Trinitroto	9.91	9.91	3212602	3803930	962.554	1002.282
13)	2-Amino-4,6-Dini	10.23	10.23	3108887	4644328	940.238	1036.543
14)	4-Amino-2,6-Dini	10.75	10.74	2182877	4257539	909.547	948.461
16)	2,4-Dinitrotolue	11.87	11.87	4130027	2571010	973.007	988.891
17)	2,6-Dinitrotolue	12.34	12.35	2473864	3139449	958.340	1020.012
18)	o-Nitrotoluene	15.42	15.42	1975467	2656478	969.817	1005.616m
19)	p-Nitrotoluene	15.99	15.99	3105870	2450714	988.058	954.692m
20)	m-Nitrotoluene	16.82	16.82	2930432	3507833	1013.968	1075.975m
21)	PETN	0.00	18.60	0	1211674	N.D.	974.524m#

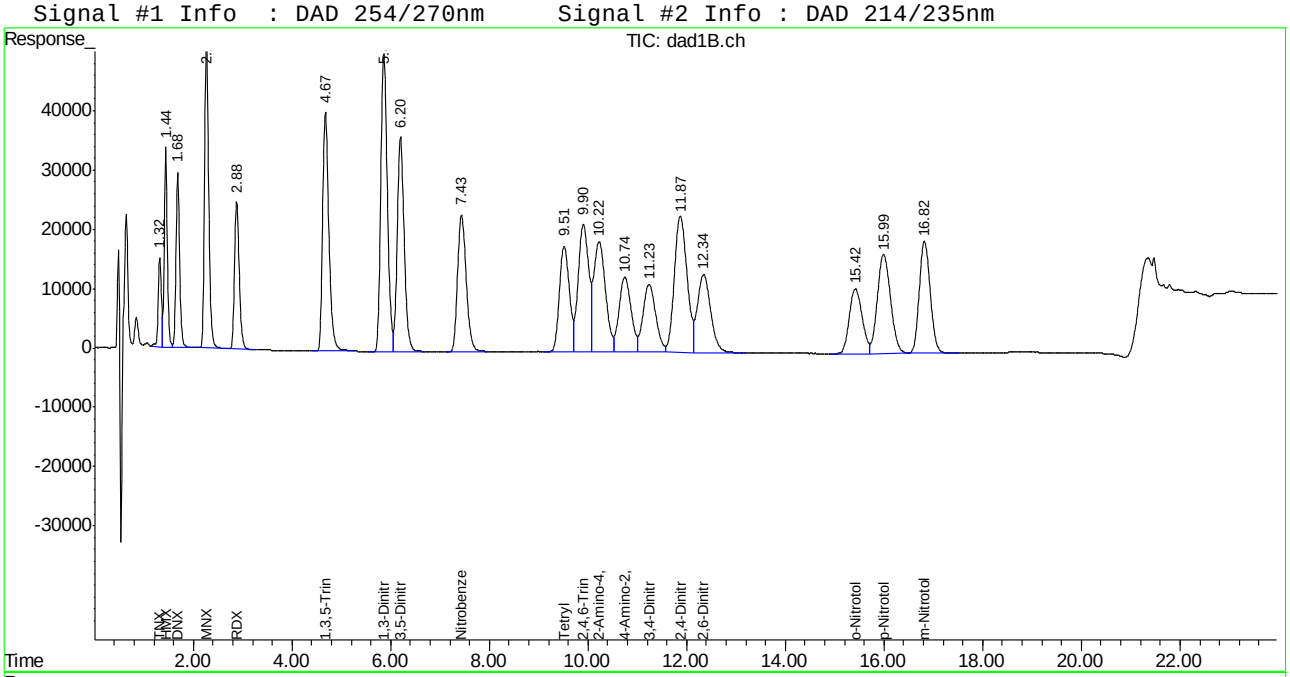
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391672.D GPP2490_110421.M Fri Nov 12 11:30:11 2021 Page 1

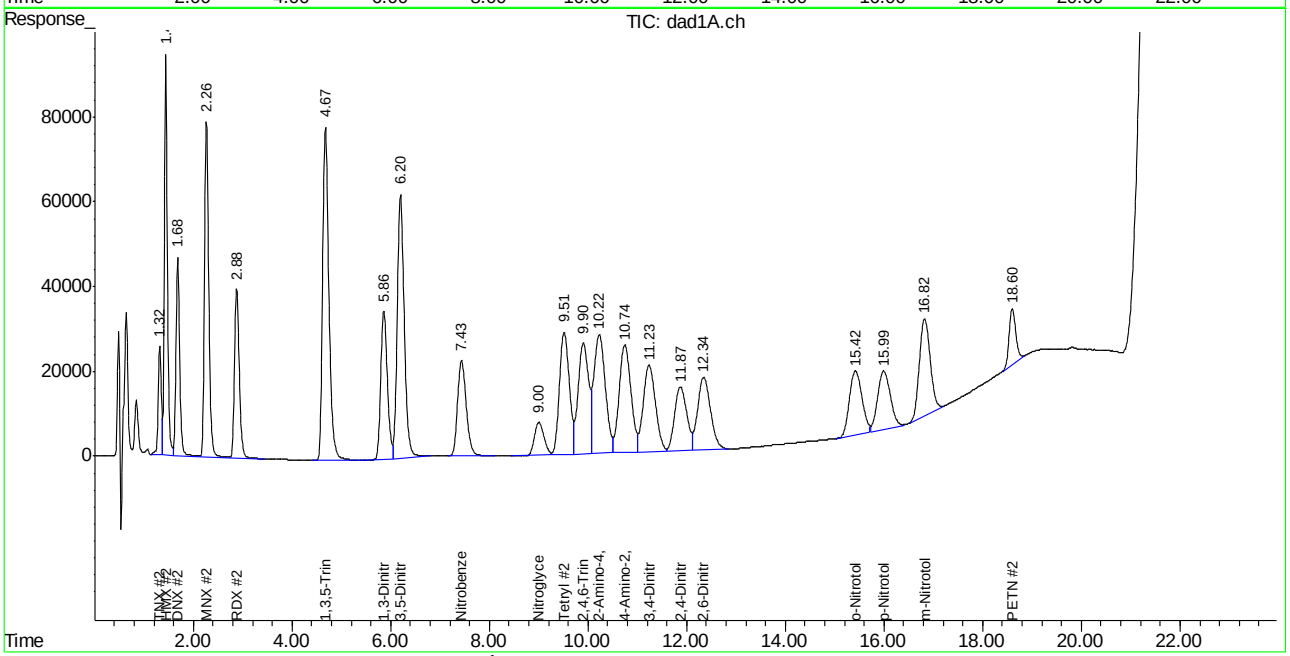
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1A.ch
Acq On : 11-Nov-2021, 10:51:07 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : op88250,GPP2493,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 11 11:22 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

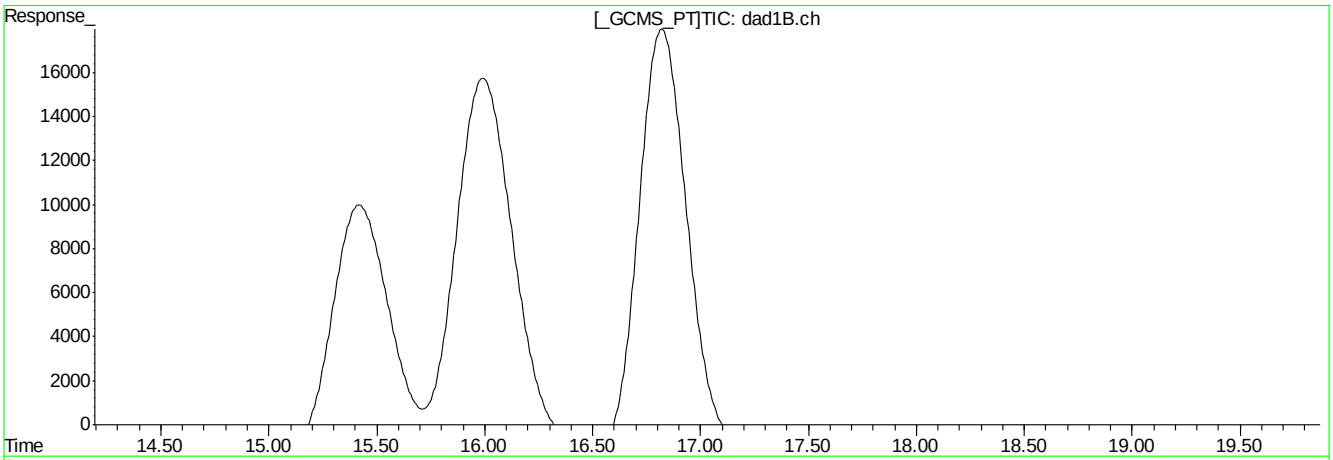
Sample Number: GPP2493-CC2490
Lab FileID: PP391672.D
Injection Time: 11/11/21 10:51
Method: SW846 8330B
Analyst approved: 11/12/21 11:31 James Boone
Supervisor approved: 11/12/21 15:17 Naresh Jiawan

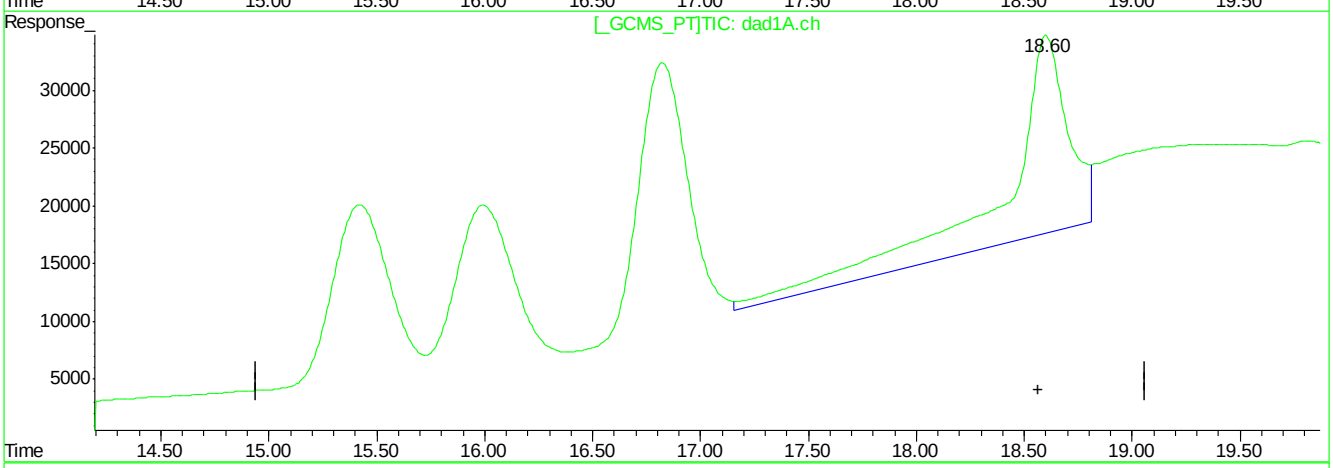
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.42	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.99	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.82	Poor instrument integration
PETN	78-11-5	2	18.60	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1A.ch
Acq On : 11-Nov-2021, 10:51:07 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 11 11:21 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.60min 2783.811ppb

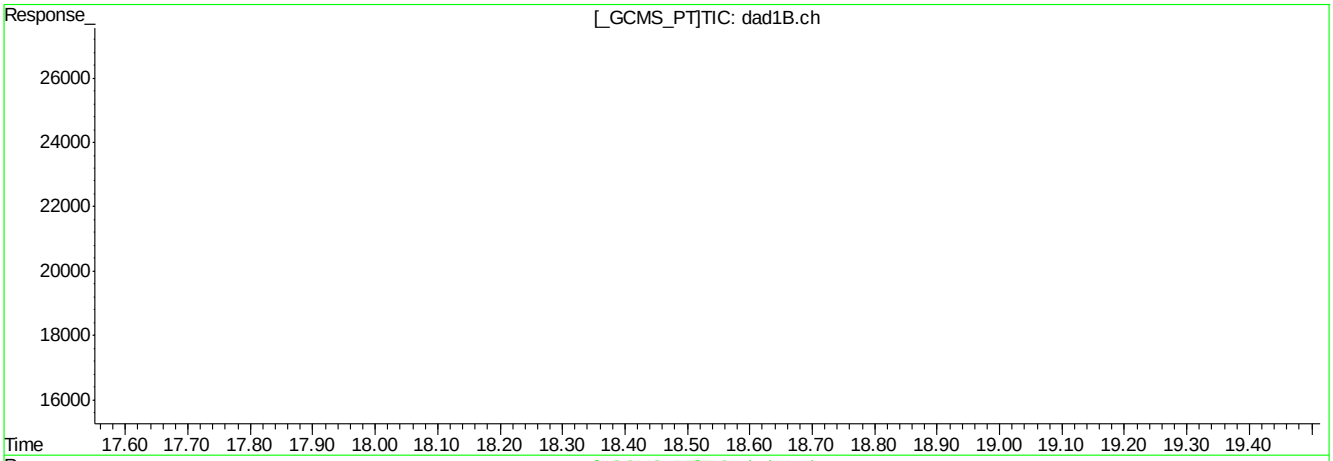
response 3461249

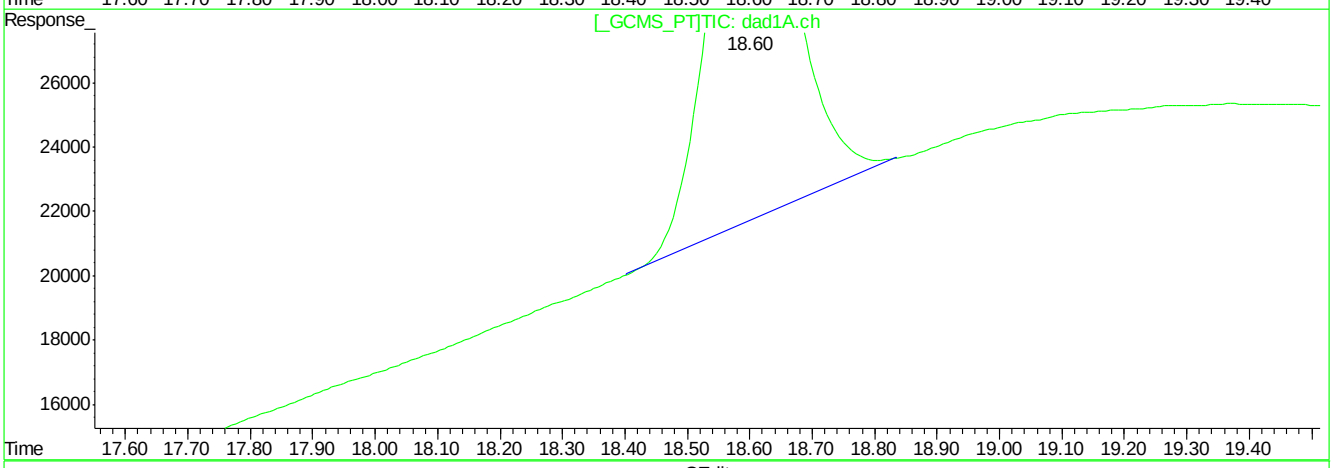
(+) = Expected Retention Time
PP391672.D GPP2490_110421.M Thu Nov 11 11:21:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1A.ch
Acq On : 11-Nov-2021, 10:51:07 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 11 11:21 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.60min 974.524ppb m

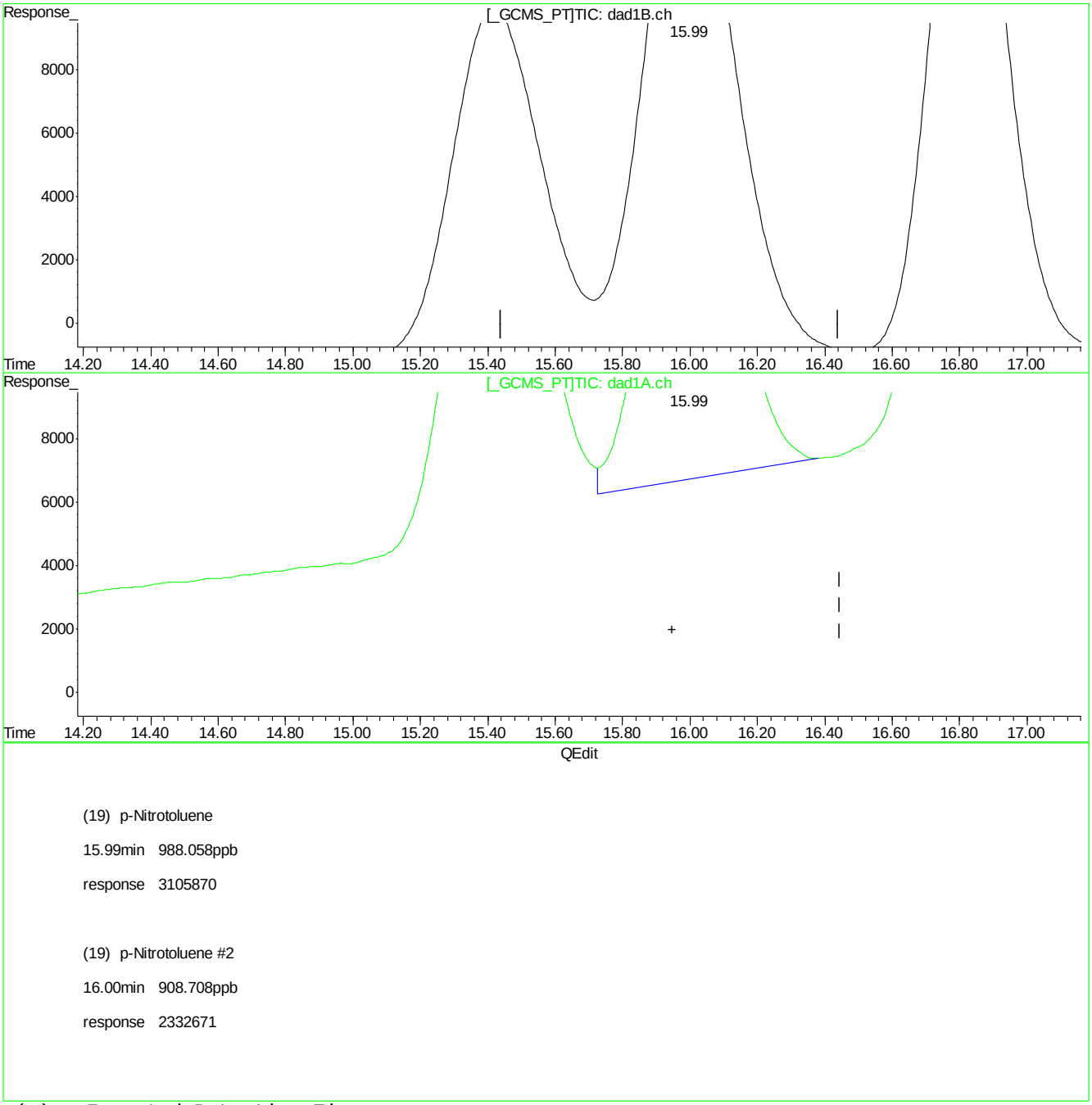
response 1211674

(+) = Expected Retention Time
PP391672.D GPP2490_110421.M Thu Nov 11 11:21:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1A.ch
Acq On : 11-Nov-2021, 10:51:07 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 11 11:21 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.99min 988.058ppb

response 3105870

(19) p-Nitrotoluene #2

16.00min 908.708ppb

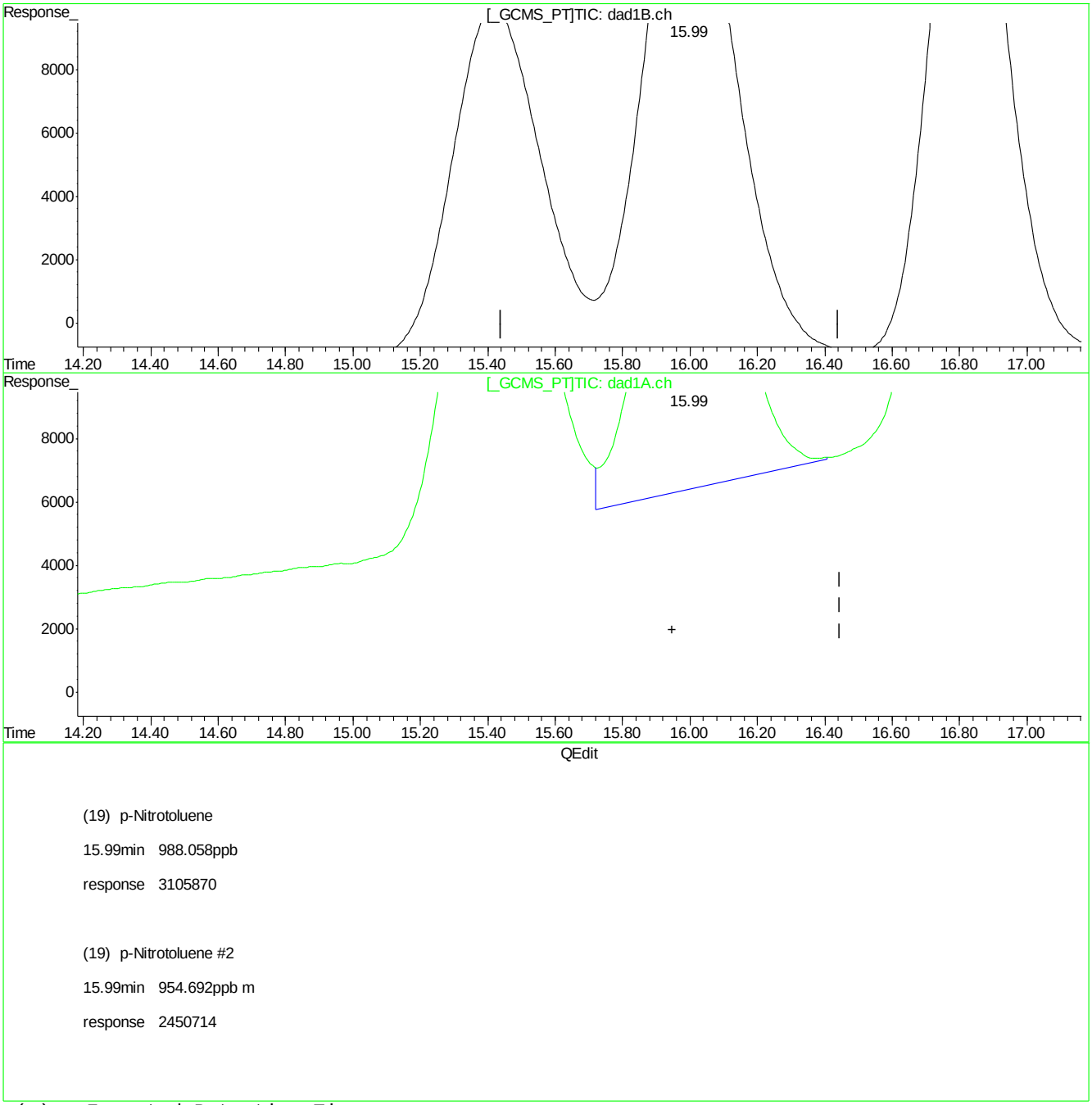
response 2332671

(+) = Expected Retention Time
PP391672.D GPP2490_110421.M Thu Nov 11 11:21:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1A.ch
Acq On : 11-Nov-2021, 10:51:07 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 11 11:21 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.99min 988.058ppb

response 3105870

(19) p-Nitrotoluene #2

15.99min 954.692ppb m

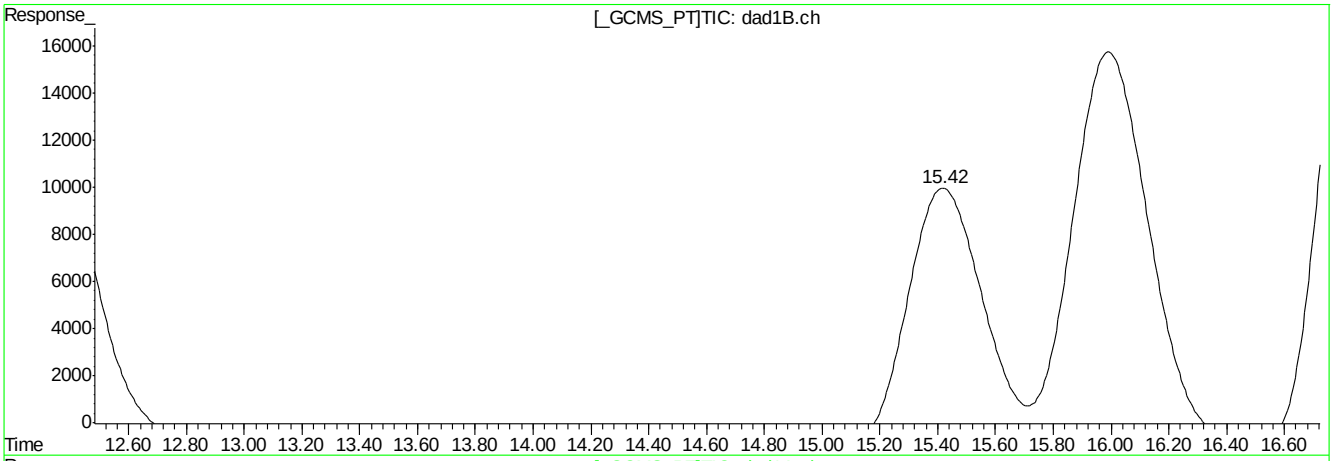
response 2450714

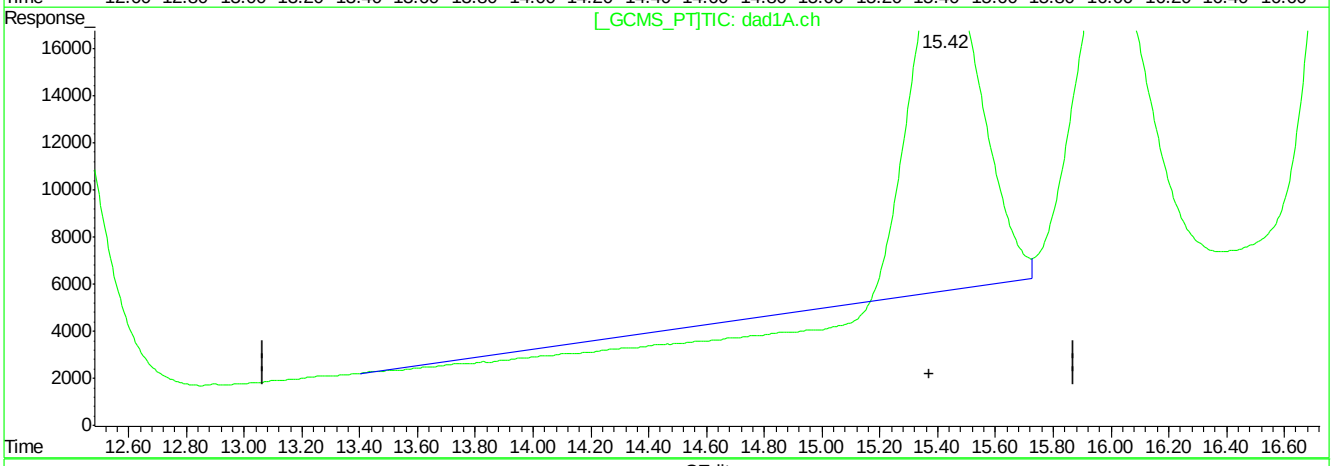
(+) = Expected Retention Time
PP391672.D GPP2490_110421.M Thu Nov 11 11:21:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1A.ch
Acq On : 11-Nov-2021, 10:51:07 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 11 11:21 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.42min 969.817ppb

response 1975467

(18) o-Nitrotoluene #2

15.42min 729.617ppb

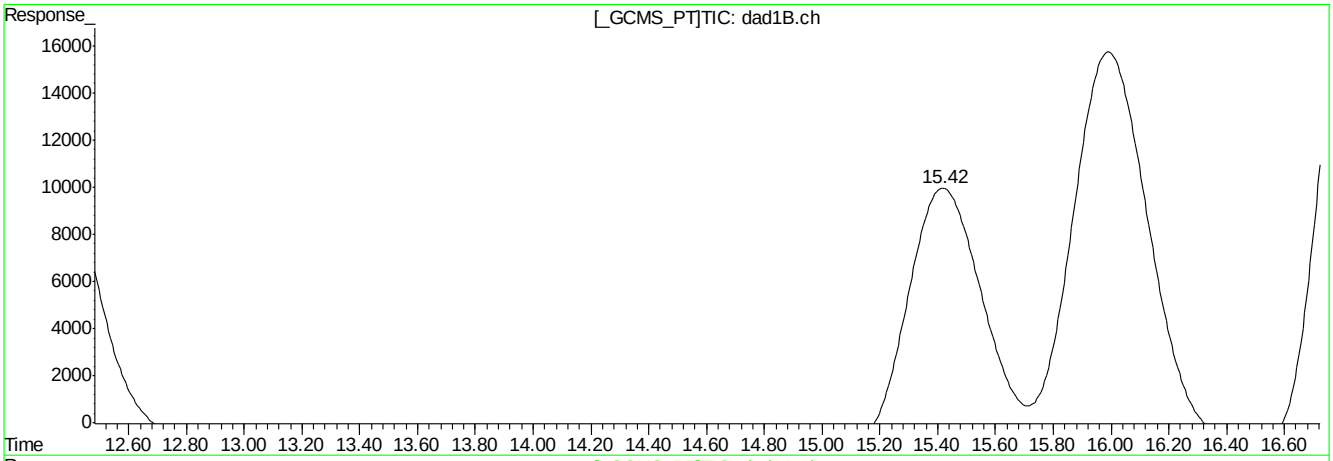
response 1927388

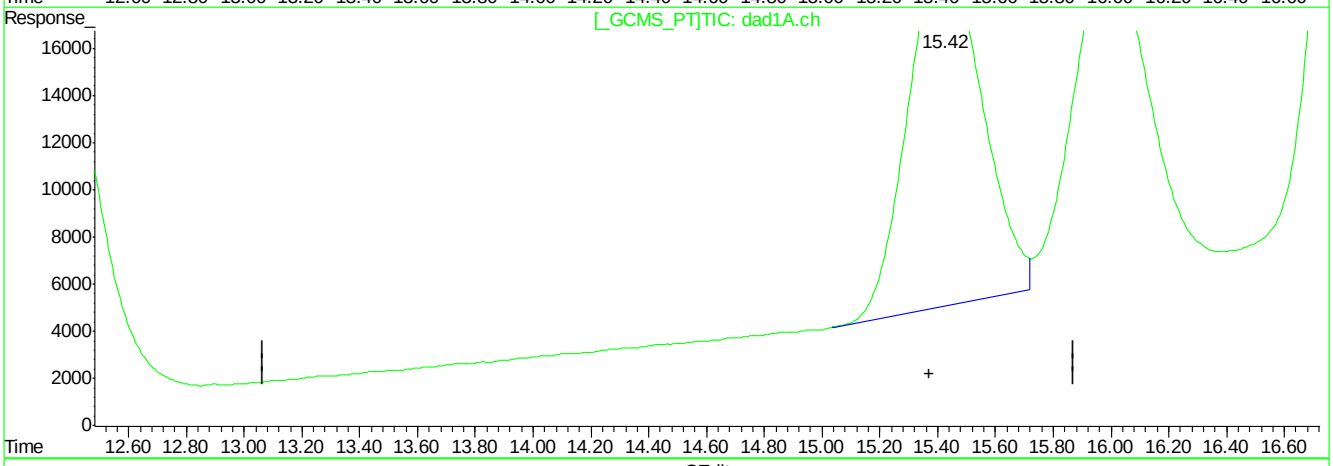
(+) = Expected Retention Time
PP391672.D GPP2490_110421.M Thu Nov 11 11:22:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391672.D\dad1A.ch
Acq On : 11-Nov-2021, 10:51:07 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 11 11:21 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.42min 969.817ppb

response 1975467

(18) o-Nitrotoluene #2

15.42min 1005.616ppb m

response 2656478

(+) = Expected Retention Time
PP391672.D GPP2490_110421.M Thu Nov 11 11:22:10 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/12/21 15:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : op88250,GPP2493,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55:49 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.29	11.29	2079212	3491861	1092.830	1086.624
	Spiked Amount 500.000	Range 70 - 136		Recovery =		218.57%#	217.32%#
	Target Compounds						
1)	TNX	1.32	1.32	708607	1184411	501.742	514.244
2)	HMX	1.45	1.45	1407546	3929768	1024.957	1018.853
3)	DNX	1.69	1.69	1493079	2406568	898.488	995.050
4)	MNX	2.28	2.28	3016992	4677216	1135.169	1131.441
5)	RDX	2.89	2.89	1666209	2666944	966.433	970.513
6)	1,3,5-Trinitrobe	4.70	4.70	3558133	6953505	984.681	991.014
7)	1,3-Dinitrobenze	5.88	5.88	4644098	3251140	985.199	988.153
8)	3,5-Dinitroanili	6.22	6.22	3557942	6186077	952.800	960.958
9)	Nitrobenzene	7.46	7.46	2801276	2736190	1012.348	959.169
10)	Nitroglycerin	0.00	9.04	0	1014071	N.D.	911.981 #
11)	Tetryl	9.56	9.56	2527237	4030663	965.047	972.436
12)	2,4,6-Trinitroto	9.95	9.95	3247173	3819030	972.912	1006.261
13)	2-Amino-4,6-Dini	10.28	10.28	3108789	4596575	940.209	1025.885
14)	4-Amino-2,6-Dini	10.80	10.80	2199244	4236083	916.367	943.681
16)	2,4-Dinitrotolue	11.92	11.93	4146767	2576013	976.951	990.816
17)	2,6-Dinitrotolue	12.40	12.40	2466720	3125358	955.572	1015.433
18)	o-Nitrotoluene	15.47	15.47	1971845	2655121	968.039	1005.102m
19)	p-Nitrotoluene	16.05	16.04	3094874	2555767	984.560	995.616m
20)	m-Nitrotoluene	16.87	16.86	2917453	3487936	1009.477	1069.872m
21)	PETN	0.00	18.63	0	1204570	N.D.	968.811m#

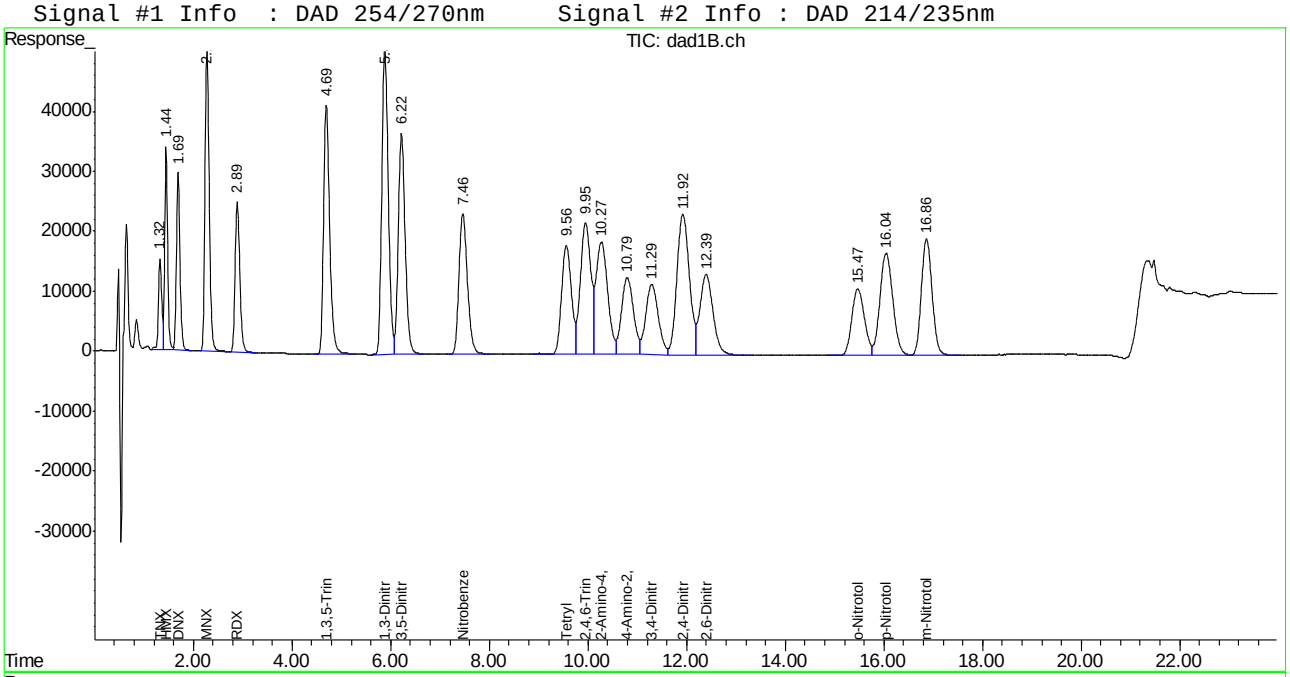
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391684.D GPP2490_110421.M Fri Nov 12 11:30:12 2021 Page 1

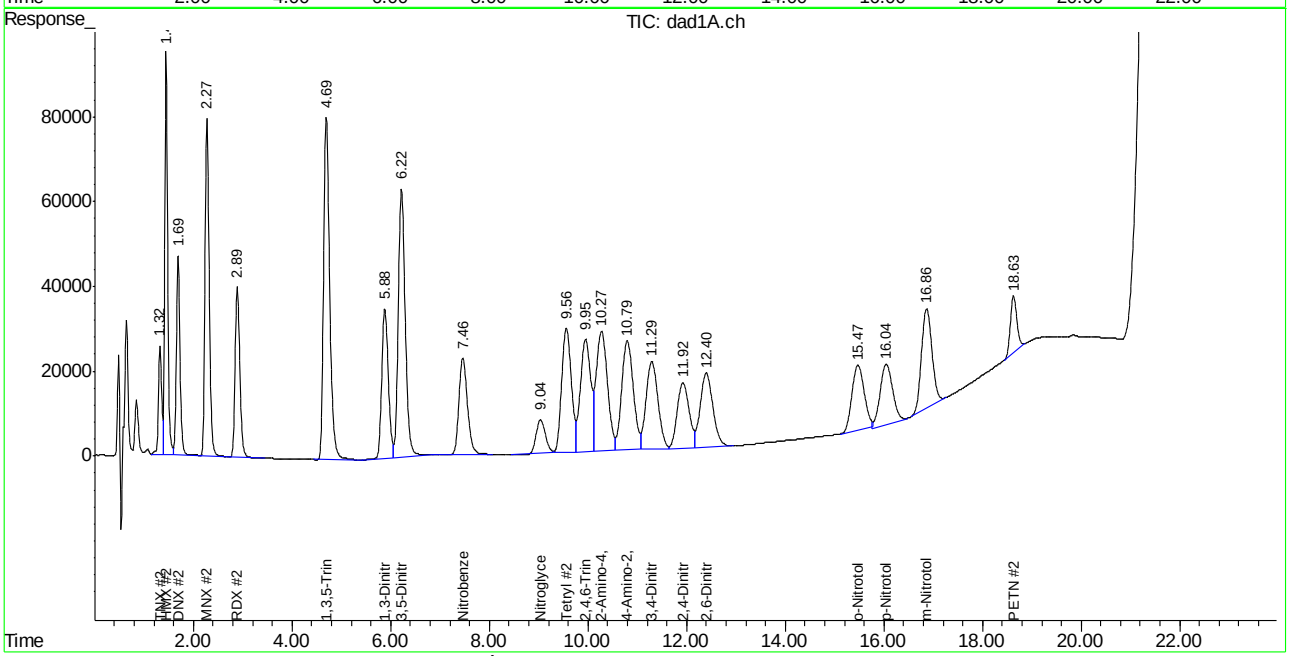
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : op88250,GPP2493,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:56 2021 Quant Results File: GPP2490_110421.RES

Quant Method : C:\MSDCHEM\2...\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

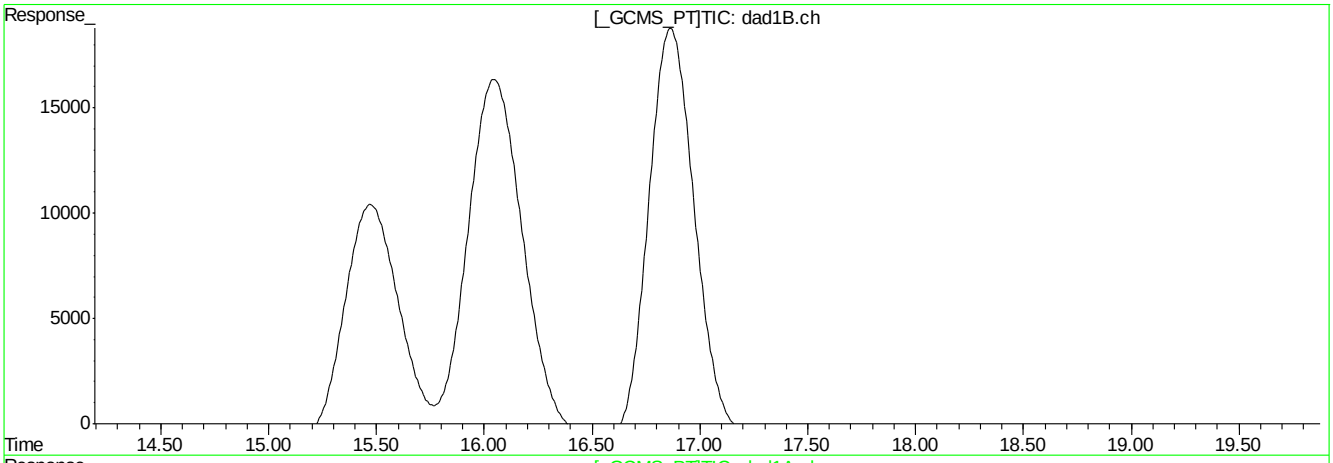
Sample Number: GPP2493-CC2490
Lab FileID: PP391684.D
Injection Time: 11/11/21 17:03
Method: SW846 8330B
Analyst approved: 11/12/21 11:31 James Boone
Supervisor approved: 11/12/21 15:17 Naresh Jiawan

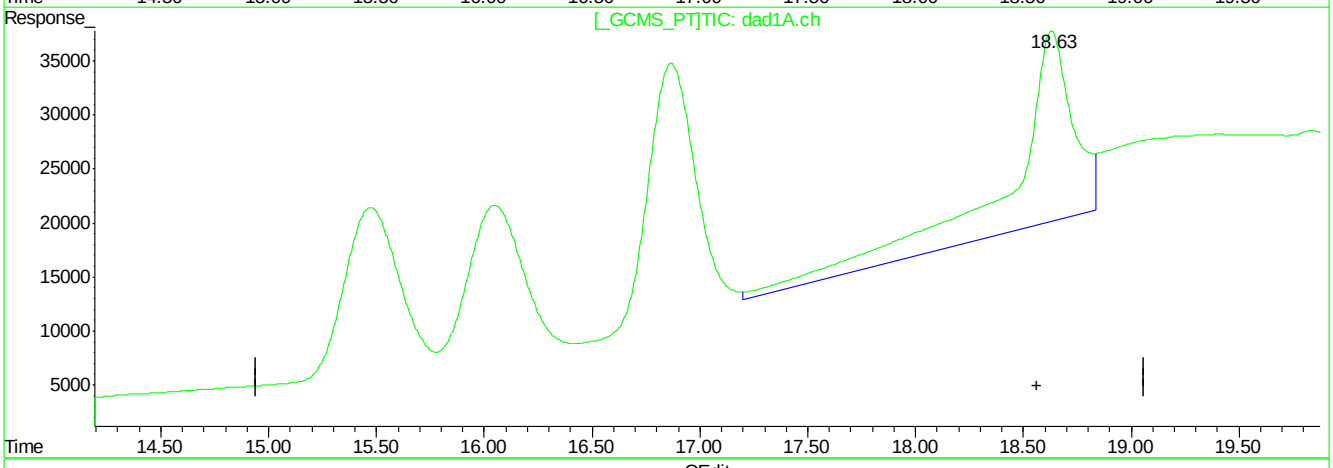
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.47	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.04	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.63	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.63min 2827.896ppb

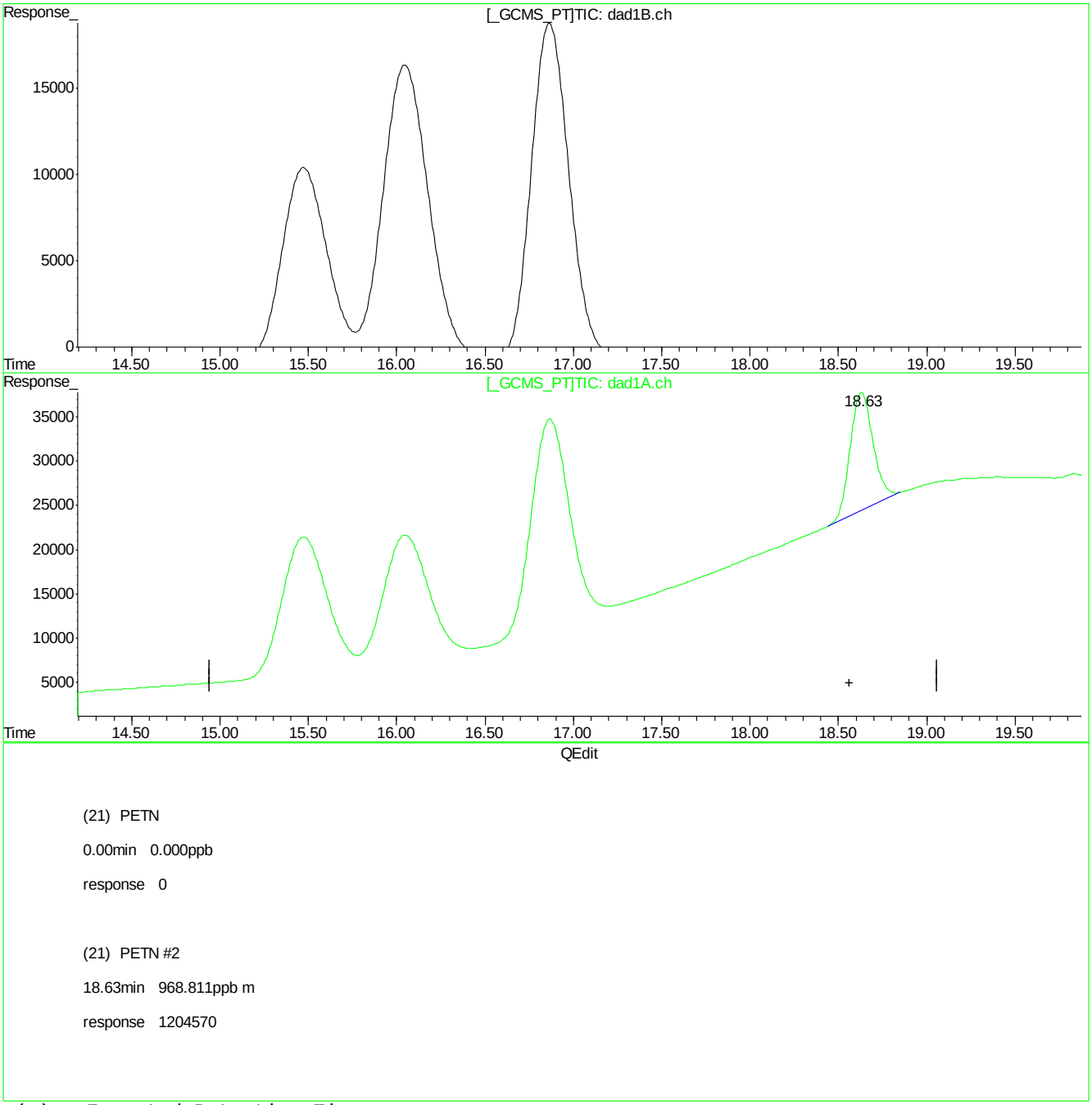
response 3516063

(+) = Expected Retention Time
PP391684.D GPP2490_110421.M Fri Nov 12 10:56:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration

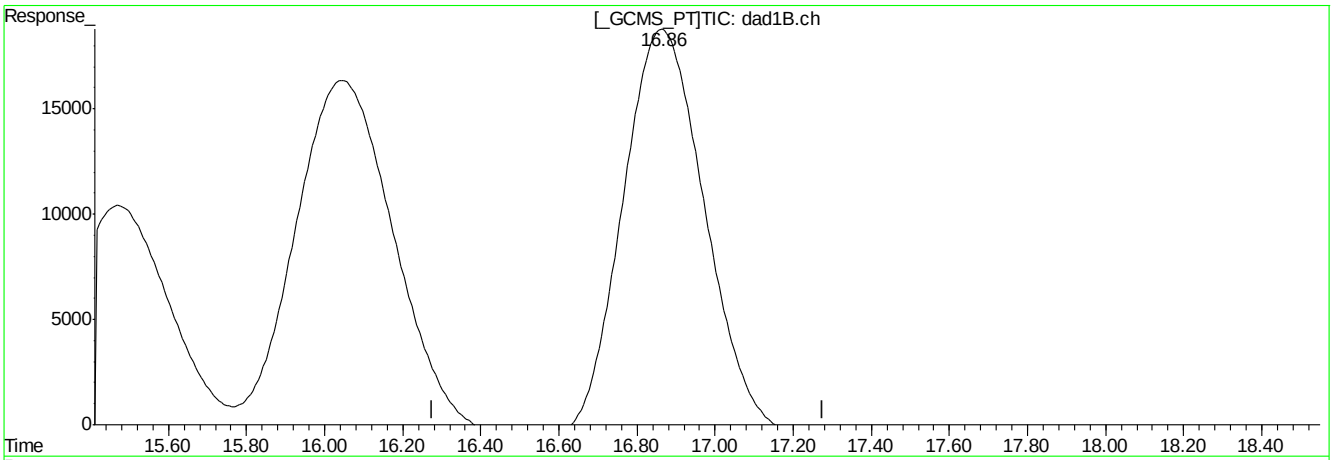


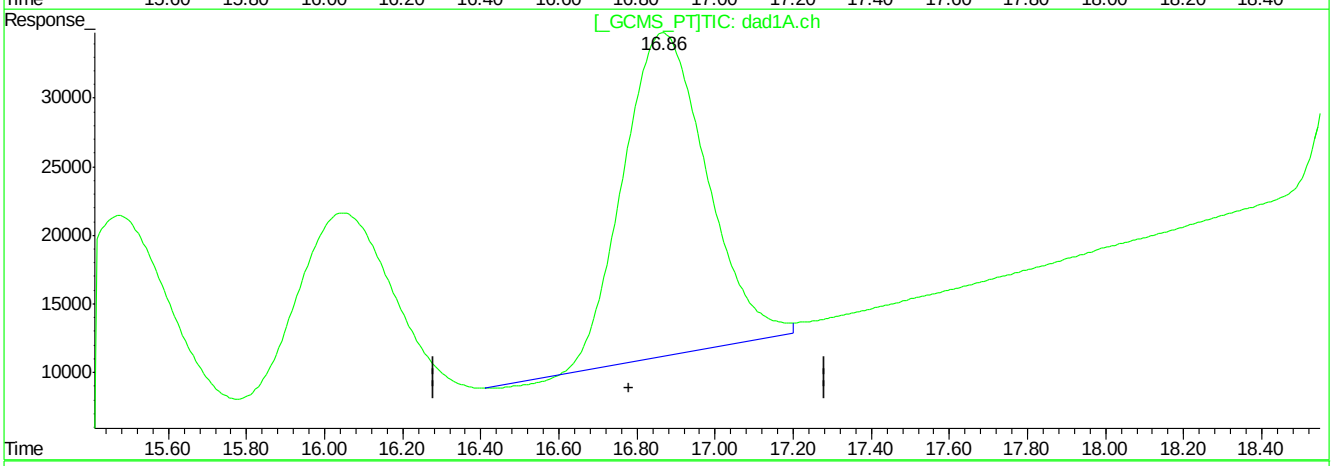
(+) = Expected Retention Time
PP391684.D GPP2490_110421.M Fri Nov 12 10:56:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 1009.477ppb

response 2917453

(20) m-Nitrotoluene #2

16.87min 1074.076ppb

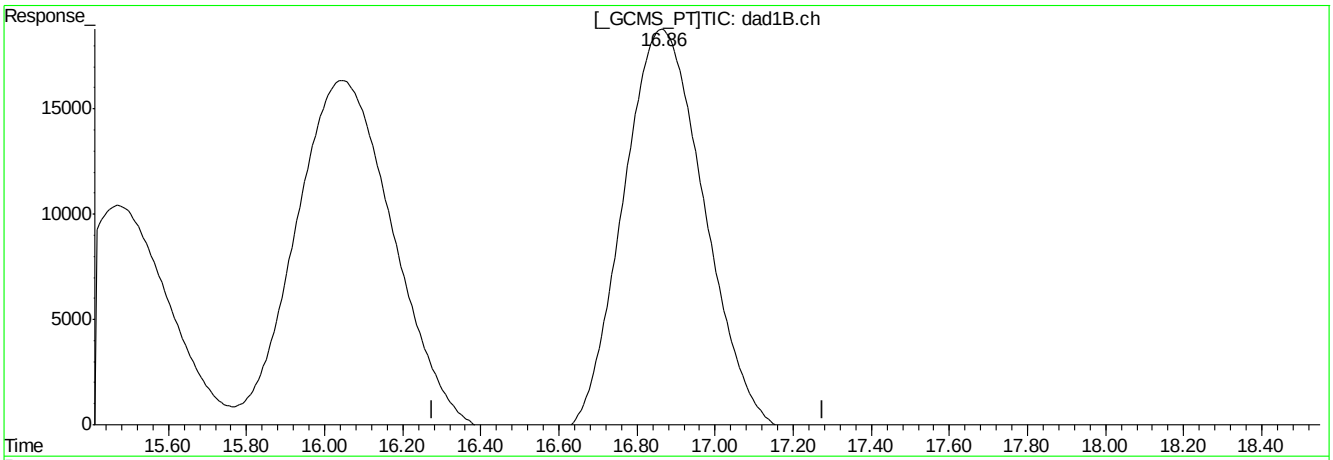
response 3501644

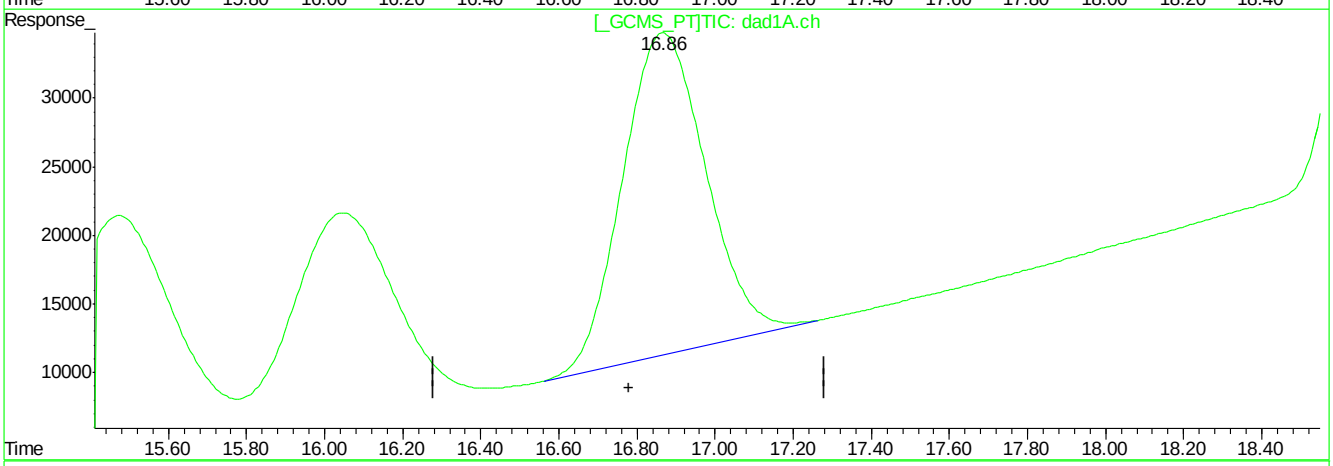
(+) = Expected Retention Time
PP391684.D GPP2490_110421.M Fri Nov 12 10:56:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 1009.477ppb

response 2917453

(20) m-Nitrotoluene #2

16.86min 1069.872ppb m

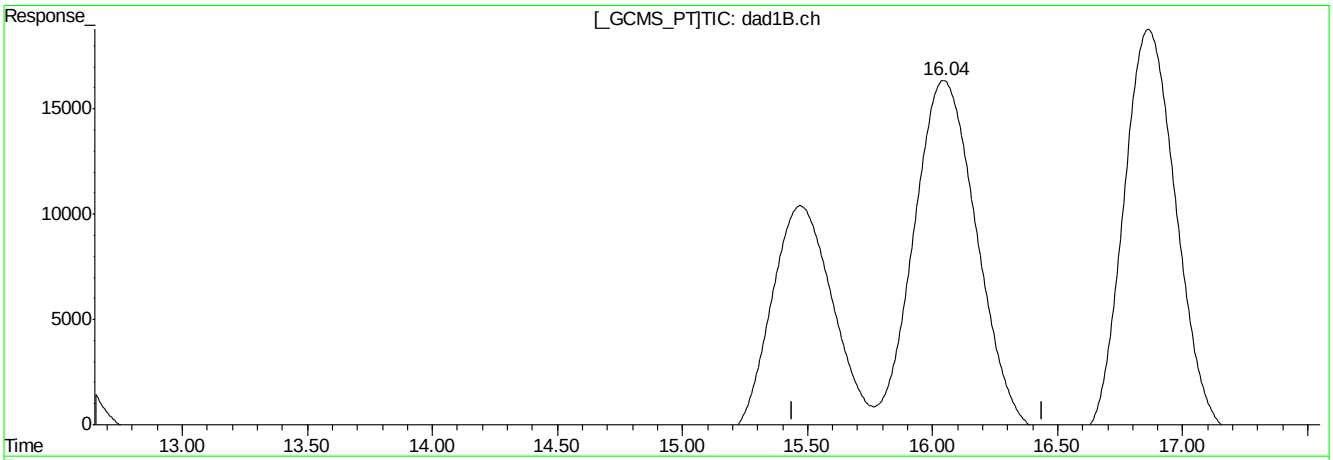
response 3487936

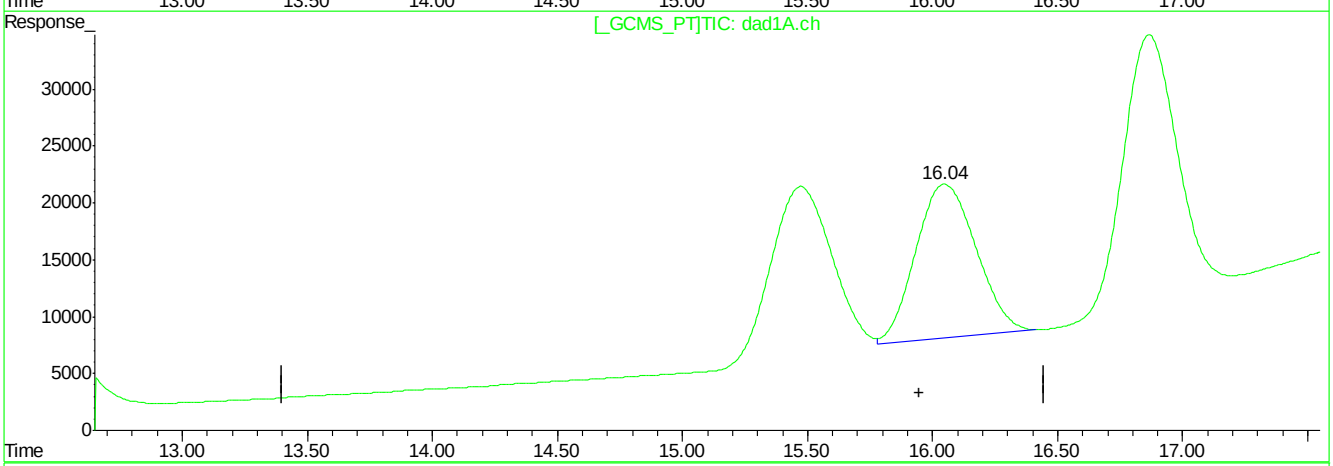
(+) = Expected Retention Time
PP391684.D GPP2490_110421.M Fri Nov 12 10:56:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.05min 984.560ppb

response 3094874

(19) p-Nitrotoluene #2

16.05min 883.266ppb

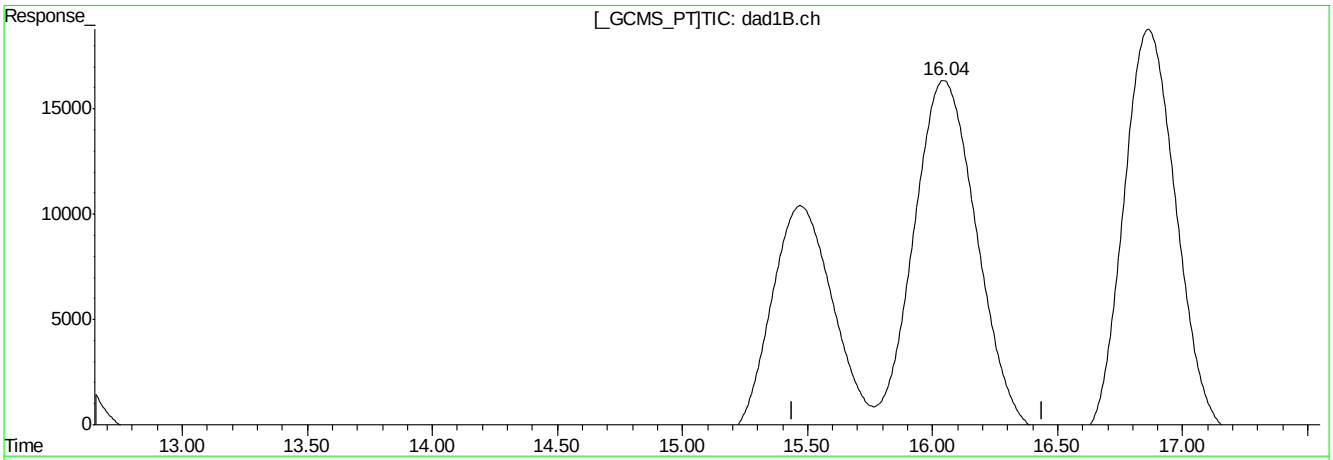
response 2267362

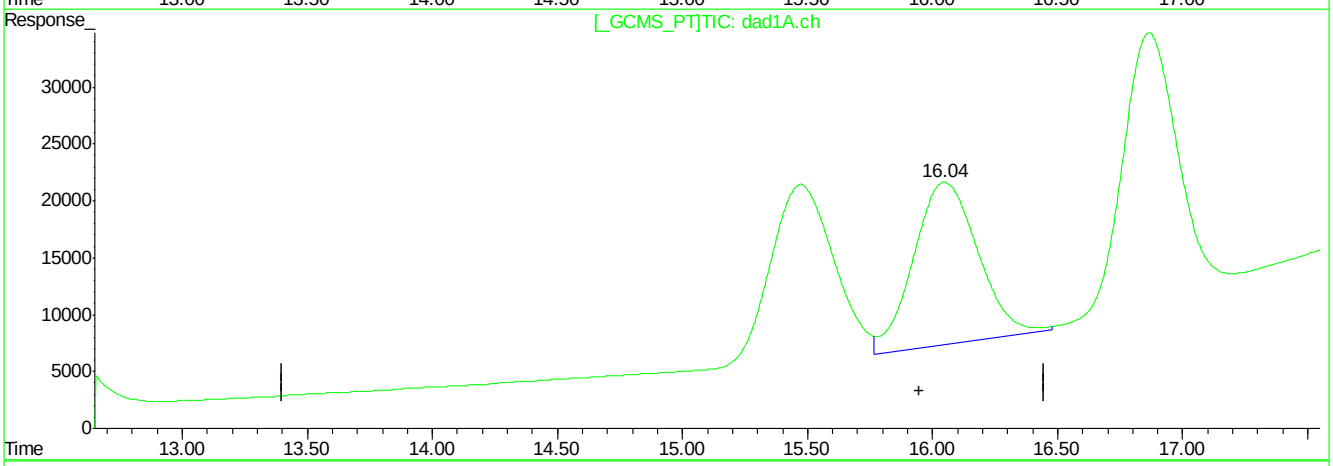
(+) = Expected Retention Time
PP391684.D GPP2490_110421.M Fri Nov 12 10:56:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.05min 984.560ppb

response 3094874

(19) p-Nitrotoluene #2

16.04min 995.616ppb m

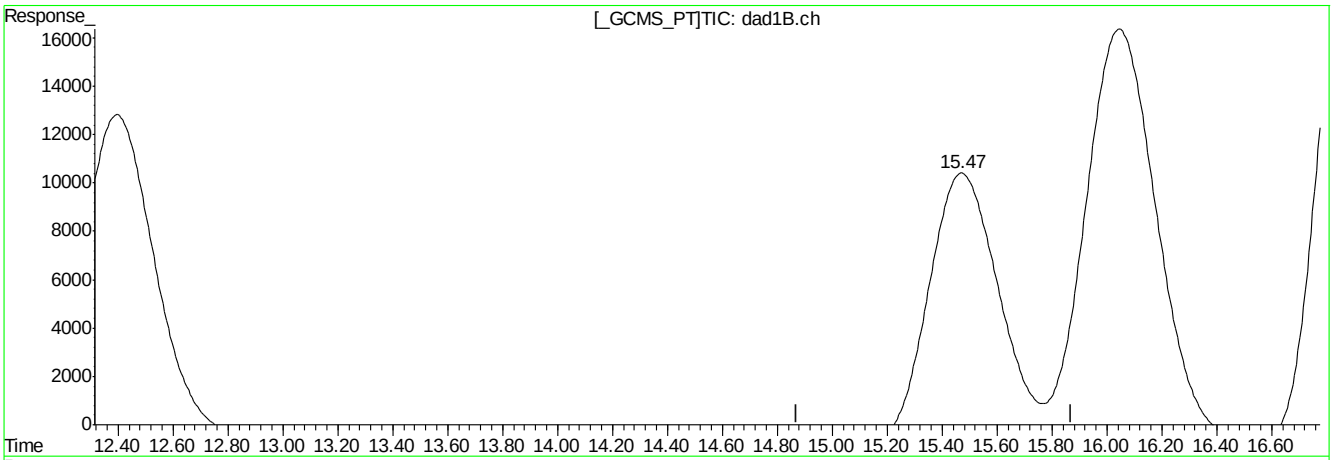
response 2555767

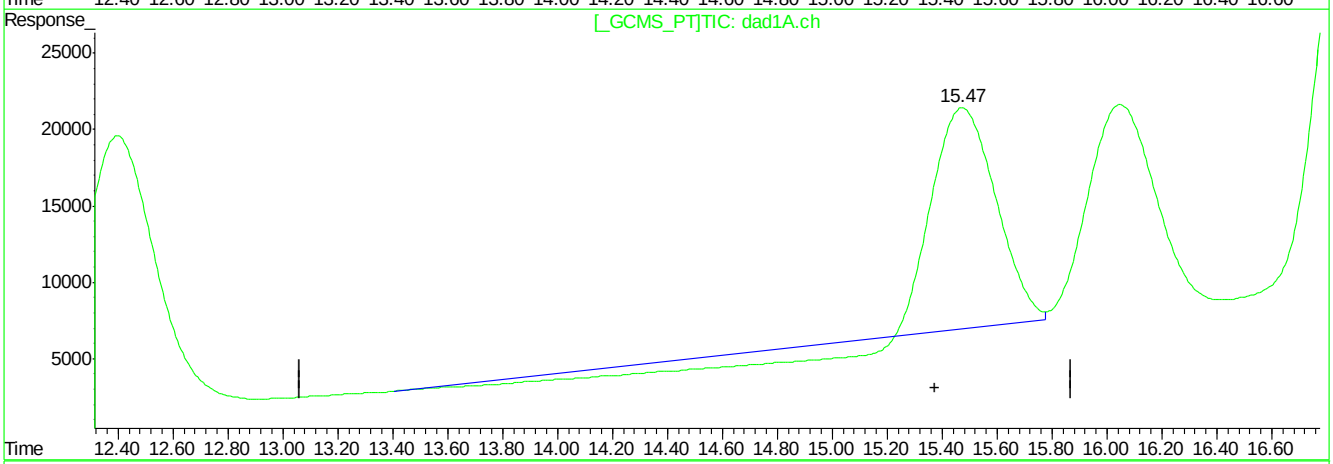
(+) = Expected Retention Time
PP391684.D GPP2490_110421.M Fri Nov 12 10:56:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 968.039ppb

response 1971845

(18) o-Nitrotoluene #2

15.47min 650.195ppb

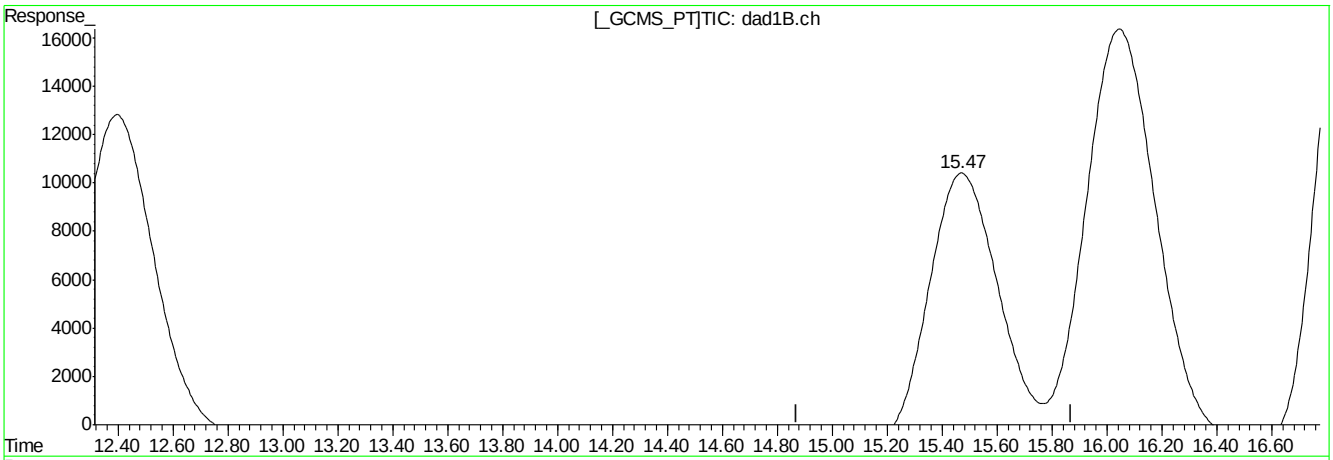
response 1717584

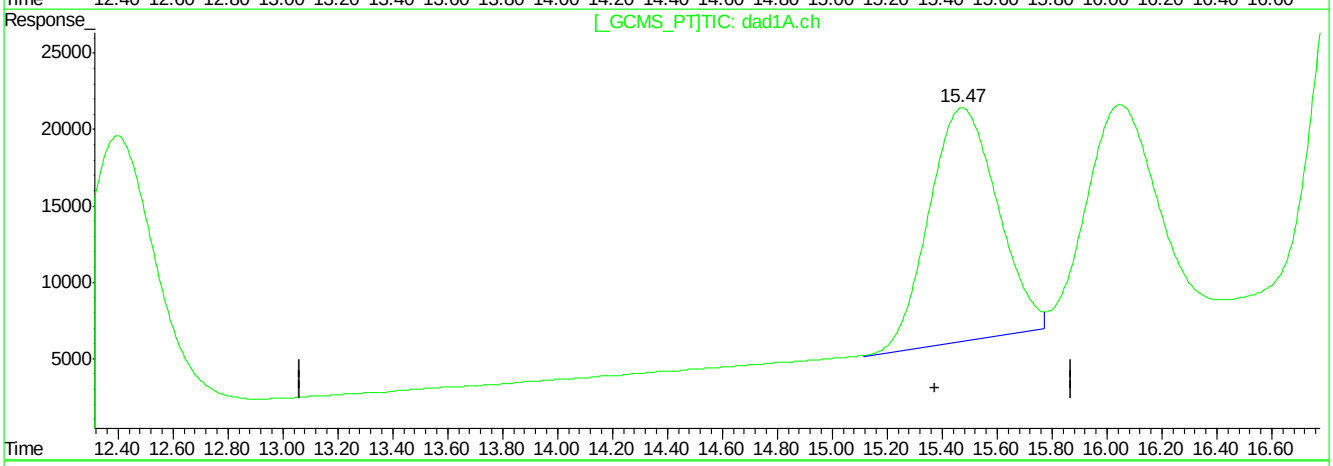
(+) = Expected Retention Time
PP391684.D GPP2490_110421.M Fri Nov 12 10:56:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2493\PP391684.D\dad1A.ch
Acq On : 11-Nov-2021, 17:03:15 Operator: jamesb
Sample : cc2490-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 10:55 2021 Quant Results File: GPP2490_110421.RES

Method : C:\MSDCHEM\2\METHODS\GPP2490_110421.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sun Nov 07 09:34:06 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 968.039ppb

response 1971845

(18) o-Nitrotoluene #2

15.47min 1005.102ppb m

response 2655121

(+) = Expected Retention Time
PP391684.D GPP2490_110421.M Fri Nov 12 10:57:02 2021

SGS-ORLANDO HPLC-04 BB ANALYSIS LOG

DATE	10/30/2021	METHODS	8330	IC/ICC STD LOT	LC1548
COLUMN TYPE	Extend C18	ACQ. METHOD	8330B	ICV STD LOT	LC1549/LC1550
AMOUNT INJ	100ul	PROC. METHOD	BBB2118_103021.M	SOLVENT	204903
INSTRUMENT	HPLC05-BB	CALIB. DATE	10/30/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GBB2118	HEAD PRESSURE	270

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
BB070753	1	ccb	8330	1	op88045,GBB2118,1000,,,10,1,water	/
BB070754	2	ic2118-20	8330	2/500	op88045,GBB2118,1000,,,10,1,water	/
BB070755	3	ic2118-50	8330	5/500	op88045,GBB2118,1000,,,10,1,water	/
BB070756	4	ic2118-100	8330	10/500	op88045,GBB2118,1000,,,10,1,water	/
BB070757	5	ic2118-200	8330	20/500	op88045,GBB2118,1000,,,10,1,water	/
BB070758	6	ic2118-500	8330	50/500	op88045,GBB2118,1000,,,10,1,water	/
BB070759	7	icc2118-1000	8330	100/500	op88045,GBB2118,1000,,,10,1,water	/
BB070760	8	ic2118-2500	8330	250/500	op88045,GBB2118,1000,,,10,1,water	/
BB070761	9	ic2118-5000	8330	1	op88045,GBB2118,1000,,,10,1,water	/
BB070762	10	icv2118-1000	8330	1	op88045,GBB2118,1000,,,10,1,water	Remake
BB070763	91	icv2118-1000	8330	1	op88045,GBB2118,1000,,,10,1,water	Pass

SGS-ORLANDO HPLC-04 BB ANALYSIS LOG

DATE	11/4/2021	METHODS	8330	IC/ICC STD LOT	LC1548
COLUMN TYPE	Extend C18	ACQ. METHOD	8330B	ICV STD LOT	LC1550
AMOUNT INJ	100ul	PROC. METHOD	BBB2118_103021.M	SOLVENT	204903
INSTRUMENT	HPLC05-BB	CALIB. DATE	10/30/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GBB2121	HEAD PRESSURE	270

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
BB070806	1	ccb	8330	1	op88132,GBB2121,1000,,,10,1,water	/
BB070807	2	cc2118-1000	8330	100/500	op88132,GBB2121,1000,,,10,1,water	(DNFLS2)
BB070808	1	ccb	8330	1	op88132,GBB2121,1000,,,10,1,water	/
BB070809	3	opP88132-MB	8330	1	op88132,GBB2121,1000,,,10,1,water	/
BB070810	4	FA90374-1	8330	1	op88132,GBB2121,1020,,,10,1,water	cf-MNX RDX
BB070811	5	FA90375-1	8330	1	op88132,GBB2121,1020,,,10,1,water	/
BB070812	6	op88132-BS	8330	1	op88132,GBB2121,1000,,,10,1,water	Pass
BB070813	7	FA90260-1	8330	1	op88132,GBB2121,1020,,,10,1,water	cf-HMX RDX 135 35 TNT 2a 4a 26
BB070814	8	FA90260-2	8330	1	op88132,GBB2121,1020,,,10,1,water	cf-HMX DNX RDX 135 13 35 TNT 2a 4a
BB070815	9	FA90260-3	8330	1	op88132,GBB2121,1020,,,10,1,water	cf-HMX RDX 135 35 TNT 2a 4a
BB070816	10	FA90260-4	8330	1	op88132,GBB2121,1040,,,10,1,water	cf-HMX RDX 135 13 35 TNT 2a 4a 26
BB070817	11	FA90260-5	8330	1	op88132,GBB2121,1020,,,10,1,water	/
BB070818	12	op88132-MS	8330	1	op88132,GBB2121,520,,,10,1,water	/
BB070819	2	cc2118-1000	8330	100/500	op88132,GBB2121,1000,,,10,1,water	(DNFLS2)
BB070820	1	ccb	8330	1	op88132,GBB2121,1000,,,10,1,water	/
BB070821	13	op88132-MSD	8330	1	op88132,GBB2121,502,,,10,1,water	/
BB070822	14	op88144-MB	8330	1	op88144,GBB2121,1000,,,10,1,water	/
BB070823	15	op88144-BS	8330	1	op88144,GBB2121,1000,,,10,1,water	Pass
BB070824	16	FA90328-1	8330	1	op88144,GBB2121,1040,,,10,1,water	/
BB070825	17	FA90328-2	8330	1	op88144,GBB2121,1040,,,10,1,water	cf- 13 PETN
BB070826	18	FA90328-3	8330	1	op88144,GBB2121,1020,,,10,1,water	cf- 13 PETN
BB070827	19	FA90328-4	8330	1	op88144,GBB2121,1040,,,10,1,water	cf-13
BB070828	20	FA90328-5	8330	1	op88144,GBB2121,1040,,,10,1,water	cf-13
BB070829	21	FA90328-6	8330	1	op88144,GBB2121,1040,,,10,1,water	cf-13
BB070830	22	FA90328-7	8330	1	op88144,GBB2121,1040,,,10,1,water	cf-13
BB070831	2	cc2118-1000	8330	100/500	op88132,GBB2121,1000,,,10,1,water	(DNFLS2)
BB070832	1	ccb	8330	1	op88132,GBB2121,1000,,,10,1,water	/
BB070833	23	FA90328-8	8330	1	op88144,GBB2121,1020,,,10,1,water	cf-13
BB070834	24	FA90328-9	8330	1	op88144,GBB2121,1020,,,10,1,water	cf-13
BB070835	25	FA90328-10	8330	1	op88144,GBB2121,1020,,,10,1,water	cf-13
BB070836	26	FA90378-1	8330	1	op88144,GBB2121,1000,,,10,1,water	cf-135 13 35 2a 4a PETN
BB070837	27	FA90378-2	8330	1	op88144,GBB2121,120,,,10,1,water	cf-13 35
BB070838	28	FA90378-3	8330	1	op88144,GBB2121,1020,,,10,1,water	cf-RDX 135 13 PETN
BB070839	29	FA90350-1	8330	1	op88144,GBB2121,1020,,,10,1,water	cf-RDX 13
BB070840	30	FA90295-3	8330	1	op88144,GBB2121,1040,,,10,1,water	10x-135 PETN cf-TNX RDX 13 35 TNT 2a 4a
BB070841	31	FA90295-4	8330	1	op88144,GBB2121,1040,,,10,1,water	cf-RDX 135 4a PETN
BB070842	32	FA90295-5	8330	1	op88144,GBB2121,1020,,,10,1,water	cf-RDX 4a
BB070843	33	FA90295-7	8330	1	op88144,GBB2121,1040,,,10,1,water	10x-PETN cf-RDX 135 13 35 2a 4a P
BB070844	2	cc2118-1000	8330	100/500	op88132,GBB2121,1000,,,10,1,water	(DNFLS2)
BB070845	1	ccb	8330	1	op88132,GBB2121,1000,,,10,1,water	/
BB070846	34	op88144-MS	8330	1	op88144,GBB2121,520,,,10,1,water	/
BB070847	35	op88144-MSD	8330	1	op88144,GBB2121,520,,,10,1,water	/
BB070848	91	ecc2118-1000	8330	100/500	op88132,GBB2121,1000,,,10,1,water	Pass

DATE	10/31/2021	**METHODS**	8330	**IC/ICC STD LOT**	**LC1548**
COLUMN TYPE	Bonus-RP	**ACQ. METHOD**	8330RPB3	**ICV STD LOT**	**LC1549/LC1550**
AMOUNT INJ	100uL	**PROC. METHOD**	GGG3059_103121.M	**SOLVENT**	**204903**
INSTRUMENT	HPLC3-GG	**CALIB. DATE**	10/31/2021	**SOLVENT**	**204513**
ANALYST	WFH	**RUN BATCH**	GGG3059	**HEAD PRESSURE**	**114**

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG622643	1	ccb	8330	1	op88045,GGG3059,1000,,,10,1,water	/
GG622644	2	ic3059-20	8330	2/500	op88045,GGG3059,1000,,,10,1,water	/
GG622645	3	ic3059-50	8330	5/500	op88045,GGG3059,1000,,,10,1,water	/
GG622646	4	ic3059-100	8330	10/500	op88045,GGG3059,1000,,,10,1,water	/
GG622647	5	ic3059-200	8330	20/500	op88045,GGG3059,1000,,,10,1,water	/
GG622648	6	ic3059-500	8330	50/500	op88045,GGG3059,1000,,,10,1,water	/
GG622649	7	icc3059-1000	8330	100/500	op88045,GGG3059,1000,,,10,1,water	/
GG622650	8	ic3059-2500	8330	250/500	op88045,GGG3059,1000,,,10,1,water	/
GG622651	9	ic3059-5000	8330	1	op88045,GGG3059,1000,,,10,1,water	Re Make
GG622652	10	icv3059-1000	8330	1	op88045,GGG3059,1000,,,10,1,water	Pass

DATE	11/4/2021	**METHODS**	8330	**IC/ICC STD LOT**	**LC1548**
COLUMN TYPE	Bonus-RP	**ACQ. METHOD**	8330RPB3	**ICV STD LOT**	**LC1550**
AMOUNT INJ	100uL	**PROC. METHOD**	GGG3059_103121.M	**SOLVENT**	**204903**
INSTRUMENT	HPLC3-GG	**CALIB. DATE**	10/31/2021	**SOLVENT**	**204513**
ANALYST	JB	**RUN BATCH**	GGG3062	**HEAD PRESSURE**	**114**

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG622713	1	ccb	8330	1	op88132,GGG3062,1000,,,10,1,water	/
GG622714	2	cc3059-1000	8330	1	op88132,GGG3062,1000,,,10,1,water	Pass
GG622715	1	ccb	8330	1	op88132,GGG3062,1000,,,10,1,water	/
GG622716	3	op88132-MB	8330	1	op88132,GGG3062,1000,,,10,1,water	/
GG622717	4	FA90374-1cf	8330	1	op88132,GGG3062,1020,,,10,1,water	/
GG622718	5	FA90375-1cf	8330	1	op88132,GGG3062,1020,,,10,1,water	DNR
GG622719	6	FA90212-1cf	8330	1	op88045,GGG3062,1040,,,10,1,water	DNR
GG622720	7	LC1520 Assay	8330	40/1000	op88132,GGG3062,1000,,,10,1,water	DNR
GG622721	2	ecc3059-1000	8330	1	op88132,GGG3062,1000,,,10,1,water	Pass

DATE	11/5/2021	METHODS	8330	IC/ICC STD LOT	LC1548
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1550
AMOUNT INJ	100uL	PROC. METHOD	GGG3059_103121.M	SOLVENT	204903
INSTRUMENT	HPLC3-GG	CALIB. DATE	10/31/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GGG3063	HEAD PRESSURE	114

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG622722	1	ccb	8330	1	op88132,GGG3063,1000,,,10,1,water	/
GG622723	2	cc3059-1000	8330	1	op88132,GGG3063,1000,,,10,1,water	(26 FLS2)
GG622724	1	ccb	8330	1	op88132,GGG3063,1000,,,10,1,water	/
GG622725	3	FA90260-1cf	8330	1	op88132,GGG3063,1020,,,10,1,water	x-26
GG622726	4	FA90260-2cf	8330	1	op88132,GGG3063,1020,,,10,1,water	x-13 DNX
GG622727	5	FA90260-3cf	8330	1	op88132,GGG3063,1020,,,10,1,water	/
GG622728	6	FA90260-4cf	8330	1	op88132,GGG3063,1040,,,10,1,water	rdx occluded x-26
GG622729	7	op88144-MB	8330	1	op88144,GGG3063,1000,,,10,1,water	/
GG622730	8	FA90328-1cf	8330	1	op88144,GGG3063,1040,,,10,1,water	DNR
GG622731	9	FA90328-2cf	8330	1	op88144,GGG3063,1040,,,10,1,water	No Confirm
GG622732	10	FA90328-3cf	8330	1	op88144,GGG3063,1020,,,10,1,water	No Confirm
GG622733	11	FA90328-4cf	8330	1	op88144,GGG3063,1040,,,10,1,water	No Confirm
GG622734	12	FA90328-10cf	8330	1	op88144,GGG3063,1020,,,10,1,water	No Confirm
GG622735	2	cc3059-1000	8330	1	op88132,GGG3063,1000,,,10,1,water	(26 24 O FLS2)
GG622736	1	ccb	8330	1	op88132,GGG3063,1000,,,10,1,water	/
GG622737	13	FA90350-1cf	8330	1	op88144,GGG3063,1020,,,10,1,water	No Confirm
GG622738	14	FA90378-1cf	8330	1	op88144,GGG3063,1000,,,10,1,water	x-13
GG622739	15	FA90378-2cf	8330	1	op88144,GGG3063,1020,,,10,1,water	No Confirm
GG622740	16	FA90378-3cf	8330	1	op88144,GGG3063,1020,,,10,1,water	No Confirm
GG622741	17	FA90295-3cf	8330	1	op88144,GGG3063,1040,,,10,1,water	x-13
GG622742	18	FA90295-3cf,10	8330	50/500	op88144,GGG3063,1040,,,10,10,water	/
GG622743	19	FA90295-4cf	8330	1	op88144,GGG3063,1040,,,10,1,water	/
GG622744	20	FA90295-5cf	8330	1	op88144,GGG3063,1020,,,10,1,water	/
GG622745	21	FA90295-7cf	8330	1	op88144,GGG3063,1040,,,10,1,water	/
GG622746	22	FA90295-7cf,10	8330	50/500	op88144,GGG3063,1040,,,10,10,water	/
GG622747	2	ecc3059-1000	8330	1	op88132,GGG3063,1000,,,10,1,water	(DNX FLS2)

DATE	11/1/2021	**METHODS**	8330	**IC/ICC STD LOT**	**LC1549**
COLUMN TYPE	Extend C18	**ACQ. METHOD**	8330BPL	**ICV STD LOT**	**LC1550**
AMOUNT INJ	100uL	**PROC. METHOD**	GPP2490_110421.M	**SOLVENT**	**205227**
INSTRUMENT	HPLC4-PP	**CALIB. DATE**	11/4/2021	**SOLVENT**	**203405**
ANALYST	JB	**RUN BATCH**	GPP2490	**HEAD PRESSURE**	**261**

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP391629	1	ccb	8330	1	op88132,GPP2490,1000,,,10,1,water	/
PP391630	91	ic2490-20	8330	2/500	op88132,GPP2490,1000,,,10,1,water	/
PP391631	92	ic2490-50	8330	5/500	op88132,GPP2490,1000,,,10,1,water	/
PP391632	93	ic2490-100	8330	10/500	op88132,GPP2490,1000,,,10,1,water	/
PP391633	94	ic2490-200	8330	20/500	op88132,GPP2490,1000,,,10,1,water	/
PP391634	95	ic2490-500	8330	50/500	op88132,GPP2490,1000,,,10,1,water	/
PP391635	96	icc2490-1000	8330	100/500	op88132,GPP2490,1000,,,10,1,water	/
PP391636	97	ic2490-2500	8330	250/500	op88132,GPP2490,1000,,,10,1,water	/
PP391637	98	ic2490-5000	8330	1	op88132,GPP2490,1000,,,10,1,water	/
PP391638	99	icv2490-1000	8330	1	op88132,GPP2490,1000,,,10,1,water	(DNX FLS2)

DATE	11/11/2021	METHODS	8330	IC/ICC STD LOT	LC1552
COLUMN TYPE	Extend C18	ACQ. METHOD	8330BPL	ICV STD LOT	LC1550
AMOUNT INJ	100uL	PROC. METHOD	GPP2490_110421.M	SOLVENT	205227
INSTRUMENT	HPLC4-PP	CALIB. DATE	11/4/2021	SOLVENT	203405
ANALYST	JB	RUN BATCH	GPP2493	HEAD PRESSURE	257

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP391671	1	ccb	8330	1	op88250,GPP2493,1000,,,10,1,water	/
PP391672	2	cc2490-1000	8330	100/500	op88250,GPP2493,1000,,,10,1,water	Pass
PP391673	1	ccb	8330	1	op88250,GPP2493,1000,,,10,1,water	/
PP391674	3	op88250-MB	8330	1	op88250,GPP2493,1000,,,10,1,water	/
PP391675	4	op88250-BS	8330	1	op88250,GPP2493,1000,,,10,1,water	/
PP391676	5	FA90260-3cf	8330	1	op88250,GPP2493,1040,,,10,1,water	/
PP391677	6	FA90295-4	8330	1	op88250,GPP2493,1020,,,10,1,water	/
PP391678	7	FA90295-5	8330	1	op88250,GPP2493,1040,,,10,1,water	/
PP391679	8	FA90295-7	8330	1	op88250,GPP2493,1020,,,10,1,water	/
PP391680	9	FA90350-1	8330	1	op88250,GPP2493,1020,,,10,1,water	/
PP391681	10	FA90378-1	8330	1	op88250,GPP2493,1040,,,10,1,water	cf-135 35 2a 4a PETN
PP391682	11	FA90552-1	8330	1	op88250,GPP2493,1020,,,10,1,water	cf-TNX HMX DNX MNX RDX 35 2a 4a
PP391683	12	FA90552-2	8330	1	op88250,GPP2493,1020,,,10,1,water	cf-TNX HMX DNX MNX RDX 135 13 35 TNT 2a 4a 24
PP391684	2	cc2490-1000	8330	100/500	op88250,GPP2493,1000,,,10,1,water	Pass
PP391685	1	ccb	8330	1	op88250,GPP2493,1000,,,10,1,water	/
PP391686	13	FA90552-3	8330	1	op88250,GPP2493,1020,,,10,1,water	cf-HMX DNX MNX RDX 13 35 TNT 2a 4a 24
PP391687	14	FA90552-4	8330	1	op88250,GPP2493,1040,,,10,1,water	cf-HMX DNX MNX RDX
PP391688	15	FA90552-5	8330	1	op88250,GPP2493,1040,,,10,1,water	cf-HMX DNX MNX RDX
PP391689	16	FA90552-6	8330	1	op88250,GPP2493,1020,,,10,1,water	10x-RDX cf-TNX HMX DNX MNX 135 35 TNT 2a 4a
PP391690	17	FA90552-7	8330	1	op88250,GPP2493,1040,,,10,1,water	Blank- REDO
PP391691	18	FA90552-8	8330	1	op88250,GPP2493,1020,,,10,1,water	Blank- REDO
PP391692	19	FA90552-9	8330	1	op88250,GPP2493,1020,,,10,1,water	Blank- REDO
PP391693	20	FA90552-10	8330	1	op88250,GPP2493,1020,,,10,1,water	Blank- REDO
PP391694	21	op88250-MS	8330	1	op88250,GPP2493,520,,,10,1,water	/
PP391695	22	op88250-MSD	8330	1	op88250,GPP2493,520,,,10,1,water	/
PP391696	2	cc2490-1000	8330	100/500	op88250,GPP2493,1000,,,10,1,water	Pass
PP391697	1	ccb	8330	1	op88250,GPP2493,1000,,,10,1,water	/
PP391698	23	op88280-MB	8330	1	op88280,GPP2493,1000,,,10,1,water	
PP391699	24	op88280-BS	8330	1	op88280,GPP2493,1000,,,10,1,water	
PP391700	25	FA90631-1	8330	1	op88280,GPP2493,1000,,,10,1,water	
PP391701	26	FA90591-1	8330	1	op88280,GPP2493,1040,,,10,1,water	
PP391702	27	FA90594-1	8330	1	op88280,GPP2493,1020,,,10,1,water	

PP391703	28	FA90594-2	8330	1	op88280,GPP2493,1020,,,10,1,water	
PP391704	29	FA90594-3	8330	1	op88280,GPP2493,1020,,,10,1,water	
PP391705	30	FA90594-4	8330	1	op88280,GPP2493,1020,,,10,1,water	
PP391706	31	op88280-MS	8330	1	op88280,GPP2493,500,,,10,1,water	
PP391707	32	op88280-MSD	8330	1	op88280,GPP2493,500,,,10,1,water	
PP391708	2	ecc2490-1000	8330	100/500	op88250,GPP2493,1000,,,10,1,water	Pass

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: 11-02-21 0800
Started {mm/dd/yy 24:00}

Date/Time: 11-03-21 0600
Finished {mm/dd/yy 24:00}

Prep Method: 3535A or 537 or 537MOD (circle)

Analytical Method: 8330B

Batch#: OP88132 Ext. By: DC Conc. By: DC Vialed By: DC

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP 8813 MB	X	1000	6	NA	250µl		10.0ml	A1-1	
OP 88132 BS	X	L				250/200			
FA90260-1	7	1020							MS/MSD
-2	3	1020							
-3	3	1020							
-4	2	1040							
-5	2	1020						A1-2	
FA90374-1	2	1020							
FA90375-1	1	1020							
FA90260-1 MS	9	520	6	NA	250.0µl	250/200	10.0ml	L	
L MSD	9	520	1	1	L	1	1	L	
DUP									

Comments:

Surr.1 ID: LC1545A Conc: 20ppm Exp. Date: 4/27/22 Inj. By: DC Ver. By DC

Spk.1 ID: LC1546 Conc: 20 ppm Exp. Date: 4/28/22 Inj. By: DC Ver. By DC

Spk.2 ID: LC1520 Conc: 25ppm Exp. Date: 3/2/22 Inj. By: DC Ver. By DC

Spk.3 ID: _____ Conc: _____ Exp. Date: _____ Inj. By: _____ Ver. By _____

TurboVap Temp (Therm ID): — Observed Temp °C: — Corr. Temp °C: _____

N-Evap Temp (Therm ID): — Observed Temp °C: _____ Corr. Temp °C: _____

Methanol Lot # —
Acetonitrile Lot # 213553
Water Lot# DI H2O
Solvent# —

SPE Lot # S214-0121
Syringe filter Lot # —
Pre-filter Lot# —
Carbon Lot# —

pH Paper # 242220
Reagent # —
Reagent # —
Other —

Relinquished By: _____ Date: 11/3/21

Accepted By: _____ Date: 11/3/21

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: 11/09/21 0600
Started {mm/dd/yy 24:00}

Date/Time: 11/10/21 1000
Finished {mm/dd/yy 24:00}

Prep Method: 3535A or 537 or 537MOD (circle)

Analytical Method: 8330

Batch#: OP88250 Ext. By: DC Conc. By: DC Vialed By: _____

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP MB		1000	6	NA	250µl	250µl/200	10.0ml	AT-2	
OP BS		"							
FA90260-3	2	1040							
FA90295-4	1	1020							
-5	2	1040							
-7	1	1020							
FA90350-1	2	1020							
FA90378-1	9	1040							
FA90552-1	1	1020							
-2	2	1020							
-3	2	1020							
-4	1	1040							
-5	1	1040						AT-1	
-6	2	1020							
-7	1	1040							
-8	1	1020							
-9	2	1020							
-10	2	1020							
FA90552-1 MS	2	520	6	NA	250µl	250µl/200	10.0	AT-2	
" MSD	2	520	6	"	"	"	"	"	
DUP									

Comments:

Surr.1 ID: LC1545A Conc: 20ppm Exp. Date: 4/27/22 Inj. By: DC Ver. By DC

Spk.1 ID: LC1546 Conc: 20ppm Exp. Date: 4/28/22 Inj. By: DC Ver. By DC

Spk.2 ID: LC1551 Conc: 25ppm Exp. Date: 5/4/22 Inj. By: DC Ver. By DC

Spk.3 ID: _____ Conc: _____ Exp. Date: _____ Inj. By: _____ Ver. By _____

TurboVap Temp (Therm ID): — N-Evap Temp (Therm ID): —

Observed Temp °C: _____ Corr. Temp °C: — Observed Temp °C: _____ Corr. Temp °C: _____

Methanol Lot # —

Acetonitrile Lot # 211116

Water Lot# _____

Solvent# _____

SPE Lot # 214-0120

Syringe filter Lot # _____

Pre-filter Lot# _____

Carbon Lot# _____

pH Paper # 222420

Reagent # _____

Reagent # _____

Other _____

Relinquished By: _____ Date: 11/10/21

Accepted By: _____ Date: 11/10/21

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc

Radford AAP; VA

SGS Job Number: FA95241

Sampling Date: 04/25/22

Report to:

Weston Solutions, Inc
2 Eaton St Suite 603
Hampton, VA 23669
pacea@westonsolutions.com

ATTN: Tony Pace

Total number of pages in report: **396**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

SGS is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.
Review standard terms at: http://www.sgs.com/en/terms-and-conditions

Please share your ideas about how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Summary of Hits **5**
Section 4: Sample Results **6**
4.1: FA95241-1: 54MW13 7
4.2: FA95241-2: 54MW10 9
Section 5: Misc. Forms **11**
5.1: Chain of Custody 12
5.2: QC Evaluation: DOD QSM5.x Limits 14
Section 6: MS Semi-volatiles - QC Data Summaries **16**
6.1: Method Blank Summary 17
6.2: Blank Spike Summary 19
6.3: Matrix Spike/Matrix Spike Duplicate Summary 20
6.4: Internal Standard Area Summaries 21
6.5: Initial and Continuing Calibration Summaries 22
6.6: Run Sequence Reports 26
Section 7: MS Semi-volatiles - Raw Data **28**
7.1: Samples 29
7.2: Method Blanks 35
7.3: Blank Spikes 39
7.4: Matrix Spike/Matrix Spike Duplicates 41
7.5: Initial and Continuing Calibrations 46
7.6: Instrument Run Logs 71
7.7: Prep Logs 73
Section 8: GC/LC Semi-volatiles - QC Data Summaries **75**
8.1: Method Blank Summary 76
8.2: Blank Spike Summary 78
8.3: Matrix Spike/Matrix Spike Duplicate Summary 79
8.4: GC Identification Summaries (Explosives) 80
8.5: Surrogate Recovery Summaries 82
8.6: GC Surrogate Retention Time Summaries 83
8.7: Initial and Continuing Calibration Summaries 86
8.8: Run Sequence Reports 106
Section 9: GC/LC Semi-volatiles - Raw Data **110**
9.1: Samples 111
9.2: Method Blanks 153
9.3: Blank Spikes 157
9.4: Matrix Spike/Matrix Spike Duplicates 162
9.5: Initial and Continuing Calibrations 172
9.6: Instrument Run Logs 392
9.7: Prep Logs 396

SGS North America Inc.

Sample Summary

Weston Solutions, Inc

Radford AAP; VA

Job No: FA95241

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA95241-1	04/25/22	12:10	TUPT	04/28/22	AQ	Ground Water	54MW13
FA95241-1D	04/25/22	12:10	TUPT	04/28/22	AQ	Water Dup/MSD	54MW13
FA95241-1S	04/25/22	12:10	TUPT	04/28/22	AQ	Water Matrix Spike	54MW13
FA95241-2	04/25/22	14:55	TUPT	04/28/22	AQ	Ground Water	54MW10

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Weston Solutions, Inc **Job No:** FA95241

Site: Radford AAP; VA **Report Date:** 5/20/2022 5:30:45 PM

On 04/28/2022, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA95241 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Semi-volatiles By Method SW846 6850

Matrix: AQ **Batch ID:** OP91294

Sample(s) FA95241-1MS, FA95241-1MSD were used as the QC samples indicated.

GC/LC Semi-volatiles By Method SW846 8330B

Matrix: AQ **Batch ID:** OP91013

Sample(s) FA95241-1MS, FA95241-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 1,3,5-Trinitrobenzene, 2,4,6-Trinitrotoluene, RDX, Tetryl are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 1,3,5-Trinitrobenzene are outside control limits for sample OP91013-MSD. Probable cause is due to sample non-homogeneity.

FA95241-1: All hits confirmed by reanalysis on a dissimilar column.

FA95241-1: Confirmation run.

FA95241-2: All hits confirmed by reanalysis on a dissimilar column.

FA95241-2: Confirmation run.

FA95241-1 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA95241-2 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA95241
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 04/25/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA95241-1	**54MW13**					
Perchlorate		0.26	0.20	0.10	ug/l	SW846 6850
HMX [a]		2.5	0.20	0.10	ug/l	SW846 8330B
RDX [a]		2.0	0.20	0.10	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.41	0.20	0.10	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		1.2	0.20	0.10	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [b]		0.83	0.20	0.10	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		10.6	0.20	0.10	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		5.8	0.20	0.10	ug/l	SW846 8330B
FA95241-2	**54MW10**					
Perchlorate		0.12 J	0.20	0.10	ug/l	SW846 6850
HMX [a]		1.5	0.20	0.10	ug/l	SW846 8330B
RDX [a]		1.8	0.20	0.10	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.26	0.20	0.10	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		1.1	0.20	0.10	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [b]		0.78	0.20	0.10	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		1.9	0.20	0.10	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		3.0	0.20	0.10	ug/l	SW846 8330B

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) All hits confirmed by reanalysis on a dissimilar column. Primary and confirmation results differ by more than 40%.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW13		
Lab Sample ID:	FA95241-1	**Date Sampled:**	04/25/22
Matrix:	AQ - Ground Water	**Date Received:**	04/28/22
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q90935.D	1	05/19/22 15:22	NG	05/19/22 10:30	OP91294	SQ1967
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.26	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA95241-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/25/22
Date Received: 04/28/22
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB072812.D	1	05/03/22 23:17	FS	05/02/22 08:30	OP91013	GBB2196
Run #2 [b]	GG624055.D	1	05/04/22 18:03	FS	05/02/22 08:30	OP91013	GGG3135

	Initial Volume	Final Volume
Run #1	980 ml	10.0 ml
Run #2	980 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	2.5	0.20	0.10	0.082	ug/l	
121-82-4	RDX	2.0	0.20	0.10	0.082	ug/l	
	DNX	0.10 U	0.20	0.10	0.082	ug/l	
	MNX	0.10 U	0.20	0.10	0.082	ug/l	
	TNX	0.10 U	0.20	0.10	0.082	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.41	0.20	0.10	0.082	ug/l	
99-65-0	1,3-Dinitrobenzene	0.10 U	0.20	0.10	0.082	ug/l	
606-20-2	2,6-Dinitrotoluene	0.10 U	0.20	0.10	0.082	ug/l	
121-14-2	2,4-Dinitrotoluene	0.10 U	0.20	0.10	0.082	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.2	0.20	0.10	0.082	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	0.83	0.20	0.10	0.082	ug/l	
98-95-3	Nitrobenzene	0.10 U	0.20	0.10	0.099	ug/l	
88-72-2	o-Nitrotoluene	0.10 U	0.20	0.10	0.082	ug/l	
99-08-1	m-Nitrotoluene	0.10 U	0.20	0.10	0.082	ug/l	
99-99-0	p-Nitrotoluene	0.10 U	0.20	0.10	0.082	ug/l	
479-45-8	Tetryl	0.10 U	0.20	0.10	0.082	ug/l	
99-35-4	1,3,5-Trinitrobenzene	10.6	0.20	0.10	0.10	ug/l	
118-96-7	2,4,6-Trinitrotoluene	5.8	0.20	0.10	0.082	ug/l	
55-63-0	Nitroglycerine	1.0 U	2.0	1.0	0.51	ug/l	
78-11-5	PETN	1.0 U	2.0	1.0	0.51	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	101%	112%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW10
Lab Sample ID: FA95241-2
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 04/25/22
Date Received: 04/28/22
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q90938.D	1	05/19/22 15:48	NG	05/19/22 10:30	OP91294	SQ1967
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.12	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW10
Lab Sample ID: FA95241-2
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/25/22
Date Received: 04/28/22
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB072815.D	1	05/04/22 00:52	FS	05/02/22 08:30	OP91013	GBB2196
Run #2 [b]	GG624056.D	1	05/04/22 18:34	FS	05/02/22 08:30	OP91013	GGG3135

	Initial Volume	Final Volume
Run #1	990 ml	10.0 ml
Run #2	990 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	1.5	0.20	0.10	0.081	ug/l	
121-82-4	RDX	1.8	0.20	0.10	0.081	ug/l	
	DNX	0.10 U	0.20	0.10	0.081	ug/l	
	MNX	0.10 U	0.20	0.10	0.081	ug/l	
	TNX	0.10 U	0.20	0.10	0.081	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.26	0.20	0.10	0.081	ug/l	
99-65-0	1,3-Dinitrobenzene	0.10 U	0.20	0.10	0.081	ug/l	
606-20-2	2,6-Dinitrotoluene	0.10 U	0.20	0.10	0.081	ug/l	
121-14-2	2,4-Dinitrotoluene	0.10 U	0.20	0.10	0.081	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.1	0.20	0.10	0.081	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	0.78	0.20	0.10	0.081	ug/l	
98-95-3	Nitrobenzene	0.10 U	0.20	0.10	0.098	ug/l	
88-72-2	o-Nitrotoluene	0.10 U	0.20	0.10	0.081	ug/l	
99-08-1	m-Nitrotoluene	0.10 U	0.20	0.10	0.081	ug/l	
99-99-0	p-Nitrotoluene	0.10 U	0.20	0.10	0.081	ug/l	
479-45-8	Tetryl	0.10 U	0.20	0.10	0.081	ug/l	
99-35-4	1,3,5-Trinitrobenzene	1.9	0.20	0.10	0.10	ug/l	
118-96-7	2,4,6-Trinitrotoluene	3.0	0.20	0.10	0.081	ug/l	
55-63-0	Nitroglycerine	1.0 U	2.0	1.0	0.51	ug/l	
78-11-5	PETN	1.0 U	2.0	1.0	0.51	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	93%	99%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FA95241

SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Weston Solutions
Address: 2 Eaton St. Ste. 603
City: Hampton State: VA Zip: 23669
Project Contact: Tony Pace Email: pacea@WestonSolutions.com
Phone #: (757) 819-5310
Sampler(s) Name(s) (Printed)
Sampler 1: Sampler 2:

Project Information

Project Name: Radford AAP SWMU 54
Street
City State
Project #
Fax #
Client Purchase Order #

Analytical Information

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE (2022)	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNA	DI WATER	MEOH	LC6850 PERCHLT	LC8330B, XLC3NX									LAB USE ONLY
1	54MW13	4/25	1210	TV/PT	GW	9		X								3	6		MS/MSD							
2	54MW10	4/25	1455	TV/PT	GW	3		X								1	2									
	54MW12	4/26	1459	TV/PT	GW	3		X								1	2									
	54TW12	4/26	1459	TV/PT	GW	3		X								1	2									
	54MW11	4/26	1644	TV/PT	GW	3		X								1	2									

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other 14 Day 14
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- ☐ COMMERCIAL "A" (RESULTS ONLY)
- ☐ COMMERCIAL "B" (RESULTS PLUS QC)
- ☐ REDT1 (EPA LEVEL 3)
- ☑ FULLT1 (EPA LEVEL 4)
- ☐ EDD'S

Comments / Remarks

INITIAL ASSESSMENT
LABEL VERIFICATION
3.8° IR#4

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished By Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	Weston	4/27/22 1800	2 FedEx	3		4 4/28/22 930
5			6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

5.1 5

FA95241: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA95241 **Client:** WESTON SOLUTIONS **Project:** RADFORD AAP SWMU 54

Date / Time Received: 4/28/2022 9:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:**

Therm ID: IR4; **Therm CF:** 0.6; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (4.4);

Cooler Information	Y	N
1. Custody Seals Present	☑	☐
2. Custody Seals Intact	☑	☐
3. Temp criteria achieved	☑	☐
4. Cooler temp verification	IR Gun	
5. Cooler media	Ice (Bag)	

Trip Blank Information	Y	N	N/A
1. Trip Blank present / cooler	☐	☐	☑
2. Trip Blank listed on COC	☐	☐	☑

	W	S	N/A
3. Type Of TB Received	☐	☐	☑

Sample Information	Y	N	N/A
1. Sample labels present on bottles	☑	☐	
2. Samples preserved properly	☑	☐	
3. Sufficient volume/containers recvd for analysis:	☑	☐	
4. Condition of sample	Intact		
5. Sample recvd within HT	☑	☐	
6. Dates/Times/IDs on COC match Sample Label	☑	☐	
7. VOCs have headspace	☐	☐	☑
8. Bottles received for unspecified tests	☐	☑	
9. Compositing instructions clear	☐	☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐	☐	☑
11. % Solids Jar received?	☐	☐	☑
12. Residual Chlorine Present?	☐	☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments WE DID NOT RECEIVE ANY BOTTLES FOR SAMPLE "54MW12", "54TW12", OR "54MW1". WE ONLY RECEIVED ONE 1000 mL AMBER FOR (8330) ANALYSIS FOR SAMPLE #2, ID: "54MW10" INSTEAD OF TWO.

SM001
Rev. Date 05/24/17

Technician: SAMUELM Date: 4/28/2022 9:30:00 AM Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FA95241
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 04/25/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP91294	SW846 6850						
OP91294-BS	14797-73-0	Perchlorate	BSP	REC	80	%	84-119
OP91294-MS1	14797-73-0	Perchlorate	MS	REC	85	%	84-119
OP91294-MSD1	14797-73-0	Perchlorate	MSD	REC	85	%	84-119
OP91294-MSD1	14797-73-0	Perchlorate	MSD	RPD	0	%	15
OP91013	SW846 8330B						
OP91013-BS	2691-41-0	HMX	BSP	REC	100	%	65-135
OP91013-BS	121-82-4	RDX	BSP	REC	94	%	68-130
OP91013-BS		DNX	BSP	REC	86	%	66-119
OP91013-BS		MNX	BSP	REC	90	%	57-132
OP91013-BS	618-87-1	3,5-Dinitroaniline	BSP	REC	98	%	71-117
OP91013-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	98	%	78-120
OP91013-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	96	%	77-127
OP91013-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	96	%	78-120
OP91013-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	98	%	79-120
OP91013-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	98	%	76-125
OP91013-BS	98-95-3	Nitrobenzene	BSP	REC	84	%	65-134
OP91013-BS	88-72-2	o-Nitrotoluene	BSP	REC	84	%	70-127
OP91013-BS	99-08-1	m-Nitrotoluene	BSP	REC	84	%	73-125
OP91013-BS	99-99-0	p-Nitrotoluene	BSP	REC	86	%	71-127
OP91013-BS	479-45-8	Tetryl	BSP	REC	66	%	64-128
OP91013-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	98	%	73-125
OP91013-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	78	%	71-123
OP91013-BS	55-63-0	Nitroglycerine	BSP	REC	98	%	74-127
OP91013-BS	78-11-5	PETN	BSP	REC	104	%	73-127
OP91013-MS	2691-41-0	HMX	MS	REC	105	%	65-135
OP91013-MS	121-82-4	RDX	MS	REC	74	%	68-130
OP91013-MS		DNX	MS	REC	95	%	66-119
OP91013-MS		MNX	MS	REC	83	%	57-132
OP91013-MS	618-87-1	3,5-Dinitroaniline	MS	REC	83	%	71-117
OP91013-MS	99-65-0	1,3-Dinitrobenzene	MS	REC	85	%	78-120
OP91013-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	92	%	77-127
OP91013-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	84	%	78-120
OP91013-MS	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	84	%	79-120
OP91013-MS	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	84	%	76-125
OP91013-MS	98-95-3	Nitrobenzene	MS	REC	83	%	65-134
OP91013-MS	88-72-2	o-Nitrotoluene	MS	REC	85	%	70-127
OP91013-MS	99-08-1	m-Nitrotoluene	MS	REC	83	%	73-125
OP91013-MS	99-99-0	p-Nitrotoluene	MS	REC	84	%	71-127
OP91013-MS	479-45-8	Tetryl	MS	REC	59	%	64-128
OP91013-MS	99-35-4	1,3,5-Trinitrobenzene	MS	REC	77	%	73-125

* Sample used for QC is not from job FA95241

QC Evaluation: DOD QSM5.x Limits

Job Number: FA95241
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 04/25/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP91013-MS	118-96-7	2,4,6-Trinitrotoluene	MS	REC	60	%	71-123
OP91013-MS	55-63-0	Nitroglycerine	MS	REC	87	%	74-127
OP91013-MS	78-11-5	PETN	MS	REC	90	%	73-127
OP91013-MSD	2691-41-0	HMX	MSD	REC	116	%	65-135
OP91013-MSD	2691-41-0	HMX	MSD	RPD	9	%	20
OP91013-MSD	121-82-4	RDX	MSD	REC	91	%	68-130
OP91013-MSD	121-82-4	RDX	MSD	RPD	17	%	20
OP91013-MSD		DNX	MSD	REC	109	%	66-119
OP91013-MSD		DNX	MSD	RPD	14	%	20
OP91013-MSD		MNX	MSD	REC	97	%	57-132
OP91013-MSD		MNX	MSD	RPD	16	%	20
OP91013-MSD	618-87-1	3,5-Dinitroaniline	MSD	REC	99	%	71-117
OP91013-MSD	618-87-1	3,5-Dinitroaniline	MSD	RPD	16	%	20
OP91013-MSD	99-65-0	1,3-Dinitrobenzene	MSD	REC	100	%	78-120
OP91013-MSD	99-65-0	1,3-Dinitrobenzene	MSD	RPD	16	%	20
OP91013-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	107	%	77-127
OP91013-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	14	%	20
OP91013-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	97	%	78-120
OP91013-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	15	%	20
OP91013-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	99	%	79-120
OP91013-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	14	%	20
OP91013-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	100	%	76-125
OP91013-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	15	%	20
OP91013-MSD	98-95-3	Nitrobenzene	MSD	REC	98	%	65-134
OP91013-MSD	98-95-3	Nitrobenzene	MSD	RPD	17	%	20
OP91013-MSD	88-72-2	o-Nitrotoluene	MSD	REC	98	%	70-127
OP91013-MSD	88-72-2	o-Nitrotoluene	MSD	RPD	14	%	20
OP91013-MSD	99-08-1	m-Nitrotoluene	MSD	REC	97	%	73-125
OP91013-MSD	99-08-1	m-Nitrotoluene	MSD	RPD	16	%	20
OP91013-MSD	99-99-0	p-Nitrotoluene	MSD	REC	97	%	71-127
OP91013-MSD	99-99-0	p-Nitrotoluene	MSD	RPD	15	%	20
OP91013-MSD	479-45-8	Tetryl	MSD	REC	66	%	64-128
OP91013-MSD	479-45-8	Tetryl	MSD	RPD	12	%	20
OP91013-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	114	%	73-125
OP91013-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	19	%	20
OP91013-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	79	%	71-123
OP91013-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	15	%	20
OP91013-MSD	55-63-0	Nitroglycerine	MSD	REC	100	%	74-127
OP91013-MSD	55-63-0	Nitroglycerine	MSD	RPD	13	%	20
OP91013-MSD	78-11-5	PETN	MSD	REC	105	%	73-127
OP91013-MSD	78-11-5	PETN	MSD	RPD	15	%	20

* Sample used for QC is not from job FA95241

MS Semi-volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Instrument Blank

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
SQ1967-IBLK	Q90976.D	1	05/19/22	NG	n/a	n/a	SQ1967

The QC reported here applies to the following samples: **Method:** SW846 6850

FA95241-1, FA95241-2

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Method Blank Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP91294-MB	Q90934.D	1	05/19/22	NG	05/19/22	OP91294	SQ1967

The QC reported here applies to the following samples: **Method:** SW846 6850

FA95241-1, FA95241-2

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Blank Spike Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP91294-BS	Q90933.D	1	05/19/22	NG	05/19/22	OP91294	SQ1967

The QC reported here applies to the following samples: **Method:** SW846 6850

FA95241-1, FA95241-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
14797-73-0	Perchlorate	0.2	0.16	80	80-120

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP91294-MS1	Q90936.D	1	05/19/22	NG	05/19/22	OP91294	SQ1967
OP91294-MSD1	Q90937.D	1	05/19/22	NG	05/19/22	OP91294	SQ1967
FA95241-1	Q90935.D	1	05/19/22	NG	05/19/22	OP91294	SQ1967

The QC reported here applies to the following samples: **Method:** SW846 6850

FA95241-1, FA95241-2

CAS No.	Compound	FA95241-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
14797-73-0	Perchlorate	0.26		0.2	0.43	85	0.2	0.43	85	0	80-120/15

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1967-ICC1967	**Injection Date:**	05/19/22
Lab File ID:	Q90926.D	**Injection Time:**	13:39
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	573632	5.22
Check Std [b]	635598	5.22
Upper Limit [c]	860448	7.22
Lower Limit [d]	286816	3.22

Lab Sample ID	IS 1 AREA	RT
OP91294-BS	696628	5.21
OP91294-MB	695011	5.21
FA95241-1	651797	5.18
OP91294-MS1	421280	4.97
OP91294-MSD1	374076	4.95
FA95241-2	377062	4.89
ZZZZZZ	618084	5.16
ZZZZZZ	626101	5.17

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1967-ICC1967 Q90926.D 05/19/22 13:39. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Initial Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1967-ICC1967
Lab FileID: Q90926.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	6850_051922_SQ1967.quantmethod.xml
Batch Name	D:\MassHunter\Data\051922_6850_SQ1967\QuantResults\sq1967.batch.bin
Last Calib Update	5/20/2022 11:17:57 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\051922_6850_SQ1967\Q90923.d	5/19/2022 1:14:03 PM	5/20/2022 11:17:57 AM
2	D:\MassHunter\Data\051922_6850_SQ1967\Q90924.d	5/19/2022 1:22:35 PM	5/20/2022 11:17:57 AM
3	D:\MassHunter\Data\051922_6850_SQ1967\Q90925.d	5/19/2022 1:31:01 PM	5/20/2022 11:17:57 AM
4	D:\MassHunter\Data\051922_6850_SQ1967\Q90926.d	5/19/2022 1:39:27 PM	5/20/2022 11:17:57 AM
5	D:\MassHunter\Data\051922_6850_SQ1967\Q90927.d	5/19/2022 1:47:53 PM	5/20/2022 11:17:57 AM
6	D:\MassHunter\Data\051922_6850_SQ1967\Q90928.d	5/19/2022 1:56:18 PM	5/20/2022 11:17:57 AM
7	D:\MassHunter\Data\051922_6850_SQ1967\Q90929.d	5/19/2022 2:04:43 PM	5/20/2022 11:17:57 AM

Compound	Curve Fit	1	2	3	4	5	6	7	Avg RF	%RSD
I Cl18O4				---------- ISTD ----------						
T Perchlorate	Avg RF	0.9988	0.9792	1.0280	1.0977	1.1708	1.2352	1.2793	1.1127	10.654

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1967-ICV1967
Lab FileID: Q90931.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\051922_6850_SQ1967\sq1967.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\051922_6850_SQ1967\Q90923.d
2:D:\MassHunter\Data\051922_6850_SQ1967\Q90924.d
3:D:\MassHunter\Data\051922_6850_SQ1967\Q90925.d
4:D:\MassHunter\Data\051922_6850_SQ1967\Q90926.d
5:D:\MassHunter\Data\051922_6850_SQ1967\Q90927.d
6:D:\MassHunter\Data\051922_6850_SQ1967\Q90928.d
7:D:\MassHunter\Data\051922_6850_SQ1967\Q90929.d

Data File: Q90931
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.953	-2.3	97.7

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1967-CC1967
Lab FileID: Q90943.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\051922_6850_SQ1967\sq1967.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\051922_6850_SQ1967\Q90923.d
2:D:\MassHunter\Data\051922_6850_SQ1967\Q90924.d
3:D:\MassHunter\Data\051922_6850_SQ1967\Q90925.d
4:D:\MassHunter\Data\051922_6850_SQ1967\Q90926.d
5:D:\MassHunter\Data\051922_6850_SQ1967\Q90927.d
6:D:\MassHunter\Data\051922_6850_SQ1967\Q90928.d
7:D:\MassHunter\Data\051922_6850_SQ1967\Q90929.d

Data File: Q90943
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.995	-0.3	99.7

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1967-CC1967
Lab FileID: Q90944.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\051922_6850_SQ1967\sq1967.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\051922_6850_SQ1967\Q90923.d
2:D:\MassHunter\Data\051922_6850_SQ1967\Q90924.d
3:D:\MassHunter\Data\051922_6850_SQ1967\Q90925.d
4:D:\MassHunter\Data\051922_6850_SQ1967\Q90926.d
5:D:\MassHunter\Data\051922_6850_SQ1967\Q90927.d
6:D:\MassHunter\Data\051922_6850_SQ1967\Q90928.d
7:D:\MassHunter\Data\051922_6850_SQ1967\Q90929.d

Data File: Q90944
Type : QC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	0.200	0.176	-12.1	87.9

CC Criteria: +/- 15%

Run Sequence Report

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1967	**Method:** SW846 6850	**Instrument ID:** GCMSQ

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1967-IC1967	Q90922.D	05/19/22 13:05	n/a	Mass Calibration Verification
SQ1967-IC1967	Q90923.D	05/19/22 13:14	n/a	Initial cal 0.2
SQ1967-IC1967	Q90924.D	05/19/22 13:22	n/a	Initial cal 0.5
SQ1967-IC1967	Q90925.D	05/19/22 13:31	n/a	Initial cal 1.0
SQ1967-ICC1967	Q90926.D	05/19/22 13:39	n/a	Initial cal 2.0
SQ1967-IC1967	Q90927.D	05/19/22 13:47	n/a	Initial cal 5.0
SQ1967-IC1967	Q90928.D	05/19/22 13:56	n/a	Initial cal 10
SQ1967-IC1967	Q90929.D	05/19/22 14:04	n/a	Initial cal 25
SQ1967-IC1967	Q90930.D	05/19/22 14:40	n/a	Initial cal 50
SQ1967-ICV1967	Q90931.D	05/19/22 14:48	n/a	Initial cal verification 2
OP91294-BS	Q90933.D	05/19/22 15:05	OP91294	Blank Spike
OP91294-MB	Q90934.D	05/19/22 15:14	OP91294	Method Blank
FA95241-1	Q90935.D	05/19/22 15:22	OP91294	54MW13
OP91294-MS1	Q90936.D	05/19/22 15:31	OP91294	Matrix Spike
OP91294-MSD1	Q90937.D	05/19/22 15:39	OP91294	Matrix Spike Duplicate
FA95241-2	Q90938.D	05/19/22 15:48	OP91294	54MW10
ZZZZZZ	Q90941.D	05/19/22 16:13	OP91294	(unrelated sample)
ZZZZZZ	Q90942.D	05/19/22 16:21	OP91294	(unrelated sample)
SQ1967-CC1967	Q90943.D	05/19/22 16:30	n/a	Continuing cal 2.0
SQ1967-CC1967	Q90944.D	05/19/22 16:38	n/a	Continuing cal 0.2
FA95331-3F	Q90946.D	05/19/22 16:55	OP91294	(used for QC only; not part of job FA95241)
OP91294-MS2	Q90947.D	05/19/22 17:03	OP91294	Matrix Spike
OP91294-MSD2	Q90948.D	05/19/22 17:12	OP91294	Matrix Spike Duplicate
ZZZZZZ	Q90949.D	05/19/22 17:20	OP91294	(unrelated sample)
ZZZZZZ	Q90950.D	05/19/22 17:29	OP91294	(unrelated sample)
ZZZZZZ	Q90951.D	05/19/22 17:37	OP91294	(unrelated sample)
ZZZZZZ	Q90952.D	05/19/22 17:46	OP91294	(unrelated sample)
ZZZZZZ	Q90953.D	05/19/22 17:54	OP91294	(unrelated sample)
SQ1967-CC1967	Q90954.D	05/19/22 18:03	n/a	Continuing cal 2.0
SQ1967-CC1967	Q90955.D	05/19/22 18:11	n/a	Continuing cal 0.2
FA95332-2F	Q90957.D	05/19/22 18:28	OP91294	(used for QC only; not part of job FA95241)
OP91294-MS3	Q90958.D	05/19/22 18:36	OP91294	Matrix Spike
OP91294-MSD3	Q90959.D	05/19/22 18:45	OP91294	Matrix Spike Duplicate
ZZZZZZ	Q90960.D	05/19/22 18:53	OP91294	(unrelated sample)
ZZZZZZ	Q90961.D	05/19/22 19:02	OP91294	(unrelated sample)
ZZZZZZ	Q90962.D	05/19/22 19:10	OP91294	(unrelated sample)
SQ1967-CC1967	Q90963.D	05/19/22 19:18	n/a	Continuing cal 2.0
SQ1967-CC1967	Q90964.D	05/19/22 19:27	n/a	Continuing cal 0.2
OP91295-BS	Q90966.D	05/19/22 19:44	OP91295	Blank Spike
OP91295-MB	Q90967.D	05/19/22 19:52	OP91295	Method Blank
FA95449-1	Q90968.D	05/19/22 20:01	OP91295	(used for QC only; not part of job FA95241)
OP91295-MS	Q90969.D	05/19/22 20:09	OP91295	Matrix Spike
OP91295-MSD	Q90970.D	05/19/22 20:18	OP91295	Matrix Spike Duplicate
ZZZZZZ	Q90971.D	05/19/22 20:26	OP91295	(unrelated sample)
ZZZZZZ	Q90972.D	05/19/22 20:34	OP91295	(unrelated sample)
ZZZZZZ	Q90973.D	05/19/22 20:43	OP91295	(unrelated sample)

Run Sequence Report

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1967	**Method:** SW846 6850	**Instrument ID:** GCMSQ

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1967-CC1967	Q90974.D	05/19/22 20:51	n/a	Continuing cal 2.0
SQ1967-ECC1967	Q90975.D	05/19/22 21:00	n/a	Ending cal 0.2
SQ1967-IBLK	Q90976.D	05/19/22 21:08	n/a	Instrument Blank
SQ1967-IBLK	Q90976.D	05/19/22 21:08	n/a	Instrument Blank

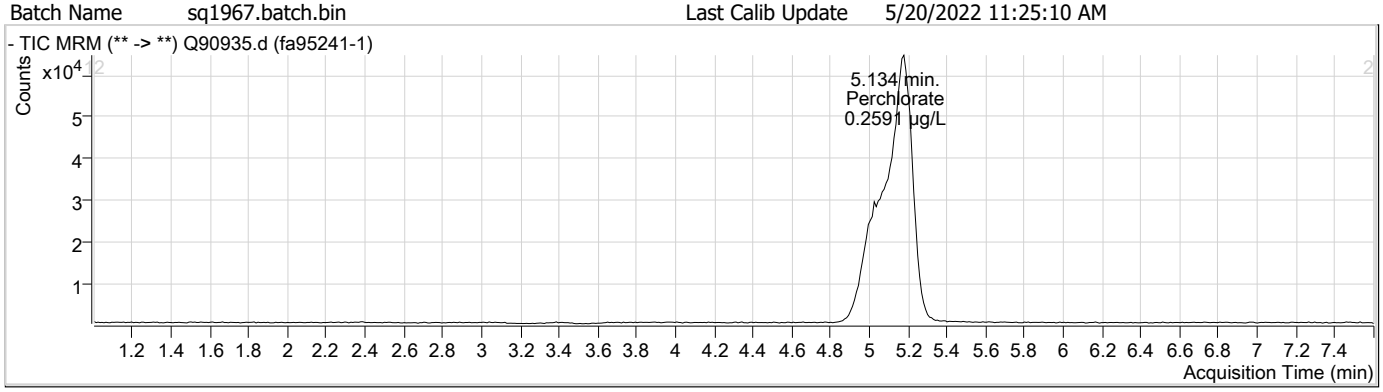
MS Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/20/22 15:32

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90935.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 3:22:43 PM
Sample Name	fa95241-1	Instrument	Instrument 1
Vial	P2-B5	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

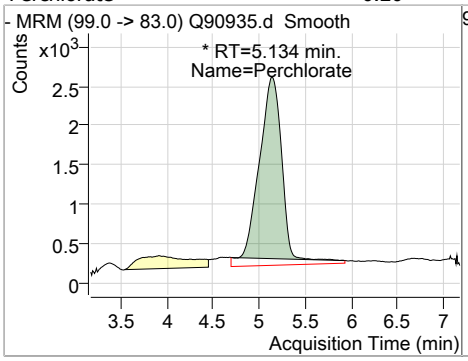


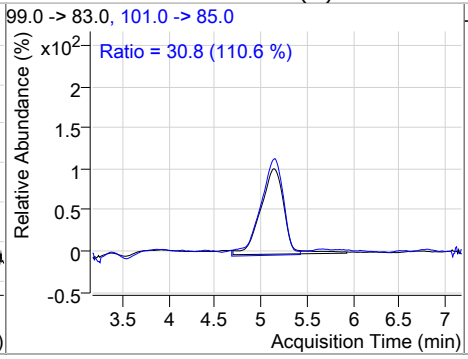
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	5.178	107.0 -> 89.0	651797	NoQ	5.00	µg/L		-0.041
System Monitoring Compounds								
Target Compounds								QValue
Perchlorate	5.134	99.0 -> 83.0	37584	3.2	0.26	µg/L	m	94

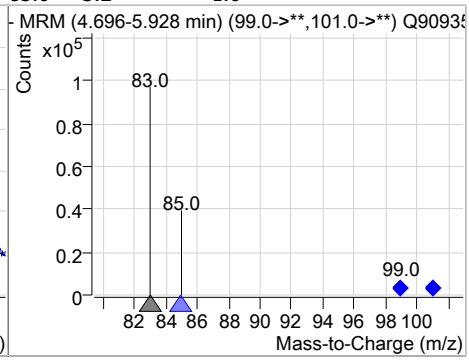
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.26	5.13	-0.08	37584 (m)	101.0 -> 85.0	3.2	1.6	







Manual Integration Approval Summary

Sample Number: FA95241-1
Lab FileID: Q90935.D
Injection Time: 05/19/22 15:22

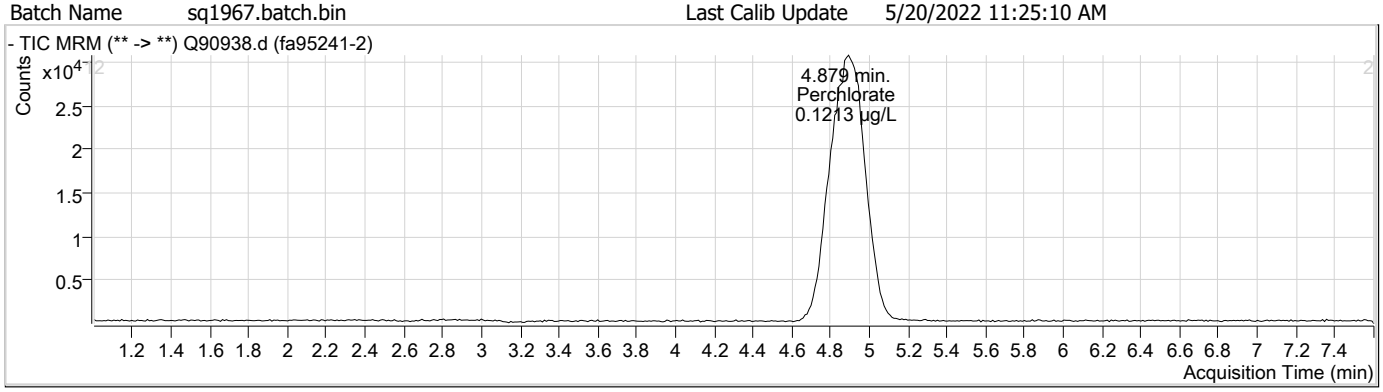
Method: SW846 6850
Analyst approved: 05/20/22 12:14 Natasha Gumtie
Supervisor approved: 05/20/22 15:32 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perchlorate	14797-73-0		5.13	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/20/22 15:32

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90938.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 3:48:01 PM
Sample Name	fa95241-2	Instrument	Instrument 1
Vial	P2-B8	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

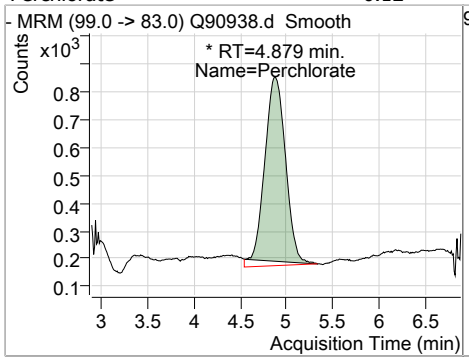


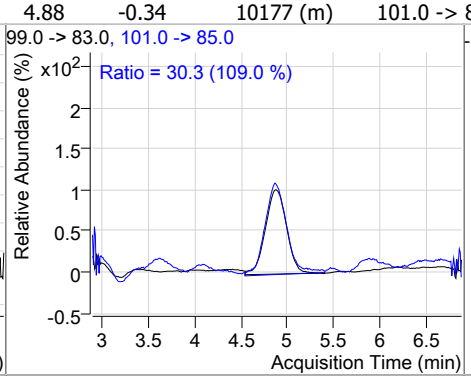
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	4.893	107.0 -> 89.0	377062	NoQ	5.00	µg/L		-0.326
System Monitoring Compounds								
Target Compounds								QValue
Perchlorate	4.879	99.0 -> 83.0	10177	3.3	0.12	µg/L	m	95

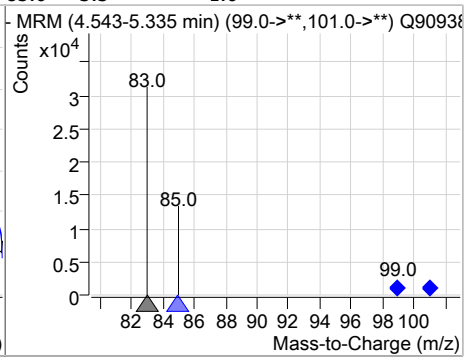
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.12	4.88	-0.34	10177 (m)	101.0 -> 85.0	3.3	1.6	







Manual Integration Approval Summary

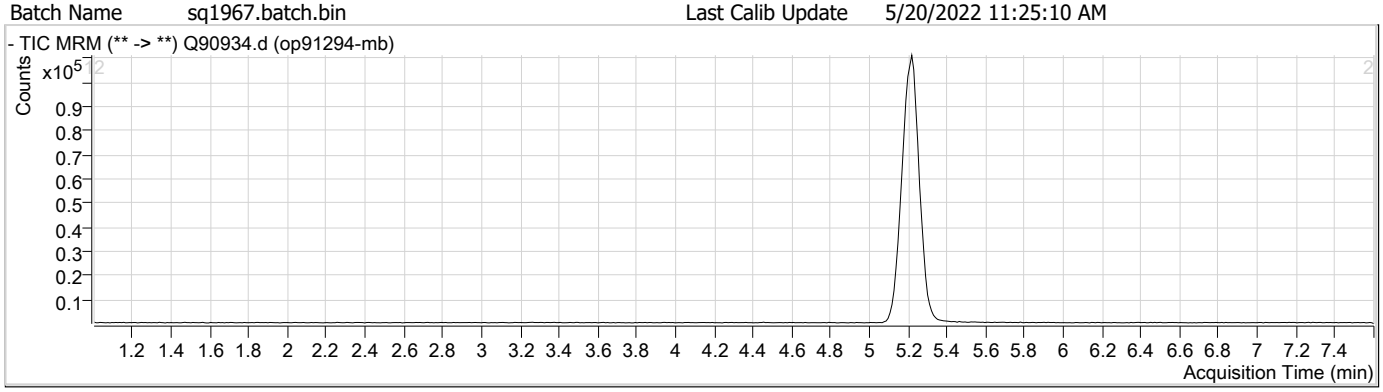
Sample Number: FA95241-2
Lab FileID: Q90938.D
Injection Time: 05/19/22 15:48

Method: SW846 6850
Analyst approved: 05/20/22 12:14 Natasha Gumtie
Supervisor approved: 05/20/22 15:32 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perchlorate	14797-73-0		4.88	Poor instrument integration

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90934.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 3:14:17 PM
Sample Name	op91294-mb	Instrument	Instrument 1
Vial	P2-B4	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

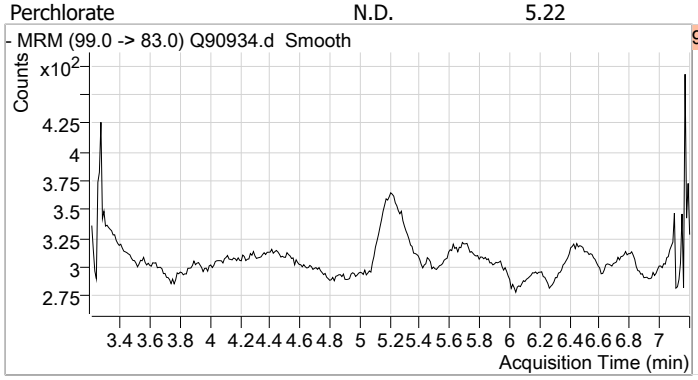


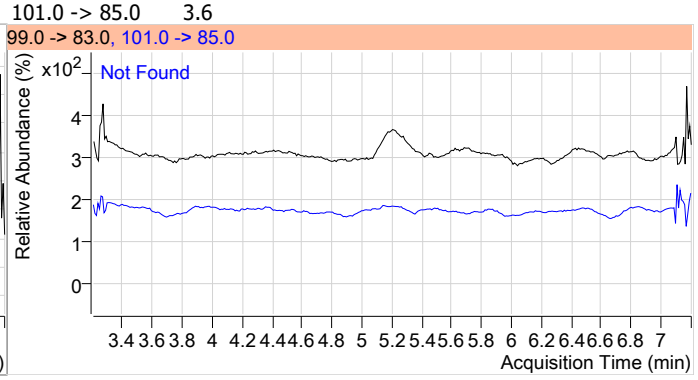
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.209	107.0 -> 89.0	695011	NoQ	5.00	µg/L	-0.010
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	-	99.0 -> 83.0		-	N.D.		

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

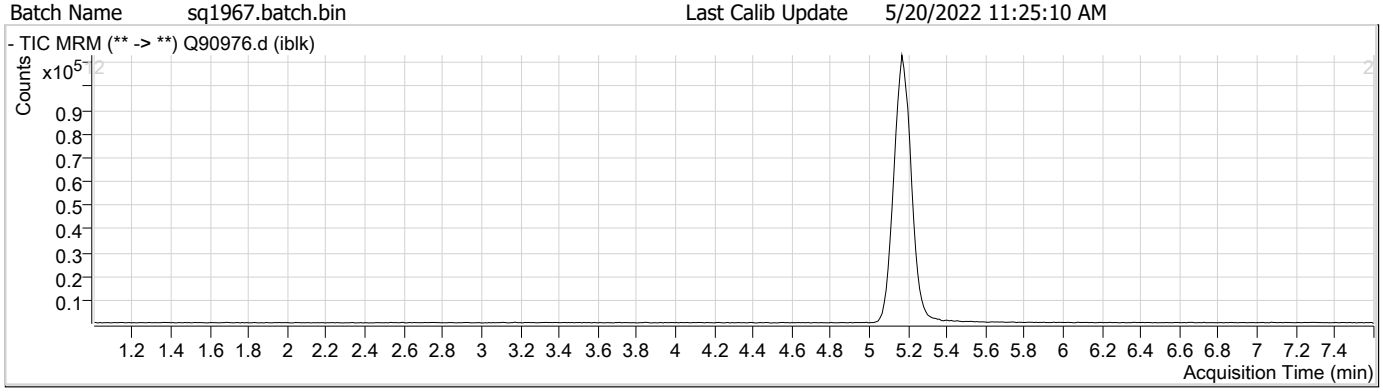
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	5.22	101.0 -> 85.0	3.6





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90976.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 9:08:40 PM
Sample Name	iblk	Instrument	Instrument 1
Vial	P2-A1	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

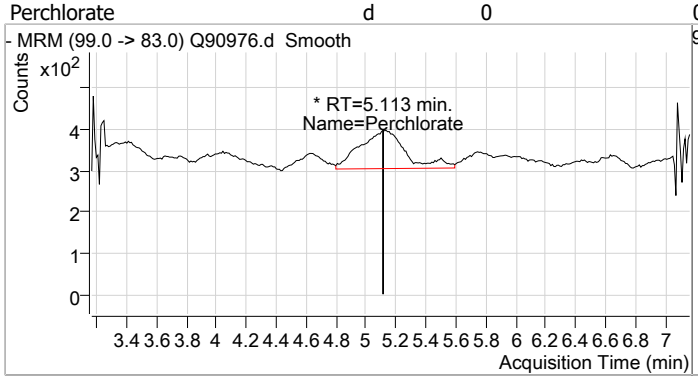


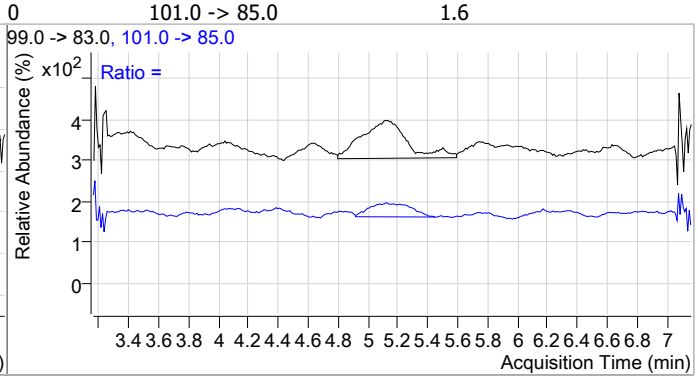
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	5.168	107.0 -> 89.0	717426	NoQ	5.00	µg/L		-0.051
System Monitoring Compounds								
Target Compounds								QValue
Perchlorate	5.113	99.0 -> 83.0	0		0.00	µg/L	md	1

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

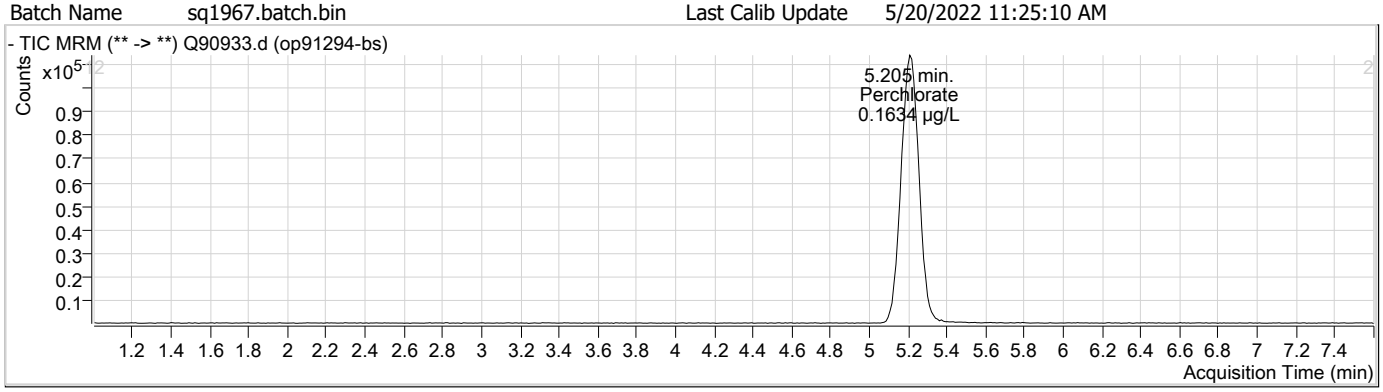
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	d	0		0	101.0 -> 85.0		1.6	





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90933.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 3:05:51 PM
Sample Name	op91294-bs	Instrument	Instrument 1
Vial	P2-B3	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

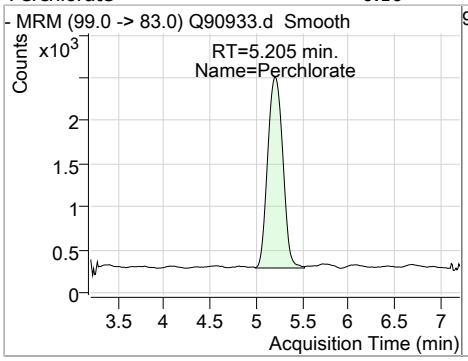


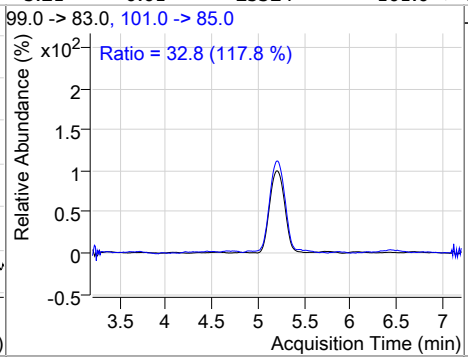
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.209	107.0 -> 89.0	696628	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.205	99.0 -> 83.0	25324	3.0	0.16 µg/L	90

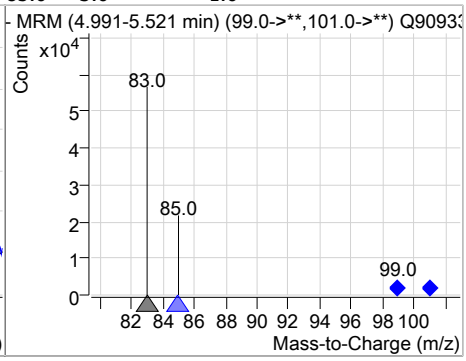
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.16	5.21	-0.01	25324	101.0 -> 85.0	3.0	1.6	



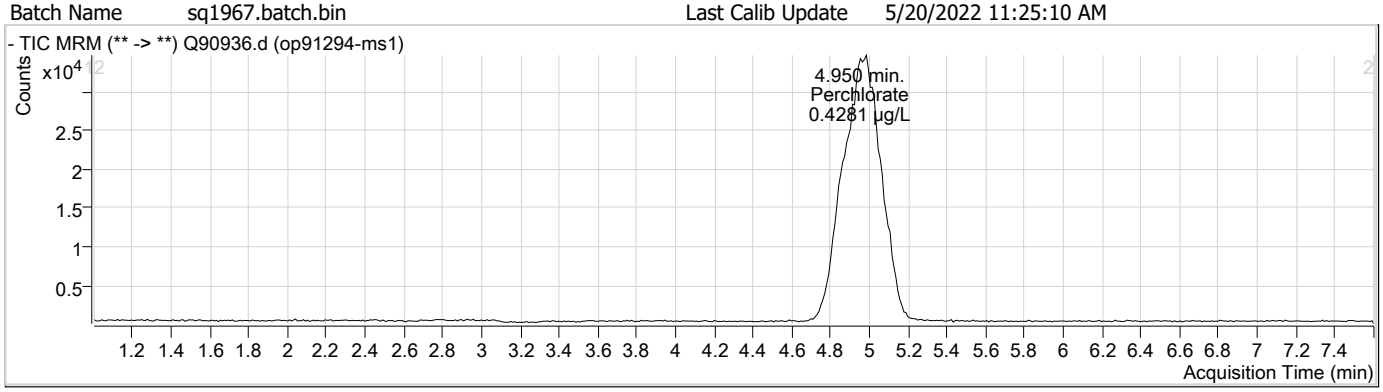




Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/20/22 15:32

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90936.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 3:31:10 PM
Sample Name	op91294-ms1	Instrument	Instrument 1
Vial	P2-B6	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

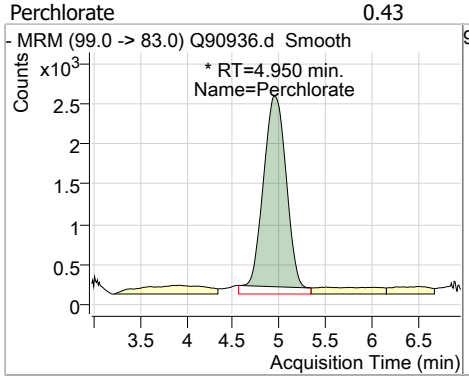


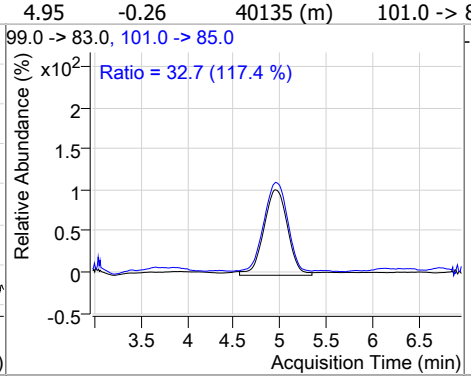
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	4.974	107.0 -> 89.0	421280	NoQ	5.00	µg/L		-0.244
System Monitoring Compounds								
Target Compounds								QValue
Perchlorate	4.950	99.0 -> 83.0	40135	3.1	0.43	µg/L	m	91

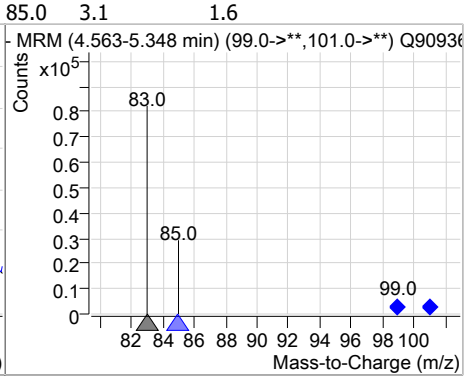
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.43	4.95	-0.26	40135 (m)	101.0 -> 85.0	3.1	1.6	







Manual Integration Approval Summary

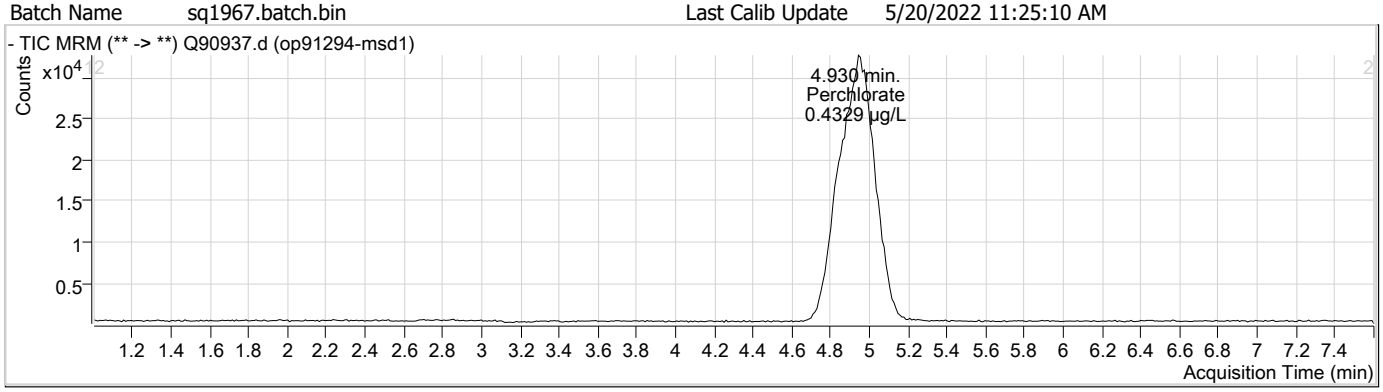
Sample Number: OP91294-MS1
Lab FileID: Q90936.D
Injection Time: 05/19/22 15:31

Method: SW846 6850
Analyst approved: 05/20/22 12:14 Natasha Gumtie
Supervisor approved: 05/20/22 15:32 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perchlorate	14797-73-0		4.95	Poor instrument integration

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90937.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 3:39:35 PM
Sample Name	op91294-msd1	Instrument	Instrument 1
Vial	P2-B7	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

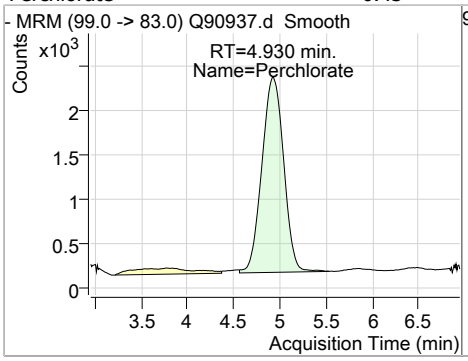


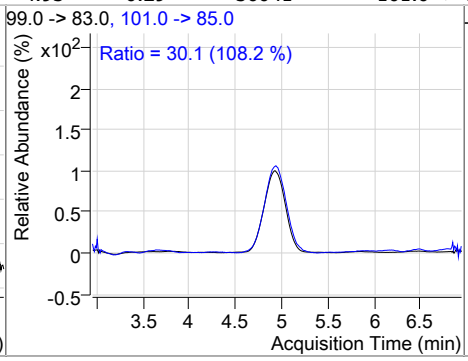
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	4.954	107.0 -> 89.0	374076	NoQ	5.00	µg/L	-0.265
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	4.930	99.0 -> 83.0	36041	3.3	0.43	µg/L	96

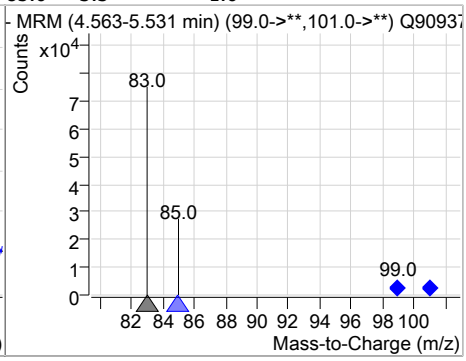
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.43	4.93	-0.29	36041	101.0 -> 85.0	3.3	1.6	







QQQ Check Tune Report

Agilent Technologies

Instrument Name	Instrument 1
MS Model	G6460A
MS Instrument Serial	SG10447001
Software_Firmware Version	B.08.02.B8260.0, FW: A.00.08.62
Tune Date & Time	19 May 2022 10:26:41
Data Path	D:\MassHunter\Tune\QQQ\G6460A\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.62E+0[R]; 2.47E-5[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	10
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

QQQ Check Tune Report

Agilent Technologies

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.95	-0.04	Pass	0.70	0.67	-0.03	Pass	444054
302.00	301.98	-0.02	Pass	0.70	0.60	-0.10	Pass	75831
601.98	602.00	0.02	Pass	0.70	0.57	-0.13	Pass	58711
1033.99	1034.03	0.04	Pass	0.70	0.59	-0.11	Pass	165331
1633.95	1633.94	-0.01	Pass	0.70	0.60	-0.10	Pass	228922
2233.91	2233.78	-0.13	Pass	0.70	0.64	-0.06	Pass	96962

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	68.99	-0.01	Pass	0.70	0.75	0.05	Pass	152215
112.99	112.91	-0.08	Pass	0.70	0.76	0.06	Pass	1037394
302.00	301.94	-0.06	Pass	0.70	0.76	0.06	Pass	271826
601.98	601.93	-0.05	Pass	0.70	0.69	-0.01	Pass	301785
1033.99	1033.90	-0.09	Pass	0.70	0.69	-0.01	Pass	816698
1633.95	1633.85	-0.10	Pass	0.70	0.67	-0.03	Pass	1390994
2233.91	2233.73	-0.18	Pass	0.70	0.75	0.05	Pass	1136722

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.85	-0.14	Pass	1.20	1.17	-0.03	Pass	627917
302.00	301.86	-0.14	Pass	1.20	1.22	0.02	Pass	142065
601.98	601.90	-0.08	Pass	1.20	1.36	0.16	Pass	119235
1033.99	1033.92	-0.07	Pass	1.20	1.43	0.23	Pass	444759
1633.95	1633.87	-0.08	Pass	1.20	1.25	0.05	Pass	1084784
2233.91	2233.78	-0.13	Pass	1.20	1.07	-0.13	Pass	574450

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.01	0.01	Pass	1.20	1.32	0.12	Pass	200095
112.99	112.94	-0.05	Pass	1.20	1.38	0.18	Pass	1210332
302.00	301.93	-0.07	Pass	1.20	1.45	0.25	Pass	432789
601.98	601.92	-0.06	Pass	1.20	1.34	0.14	Pass	479683
1033.99	1033.90	-0.09	Pass	1.20	1.07	-0.13	Pass	1651387
1633.95	1633.86	-0.09	Pass	1.20	1.02	-0.18	Pass	4200894
2233.91	2233.74	-0.17	Pass	1.20	1.11	-0.09	Pass	3667192

Analyzer: MS1 Polarity: Negative Width: Widest

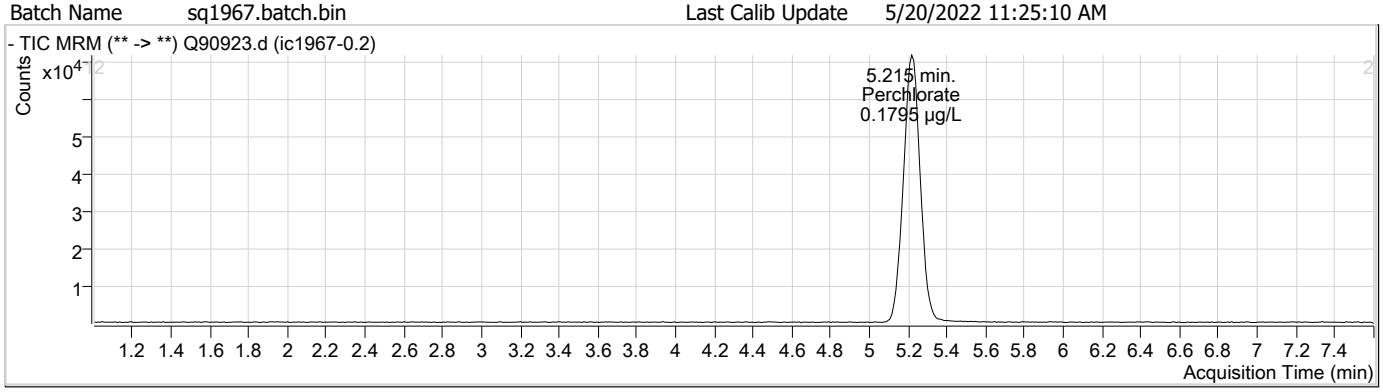
m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.61	-0.38	Pass	2.50	2.61	0.11	Pass	936320
302.00	301.77	-0.23	Pass	2.50	2.55	0.05	Pass	239073
601.98	601.79	-0.19	Pass	2.50	2.62	0.12	Pass	225579
1033.99	1033.94	-0.05	Pass	2.50	2.59	0.09	Pass	945736
1633.95	1633.92	-0.03	Pass	2.50	2.33	-0.17	Pass	2496337
2233.91	2233.85	-0.06	Pass	2.50	2.05	-0.45	Pass	1530219

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	68.96	-0.04	Pass	2.50	2.60	0.10	Pass	238793
112.99	112.89	-0.10	Pass	2.50	2.70	0.20	Pass	1373542
302.00	301.94	-0.06	Pass	2.50	2.74	0.24	Pass	496652
601.98	601.94	-0.04	Pass	2.50	2.63	0.13	Pass	626223
1033.99	1033.89	-0.10	Pass	2.50	2.24	-0.26	Pass	3025830
1633.95	1633.80	-0.15	Pass	2.50	2.37	-0.13	Pass	8677918
2233.91	2233.78	-0.13	Pass	2.50	2.55	0.05	Pass	9016396

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90923.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 1:14:03 PM
Sample Name	ic1967-0.2	Instrument	Instrument 1
Vial	P2-A2	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

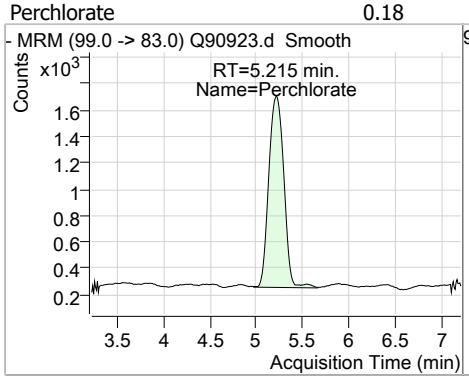


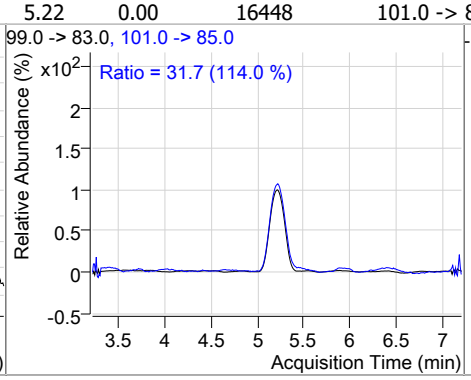
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.219	107.0 -> 89.0	411685	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.215	99.0 -> 83.0	16448	3.2	0.18	µg/L	93

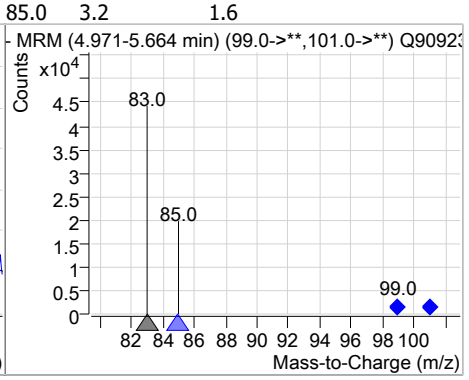
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	5.22	0.00	16448	101.0 -> 85.0	3.2	1.6	

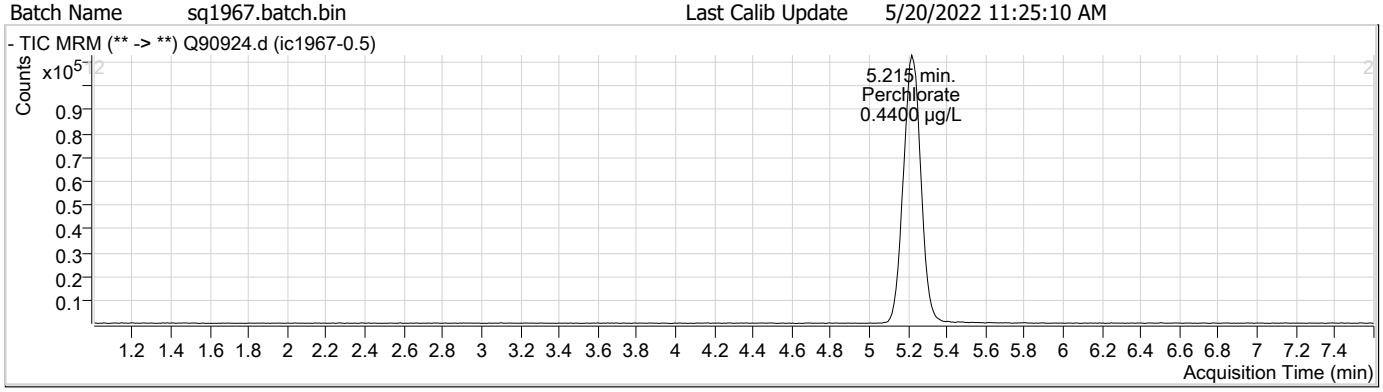






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90924.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 1:22:35 PM
Sample Name	ic1967-0.5	Instrument	Instrument 1
Vial	P2-A3	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

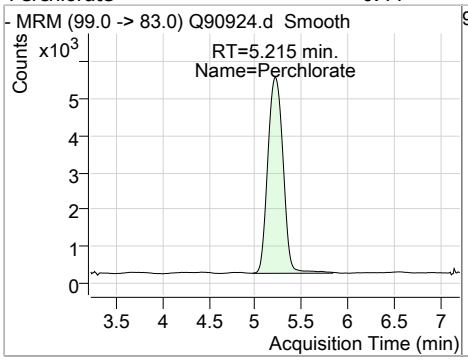


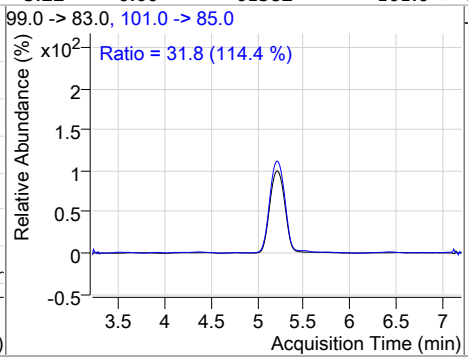
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.219	107.0 -> 89.0	628893	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.215	99.0 -> 83.0	61582	3.1	0.44	µg/L	92

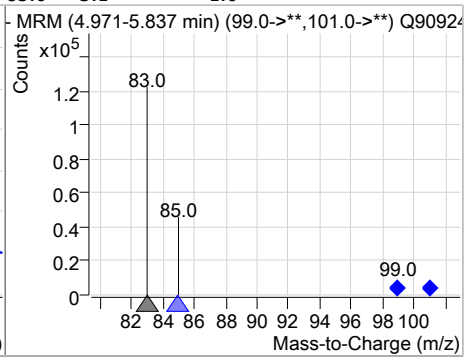
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.44	5.22	0.00	61582	101.0 -> 85.0	3.1	1.6	

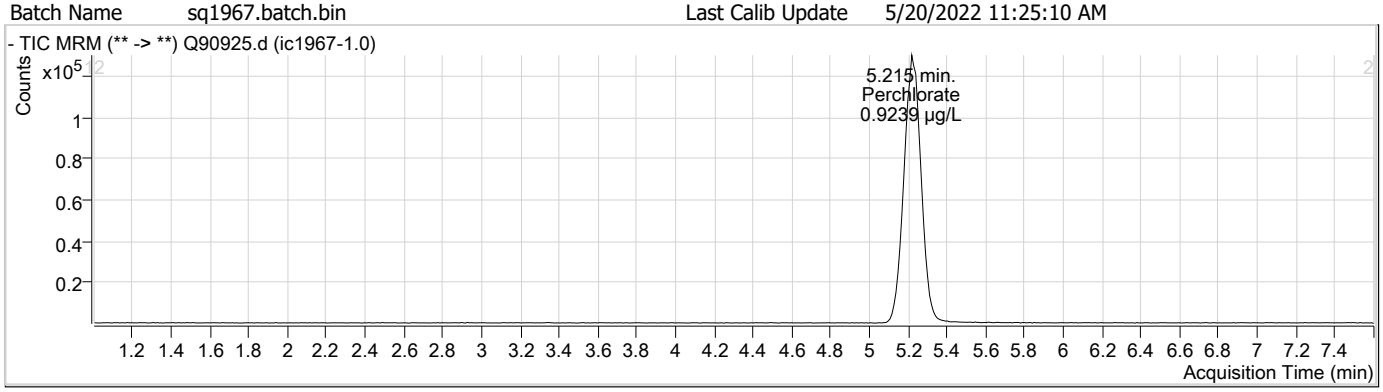






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90925.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 1:31:01 PM
Sample Name	ic1967-1.0	Instrument	Instrument 1
Vial	P2-A4	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

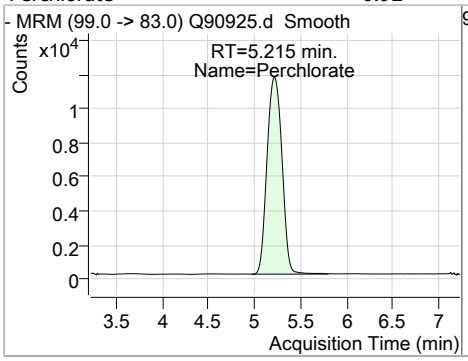


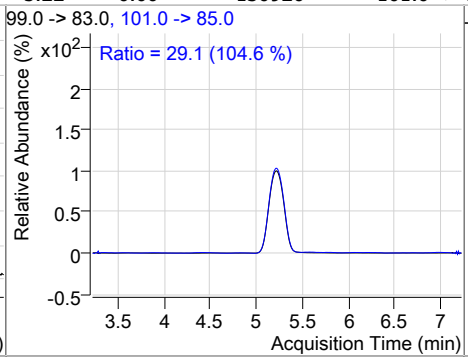
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.229	107.0 -> 89.0	636794	NoQ	5.00	µg/L	0.010
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.215	99.0 -> 83.0	130926	3.4	0.92	µg/L	97

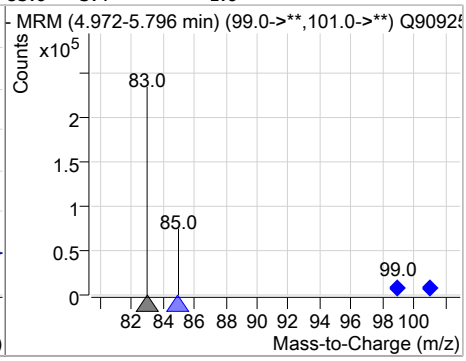
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.92	5.22	0.00	130926	101.0 -> 85.0	3.4	1.6	

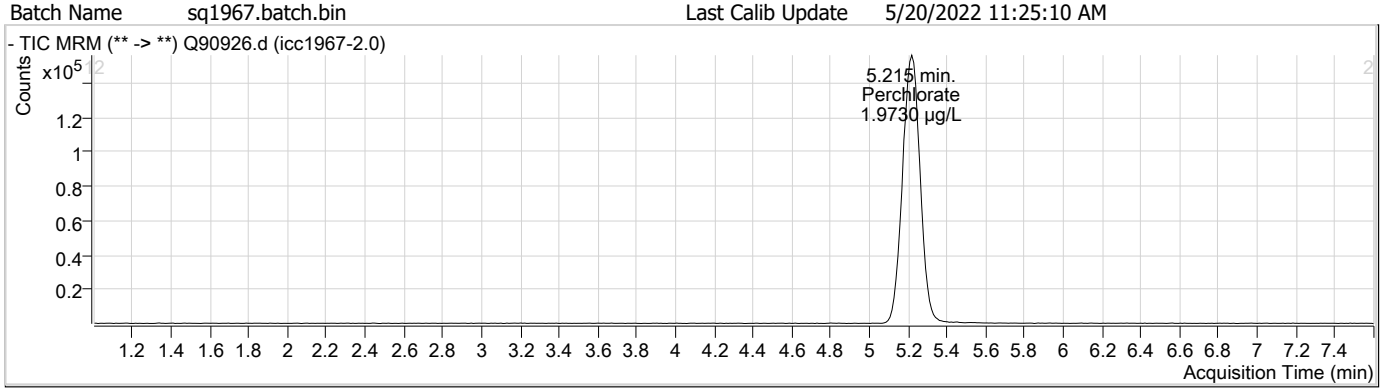






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90926.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 1:39:27 PM
Sample Name	icc1967-2.0	Instrument	Instrument 1
Vial	P2-A5	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

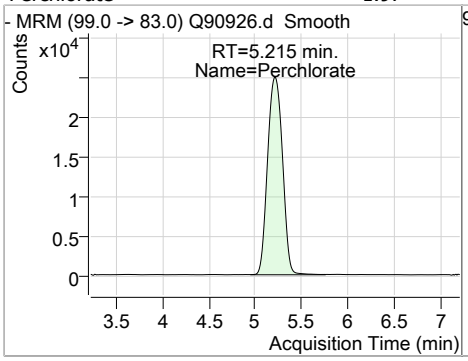


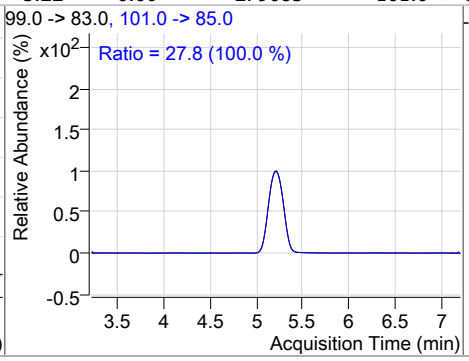
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.219	107.0 -> 89.0	635598	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.215	99.0 -> 83.0	279083	3.6	1.97 µg/L	100

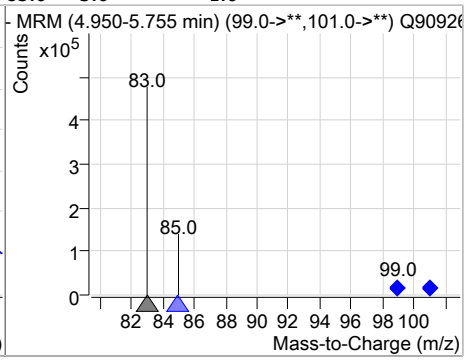
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.97	5.22	0.00	279083	101.0 -> 85.0	3.6	1.6	

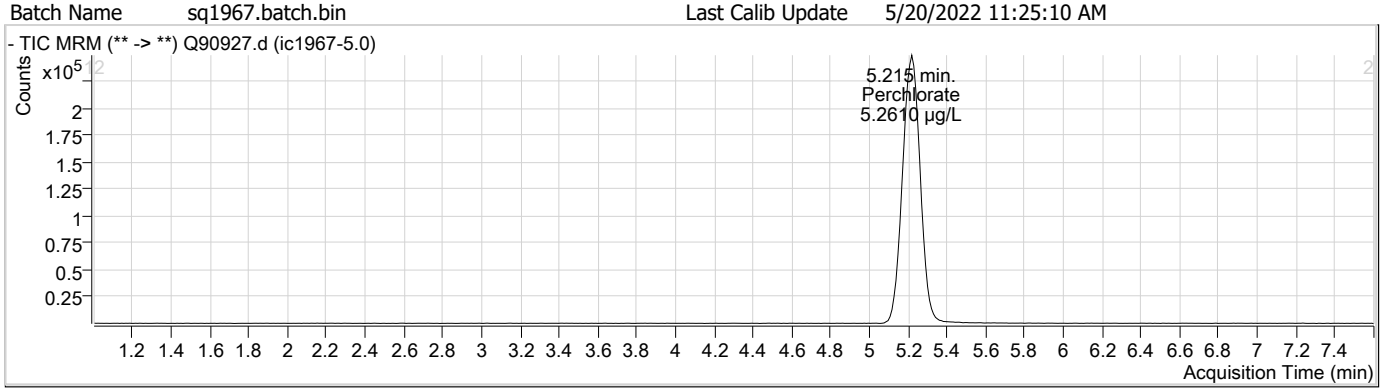






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90927.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 1:47:53 PM
Sample Name	ic1967-5.0	Instrument	Instrument 1
Vial	P2-A6	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

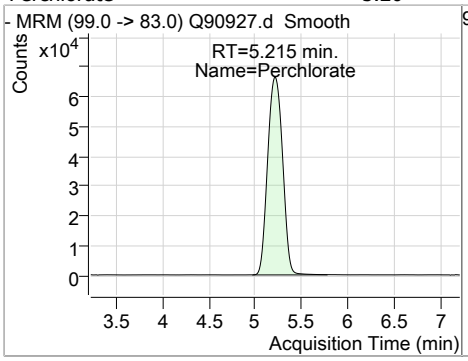


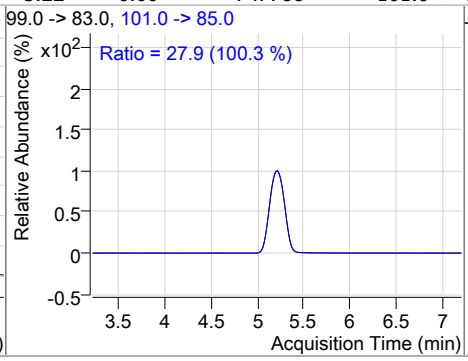
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.219	107.0 -> 89.0	638697	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.215	99.0 -> 83.0	747788	3.6	5.26	µg/L	100

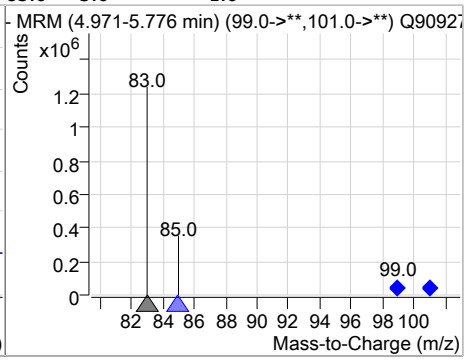
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	5.26	5.22	0.00	747788	101.0 -> 85.0	3.6	1.6	

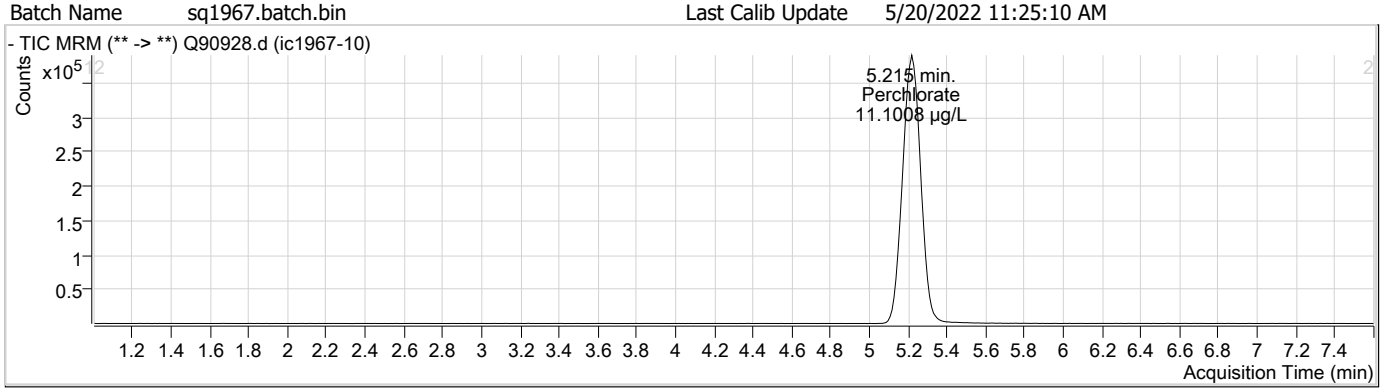






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90928.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 1:56:18 PM
Sample Name	ic1967-10	Instrument	Instrument 1
Vial	P2-A7	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

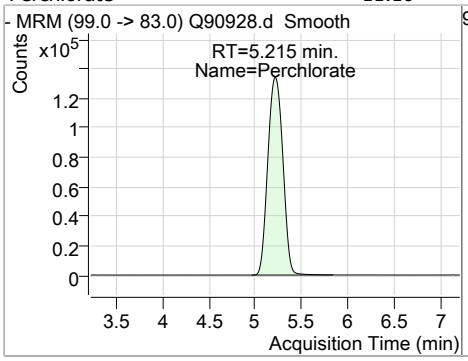


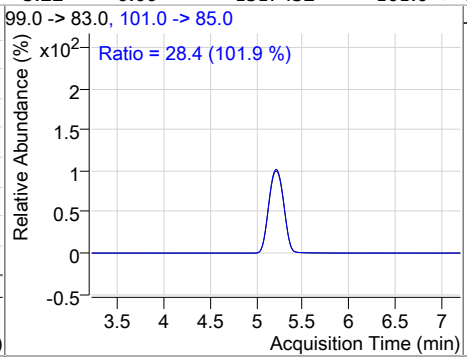
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.219	107.0 -> 89.0	614250	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.215	99.0 -> 83.0	1517452	3.5	11.10	µg/L	99

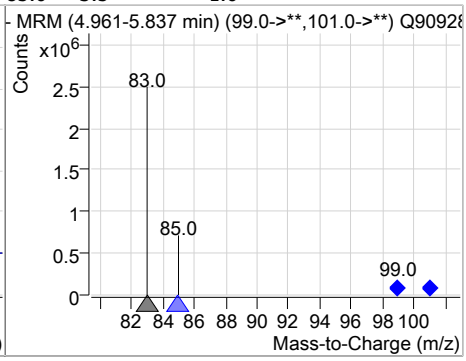
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	11.10	5.22	0.00	1517452	101.0 -> 85.0	3.5	1.6	



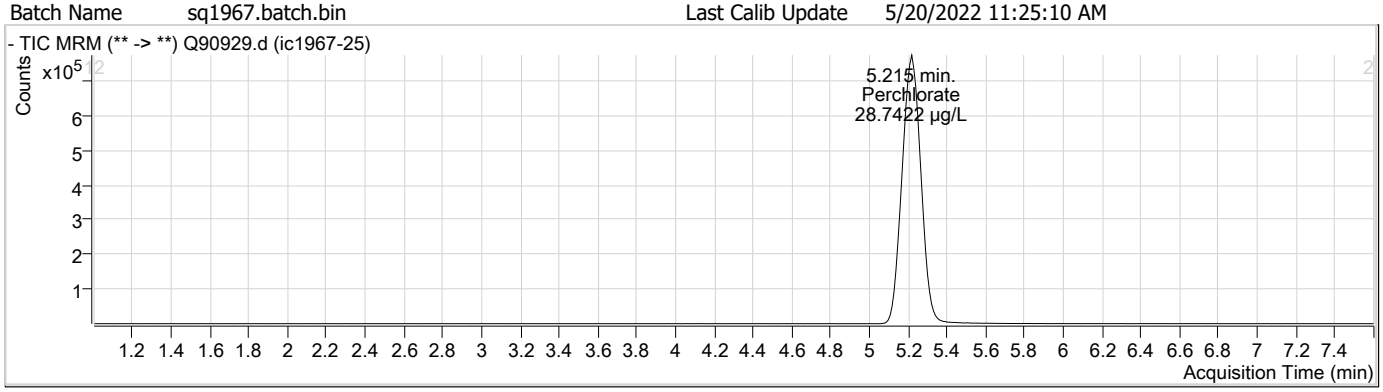




Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/20/22 15:32

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90929.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 2:04:43 PM
Sample Name	ic1967-25	Instrument	Instrument 1
Vial	P2-A8	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

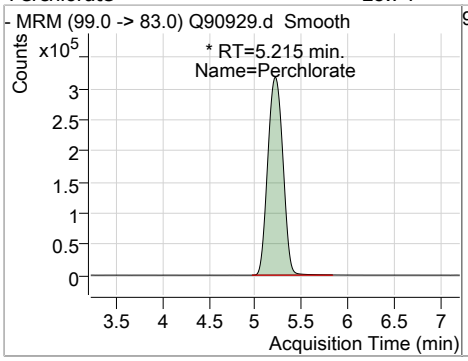


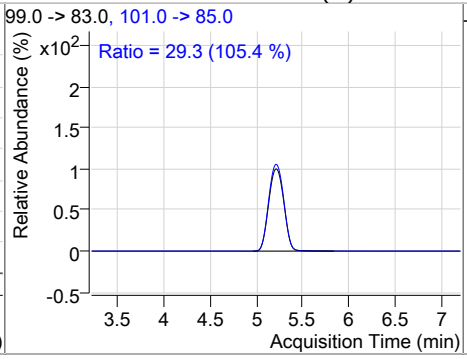
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units		Dev(Min)
Internal Standards								
Cl18O4	5.219	107.0 -> 89.0	567196	NoQ	5.00	µg/L		0.000
System Monitoring Compounds								
Target Compounds								**QValue**
Perchlorate	5.215	99.0 -> 83.0	3628013	3.4	28.74	µg/L	m	97

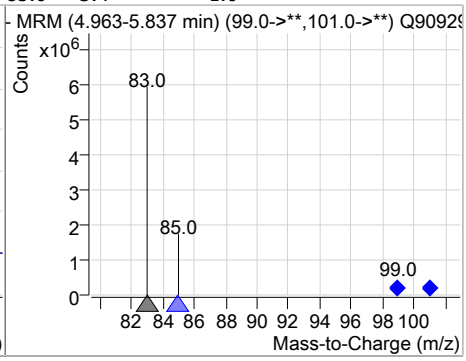
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	28.74	5.22	0.00	3628013 (m)	101.0 -> 85.0	3.4	1.6	







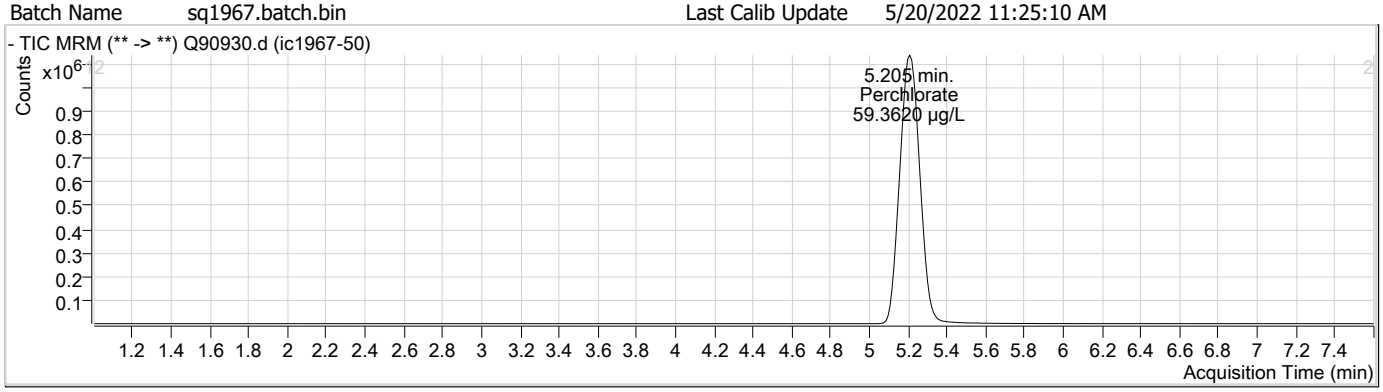
Manual Integration Approval Summary

Sample Number:	SQ1967-IC1967	**Method:**	SW846 6850
Lab FileID:	Q90929.D	**Analyst approved:**	05/20/22 12:04 Natasha Gumtie
Injection Time:	05/19/22 14:04	**Supervisor approved:**	05/20/22 15:32 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perchlorate	14797-73-0		5.21	Poor instrument integration

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90930.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 2:40:33 PM
Sample Name	ic1967-50	Instrument	Instrument 1
Vial	P2-A9	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

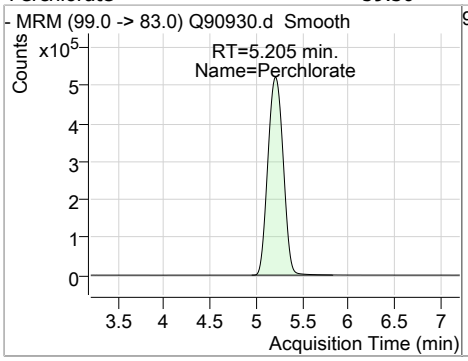


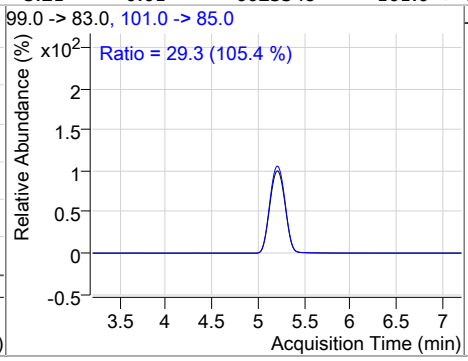
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.209	107.0 -> 89.0	455946	NoQ	5.00	µg/L	-0.010
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	5.205	99.0 -> 83.0	6023348	3.4	59.36	µg/L	97

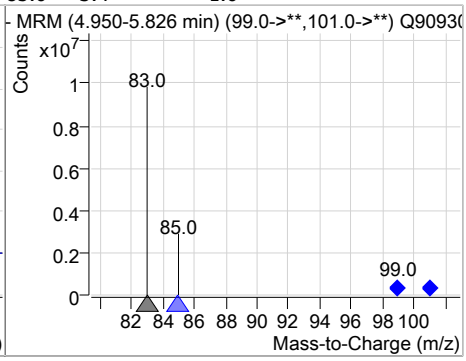
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	59.36	5.21	-0.01	6023348	101.0 -> 85.0	3.4	1.6	

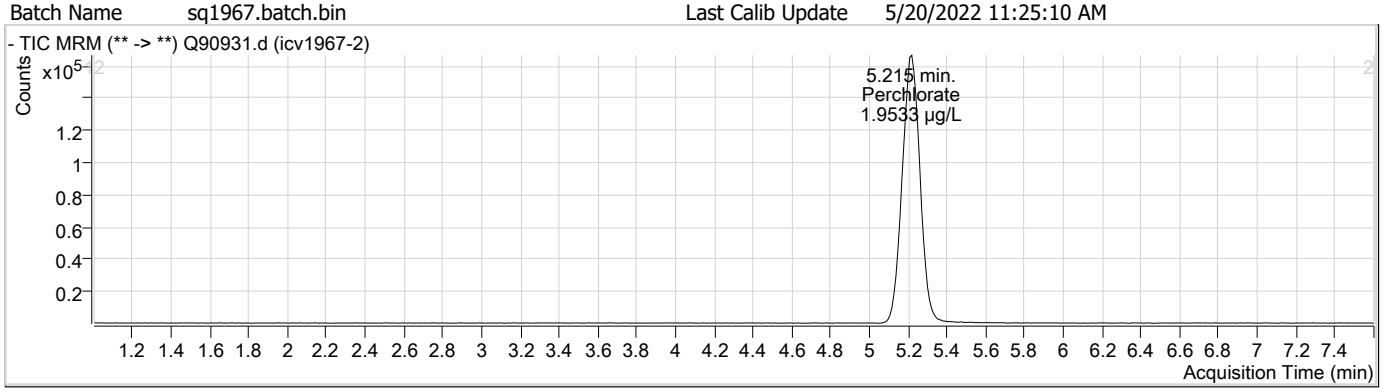






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90931.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 2:48:58 PM
Sample Name	icv1967-2	Instrument	Instrument 1
Vial	P2-B1	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

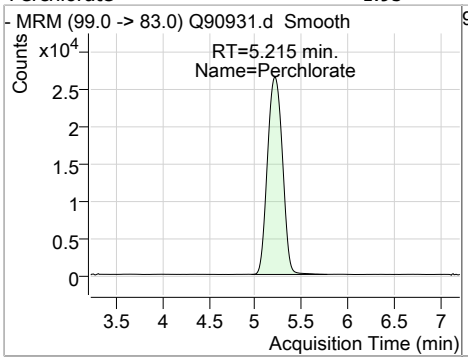


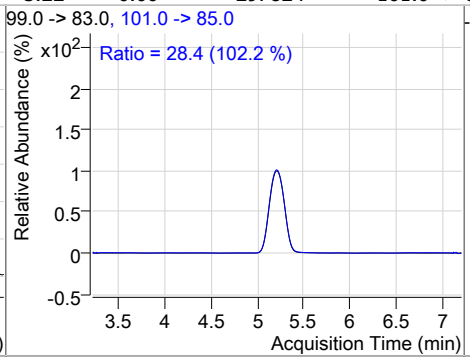
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.219	107.0 -> 89.0	685123	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.215	99.0 -> 83.0	297824	3.5	1.95 µg/L	99

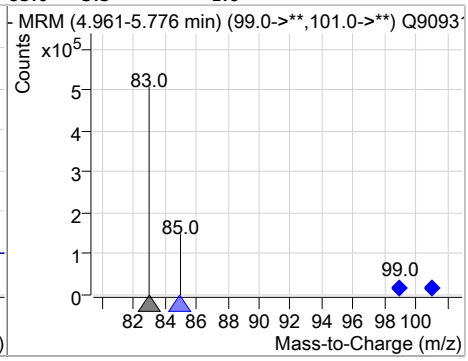
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.95	5.22	0.00	297824	101.0 -> 85.0	3.5	1.6	

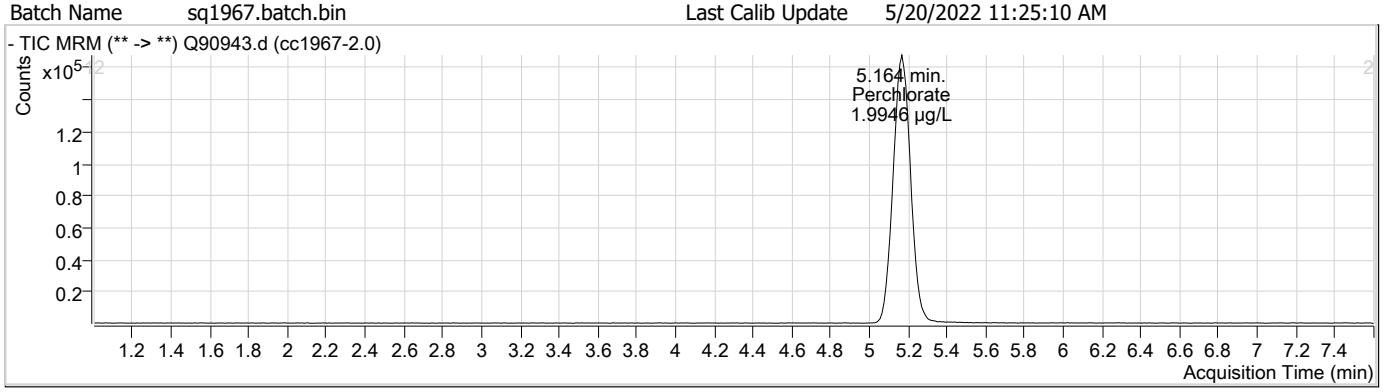






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90943.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 4:30:14 PM
Sample Name	cc1967-2.0	Instrument	Instrument 1
Vial	P2-A5	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

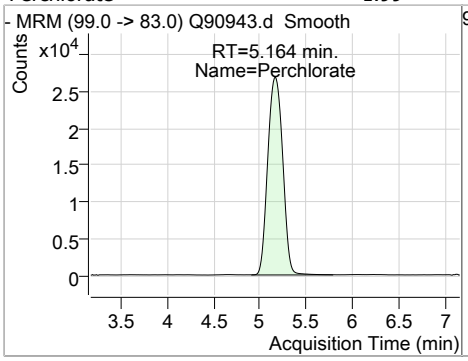


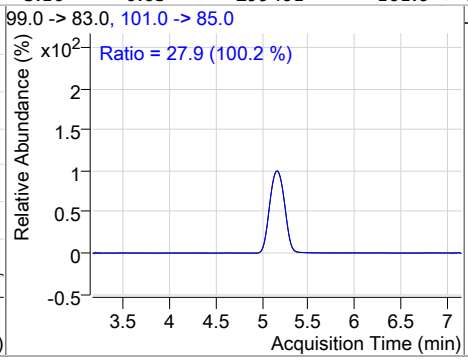
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.168	107.0 -> 89.0	674501	NoQ	5.00 µg/L	-0.051
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.164	99.0 -> 83.0	299401	3.6	1.99 µg/L	100

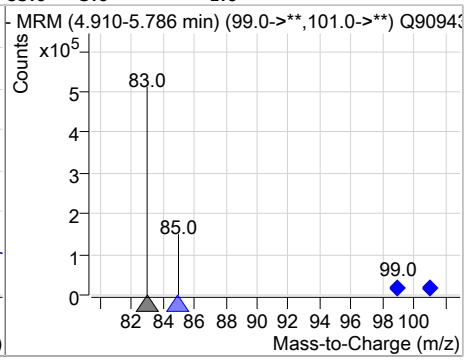
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.99	5.16	-0.05	299401	101.0 -> 85.0	3.6	1.6	

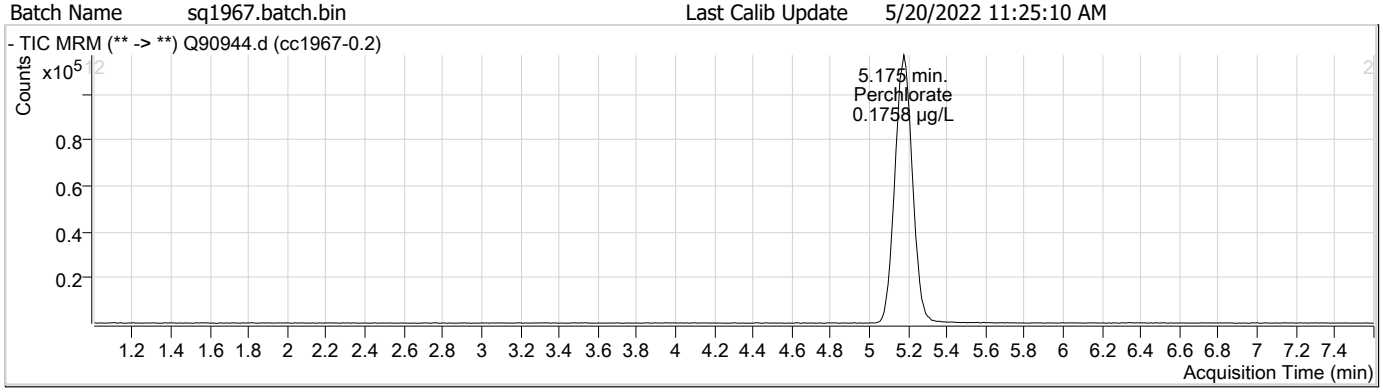






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q90944.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	5/19/2022 4:38:40 PM
Sample Name	cc1967-0.2	Instrument	Instrument 1
Vial	P2-A2	Sample Information	OP91294,SQ1967,10.0,,,10.0,1,water
DA Method File	6850_051922_SQ1967.quantmethod.xml	Comment	
Batch Name	sq1967.batch.bin	Last Calib Update	5/20/2022 11:25:10 AM

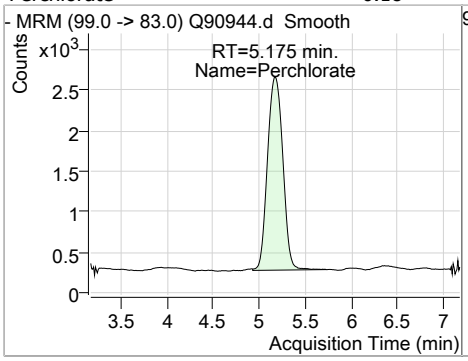


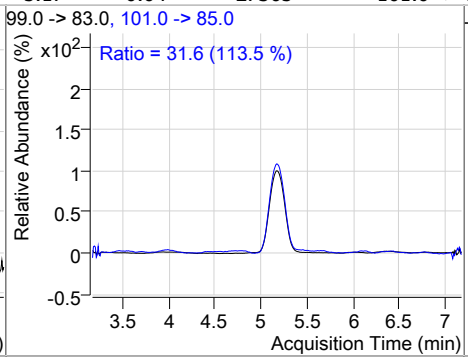
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.178	107.0 -> 89.0	699613	NoQ	5.00	µg/L	-0.041
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.175	99.0 -> 83.0	27365	3.2	0.18	µg/L	93

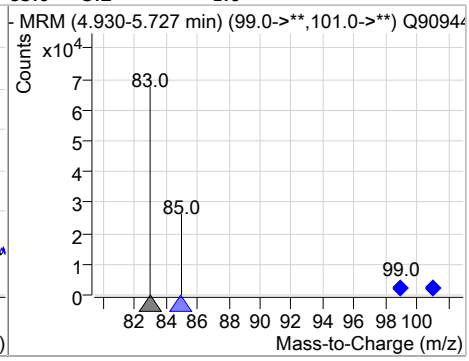
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	5.17	-0.04	27365	101.0 -> 85.0	3.2	1.6	







SGS ORLANDO

LCMS1-Q ANALYSIS LOG

DATE:	05/19/22
COLUMN TYPE:	K PRIME
AMOUNT INJ:	7.5 ul
INSTRUMENT:	LCMS1-Q

METHODS:	SW846 6850
PROC. METH:	6850_051922_SQ1967
CAL DATE:	05/19/22
ANALYST:	NG
RUN BATCH:	SQ1967

ELUENT A LOT #:	216038 W/0.1% AA 194003
ELUENT B LOT #:	214785 W/0.1% AA 194003
IC/CC STD LOT #:	LCMS1736
ICV STD LOT #:	LCMS1751
ISTD/ID STD LOT #:	10954A

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q90920.d	P2-A1	ccb	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
2	Q90921.d	P2-A1	ccb	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
3	Q90922.d	P2-A1	ic1967-0	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
4	Q90923.d	P2-A2	ic1967-0.2	Perchlorate2.m	Calibration	500x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
5	Q90924.d	P2-A3	ic1967-0.5	Perchlorate2.m	Calibration	200x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
6	Q90925.d	P2-A4	ic1967-1.0	Perchlorate2.m	Calibration	100x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
7	Q90926.d	P2-A5	icc1967-2.0	Perchlorate2.m	Calibration	50x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
8	Q90927.d	P2-A6	ic1967-5.0	Perchlorate2.m	Calibration	20x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
9	Q90928.d	P2-A7	ic1967-10	Perchlorate2.m	Calibration	10x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
10	Q90929.d	P2-A8	ic1967-25	Perchlorate2.m	Calibration	4x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
11	Q90930.d	P2-A9	ic1967-50	Perchlorate2.m	Calibration	2x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
12	Q90931.d	P2-B1	icv1967-2	Perchlorate2.m	QC	50x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
13	Q90932.d	P2-B2	ics	Perchlorate2.m	Sample	500x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
14	Q90933.d	P2-B3	op91294-bs	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
15	Q90934.d	P2-B4	op91294-mb	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
16	Q90935.d	P2-B5	fa95241-1	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
17	Q90936.d	P2-B6	op91294-ms1	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
18	Q90937.d	P2-B7	op91294-msd1	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
19	Q90938.d	P2-B8	fa95241-2	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
20	Q90939.d	P2-B9	fa95323-1	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	rr 2x
21	Q90940.d	P2-C1	fa95323-2	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	rr 1x c/o
22	Q90941.d	P2-C2	fa95331-1F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
23	Q90942.d	P2-C3	fa95331-2F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
24	Q90943.d	P2-A5	cc1967-2.0	Perchlorate2.m	QC	50x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
25	Q90944.d	P2-A2	cc1967-0.2	Perchlorate2.m	QC	500x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
26	Q90945.d	P2-A1	ccb	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
27	Q90946.d	P2-C4	fa95331-3F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
28	Q90947.d	P2-C5	op91294-ms2	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
29	Q90948.d	P2-C6	op91294-msd2	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
30	Q90949.d	P2-C7	fa95331-4F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
31	Q90950.d	P2-C8	fa95331-5F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
32	Q90951.d	P2-C9	fa95331-6F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
33	Q90952.d	P2-D1	fa95332-6	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
34	Q90953.d	P2-D2	fa95332-1F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
35	Q90954.d	P2-A5	cc1967-2.0	Perchlorate2.m	QC	50x	OP91294,SQ1967,10.0,,,10.0,1,water	✓

SGS ORLANDO LCMS1-Q ANALYSIS LOG

36	Q90955.d	P2-A2	cc1967-0.2	Perchlorate2.m	QC	500x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
37	Q90956.d	P2-A1	ccb	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
38	Q90957.d	P2-D3	fa95332-2F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
39	Q90958.d	P2-D4	op91294-ms3	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
40	Q90959.d	P2-D5	op91294-msd3	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
41	Q90960.d	P2-D6	fa95332-3F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
42	Q90961.d	P2-D7	fa95332-4F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
43	Q90962.d	P2-D8	fa95332-5F	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
44	Q90963.d	P2-A5	cc1967-2.0	Perchlorate2.m	QC	50x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
45	Q90964.d	P2-A2	cc1967-0.2	Perchlorate2.m	QC	500x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
46	Q90965.d	P2-A1	ccb	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓
47	Q90966.d	P2-D9	op91295-bs	Perchlorate2.m	Sample		OP91295,SQ1967,1.00,,,10.0,1,soil	✓
48	Q90967.d	P2-E1	op91295-mb	Perchlorate2.m	Sample		OP91295,SQ1967,1.00,,,10.0,1,soil	✓
49	Q90968.d	P2-E2	fa95449-1	Perchlorate2.m	Sample		OP91295,SQ1967,1.23,,,10.0,1,soil	✓
50	Q90969.d	P2-E3	op91295-ms	Perchlorate2.m	Sample		OP91295,SQ1967,1.03,,,10.0,1,soil	✓
51	Q90970.d	P2-E4	op91295-msd	Perchlorate2.m	Sample		OP91295,SQ1967,1.02,,,10.0,1,soil	✓
52	Q90971.d	P2-E5	fa95449-2	Perchlorate2.m	Sample		OP91295,SQ1967,1.00,,,10.0,1,soil	✓
53	Q90972.d	P2-E6	fa95449-3	Perchlorate2.m	Sample		OP91295,SQ1967,1.26,,,10.0,1,soil	✓
54	Q90973.d	P2-E7	fa95449-4	Perchlorate2.m	Sample		OP91295,SQ1967,1.29,,,10.0,1,soil	✓
55	Q90974.d	P2-A5	cc1967-2.0	Perchlorate2.m	QC	50x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
56	Q90975.d	P2-A2	ecc1967-0.2	Perchlorate2.m	QC	500x	OP91294,SQ1967,10.0,,,10.0,1,water	✓
57	Q90976.d	P2-A1	iblk	Perchlorate2.m	Sample		OP91294,SQ1967,10.0,,,10.0,1,water	✓

SGS - ORLANDO

LIQUID SAMPLE PREP REPORT

Date/Time: 05/19/22 10:30 Started {mm/dd/yy 24:00}

Date/Time: 05/19/22 11:30 Finished {mm/dd/yy 24:00}

Prep Method: 3510C 3580A or (Method (circle))

Analytical Method: 6850

Batch#: OP91294 Ext. By: NG Conc. By: — Vialed By: NG

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP91294 MB		10.0					10.0	
OP 91294 BS						20uL		
FA95241-1	1							MS/MSD
-2	1							
FA95323-1								
-2								
FA95331-1F								
-2F								
-3F								MS/MSD
-4F								
-5F								
-6F								
FA95332-6								
-1F								
-2F								MS/MSD
-3F								
-4F								
-5F								
OP91294 MS3	2					20uL		FA95332-2F
MSD3	3							↓
MS1	2	10.0						FA9524-1
MSD1	3							↓
MS2	2							FA95331-3F
MSD2	3							↓
DUP								

Comments: 10999 Istd 1.0mg/L Exp:04/05/23 (50uL)

Surr. ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

Spk. ID: LCMS1858 Conc: 100ppb Exp. Date: 10/04/22 Inj. By: NG Ver. By MRE

Initial Bath Temp (Therm ID): — Exchange Bath/N-Evap Temp (Therm ID): —

Observed Temp °C: — Corr. Temp °C: — Observed Temp °C: — Corr. Temp °C: —

CH2CL2 Lot #: — Hexane Lot #: — Na2SO4 Lot#: —

Acetonitrile Lot #: — Methanol Lot #: — Acetone Lot#: —

Syringe Filter Lot# P25236-0927 pH Paper #: — Reagent # HPLCWater 219210

Copper Lot #: — If Sulfur Cleaning is performed in Extractions (3660B)

Relinquished By: [signature] Date: 05/19/22

Accepted By: [signature] Date: 05/19/22

ORLD-EXT-0001-1-06-FORM-extwater.xls 032718

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Explosives)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP91013-MB	BB072808.D	1	05/03/22	FS	05/02/22	OP91013	GBB2196

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA95241-1, FA95241-2

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	96%	70-136%

Method Blank Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP91013-MB	GG624054.D	1	05/04/22	FS	05/02/22	OP91013	GGG3135

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA95241-1, FA95241-2

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	104%	70-136%

Blank Spike Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP91013-BS	BB072809.D	1	05/03/22	FS	05/02/22	OP91013	GBB2196

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA95241-1, FA95241-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	5.0	100	77-144
121-82-4	RDX	5	4.7	94	77-125
	DNX	5	4.3	86	66-127
	MNX	5.8	5.2	90	71-137
	TNX	2.35	1.7	72	60-126
618-87-1	3,5-Dinitroaniline	5	4.9	98	77-115
99-65-0	1,3-Dinitrobenzene	5	4.9	98	79-122
606-20-2	2,6-Dinitrotoluene	5	4.8	96	81-131
121-14-2	2,4-Dinitrotoluene	5	4.8	96	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	4.9	98	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	4.9	98	79-119
98-95-3	Nitrobenzene	5	4.2	84	78-130
88-72-2	o-Nitrotoluene	5	4.2	84	76-131
99-08-1	m-Nitrotoluene	5	4.2	84	78-122
99-99-0	p-Nitrotoluene	5	4.3	86	79-124
479-45-8	Tetryl	5	3.3	66	65-124
99-35-4	1,3,5-Trinitrobenzene	5	4.9	98	79-128
118-96-7	2,4,6-Trinitrotoluene	5	3.9	78	72-112
55-63-0	Nitroglycerine	5	4.9	98	69-123
78-11-5	PETN	5	5.2	104	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	101%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP91013-MS	BB072813.D	1	05/03/22	FS	05/02/22	OP91013	GBB2196
OP91013-MSD	BB072814.D	1	05/04/22	FS	05/02/22	OP91013	GBB2196
FA95241-1 [a]	BB072812.D	1	05/03/22	FS	05/02/22	OP91013	GBB2196
FA95241-1 [b]	GG624055.D	1	05/04/22	FS	05/02/22	OP91013	GGG3135

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA95241-1, FA95241-2

CAS No.	Compound	FA95241-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	2.5		10.4	13.4	105	10.4	14.6	116	9	77-144/21
121-82-4	RDX	2.0		10.4	9.7	74*	10.4	11.5	91	17	77-125/19
	DNX	0.20	U	10.4	9.9	95	10.4	11.4	109	14	66-127/25
	MNX	0.20	U	12.1	10	83	12.1	11.7	97	16	71-137/20
	TNX	0.20	U	4.9	4.1	84	4.9	4.7	96	14	60-126/18
618-87-1	3,5-Dinitroaniline	0.41		10.4	9.1	83	10.4	10.7	99	16	77-115/19
99-65-0	1,3-Dinitrobenzene	0.20	U	10.4	8.9	85	10.4	10.4	100	16	79-122/17
606-20-2	2,6-Dinitrotoluene	0.20	U	10.4	9.6	92	10.4	11.1	107	14	81-131/17
121-14-2	2,4-Dinitrotoluene	0.20	U	10.4	8.7	84	10.4	10.1	97	15	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	1.2		10.4	10.0	84	10.4	11.5	99	14	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	0.83		10.4	9.6	84	10.4	11.2	100	15	79-119/20
98-95-3	Nitrobenzene	0.20	U	10.4	8.6	83	10.4	10.2	98	17	78-130/19
88-72-2	o-Nitrotoluene	0.20	U	10.4	8.9	85	10.4	10.2	98	14	76-131/20
99-08-1	m-Nitrotoluene	0.20	U	10.4	8.6	83	10.4	10.1	97	16	78-122/18
99-99-0	p-Nitrotoluene	0.20	U	10.4	8.7	84	10.4	10.1	97	15	79-124/18
479-45-8	Tetryl	0.20	U	10.4	6.1	59*	10.4	6.9	66	12	65-124/20
99-35-4	1,3,5-Trinitrobenzene	10.6		10.4	18.6	77*	10.4	22.5	114	19*	79-128/16
118-96-7	2,4,6-Trinitrotoluene	5.8		10.4	12.0	60*	10.4	14.0	79	15	72-112/16
55-63-0	Nitroglycerine	2.0	U	10.4	9.1	87	10.4	10.4	100	13	69-123/18
78-11-5	PETN	2.0	U	10.4	9.4	90	10.4	10.9	105	15	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA95241-1	FA95241-1	Limits
610-39-9	3,4-Dinitrotoluene	85%	99%	101%	112%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.

* = Outside of Control Limits.

GC Identification Summary (Explosives)

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA95241-1	**Method:**	SW846 8330B
Client ID:	54MW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	BB072812.D	1	OP91013	GBB2196	05/03/22 23:17	GCBB
Confirmation	GG624055.D	1	OP91013	GGG3135	05/04/22 18:03	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	BB072812.D	1	1	2.5		ug/l	27.6
HMX	GG624055.D	1	1	3.3		ug/l	
RDX	BB072812.D	1	1	2		ug/l	28.6
RDX	GG624055.D	1	1	1.5		ug/l	
3,5-Dinitroaniline [a]	BB072812.D	1	1	.41		ug/l	118.4
3,5-Dinitroaniline	GG624055.D	1	1	1.6		ug/l	
2-amino-4,6-Dinitrotoluene	BB072812.D	1	1	1.2		ug/l	15.4
2-amino-4,6-Dinitrotoluene	GG624055.D	1	1	1.4		ug/l	
4-amino-2,6-Dinitrotoluene [a]	BB072812.D	1	1	.83		ug/l	44.1
4-amino-2,6-Dinitrotoluene	GG624055.D	1	1	1.3		ug/l	
1,3,5-Trinitrobenzene	BB072812.D	1	1	10.6		ug/l	3.7
1,3,5-Trinitrobenzene	GG624055.D	1	1	11		ug/l	
2,4,6-Trinitrotoluene	BB072812.D	1	1	5.8		ug/l	1.7
2,4,6-Trinitrotoluene	GG624055.D	1	1	5.7		ug/l	

(a) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA95241-2	**Method:**	SW846 8330B
Client ID:	54MW10		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	BB072815.D	1	OP91013	GBB2196	05/04/22 00:52	GCBB
Confirmation	GG624056.D	1	OP91013	GGG3135	05/04/22 18:34	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	BB072815.D	1	1	1.5		ug/l	37.8
HMX	GG624056.D	1	1	2.2		ug/l	
RDX	BB072815.D	1	1	1.8		ug/l	32.3
RDX	GG624056.D	1	1	1.3		ug/l	
3,5-Dinitroaniline [a]	BB072815.D	1	1	.26		ug/l	59.5
3,5-Dinitroaniline	GG624056.D	1	1	.48		ug/l	
2-amino-4,6-Dinitrotoluene	BB072815.D	1	1	1.1		ug/l	8.7
2-amino-4,6-Dinitrotoluene	GG624056.D	1	1	1.2		ug/l	
4-amino-2,6-Dinitrotoluene [a]	BB072815.D	1	1	.78		ug/l	42.4
4-amino-2,6-Dinitrotoluene	GG624056.D	1	1	1.2		ug/l	
1,3,5-Trinitrobenzene	BB072815.D	1	1	1.9		ug/l	5.1
1,3,5-Trinitrobenzene	GG624056.D	1	1	2		ug/l	
2,4,6-Trinitrotoluene	BB072815.D	1	1	3		ug/l	0.0
2,4,6-Trinitrotoluene	GG624056.D	1	1	3		ug/l	

(a) Primary and confirmation results differ by more than 40%.

Surrogate Recovery Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Method: SW846 8330B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA95241-1	GG624055.D	112
FA95241-1	BB072812.D	101
FA95241-2	GG624056.D	99
FA95241-2	BB072815.D	93
OP91013-BS	BB072809.D	101
OP91013-MB	BB072808.D	96
OP91013-MB	GG624054.D	104
OP91013-MS	BB072813.D	85
OP91013-MSD	BB072814.D	99

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GBB2196-CC2188	**Injection Date:**	05/03/22
Lab File ID:	BB072800.D	**Injection Time:**	17:03
Instrument ID:	GCBB	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	11.07

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
ZZZZZZ	BB072801.D	05/03/22	17:34	11.06
ZZZZZZ	BB072802.D	05/03/22	18:05	11.05
ZZZZZZ	BB072803.D	05/03/22	18:36	0.00
ZZZZZZ	BB072804.D	05/03/22	19:07	0.00
ZZZZZZ	BB072805.D	05/03/22	19:39	11.07
ZZZZZZ	BB072806.D	05/03/22	20:10	0.00
ZZZZZZ	BB072807.D	05/03/22	20:41	11.07
OP91013-MB	BB072808.D	05/03/22	21:12	11.07
OP91013-BS	BB072809.D	05/03/22	21:43	11.04

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GBB2196-CC2188	**Injection Date:**	05/03/22
Lab File ID:	BB072811.D	**Injection Time:**	22:46
Instrument ID:	GCBB	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	11.04

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
FA95241-1	BB072812.D	05/03/22	23:17	11.03
OP91013-MS	BB072813.D	05/03/22	23:49	11.04
OP91013-MSD	BB072814.D	05/04/22	00:20	11.03
FA95241-2	BB072815.D	05/04/22	00:52	11.04
OP91049-BS	BB072817.D	05/04/22	01:54	11.05
ZZZZZZ	BB072818.D	05/04/22	02:26	11.05
FA95260-2	BB072819.D	05/04/22	02:57	11.03

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG3135-CC3094	**Injection Date:**	05/04/22
Lab File ID:	GG624050.D	**Injection Time:**	12:45
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	13.65

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP90975-MB	GG624051.D	05/04/22	13:43	13.51
ZZZZZZ	GG624052.D	05/04/22	16:29	13.55
ZZZZZZ	GG624053.D	05/04/22	17:00	13.53
OP91013-MB	GG624054.D	05/04/22	17:31	13.58
FA95241-1	GG624055.D	05/04/22	18:03	13.53
FA95241-2	GG624056.D	05/04/22	18:34	13.55
OP91049-MB	GG624057.D	05/04/22	19:06	13.56
ZZZZZZ	GG624058.D	05/04/22	19:37	13.56
ZZZZZZ	GG624059.D	05/04/22	20:09	13.62

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2188-ICC2188
Lab FileID: BB072468.D

Response Factor Report G1315B

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 14:37:09 2022
Response via : Initial Calibration

Calibration Files
20 =BB072463.D 50 =BB072464.D 100 =BB072465.D 200 =BB072466.D
500 =BB072467.D 1000=BB072468.D 2500=BB072469.D 5000=BB072470.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	6.908	4.644	3.876	3.450	3.478	3.459	3.311	3.444	4.071 E3	30.08
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 3419.28549 *A									
2) HMX	3.860	2.937	2.003	1.800	1.635	1.658	1.561	1.622	2.135 E3	38.87
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9995									
	Response Ratio = 0.00000 + 1612.17869 *A									
3) DNX	6.624	4.401	3.476	3.016	2.989	2.974	2.848	2.953	3.660 E3	35.57
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 2934.34018 *A									
4) MNX	6.263	3.745	3.154	2.714	2.740	2.730	2.626	2.726	3.337 E3	37.14
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 2707.05465 *A									
5) RDX	4.707	2.724	2.262	1.954	1.959	1.963	1.888	1.961	2.427 E3	39.64
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 1947.35340 *A									
6) 1,3,5-Trinit	9.222	5.510	4.835	4.130	4.168	4.220	4.101	4.246	5.054 E3	34.70
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9997									
	Response Ratio = 0.00000 + 4217.04195 *A									
7) 1,3-Dinitrob	1.237	0.752	0.634	0.552	0.549	0.550	0.532	0.552	0.670 E4	35.91
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 5484.58000 *A									
8) 3,5-Dinitroa	9.565	5.536	4.844	4.189	4.148	4.169	4.040	4.191	5.085 E3	36.97
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 4161.29663 *A									
9) Nitrobenzene	7.202	4.330	3.755	3.151	3.191	3.218	3.118	3.253	3.902 E3	35.81
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9995									
	Response Ratio = 0.00000 + 3225.62172 *A									
10) Nitroglyceri									0.000	-1.00
11) Tetryl	7.326	4.591	3.673	3.123	3.123	3.178	3.054	3.180	3.906 E3	37.76
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 3155.70251 *A									
12) 2,4,6-Trinit	8.913	5.448	4.545	3.928	3.911	3.965	3.815	3.973	4.812 E3	36.25
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 3942.17179 *A									
13) 2-Amino-4,6-	7.980	4.886	3.962	3.443	3.414	3.475	3.345	3.485	4.249 E3	37.49
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									

Initial Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GBB2188-ICC2188
Lab FileID: BB072468.D

```
               Response Ratio = 0.00000 + 3457.76334 *A

 14) 4-Amino-2,6- 5.786 3.598 2.936 2.563 2.520 2.574 2.471 2.583 3.129 E3  36.33
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 2560.86151 *A

 15) 3,4-Dinitrot 4.875 2.978 2.491 2.201 2.175 2.214 2.134 2.224 2.662 E3  35.20
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 2206.48496 *A

 16) 2,4-Dinitrot 1.118 0.651 0.554 0.486 0.481 0.487 0.470 0.490 0.592 E4  37.28
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 4862.47412 *A

 17) 2,6-Dinitrot 6.306 3.905 3.169 2.831 2.816 2.829 2.717 2.840 3.427 E3  35.77
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 2816.40615 *A

 18) o-Nitrotolue 4.968 3.018 2.614 2.228 2.305 2.294 2.229 2.332 2.749 E3  34.05
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 2311.18189 *A

 19) p-Nitrotolue 7.593 4.522 4.038 3.495 3.564 3.582 3.475 3.633 4.238 E3  33.09
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 3600.40371 *A

 20) m-Nitrotolue 7.376 4.377 3.913 3.283 3.363 3.350 3.253 3.423 4.042 E3  34.70
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9994
               Response Ratio = 0.00000 + 3388.00336 *A

 21) PETN                                                      0.000  -1.00

Signal #2

  1) TNX          1.139 0.714 0.604 0.530 0.530 0.528 0.504 0.524 0.634 E4  33.90
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 5207.56520 *A

  2) HMX          1.317 0.960 0.582 0.533 0.456 0.460 0.427 0.445 0.648 E4  49.68
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9994
               Response Ratio = 0.00000 + 4425.32034 *A

  3) DNX          1.259 0.803 0.584 0.493 0.472 0.472 0.447 0.464 0.624 E4  45.21
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 4657.68475 *A

  4) MNX          9.988 6.062 4.819 4.132 4.173 4.183 4.018 4.179 5.194 E3  39.51
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 4148.49696 *A

  5) RDX          7.518 4.237 3.608 3.073 3.094 3.107 2.984 3.105 3.841 E3  40.20
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 3082.43311 *A

  6) 1,3,5-Trinit 1.463 0.889 0.764 0.664 0.636 0.673 0.650 0.672 0.802 E4  34.95
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 6678.72801 *A

  7) 1,3-Dinitrob 0.925 1.521 0.464 0.380 0.383 0.391 0.381 0.384 0.604 E4  68.78
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
```

Initial Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2188-ICC2188
Lab FileID: BB072468.D

```
              Response Ratio = 0.00000 + 3834.09008 *A

 8) 3,5-Dinitroa 1.587 0.992 0.969 0.790 0.727 0.717 0.680 0.702 0.895 E4  34.00
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 6982.32216 *A

 9) Nitrobenzene 7.673 4.460 3.793 3.178 3.161 3.173 3.061 3.176 3.959 E3  39.77
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 3153.89974 *A

10) Nitroglyceri 2.853 1.797 1.503 1.264 1.214 1.309 1.274 1.350 1.571 E3  35.11
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 1333.14464 *A

11) Tetryl       1.051 0.651 0.547 0.477 0.483 0.502 0.488 0.513 0.589 E4  33.11
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9994
              Response Ratio = 0.00000 + 5078.77910 *A

12) 2,4,6-Trinit 9.324 5.950 4.857 4.364 4.496 4.699 4.593 4.830 5.389 E3  30.85
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 4740.74418 *A

13) 2-Amino-4,6- 9.653 6.108 4.904 4.400 4.759 5.044 4.979 5.269 5.639 E3  30.05
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 5201.06184 *A

14) 4-Amino-2,6- 7.713 5.485 4.747 4.339 4.721 4.996 4.935 5.230 5.271 E3  19.83
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 5161.26815 *A

15) 3,4-Dinitrot 6.290 4.378 3.878 3.556 3.680 3.817 3.767 4.002 4.171 E3  21.36
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 3948.27654 *A

16) 2,4-Dinitrot 6.009 3.618 3.441 3.121 3.103 3.182 3.116 3.312 3.613 E3  27.27
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 3268.38875 *A

17) 2,6-Dinitrot 7.636 4.263 4.116 3.568 3.635 3.705 3.591 3.765 4.285 E3  32.15
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
              Response Ratio = 0.00000 + 3728.47061 *A

18) o-Nitrotolue 8.031 4.390 3.546 3.510 3.423 3.280 3.158 3.159 4.062 E3  40.65
            ---- Linear regr., Force(0,0) ----  Coefficient =  1.0000
              Response Ratio = 0.00000 + 3165.15531 *A

19) p-Nitrotolue 4.789 3.269 2.827 2.577 2.667 2.777 2.841 3.061 3.101 E3  23.09
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 3006.10203 *A

20) m-Nitrotolue 7.018 5.758 5.511 3.867 3.950 3.928 3.915 4.114 4.757 E3  25.04
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 4068.71563 *A

21) PETN         3.037 1.575 1.429 1.413 1.419 1.503 1.448 1.507 1.667 E3  33.39
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 1494.91436 *A

--------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###
```

8.7.1

8

Initial Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2188-ICC2188
Lab FileID: BB072468.D

BBB2167_041522.M Mon Apr 18 11:04:56 2022

Initial Calibration Verification

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2188-ICV2188
Lab FileID: BB072471.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1A.ch
Acq On : 15-Apr-2022, 15:29:23 Operator: FOUADS
Sample : icv2188-1000 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 14:37:09 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	498.840	-5.7	104	0.00	1.06- 1.66
2	HMX	1000.000	1079.011	-7.9	105	0.00	1.20- 1.80
3	DNX	1000.000	1047.967	-4.8	103	0.00	1.46- 2.06
4	MNX	1166.000	1222.964	-4.9	104	0.00	2.07- 2.67
5	RDX	1000.000	1080.144	-8.0	107	0.01	2.62- 3.42
6	1,3,5-Trinitrobenzene	1000.000	1065.414	-6.5	106	0.00	4.41- 5.21
7	1,3-Dinitrobenzene	1000.000	1075.543	-7.6	107	0.00	5.63- 6.43
8	3,5-Dinitroaniline	1000.000	1113.448	-11.3	111	0.01	6.04- 6.84
9	Nitrobenzene	1000.000	1053.829	-5.4	106	0.00	7.26- 8.06
		Amount	Calc.	%Drift			
10	Nitroglycerin	----------NA----------					
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	1041.601	-4.2	103	0.00	9.38-10.18
12	2,4,6-Trinitrotoluene	1000.000	1056.830	-5.7	105	0.00	9.77-10.57
13	2-Amino-4,6-Dinitrotol	1000.000	1075.008	-7.5	107	0.00	10.21-11.01
14	4-Amino-2,6-Dinitrotol	1000.000	1089.151	-8.9	108	0.00	10.74-11.54
15 S	3,4-Dinitrotoluene	----------NA----------					
16	2,4-Dinitrotoluene	1000.000	1066.589	-6.7	106	0.00	11.78-12.58
17	2,6-Dinitrotoluene	1000.000	1072.771	-7.3	107	0.00	12.26-13.06
18	o-Nitrotoluene	1000.000	1059.326	-5.9	107	0.00	15.33-16.21
19	p-Nitrotoluene	1000.000	1057.344	-5.7	106	0.00	15.77-16.77
20	m-Nitrotoluene	1000.000	1057.161	-5.7	107	0.00	16.54-17.54
		Amount	Calc.	%Drift			
21	PETN	----------NA----------					

***** Signal #2 *****

		Amount	Calc.	%Drift			
1	TNX	472.000	498.498	-5.6	104	0.00	1.06- 1.66
2	HMX	1000.000	1085.746	-8.6	104	0.00	1.20- 1.80
3	DNX	1000.000	1044.646	-4.5	103	0.00	1.46- 2.06
4	MNX	1166.000	1227.332	-5.3	104	0.00	2.07- 2.67
5	RDX	1000.000	1080.649	-8.1	107	0.01	2.62- 3.42
6	1,3,5-Trinitrobenzene	1000.000	1055.826	-5.6	105	0.00	4.41- 5.21
7	1,3-Dinitrobenzene	1000.000	1144.427	-14.4	112	0.00	5.63- 6.43

Initial Calibration Verification

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2188-ICV2188
Lab FileID: BB072471.D

8		3,5-Dinitroaniline	1000.000	1138.330	-13.8	111	0.01	6.04- 6.84
9		Nitrobenzene	1000.000	1059.454	-5.9	105	0.00	7.26- 8.06
10		Nitroglycerin	1000.000	850.109	15.0	87	0.00	8.80- 9.80
11		Tetryl	1000.000	1037.767	-3.8	105	0.00	9.38-10.18
12		2,4,6-Trinitrotoluene	1000.000	1059.657	-6.0	107	0.00	9.77-10.57
13		2-Amino-4,6-Dinitrotol	1000.000	1065.688	-6.6	110	0.00	10.21-11.01
14		4-Amino-2,6-Dinitrotol	1000.000	1074.492	-7.4	111	0.00	10.74-11.54
15	S	3,4-Dinitrotoluene			----------NA----------			
16		2,4-Dinitrotoluene	1000.000	1065.759	-6.6	109	0.00	11.78-12.58
17		2,6-Dinitrotoluene	1000.000	1077.333	-7.7	108	0.00	12.26-13.06
18		o-Nitrotoluene	1000.000	888.103	11.2	86	0.00	15.21-16.21
19		p-Nitrotoluene	1000.000	982.174	1.8	106	0.00	15.78-16.78
20		m-Nitrotoluene	1000.000	1032.182	-3.2	107	0.00	16.55-17.55
21		PETN	1000.000	1048.242	-4.8	104	0.00	18.09-19.29

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB072468.D BBB2167_041522.M Mon Apr 18 11:23:12 2022

8.7.2

8

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2196-CC2188
Lab FileID: BB072800.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1A.ch
Acq On : 03-May-2022, 17:03:33 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : op90781,GBB2196,10,,,50,1,soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	TNX	472.000	441.562	6.4	92 0.00	1.04- 1.64
2	HMX	1000.000	987.293	1.3	96 0.00	1.17- 1.77
3	DNX	1000.000	948.984	5.1	94 0.00	1.42- 2.02
4	MNX	1166.000	1101.603	5.5	94 0.02	2.00- 2.60
5	RDX	1000.000	972.532	2.7	96 0.02	2.51- 3.31
6	1,3,5-Trinitrobenzene	1000.000	964.056	3.6	96 0.02	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	969.526	3.0	97 0.02	5.46- 6.26
8	3,5-Dinitroaniline	1000.000	977.100	2.3	98 0.03	5.80- 6.60
9	Nitrobenzene	1000.000	963.711	3.6	97 0.02	7.03- 7.83
10	Nitroglycerin	---------- Amount Calc. %Drift ---------- NA ----------				
11	Tetryl	1000.000	967.582	3.2	96 0.03	8.99- 9.79
12	2,4,6-Trinitrotoluene	1000.000	942.749	5.7	94 0.03	9.44-10.24
13	2-Amino-4,6-Dinitrotol	1000.000	984.092	1.6	98 0.04	9.71-10.51
14	4-Amino-2,6-Dinitrotol	1000.000	979.774	2.0	97 0.04	10.19-10.99
15 S	3,4-Dinitrotoluene	1000.000	979.251	2.1	98 0.03	10.64-11.44
16	2,4-Dinitrotoluene	1000.000	963.968	3.6	96 0.03	11.34-12.14
17	2,6-Dinitrotoluene	1000.000	954.825	4.5	95 0.03	11.80-12.60
18	o-Nitrotoluene	1000.000	961.768	3.8	97 0.03	14.87-15.75
19	p-Nitrotoluene	1000.000	951.555	4.8	96 0.03	15.32-16.32
20	m-Nitrotoluene	1000.000	941.333	5.9	95 0.02	16.17-17.17
21	PETN	---------- Amount Calc. %Drift ---------- NA ----------				

***** Signal #2 *****

1	TNX	472.000	441.165	6.5	92 0.00	1.04- 1.64
2	HMX	1000.000	983.210	1.7	95 0.00	1.17- 1.77
3	DNX	1000.000	946.028	5.4	93 0.00	1.42- 2.02
4	MNX	1166.000	1104.536	5.3	94 0.02	2.00- 2.60
5	RDX	1000.000	974.667	2.5	97 0.02	2.51- 3.31
6	1,3,5-Trinitrobenzene	1000.000	973.901	2.6	97 0.02	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	1070.497	-7.0	105 0.02	5.46- 6.26

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2196-CC2188
Lab FileID: BB072800.D

8		3,5-Dinitroaniline	1000.000	1020.827	-2.1	99	0.03	5.80- 6.60
9		Nitrobenzene	1000.000	973.769	2.6	97	0.02	7.03- 7.83
10		Nitroglycerin	1000.000	941.892	5.8	96	0.02	8.58- 9.58
11		Tetryl	1000.000	975.250	2.5	99	0.03	8.99- 9.79
12		2,4,6-Trinitrotoluene	1000.000	940.327	6.0	95	0.03	9.43-10.23
13		2-Amino-4,6-Dinitrotol	1000.000	986.886	1.3	102	0.04	9.71-10.51
14		4-Amino-2,6-Dinitrotol	1000.000	973.185	2.7	101	0.04	10.19-10.99
15	S	3,4-Dinitrotoluene	1000.000	978.250	2.2	101	0.03	10.64-11.44
16		2,4-Dinitrotoluene	1000.000	962.729	3.7	99	0.03	11.34-12.14
17		2,6-Dinitrotoluene	1000.000	957.581	4.2	96	0.03	11.80-12.60
18		o-Nitrotoluene	1000.000	955.593	4.4	92	0.03	14.75-15.75
19		p-Nitrotoluene	1000.000	927.591	7.2	100	0.03	15.32-16.32
20		m-Nitrotoluene	1000.000	909.225	9.1	94	0.02	16.17-17.17
21		PETN	1000.000	953.488	4.7	95	0.00	17.96-19.16

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB072468.D BBB2167_041522.M Wed May 04 13:59:51 2022

8.7.3

8

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2196-CC2188
Lab FileID: BB072811.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1A.ch
Acq On : 03-May-2022, 22:46:10 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : op90781,GBB2196,10,,,50,1,soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	440.825	6.6	92	0.00	1.04- 1.64
2	HMX	1000.000	1002.564	-0.3	97	0.00	1.17- 1.77
3	DNX	1000.000	950.742	4.9	94	0.00	1.42- 2.02
4	MNX	1166.000	1105.075	5.2	94	0.01	2.00- 2.60
5	RDX	1000.000	977.081	2.3	97	0.01	2.51- 3.31
6	1,3,5-Trinitrobenzene	1000.000	937.966	6.2	94	0.01	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	966.914	3.3	96	0.01	5.46- 6.26
8	3,5-Dinitroaniline	1000.000	977.654	2.2	98	0.02	5.80- 6.60
9	Nitrobenzene	1000.000	958.732	4.1	96	0.01	7.03- 7.83

	Compound	Amount	Calc.	%Drift			
10	Nitroglycerin	----------NA----------					

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
11	Tetryl	1000.000	970.650	2.9	96	0.00	8.99- 9.79
12	2,4,6-Trinitrotoluene	1000.000	940.839	5.9	94	0.00	9.44-10.24
13	2-Amino-4,6-Dinitrotol	1000.000	984.378	1.6	98	0.02	9.71-10.51
14	4-Amino-2,6-Dinitrotol	1000.000	985.595	1.4	98	0.02	10.19-10.99
15 S	3,4-Dinitrotoluene	1000.000	976.947	2.3	97	0.00	10.64-11.44
16	2,4-Dinitrotoluene	1000.000	964.656	3.5	96	0.00	11.34-12.14
17	2,6-Dinitrotoluene	1000.000	957.922	4.2	95	0.00	11.80-12.60
18	o-Nitrotoluene	1000.000	956.550	4.3	96	0.00	14.87-15.75
19	p-Nitrotoluene	1000.000	948.085	5.2	95	0.00	15.32-16.32
20	m-Nitrotoluene	1000.000	937.216	6.3	95	0.00	16.17-17.17

	Compound	Amount	Calc.	%Drift			
21	PETN	----------NA----------					

***** Signal #2 *****

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	439.344	6.9	92	0.00	1.04- 1.64
2	HMX	1000.000	1004.997	-0.5	97	0.00	1.17- 1.77
3	DNX	1000.000	953.424	4.7	94	0.00	1.42- 2.02
4	MNX	1166.000	1101.838	5.5	94	0.01	2.00- 2.60
5	RDX	1000.000	973.864	2.6	97	0.01	2.51- 3.31
6	1,3,5-Trinitrobenzene	1000.000	982.839	1.7	97	0.01	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	1057.359	-5.7	104	0.01	5.46- 6.26

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2196-CC2188
Lab FileID: BB072811.D

8		3,5-Dinitroaniline	1000.000	1012.397	-1.2	99	0.02	5.80- 6.60
9		Nitrobenzene	1000.000	948.383	5.2	94	0.01	7.03- 7.83
10		Nitroglycerin	1000.000	931.474	6.9	95	0.00	8.58- 9.58
11		Tetryl	1000.000	968.928	3.1	98	0.00	8.99- 9.79
12		2,4,6-Trinitrotoluene	1000.000	938.535	6.1	95	0.00	9.43-10.23
13		2-Amino-4,6-Dinitrotol	1000.000	987.020	1.3	102	0.02	9.71-10.51
14		4-Amino-2,6-Dinitrotol	1000.000	974.715	2.5	101	0.02	10.19-10.99
15	S	3,4-Dinitrotoluene	1000.000	974.389	2.6	101	0.00	10.64-11.44
16		2,4-Dinitrotoluene	1000.000	963.313	3.7	99	0.00	11.34-12.14
17		2,6-Dinitrotoluene	1000.000	959.014	4.1	97	0.00	11.80-12.60
18		o-Nitrotoluene	1000.000	959.117	4.1	93	0.00	14.75-15.75
19		p-Nitrotoluene	1000.000	933.644	6.6	101	0.00	15.32-16.32
20		m-Nitrotoluene	1000.000	906.935	9.3	94	0.00	16.17-17.17
21		PETN	1000.000	937.443	6.3	93	-0.02	17.96-19.16

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB072468.D BBB2167_041522.M Wed May 04 14:28:20 2022

8.7.4

8

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2196-CC2188
Lab FileID: BB072821.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1A.ch
Acq On : 04-May-2022, 03:59:38 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : op90781,GBB2196,10,,,50,1,soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	TNX	472.000	438.697	7.1	92 0.00	1.04- 1.64
2	HMX	1000.000	1004.348	-0.4	98 0.00	1.17- 1.77
3	DNX	1000.000	951.522	4.8	94 0.00	1.42- 2.02
4	MNX	1166.000	1100.157	5.6	94 0.00	2.00- 2.60
5	RDX	1000.000	969.840	3.0	96 0.00	2.51- 3.31
6	1,3,5-Trinitrobenzene	1000.000	955.485	4.5	95 0.00	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	967.259	3.3	97 0.01	5.46- 6.26
8	3,5-Dinitroaniline	1000.000	974.224	2.6	97 0.01	5.80- 6.60
9	Nitrobenzene	1000.000	945.736	5.4	95 0.01	7.03- 7.83

	Compound	Amount	Calc.	%Drift
10	Nitroglycerin			NA

	Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
11	Tetryl	1000.000	964.072	3.6	96 0.02	8.99- 9.79
12	2,4,6-Trinitrotoluene	1000.000	940.529	5.9	94 0.02	9.44-10.24
13	2-Amino-4,6-Dinitrotol	1000.000	979.680	2.0	97 0.03	9.71-10.51
14	4-Amino-2,6-Dinitrotol	1000.000	982.268	1.8	98 0.03	10.19-10.99
15 S	3,4-Dinitrotoluene	1000.000	972.777	2.7	97 0.02	10.64-11.44
16	2,4-Dinitrotoluene	1000.000	962.549	3.7	96 0.03	11.34-12.14
17	2,6-Dinitrotoluene	1000.000	956.209	4.4	95 0.02	11.80-12.60
18	o-Nitrotoluene	1000.000	952.068	4.8	96 0.01	14.87-15.75
19	p-Nitrotoluene	1000.000	946.226	5.4	95 0.01	15.32-16.32
20	m-Nitrotoluene	1000.000	937.873	6.2	95 0.00	16.17-17.17

	Compound	Amount	Calc.	%Drift
21	PETN			NA

***** Signal #2 *****

	Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	TNX	472.000	437.486	7.3	91 0.00	1.04- 1.64
2	HMX	1000.000	1004.574	-0.5	97 0.00	1.17- 1.77
3	DNX	1000.000	952.978	4.7	94 0.00	1.42- 2.02
4	MNX	1166.000	1098.054	5.8	93 0.00	2.00- 2.60
5	RDX	1000.000	969.586	3.0	96 0.00	2.51- 3.31
6	1,3,5-Trinitrobenzene	1000.000	962.611	3.7	95 0.00	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	1054.653	-5.5	103 0.01	5.46- 6.26

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2196-CC2188
Lab FileID: BB072821.D

8		3,5-Dinitroaniline	1000.000	1012.936	-1.3	99	0.01	5.80- 6.60
9		Nitrobenzene	1000.000	942.732	5.7	94	0.01	7.03- 7.83
10		Nitroglycerin	1000.000	935.895	6.4	95	0.02	8.58- 9.58
11		Tetryl	1000.000	966.819	3.3	98	0.02	8.99- 9.79
12		2,4,6-Trinitrotoluene	1000.000	937.795	6.2	95	0.02	9.43-10.23
13		2-Amino-4,6-Dinitrotol	1000.000	983.344	1.7	101	0.03	9.71-10.51
14		4-Amino-2,6-Dinitrotol	1000.000	971.169	2.9	100	0.03	10.19-10.99
15	S	3,4-Dinitrotoluene	1000.000	967.018	3.3	100	0.02	10.64-11.44
16		2,4-Dinitrotoluene	1000.000	956.812	4.3	98	0.03	11.34-12.14
17		2,6-Dinitrotoluene	1000.000	962.206	3.8	97	0.02	11.80-12.60
18		o-Nitrotoluene	1000.000	944.996	5.5	91	0.01	14.75-15.75
19		p-Nitrotoluene	1000.000	920.141	8.0	100	0.01	15.32-16.32
20		m-Nitrotoluene	1000.000	899.205	10.1	93	0.00	16.17-17.17
21		PETN	1000.000	941.736	5.8	94	-0.01	17.96-19.16

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB072468.D BBB2167_041522.M Thu May 05 09:00:22 2022

8.7.5

8

Initial Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3094-ICC3094
Lab FileID: GG623374.D

Response Factor Report G1315B

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:47:18 2022
Response via : Initial Calibration

Calibration Files
20 =GG623369.D 50 =GG623370.D 100 =GG623371.D 200 =GG623372.D
500 =GG623373.D 1000=GG623374.D 2500=GG623375.D 5000=GG623376.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	7.581	7.710	8.056	7.879	7.598	7.394	7.329	7.366	7.614 E3	3.39
2) HMX	3.886	3.328	3.286	3.205	3.145	2.993	2.998	3.013	3.232 E3	9.11
3) DNX	6.114	6.388	6.724	6.743	6.467	6.173	6.186	6.241	6.379 E3	3.88
4) MNX	5.926	5.814	5.940	5.806	5.682	5.403	5.416	5.453	5.680 E3	3.99
5) 1,3,5-Trinit	8.992	9.425	9.690	9.466	9.297	8.880	8.920	8.997	9.208 E3	3.27
6) RDX	4.430	4.388	4.826	4.546	4.531	4.300	4.300	4.317	4.455 E3	4.01
7) 1,3-Dinitrob	1.259	1.286	1.365	1.317	1.281	1.228	1.229	1.241	1.276 E4	3.72
8) Nitrobenzene	7.107	7.917	8.665	8.187	8.102	7.749	7.816	7.937	7.935 E3	5.55
9) 2,4,6-Trinit	9.077	9.089	9.322	9.131	9.013	8.634	8.663	8.736	8.958 E3	2.79
10) Nitroglyceri							7.769	8.368	8.069 E1	5.24
11) Tetryl	7.463	6.874	7.453	7.264	7.121	6.844	6.901	6.984	7.113 E3	3.57
12) 3,4-Dinitrot	4.977	5.210	5.177	5.237	4.926	4.755	4.752	4.833	4.983 E3	4.05
13) 2,6-Dinitrot	6.483	6.510	6.760	6.570	6.463	6.183	6.195	6.235	6.425 E3	3.19
14) 2,4-Dinitrot	1.176	1.133	1.220	1.183	1.163	1.115	1.117	1.129	1.154 E4	3.24
15) 3,5-Dinitroa	0.971	0.970	1.027	1.001	0.982	0.939	0.943	0.953	0.973 E4	3.07
16) o-Nitrotolue	4.503	5.101	5.486	5.053	5.093	4.884	4.957	5.052	5.016 E3	5.43
17) p-Nitrotolue	5.669	5.374	5.649	5.444	5.356	5.118	5.153	5.223	5.373 E3	3.88
18) 4-Amino-2,6-	5.669	5.374	5.649	5.444	5.356	5.118	5.153	5.223	5.373 E3	3.88
19) m-Nitrotolue	5.363	5.444	6.019	5.645	5.513	5.269	5.330	5.414	5.500 E3	4.36
20) 2-Amino-4,6-	9.178	8.642	9.208	8.945	8.620	8.266	8.275	8.351	8.686 E3	4.45
21) PETN									0.000	-1.00

Signal #2

1) TNX	7.581	7.710	8.056	7.879	7.575	7.394	7.329	7.366	7.611 E3	3.40
2) HMX	3.886	3.328	3.286	3.205	3.145	2.993	2.998	3.013	3.232 E3	9.11
3) DNX	6.097	6.388	6.647	6.636	6.467	6.173	6.186	6.241	6.354 E3	3.36
4) MNX	5.926	5.814	5.940	5.806	5.682	5.403	5.416	5.460	5.681 E3	3.97
5) 1,3,5-Trinit	8.992	9.425	9.690	9.466	9.297	8.880	8.920	9.010	9.210 E3	3.26
6) RDX	4.430	4.388	4.826	4.546	4.531	4.300	4.300	4.347	4.458 E3	3.94
7) 1,3-Dinitrob	1.266	1.032	1.329	1.007	0.981	0.937	0.952	0.938	1.055 E4	14.59
8) Nitrobenzene	0.743	1.191	0.859	0.778	0.785	0.720	0.749	0.742	0.821 E4	18.95
---- Linear regr., Force(0,0) ---- Coefficient = 0.9999										
Response Ratio = 0.00000 + 7429.03515 *A										
9) 2,4,6-Trinit	1.211	1.245	1.389	1.238	1.227	1.111	1.164	1.157	1.218 E4	6.84
10) Nitroglyceri	2.717	3.910	3.910	3.343	2.994	2.838	3.100	3.073	3.236 E3	14.07
11) Tetryl	1.680	1.392	1.269	1.259	1.259	1.200	1.202	1.208	1.309 E4	12.41
12) 3,4-Dinitrot	1.506	1.227	1.060	1.152	1.017	0.986	0.972	0.991	1.114 E4	16.35
---- Linear regr., Force(0,0) ---- Coefficient = 0.9999										
Response Ratio = 0.00000 + 9875.31928 *A										
13) 2,6-Dinitrot	1.025	1.158	1.033	0.969	0.906	0.870	0.875	0.874	0.964 E4	10.67
14) 2,4-Dinitrot	1.353	0.569	1.003	0.900	0.829	0.795	0.793	0.808	0.881 E4	25.68
---- Linear regr., Force(0,0) ---- Coefficient = 0.9998										
Response Ratio = 0.00000 + 8050.44809 *A										

Initial Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3094-ICC3094
Lab FileID: GG623374.D

```
15) 3,5-Dinitroa 2.115 1.723 1.704 1.809 1.657 1.561 1.566 1.589 1.716 E4  10.66
16) o-Nitrotolue 1.167 0.675 0.980 0.835 0.767 0.741 0.734 0.757 0.832 E4  19.62
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 7520.83854 *A

17) p-Nitrotolue 0.979 1.002 1.007 0.981 0.984 0.947 0.945 0.966 0.976 E4   2.35
18) 4-Amino-2,6- 0.949 1.002 1.007 0.981 0.984 0.947 0.945 0.966 0.973 E4   2.56
19) m-Nitrotolue 0.985 0.933 1.057 0.884 0.951 0.906 0.905 0.928 0.944 E4   5.85
20) 2-Amino-4,6- 2.314 1.093 1.152 1.254 1.236 1.217 1.189 1.210 1.333 E4  29.97
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 12064.35857 *A

21) PETN         1.271 0.545 0.354 0.309 0.381 0.333 0.325 0.326 0.481 E4  68.28
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 3264.67437 *A

---------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          GGG3094_012422.M        Thu Jan 27 12:54:28 2022
```

8.7.6

8

Initial Calibration Verification

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3094-ICV3094
Lab FileID: GG623377.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623377.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623377.D\dad1A.ch
Acq On : 24-Jan-2022, 17:03:37 Operator: jamesb
Sample : icv3094-1000 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:47:18 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	484.455	-2.6	106	0.00	3.90- 5.35
2	HMX	1000.000	951.240	4.9	103	0.00	4.81- 5.81
3	DNX	1000.000	1035.858	-3.6	107	0.00	5.00- 6.00
4	MNX	1166.000	1196.838	-2.6	108	0.00	6.18- 7.18
5	1,3,5-Trinitrobenzene	1000.000	1000.364	-0.0	104	0.00	7.08- 8.08
6	RDX	1000.000	1009.727	-1.0	105	0.00	7.49- 8.49
7	1,3-Dinitrobenzene	1000.000	996.368	0.4	103	0.00	9.42-10.42
8	Nitrobenzene	1000.000	1019.495	-1.9	104	0.00	10.40-11.40
9	2,4,6-Trinitrotoluene	1000.000	975.321	2.5	101	0.00	11.30-12.30
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	971.442	2.9	101	-0.01	12.73-13.73
12 S	3,4-Dinitrotoluene		----------NA----------				
13	2,6-Dinitrotoluene	1000.000	935.279	6.5	97	0.00	14.14-15.14
14	2,4-Dinitrotoluene	1000.000	993.074	0.7	103	0.00	14.76-15.76
15	3,5-Dinitroaniline	1000.000	1067.027	-6.7	111	-0.02	15.59-16.59
16	o-Nitrotoluene	1000.000	1026.304	-2.6	105	0.00	16.37-17.37
17	p-Nitrotoluene	2000.000	1973.455	1.3	104	-0.01	17.45-18.45
18	4-Amino-2,6-Dinitrotol	2000.000	1973.455	1.3	104	-0.01	17.45-18.45
19	m-Nitrotoluene	1000.000	1011.245	-1.1	106	0.00	18.62-19.62
20	2-Amino-4,6-Dinitrotol	1000.000	982.119	1.8	103	-0.02	19.30-20.30
21	PETN		----------NA----------				

***** Signal #2 *****

1	TNX	472.000	484.643	-2.7	106	0.00	4.33- 5.35
2	HMX	1000.000	951.240	4.9	103	0.00	4.81- 5.81
3	DNX	1000.000	1039.954	-4.0	107	0.00	5.00- 6.00
4	MNX	1166.000	1196.642	-2.6	108	0.00	6.18- 7.18
5	1,3,5-Trinitrobenzene	1000.000	1000.199	-0.0	104	0.00	7.08- 8.08
6	RDX	1000.000	1008.873	-0.9	105	0.00	7.49- 8.49
7	1,3-Dinitrobenzene	1000.000	943.619	5.6	106	0.00	9.42-10.42
	----------	Amount	Calc.	%Drift			----------
8	Nitrobenzene	1000.000	1086.783	-8.7	112	0.00	10.40-11.40
	----------	Amount	Calc.	%Drift			----------
9	2,4,6-Trinitrotoluene	1000.000	983.564	1.6	108	0.00	11.30-12.30
10	Nitroglycerin	1000.000	983.278	1.7	112	0.00	12.10-13.10
11	Tetryl	1000.000	932.494	6.8	102	-0.01	12.73-13.73
	----------	Amount	Calc.	%Drift			----------

Initial Calibration Verification

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3094-ICV3094
Lab FileID: GG623377.D

12	S	3,4-Dinitrotoluene			----------NA----------			
			Amount	Calc.	%Drift			
13		2,6-Dinitrotoluene	1000.000	915.404	8.5	101	0.01	14.14-15.14
			Amount	Calc.	%Drift			
14		2,4-Dinitrotoluene	1000.000	1004.062	-0.4	102	0.00	14.76-15.76
			Amount	Calc.	%Drift			
15		3,5-Dinitroaniline	1000.000	1002.591	-0.3	110	-0.02	15.59-16.59
			Amount	Calc.	%Drift			
16		o-Nitrotoluene	1000.000	1032.425	-3.2	105	0.00	16.37-17.37
			Amount	Calc.	%Drift			
17		p-Nitrotoluene	2000.000	2001.634	-0.1	103	-0.02	17.45-18.45
18		4-Amino-2,6-Dinitrotol	2000.000	2009.284	-0.5	103	-0.02	17.45-18.45
19		m-Nitrotoluene	1000.000	1012.806	-1.3	105	0.00	18.62-19.62
			Amount	Calc.	%Drift			
20		2-Amino-4,6-Dinitrotol	1000.000	1041.938	-4.2	103	-0.02	19.30-20.30
21		PETN	1000.000	992.052	0.8	97	0.00	21.19-22.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG623374.D GGG3094_012422.M Thu Jan 27 12:54:16 2022

8.7.7

8

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3135-CC3094
Lab FileID: GG624050.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1A.ch
Acq On    : 04-May-2022, 12:45:45                    Operator: fouads
Sample    : CC3094-1000                              Inst    : G1315B
Misc      : op90891,GGG3135,1000,,,10,1,water        Multiplr: 1.00
IntFile Signal #1: events3.e     IntFile Signal #2: events2.e

Method       : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title        : Explosives by 8330A,8330B,8332
Last Update  : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 200%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	490.456	-3.9	107	0.00	3.76- 5.20
2	HMX	1000.000	953.046	4.7	103	-0.01	4.58- 5.58
3	DNX	1000.000	1058.392	-5.8	109	0.00	4.77- 5.77
4	MNX	1166.000	1190.451	-2.1	107	0.00	5.81- 6.81
5	1,3,5-Trinitrobenzene	1000.000	981.404	1.9	102	0.00	6.71- 7.71
6	RDX	1000.000	987.845	1.2	102	-0.01	7.07- 8.07
7	1,3-Dinitrobenzene	1000.000	984.566	1.5	102	0.00	8.98- 9.98
8	Nitrobenzene	1000.000	923.205	7.7	95	0.00	9.90-10.90
9	2,4,6-Trinitrotoluene	1000.000	982.159	1.8	102	0.00	10.71-11.71
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	978.863	2.1	102	-0.02	11.97-12.97
12 S	3,4-Dinitrotoluene	1000.000	997.312	0.3	105	-0.04	13.19-14.19
13	2,6-Dinitrotoluene	1000.000	953.385	4.7	99	-0.01	13.49-14.49
14	2,4-Dinitrotoluene	1000.000	982.472	1.8	102	-0.01	14.12-15.12
15	3,5-Dinitroaniline	1000.000	989.017	1.1	103	-0.02	14.91-15.91
16	o-Nitrotoluene	1000.000	907.433	9.3	93	-0.03	15.65-16.65
17	p-Nitrotoluene	2000.000	1891.929	5.4	99	-0.04	16.72-17.72
18	4-Amino-2,6-Dinitrotol	2000.000	1891.929	5.4	99	-0.04	16.72-17.72
19	m-Nitrotoluene	1000.000	897.111	10.3	94	-0.04	17.91-18.91
20	2-Amino-4,6-Dinitrotol	1000.000	973.926	2.6	102	-0.05	18.63-19.63
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

1	TNX	472.000	488.018	-3.4	106	0.00	4.18- 5.20
2	HMX	1000.000	938.725	6.1	101	0.00	4.58- 5.58
3	DNX	1000.000	1025.782	-2.6	106	0.00	4.77- 5.77
4	MNX	1166.000	1190.311	-2.1	107	0.00	5.81- 6.81
5	1,3,5-Trinitrobenzene	1000.000	981.368	1.9	102	0.00	6.71- 7.71
6	RDX	1000.000	986.751	1.3	102	-0.01	7.07- 8.07
7	1,3-Dinitrobenzene	1000.000	895.330	10.5	101	0.00	8.98- 9.98
	----------	Amount	Calc.	%Drift	----------		
8	Nitrobenzene	1000.000	1015.425	-1.5	105	0.00	9.90-10.90
	----------	Amount	Calc.	%Drift	----------		
9	2,4,6-Trinitrotoluene	1000.000	989.002	1.1	108	0.00	10.71-11.71
10	Nitroglycerin	1000.000	1075.097	-7.5	123	0.00	11.43-12.43
11	Tetryl	1000.000	941.953	5.8	103	-0.02	11.97-12.97
	----------	Amount	Calc.	%Drift	----------		

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3135-CC3094
Lab FileID: GG624050.D

			Amount	Calc.	%Drift			
12	S	3,4-Dinitrotoluene	1000.000	1014.156	-1.4	102	-0.04	13.19-14.19
			Amount	Calc.	%Drift			
13		2,6-Dinitrotoluene	1000.000	892.502	10.7	99	-0.01	13.49-14.49
			Amount	Calc.	%Drift			
14		2,4-Dinitrotoluene	1000.000	1017.686	-1.8	103	-0.01	14.12-15.12
			Amount	Calc.	%Drift			
15		3,5-Dinitroaniline	1000.000	931.423	6.9	102	-0.02	14.91-15.91
			Amount	Calc.	%Drift			
16		o-Nitrotoluene	1000.000	890.839	10.9	90	-0.03	15.65-16.65
			Amount	Calc.	%Drift			
17		p-Nitrotoluene	2000.000	1910.525	4.5	99	-0.04	16.72-17.72
18		4-Amino-2,6-Dinitrotol	2000.000	1917.827	4.1	99	-0.04	16.72-17.72
19		m-Nitrotoluene	1000.000	887.932	11.2	92	-0.05	17.91-18.91
			Amount	Calc.	%Drift			
20		2-Amino-4,6-Dinitrotol	1000.000	1031.295	-3.1	102	-0.05	18.63-19.63
21		PETN	1000.000	1105.933	-10.6	108	-0.05	20.32-21.32

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG623374.D GGG3094_012422.M Thu May 05 14:54:42 2022

8.7.8

8

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3135-CC3094
Lab FileID: GG624061.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1A.ch
Acq On : 04-May-2022, 21:11:59 Operator: fouads
Sample : cc3094-1000 Inst : G1315B
Misc : op90891,GGG3135,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	475.814	-0.8	104	0.00	3.76- 5.20
2	HMX	1000.000	988.469	1.2	107	0.01	4.58- 5.58
3	DNX	1000.000	1051.641	-5.2	109	0.01	4.77- 5.77
4	MNX	1166.000	1176.252	-0.9	106	0.03	5.81- 6.81
5	1,3,5-Trinitrobenzene	1000.000	965.925	3.4	100	0.02	6.71- 7.71
6	RDX	1000.000	977.817	2.2	101	0.02	7.07- 8.07
7	1,3-Dinitrobenzene	1000.000	974.360	2.6	101	0.02	8.98- 9.98
8	Nitrobenzene	1000.000	949.708	5.0	97	0.02	9.90-10.90
9	2,4,6-Trinitrotoluene	1000.000	967.511	3.2	100	0.03	10.71-11.71
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	978.958	2.1	102	0.04	11.97-12.97
12 S	3,4-Dinitrotoluene	1000.000	976.376	2.4	102	0.02	13.19-14.19
13	2,6-Dinitrotoluene	1000.000	956.807	4.3	99	0.03	13.49-14.49
14	2,4-Dinitrotoluene	1000.000	971.468	2.9	101	0.03	14.12-15.12
15	3,5-Dinitroaniline	1000.000	976.159	2.4	101	0.02	14.91-15.91
16	o-Nitrotoluene	1000.000	934.581	6.5	96	0.03	15.65-16.65
17	p-Nitrotoluene	2000.000	1884.625	5.8	99	0.01	16.72-17.72
18	4-Amino-2,6-Dinitrotol	2000.000	1884.625	5.8	99	0.01	16.72-17.72
19	m-Nitrotoluene	1000.000	916.016	8.4	96	0.01	17.91-18.91
20	2-Amino-4,6-Dinitrotol	1000.000	957.539	4.2	101	0.00	18.63-19.63
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

1	TNX	472.000	478.488	-1.4	104	0.00	4.18- 5.20
2	HMX	1000.000	910.701	8.9	98	0.02	4.58- 5.58
3	DNX	1000.000	1010.478	-1.0	104	0.02	4.77- 5.77
4	MNX	1166.000	1176.059	-0.9	106	0.03	5.81- 6.81
5	1,3,5-Trinitrobenzene	1000.000	965.901	3.4	100	0.02	6.71- 7.71
6	RDX	1000.000	976.713	2.3	101	0.02	7.07- 8.07
7	1,3-Dinitrobenzene	1000.000	946.700	5.3	107	0.02	8.98- 9.98

		---------- Amount	Calc.	%Drift	----------		
8	Nitrobenzene	1000.000	1056.343	-5.6	109	0.03	9.90-10.90

		---------- Amount	Calc.	%Drift	----------		
9	2,4,6-Trinitrotoluene	1000.000	995.590	0.4	109	0.03	10.71-11.71
10	Nitroglycerin	1000.000	1048.913	-4.9	120	0.04	11.43-12.43
11	Tetryl	1000.000	958.541	4.1	105	0.04	11.97-12.97

	---------- Amount	Calc.	%Drift	----------

Continuing Calibration Summary

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3135-CC3094
Lab FileID: GG624061.D

			Amount	Calc.	%Drift			
12	S	3,4-Dinitrotoluene	1000.000	1022.825	-2.3	102	0.01	13.19-14.19
			Amount	Calc.	%Drift			
13		2,6-Dinitrotoluene	1000.000	910.973	8.9	101	0.03	13.49-14.49
			Amount	Calc.	%Drift			
14		2,4-Dinitrotoluene	1000.000	1006.459	-0.6	102	0.03	14.12-15.12
			Amount	Calc.	%Drift			
15		3,5-Dinitroaniline	1000.000	931.757	6.8	102	0.02	14.91-15.91
			Amount	Calc.	%Drift			
16		o-Nitrotoluene	1000.000	956.621	4.3	97	0.03	15.65-16.65
			Amount	Calc.	%Drift			
17		p-Nitrotoluene	2000.000	1909.441	4.5	98	0.01	16.72-17.72
18		4-Amino-2,6-Dinitrotol	2000.000	1916.738	4.2	98	0.01	16.72-17.72
19		m-Nitrotoluene	1000.000	919.248	8.1	96	0.01	17.91-18.91
			Amount	Calc.	%Drift			
20		2-Amino-4,6-Dinitrotol	1000.000	978.152	2.2	97	0.00	18.63-19.63
21		PETN	1000.000	964.824	3.5	95	0.03	20.32-21.32

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG623374.D GGG3094_012422.M Thu May 05 14:53:37 2022

8.7.9

8

Run Sequence Report

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GBB2188 **Method:** SW846 8330A **Instrument ID:** GCBB

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GBB2188-IC2188	BB072463.D	04/15/22 09:31	n/a	Initial cal 20
GBB2188-IC2188	BB072464.D	04/15/22 10:02	n/a	Initial cal 50
GBB2188-IC2188	BB072465.D	04/15/22 10:33	n/a	Initial cal 100
GBB2188-IC2188	BB072466.D	04/15/22 11:04	n/a	Initial cal 200
GBB2188-IC2188	BB072467.D	04/15/22 11:35	n/a	Initial cal 500
GBB2188-ICC2188	BB072468.D	04/15/22 12:06	n/a	Initial cal 1000
GBB2188-IC2188	BB072469.D	04/15/22 12:37	n/a	Initial cal 2500
GBB2188-IC2188	BB072470.D	04/15/22 13:09	n/a	Initial cal 5000
GBB2188-ICV2188	BB072471.D	04/15/22 15:29	n/a	Initial cal verification 1000
OP90689-MB	BB072472.D	04/15/22 16:02	OP90689	Method Blank
OP90689-BS	BB072473.D	04/15/22 16:33	OP90689	Blank Spike
ZZZZZZ	BB072474.D	04/15/22 17:05	OP90689	(unrelated sample)
ZZZZZZ	BB072475.D	04/15/22 17:36	OP90689	(unrelated sample)
ZZZZZZ	BB072476.D	04/15/22 18:07	OP90689	(unrelated sample)
ZZZZZZ	BB072477.D	04/15/22 18:38	OP90689	(unrelated sample)
ZZZZZZ	BB072478.D	04/15/22 19:09	OP90689	(unrelated sample)
FA94700-16	BB072479.D	04/15/22 19:40	OP90689	(used for QC only; not part of job FA95241)
OP90689-MS	BB072480.D	04/15/22 20:11	OP90689	Matrix Spike
OP90689-MSD	BB072481.D	04/15/22 20:42	OP90689	Matrix Spike Duplicate
GBB2188-CC2188	BB072483.D	04/15/22 21:44	n/a	Continuing cal 1000
ZZZZZZ	BB072484.D	04/15/22 22:15	OP90775	(unrelated sample)
ZZZZZZ	BB072485.D	04/15/22 22:46	OP90689	(unrelated sample)
ZZZZZZ	BB072486.D	04/15/22 23:17	OP90688	(unrelated sample)
OP90759-MB	BB072487.D	04/15/22 23:48	OP90759	Method Blank
OP90759-BS	BB072488.D	04/16/22 00:19	OP90759	Blank Spike
FA94818-1	BB072489.D	04/16/22 00:50	OP90759	(used for QC only; not part of job FA95241)
OP90759-MS	BB072490.D	04/16/22 01:22	OP90759	Matrix Spike
OP90759-MSD	BB072491.D	04/16/22 01:53	OP90759	Matrix Spike Duplicate
ZZZZZZ	BB072492.D	04/16/22 02:24	OP90759	(unrelated sample)
ZZZZZZ	BB072493.D	04/16/22 02:55	OP90759	(unrelated sample)
GBB2188-CC2188	BB072495.D	04/16/22 03:57	n/a	Continuing cal 1000
ZZZZZZ	BB072496.D	04/16/22 04:28	OP90759	(unrelated sample)
ZZZZZZ	BB072497.D	04/16/22 04:59	OP90759	(unrelated sample)
ZZZZZZ	BB072498.D	04/16/22 05:30	OP90759	(unrelated sample)
ZZZZZZ	BB072499.D	04/16/22 06:01	OP90759	(unrelated sample)
ZZZZZZ	BB072500.D	04/16/22 06:32	OP90759	(unrelated sample)
ZZZZZZ	BB072501.D	04/16/22 07:03	OP90759	(unrelated sample)
ZZZZZZ	BB072502.D	04/16/22 07:34	OP90759	(unrelated sample)
ZZZZZZ	BB072503.D	04/16/22 08:05	OP90689	(unrelated sample)
GBB2188-ECC2188	BB072505.D	04/16/22 09:07	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GBB2196 **Method:** SW846 8330A **Instrument ID:** GCBB

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GBB2196-CC2188	BB072788.D	05/03/22 10:02	n/a	Continuing cal 1000
OP90975-MB	BB072789.D	05/03/22 11:19	OP90975	Method Blank
OP90975-BS	BB072790.D	05/03/22 11:50	OP90975	Blank Spike
FA95194-1	BB072791.D	05/03/22 12:21	OP90975	(used for QC only; not part of job FA95241)
OP90975-MS	BB072792.D	05/03/22 12:52	OP90975	Matrix Spike
OP90975-MSD	BB072793.D	05/03/22 13:23	OP90975	Matrix Spike Duplicate
ZZZZZZ	BB072794.D	05/03/22 13:54	OP90975	(unrelated sample)
ZZZZZZ	BB072795.D	05/03/22 14:25	OP90975	(unrelated sample)
ZZZZZZ	BB072796.D	05/03/22 14:56	OP90975	(unrelated sample)
ZZZZZZ	BB072797.D	05/03/22 15:27	OP90975	(unrelated sample)
GBB2196-CC2188	BB072800.D	05/03/22 17:03	n/a	Continuing cal 1000
ZZZZZZ	BB072801.D	05/03/22 17:34	OP90975	(unrelated sample)
ZZZZZZ	BB072802.D	05/03/22 18:05	OP90975	(unrelated sample)
ZZZZZZ	BB072803.D	05/03/22 18:36	OP90981	(unrelated sample)
ZZZZZZ	BB072804.D	05/03/22 19:07	OP90981	(unrelated sample)
ZZZZZZ	BB072805.D	05/03/22 19:39	OP90981	(unrelated sample)
ZZZZZZ	BB072806.D	05/03/22 20:10	OP90981	(unrelated sample)
ZZZZZZ	BB072807.D	05/03/22 20:41	OP90981	(unrelated sample)
OP91013-MB	BB072808.D	05/03/22 21:12	OP91013	Method Blank
OP91013-BS	BB072809.D	05/03/22 21:43	OP91013	Blank Spike
GBB2196-CC2188	BB072811.D	05/03/22 22:46	n/a	Continuing cal 1000
FA95241-1	BB072812.D	05/03/22 23:17	OP91013	54MW13
OP91013-MS	BB072813.D	05/03/22 23:49	OP91013	Matrix Spike
OP91013-MSD	BB072814.D	05/04/22 00:20	OP91013	Matrix Spike Duplicate
FA95241-2	BB072815.D	05/04/22 00:52	OP91013	54MW10
OP91049-BS	BB072817.D	05/04/22 01:54	OP91049	Blank Spike
ZZZZZZ	BB072818.D	05/04/22 02:26	OP91049	(unrelated sample)
FA95260-2	BB072819.D	05/04/22 02:57	OP91049	(used for QC only; not part of job FA95241)
GBB2196-CC2188	BB072821.D	05/04/22 03:59	n/a	Continuing cal 1000
OP91049-MS	BB072822.D	05/04/22 04:31	OP91049	Matrix Spike
OP91049-MSD	BB072823.D	05/04/22 05:02	OP91049	Matrix Spike Duplicate
ZZZZZZ	BB072824.D	05/04/22 05:33	OP91049	(unrelated sample)
GBB2196-CC2188	BB072826.D	05/04/22 06:36	n/a	Continuing cal 1000
OP91049-MB	BB072828.D	05/04/22 10:18	OP91049	Method Blank
ZZZZZZ	BB072829.D	05/04/22 10:49	OP91049	(unrelated sample)
ZZZZZZ	BB072830.D	05/04/22 11:20	OP91049	(unrelated sample)
GBB2196-ECC2188	BB072832.D	05/04/22 12:23	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG3094	**Method:** SW846 8330A	**Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG3094-IC3094	GG623369.D	01/24/22 12:52	n/a	Initial cal 20
GGG3094-IC3094	GG623370.D	01/24/22 13:23	n/a	Initial cal 50
GGG3094-IC3094	GG623371.D	01/24/22 13:55	n/a	Initial cal 100
GGG3094-IC3094	GG623372.D	01/24/22 14:26	n/a	Initial cal 200
GGG3094-IC3094	GG623373.D	01/24/22 14:57	n/a	Initial cal 500
GGG3094-ICC3094	GG623374.D	01/24/22 15:29	n/a	Initial cal 1000
GGG3094-IC3094	GG623375.D	01/24/22 16:00	n/a	Initial cal 2500
GGG3094-IC3094	GG623376.D	01/24/22 16:32	n/a	Initial cal 5000
GGG3094-ICV3094	GG623377.D	01/24/22 17:03	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA95241
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG3135 **Method:** SW846 8330A **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG3135-CC3094	GG624050.D	05/04/22 12:45	n/a	Continuing cal 1000
OP90975-MB	GG624051.D	05/04/22 13:43	OP90975	Method Blank
ZZZZZZ	GG624052.D	05/04/22 16:29	OP90975	(unrelated sample)
ZZZZZZ	GG624053.D	05/04/22 17:00	OP90975	(unrelated sample)
OP91013-MB	GG624054.D	05/04/22 17:31	OP91013	Method Blank
FA95241-1	GG624055.D	05/04/22 18:03	OP91013	54MW13
FA95241-2	GG624056.D	05/04/22 18:34	OP91013	54MW10
OP91049-MB	GG624057.D	05/04/22 19:06	OP91049	Method Blank
ZZZZZZ	GG624058.D	05/04/22 19:37	OP91049	(unrelated sample)
ZZZZZZ	GG624059.D	05/04/22 20:09	OP91049	(unrelated sample)
GGG3135-CC3094	GG624061.D	05/04/22 21:11	n/a	Continuing cal 1000
ZZZZZZ	GG624062.D	05/04/22 21:43	OP91049	(unrelated sample)
ZZZZZZ	GG624063.D	05/04/22 22:14	OP91049	(unrelated sample)
GGG3135-ECC3094	GG624065.D	05/04/22 23:17	n/a	Ending cal 1000

GC/LC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/06/22 10:50

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : op91013,GBB2196,980,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 04 09:56:26 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.03	11.03	1110701	1910435	503.380	483.866
	Spiked Amount 500.000	Range 70 - 136		Recovery =		100.68%	96.77%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.46	1.46	400058	1058491	248.148m	239.190m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.92	2.92	385445	610663	197.933	198.111
6)	1,3,5-Trinitrobe	4.68	4.68	4379083	7542896	1038.425	1129.391
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.20	6.20	169165	296271	40.652	42.432m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.83	9.83	2245049	2713700	569.495m	572.421
13)	2-Amino-4,6-Dini	10.02	10.10	396470	589633	114.661m	113.368
14)	4-Amino-2,6-Dini	10.59	10.60	207867	417963	81.171m	80.981
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	18.38	0.00	215036	0	NoCal	N.D.

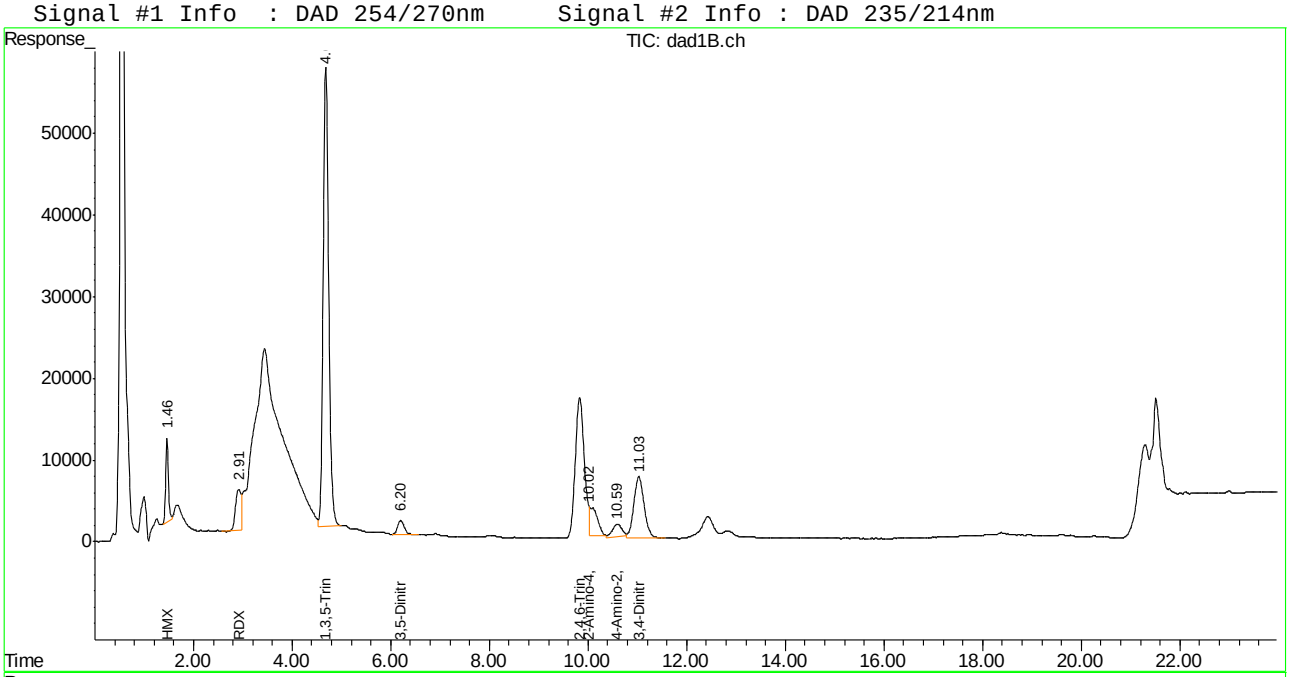
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072812.D BBB2167_041522.M Fri May 06 08:12:15 2022 Page 1

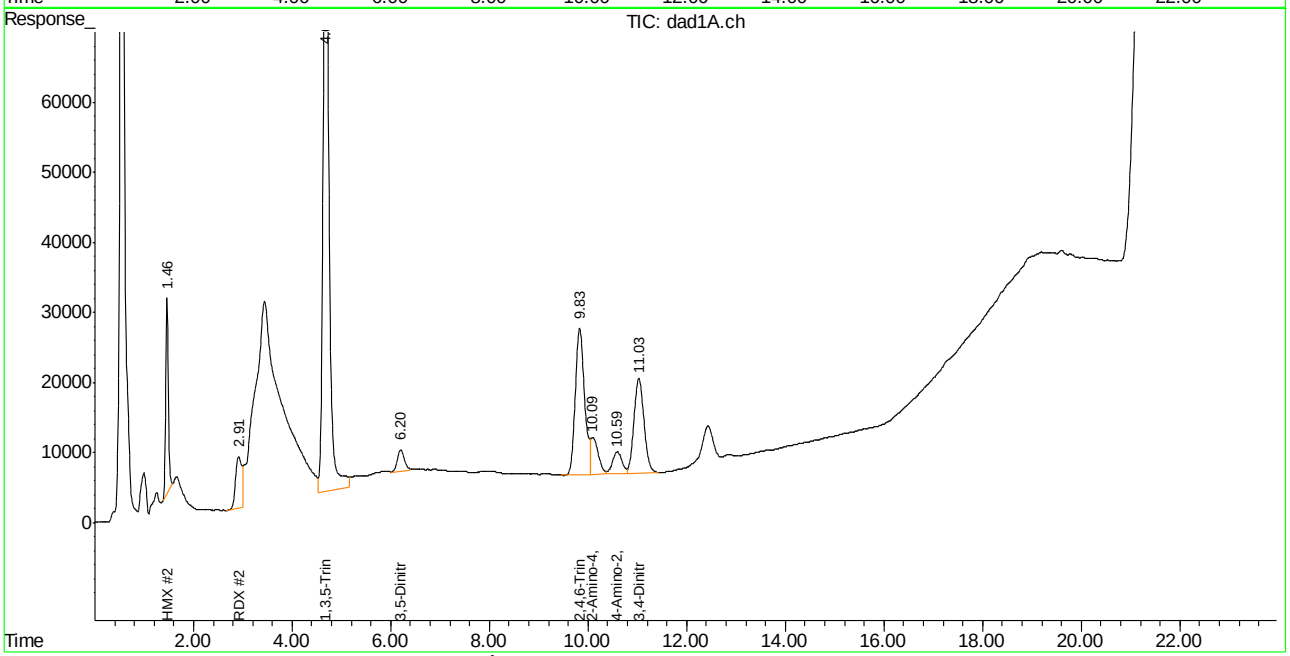
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : op91013,GBB2196,980,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:58 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





BB072812.D BBB2167_041522.M Fri May 06 08:12:15 2022 Page 2

Manual Integration Approval Summary

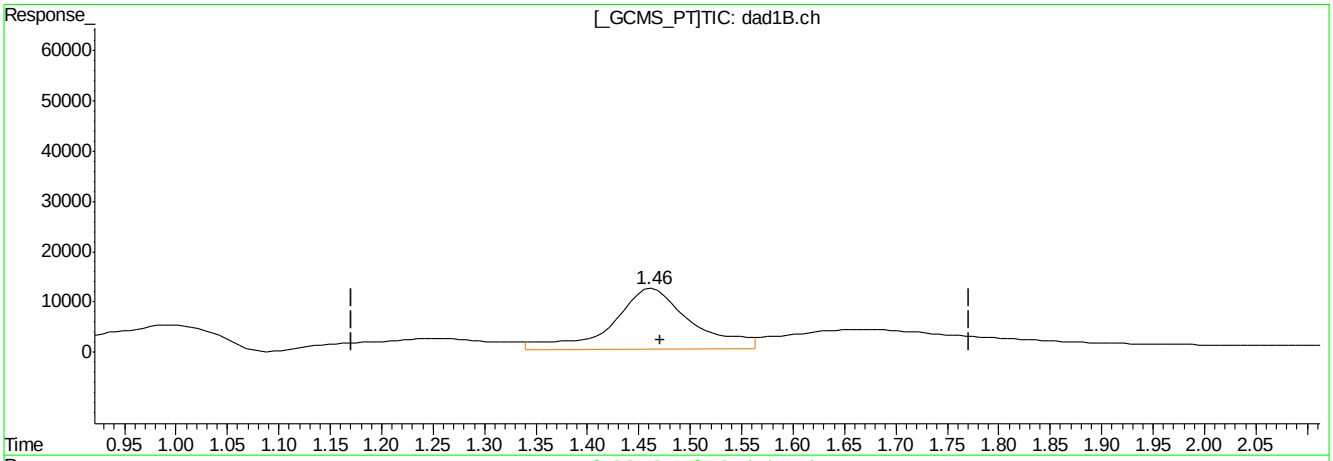
Sample Number: FA95241-1
Lab FileID: BB072812.D
Injection Time: 05/03/22 23:17
Method: SW846 8330B
Analyst approved: 05/05/22 09:14 Fouad Sekkar
Supervisor approved: 05/06/22 10:50 Naresh Jiawan

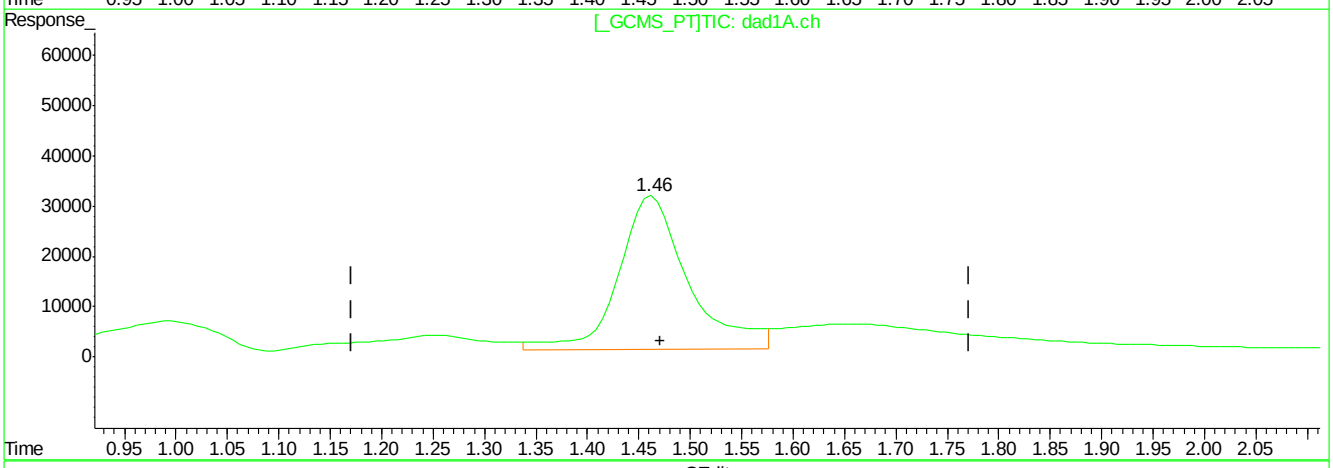
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.46	Poor instrument integration
HMX	2691-41-0	2	1.46	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.20	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.83	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.02	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.59	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.46min 400.729ppb

response 646047

(2) HMX #2

1.46min 324.718ppb

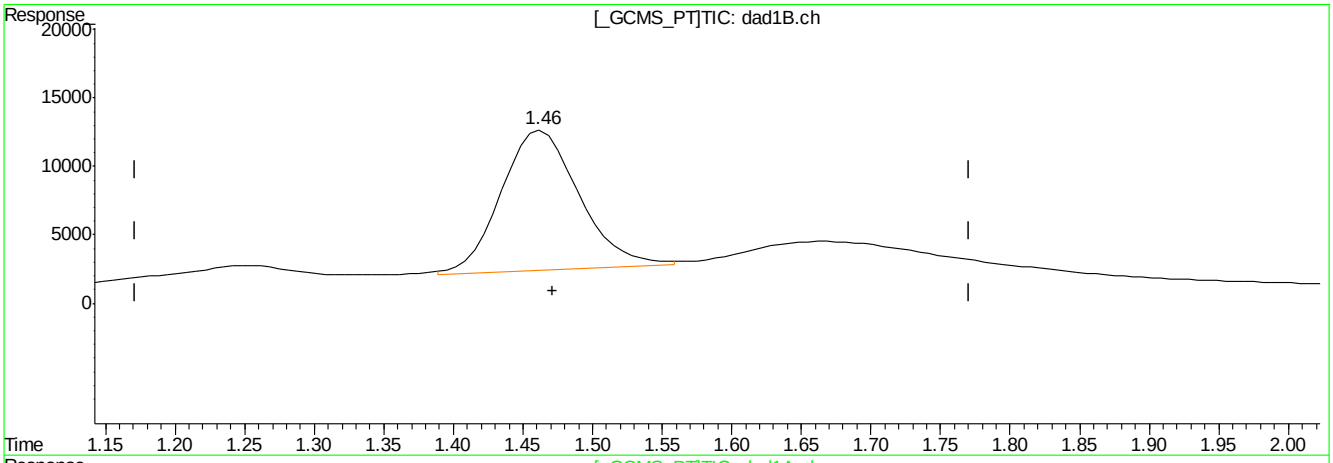
response 1436981

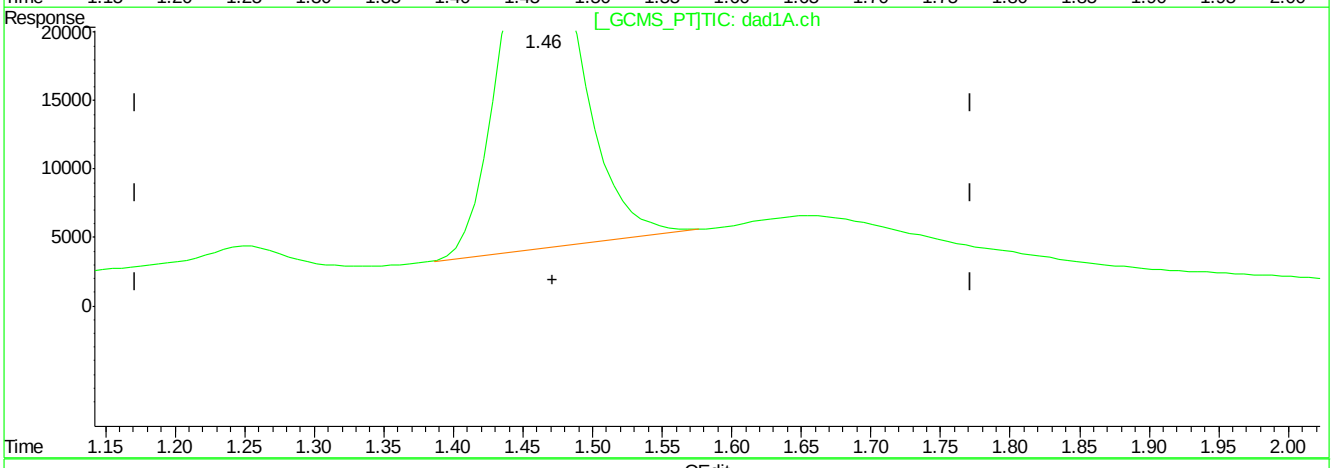
(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:56:39 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.46min 248.148ppb m

response 400058

(2) HMX #2

1.46min 239.190ppb m

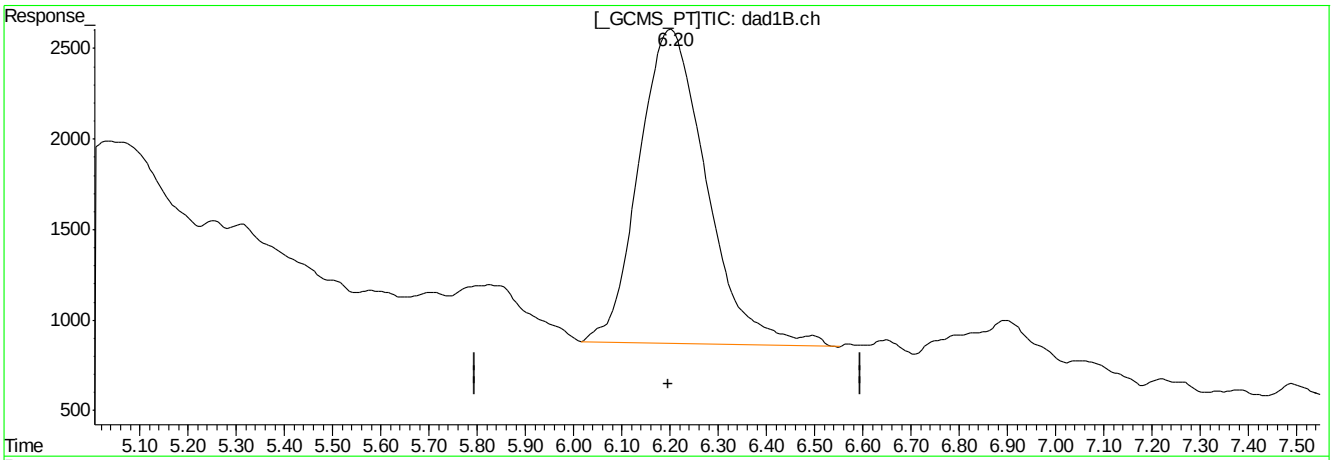
response 1058491

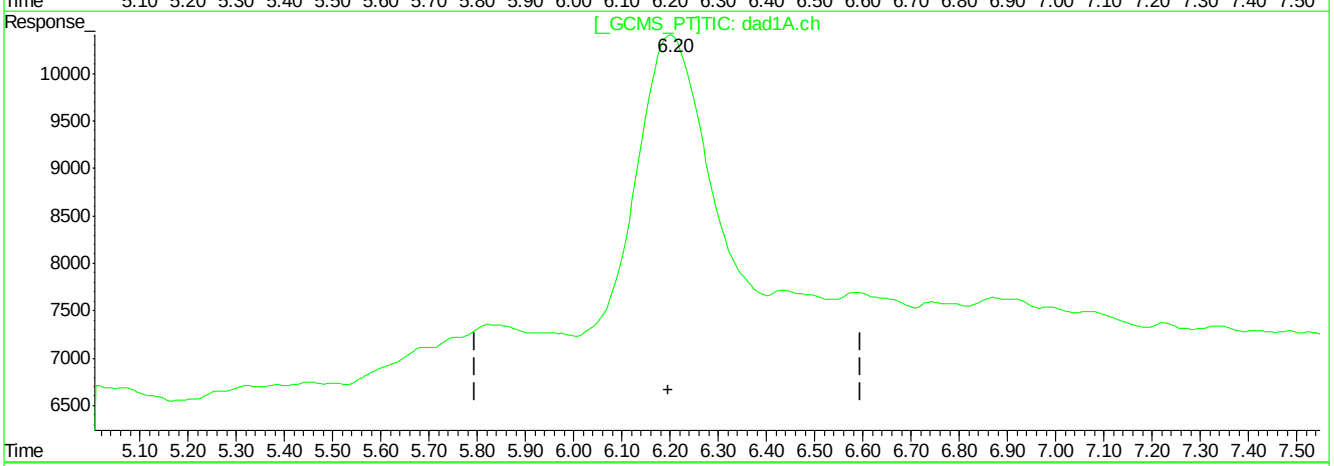
(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:56:49 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.20min 40.652ppb

response 169165

(8) 3,5-Dinitroaniline #2

6.20min 73.354ppb

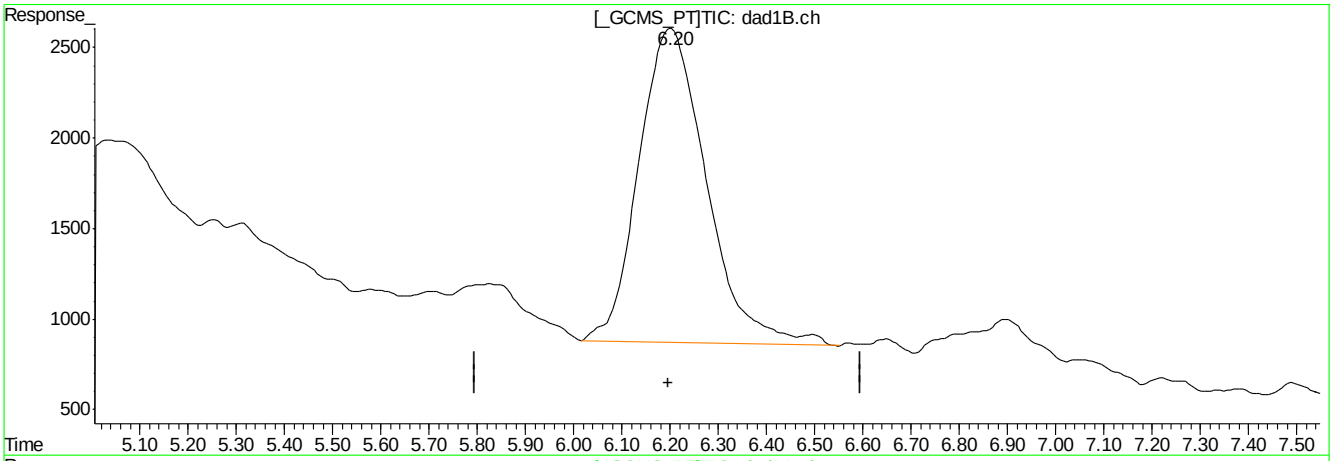
response 512182

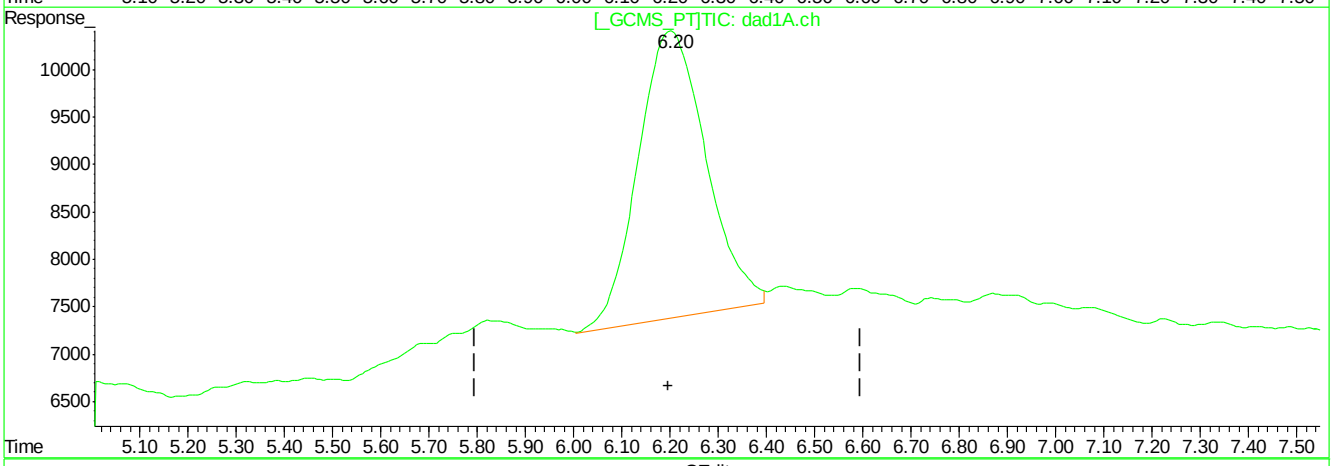
(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:57:22 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.20min 40.652ppb

response 169165

(8) 3,5-Dinitroaniline #2

6.20min 42.432ppb m

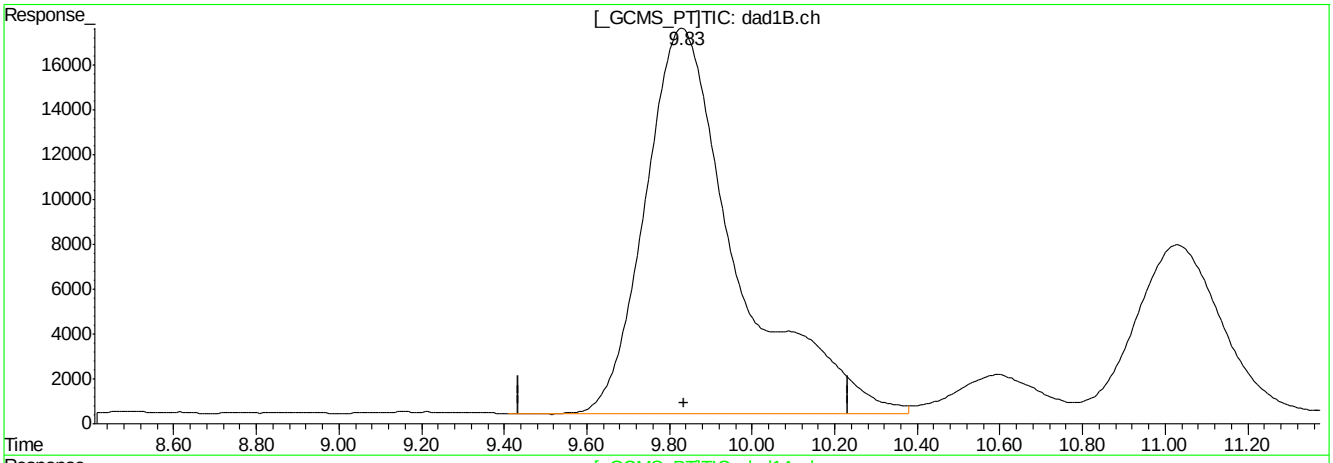
response 296271

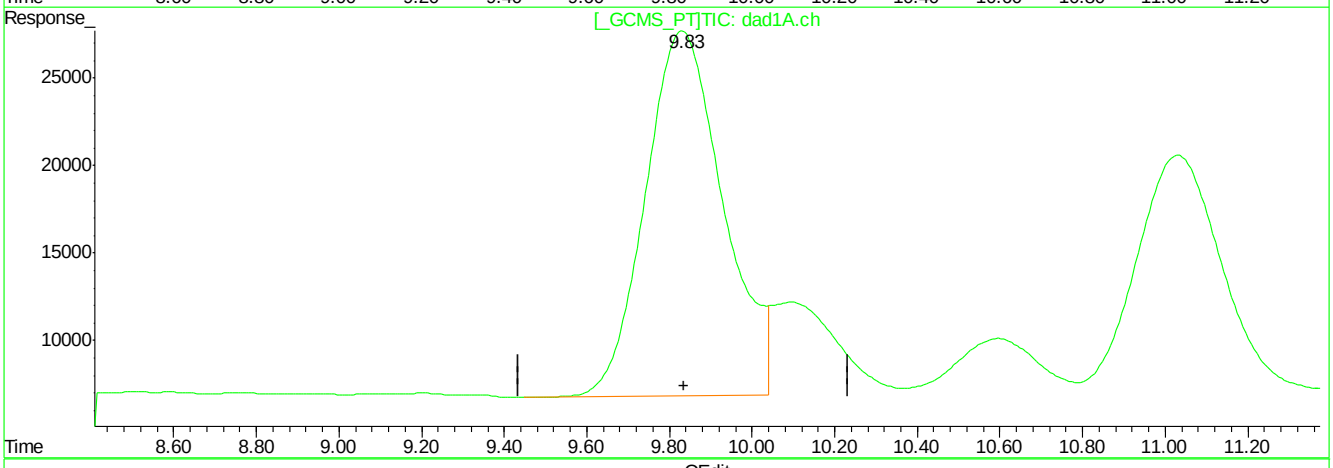
(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:57:28 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.83min 671.586ppb

response 2647507

(12) 2,4,6-Trinitrotoluene #2

9.83min 572.421ppb

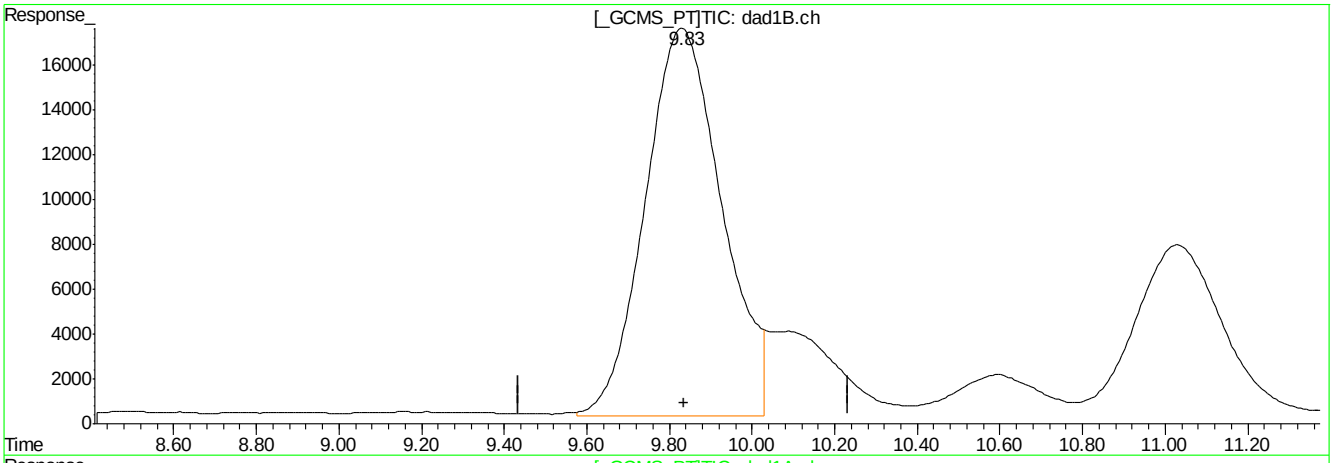
response 2713700

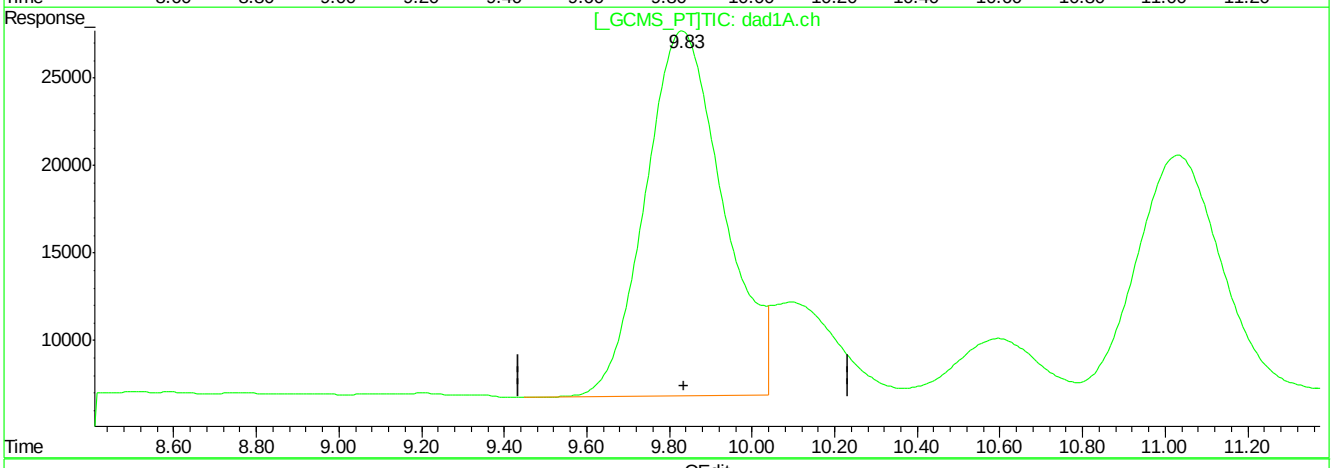
(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:57:33 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.83min 569.495ppb m

response 2245049

(12) 2,4,6-Trinitrotoluene #2

9.83min 572.421ppb

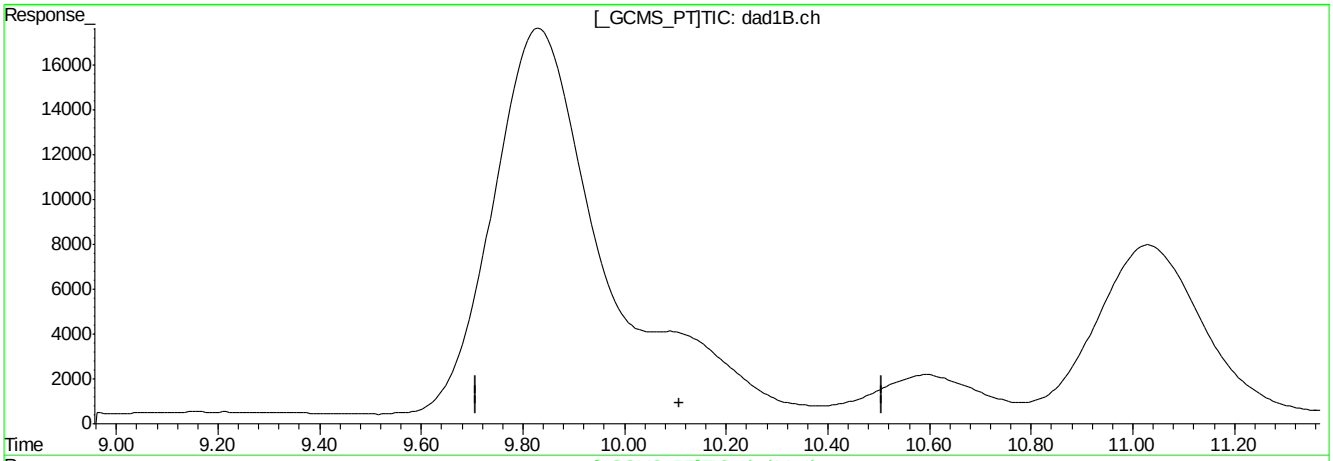
response 2713700

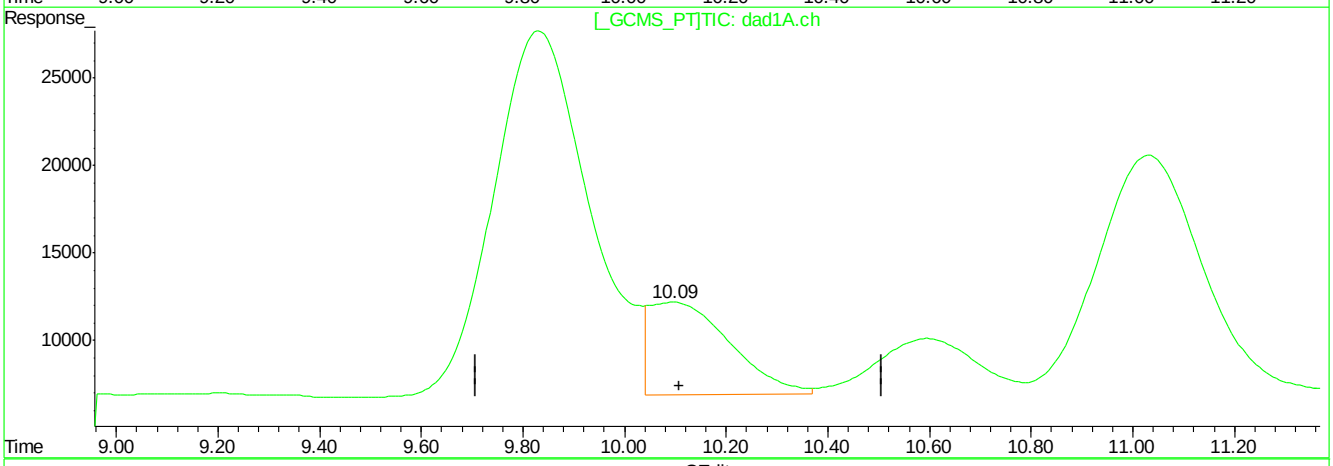
(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:57:46 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

10.10min 113.368ppb

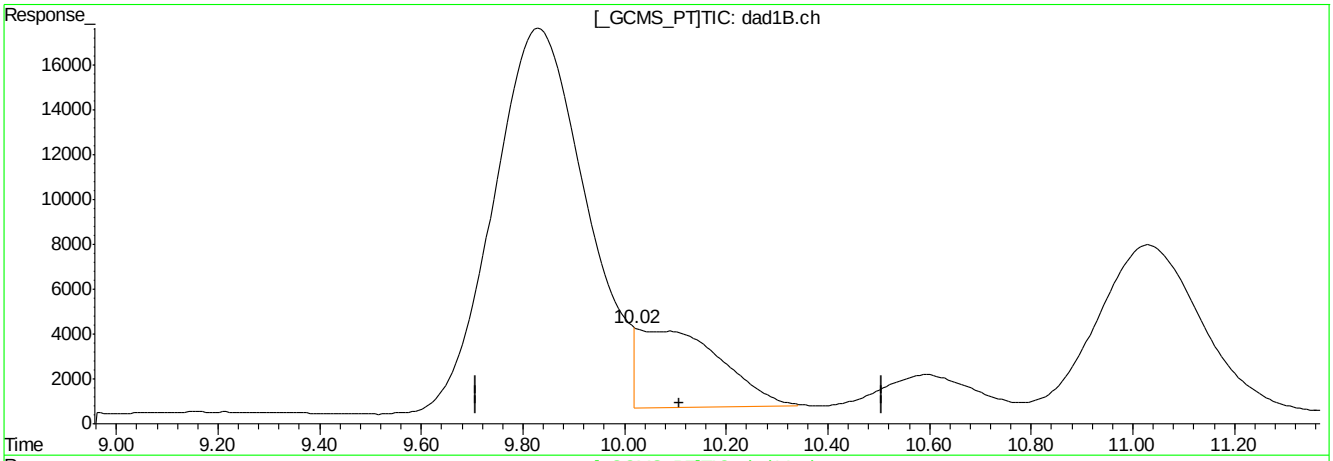
response 589633

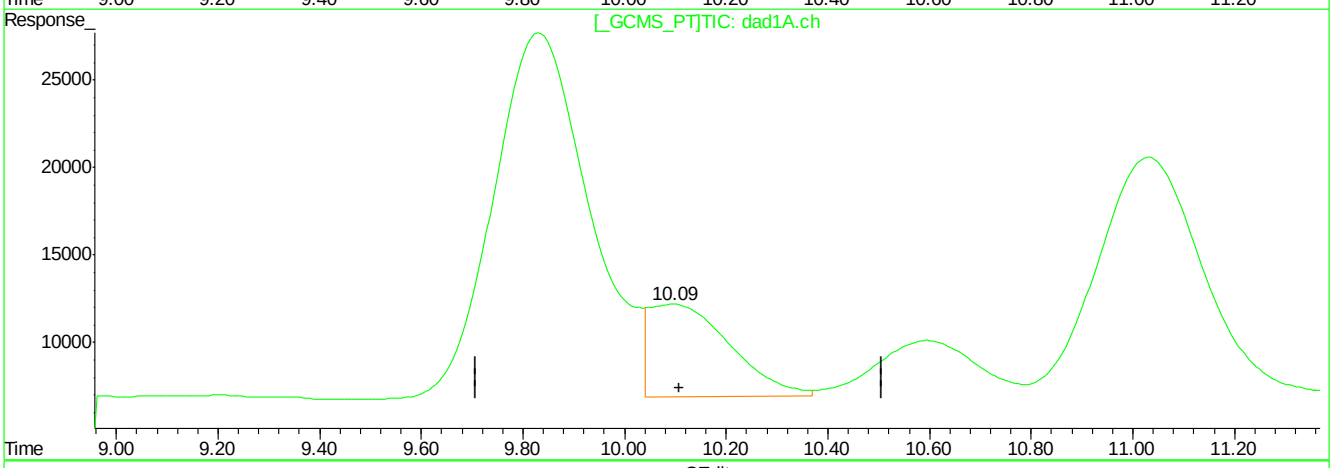
(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:57:50 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.02min 114.661ppb m

response 396470

(13) 2-Amino-4,6-Dinitrotoluene #2

10.10min 113.368ppb

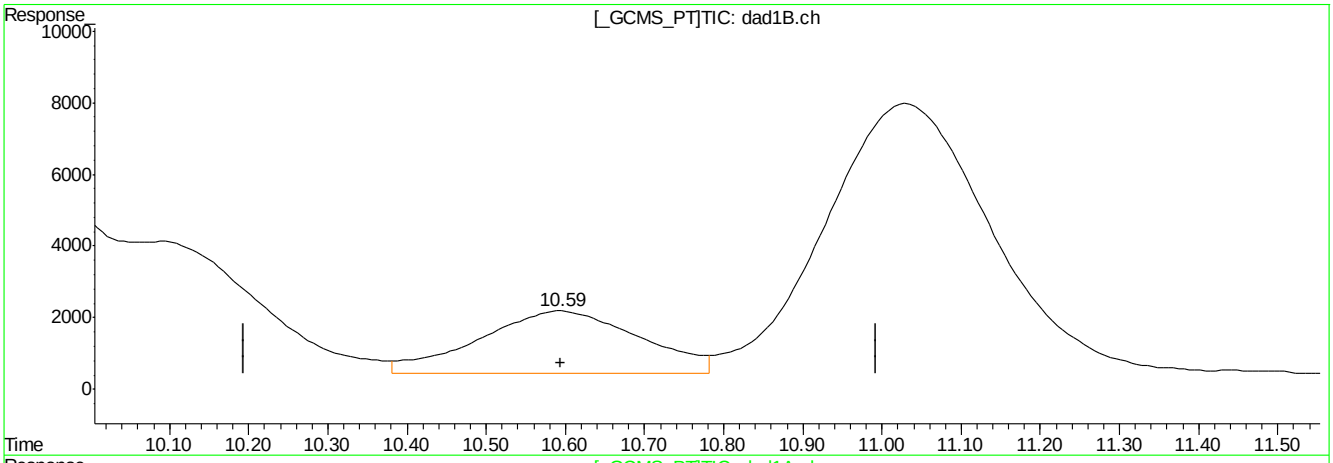
response 589633

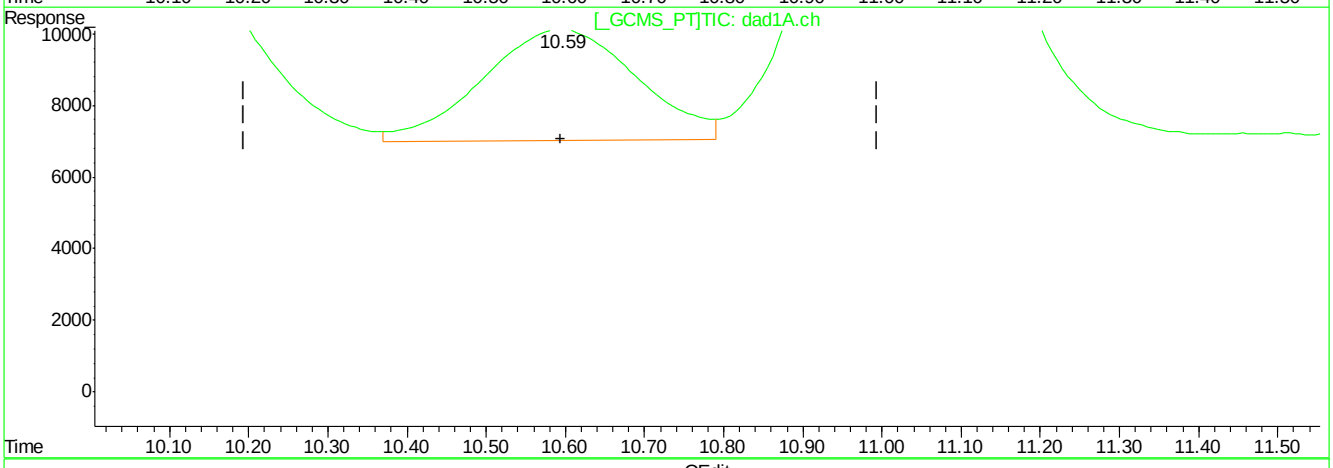
(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:58:10 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.60min 96.419ppb

response 246916

(14) 4-Amino-2,6-Dinitrotoluene #2

10.60min 80.981ppb

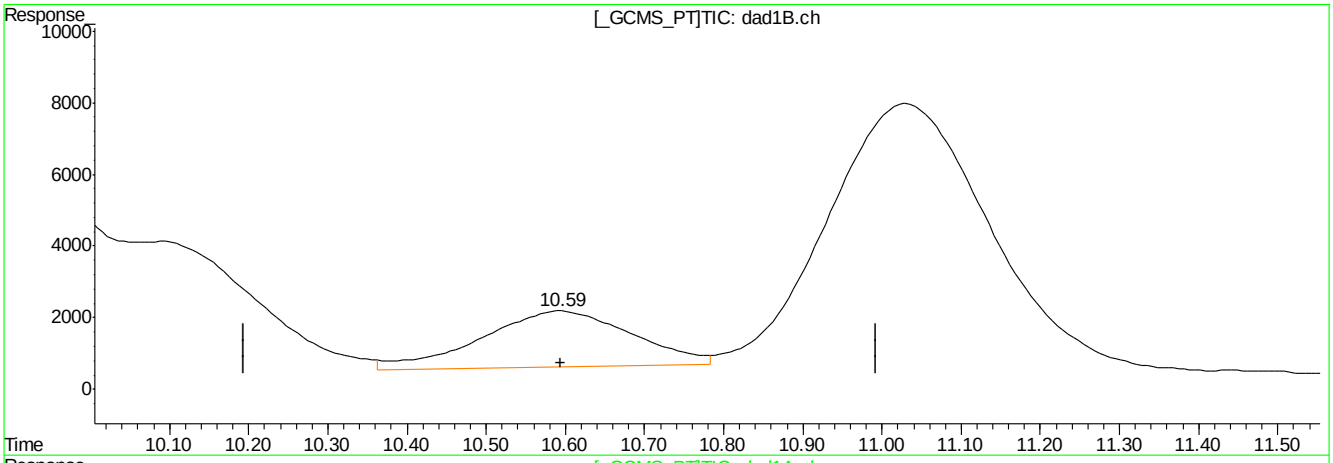
response 417963

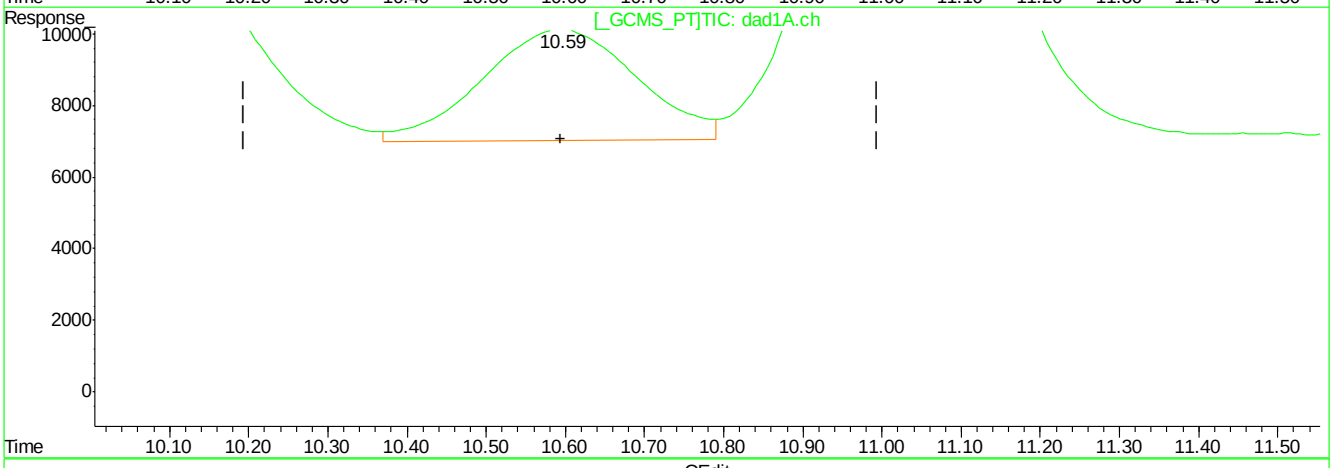
(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:58:21 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072812.D\dad1A.ch
Acq On : 03-May-2022, 23:17:34 Operator: FOUADS
Sample : fa95241-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.59min 81.171ppb m

response 207867

(14) 4-Amino-2,6-Dinitrotoluene #2

10.60min 80.981ppb

response 417963

(+) = Expected Retention Time
BB072812.D BBB2167_041522.M Wed May 04 09:58:38 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 05/06/22 10:50

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : op91013,GGG3135,980,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 05 10:53:27 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.53	13.53	2795911	5732370	561.051	580.474
	Spiked Amount 500.000	Range 70 - 136		Recovery =		112.21%	116.09%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.05	5.06	1040854	1052798	322.063m	325.758
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.16	7.16	9882385	9894854	1073.205m	1074.382m
6)	RDX	7.40	7.40	663044	625839	148.841m	140.370m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
9)	2,4,6-Trinitroto	11.15	11.14	4969749	6773442	554.773	556.180m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.29	15.29	1508324	2801228	154.988	163.282
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.07	17.07	681135	1048681	126.766	107.818m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	2-Amino-4,6-Dini	18.96	18.97	1158681	1466424	133.404	121.550m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

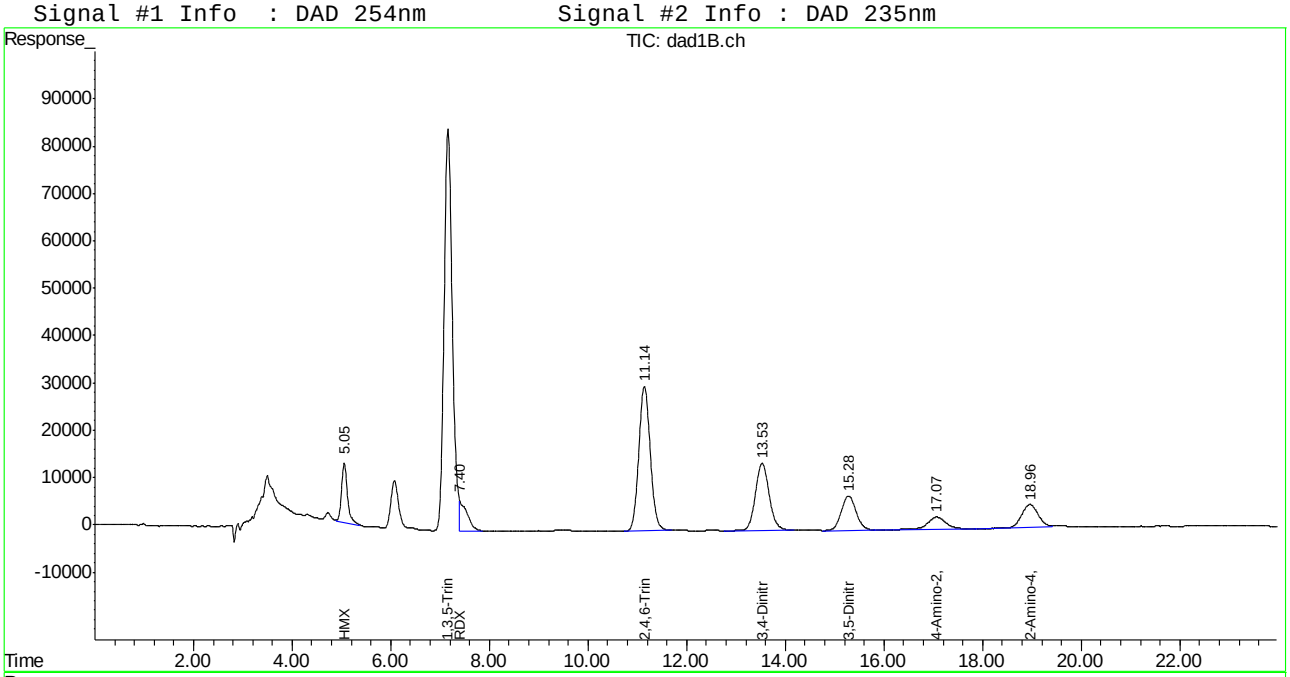
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG624055.D GGG3094_012422.M Thu May 05 14:53:12 2022 Page 1

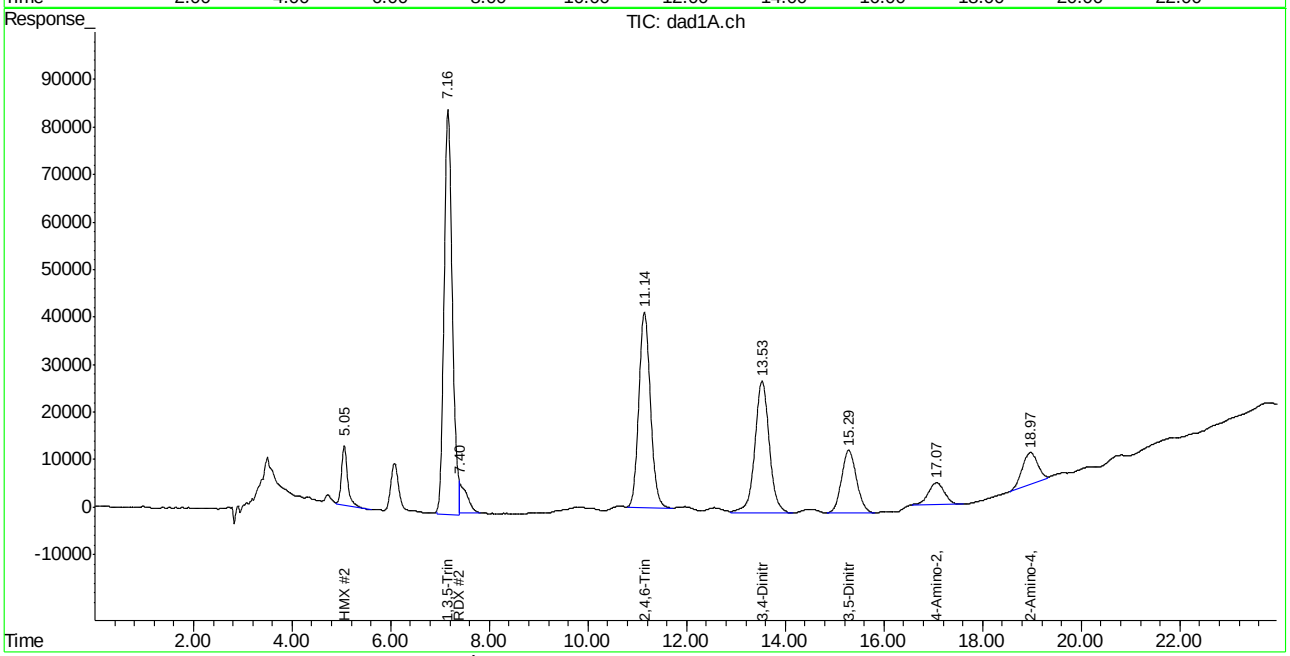
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : op91013,GGG3135,980,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:57 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

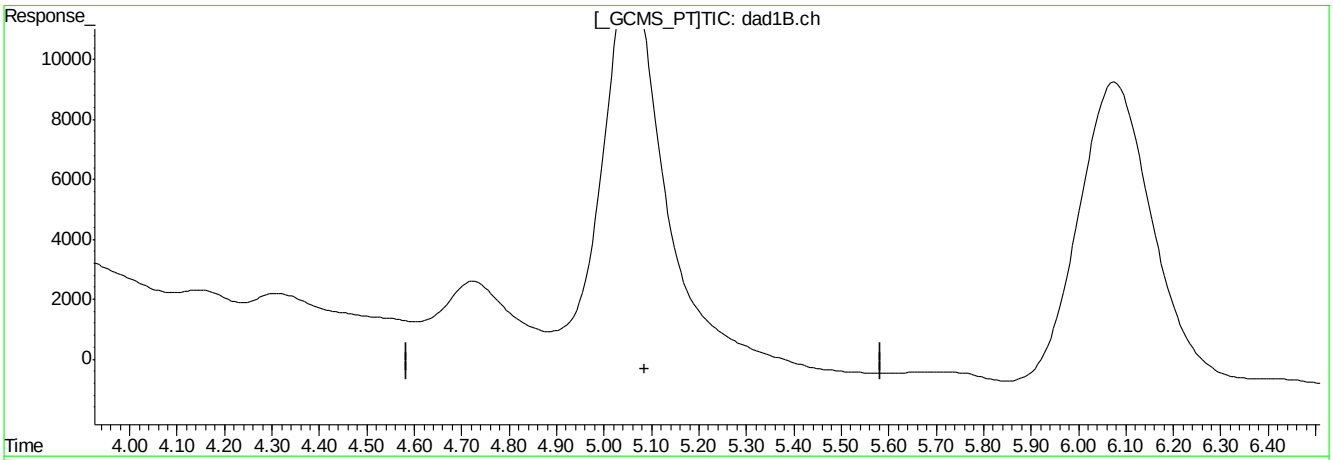
Sample Number: FA95241-1
Lab FileID: GG624055.D
Injection Time: 05/04/22 18:03
Method: SW846 8330B
Analyst approved: 05/05/22 15:05 Fouad Sekkar
Supervisor approved: 05/06/22 10:50 Naresh Jiawan

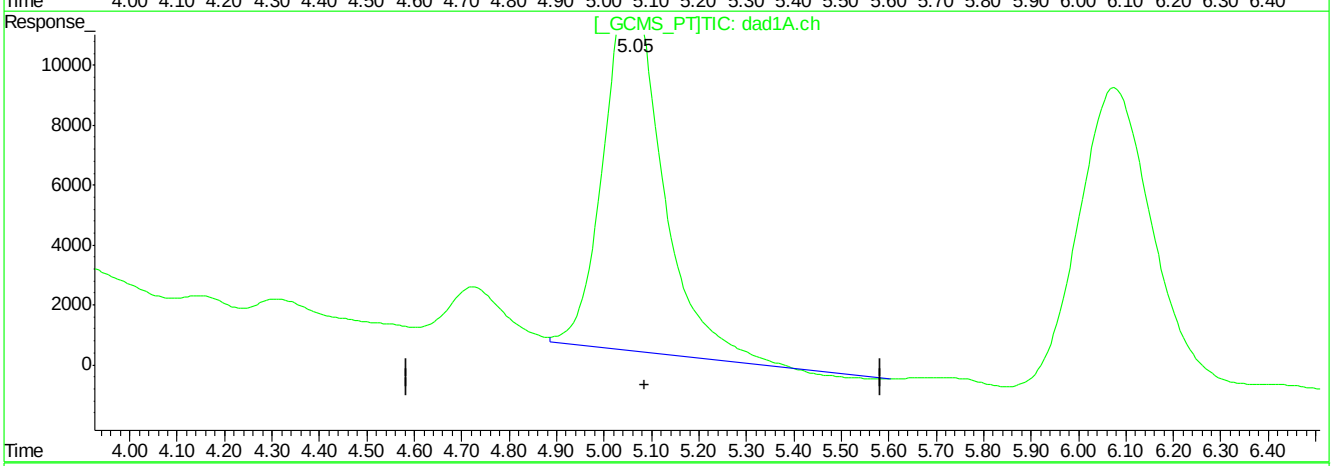
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	5.05	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	7.16	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.16	Poor instrument integration
RDX	121-82-4	1	7.40	Poor instrument integration
RDX	121-82-4	2	7.40	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.14	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.07	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	18.97	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

0.00min 0.000ppb

response 0

(2) HMX #2

5.06min 325.758ppb

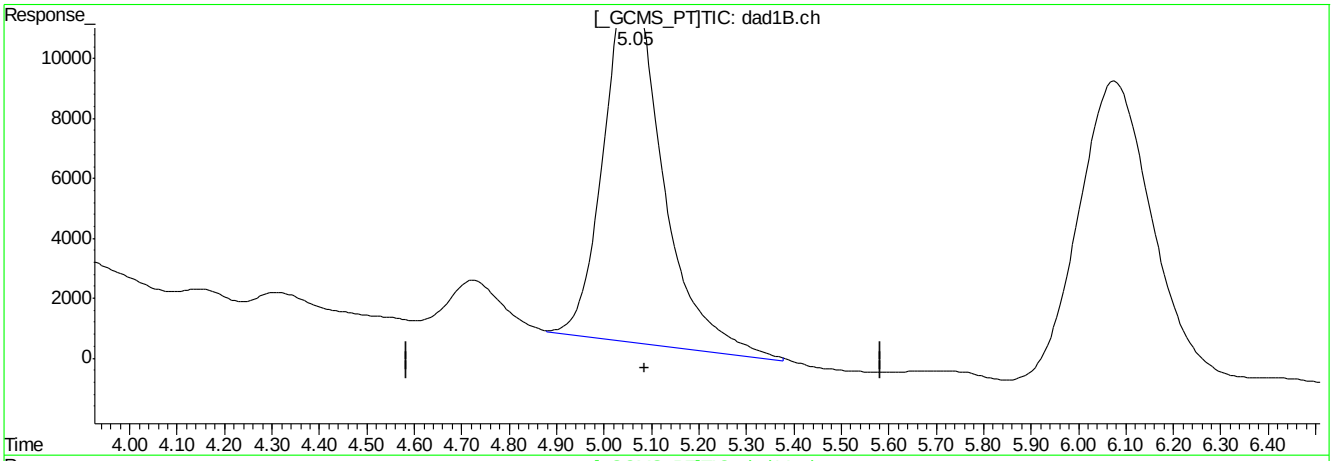
response 1052798

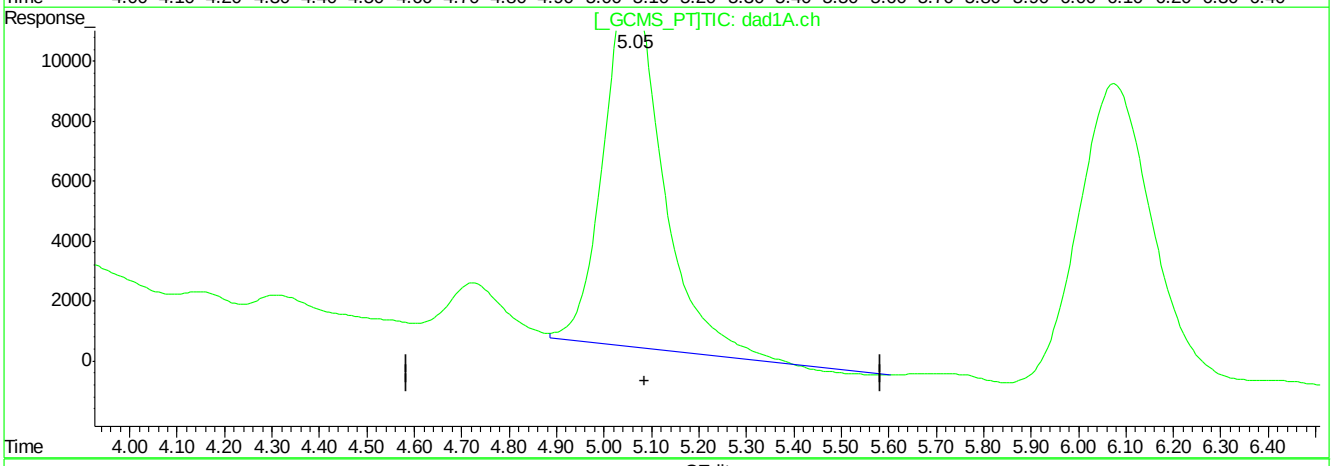
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:54:10 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.05min 322.063ppb m

response 1040854

(2) HMX #2

5.06min 325.758ppb

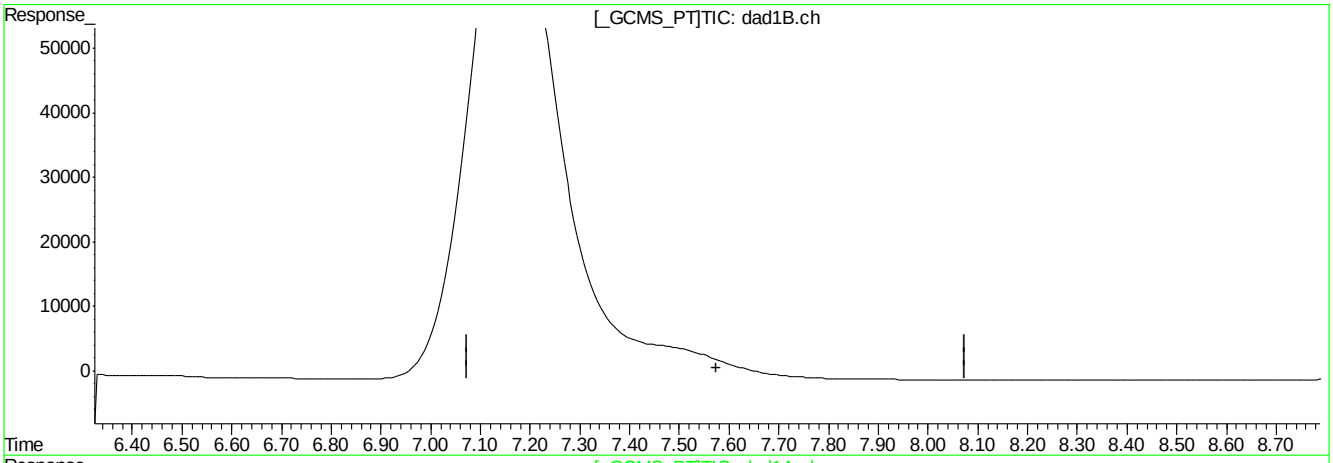
response 1052798

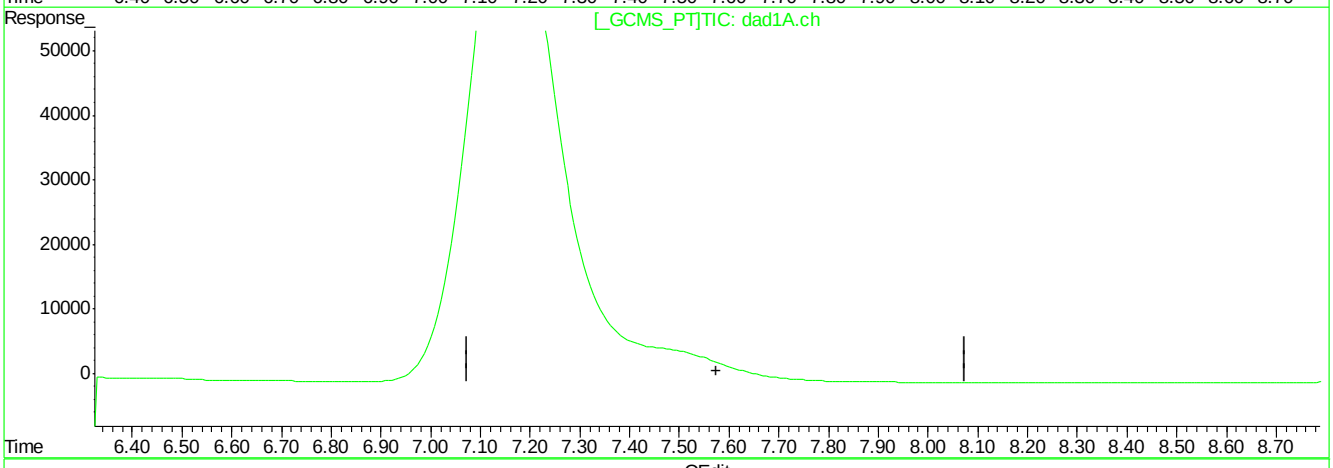
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:54:15 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb

response 0

(6) RDX #2

0.00min 0.000ppb

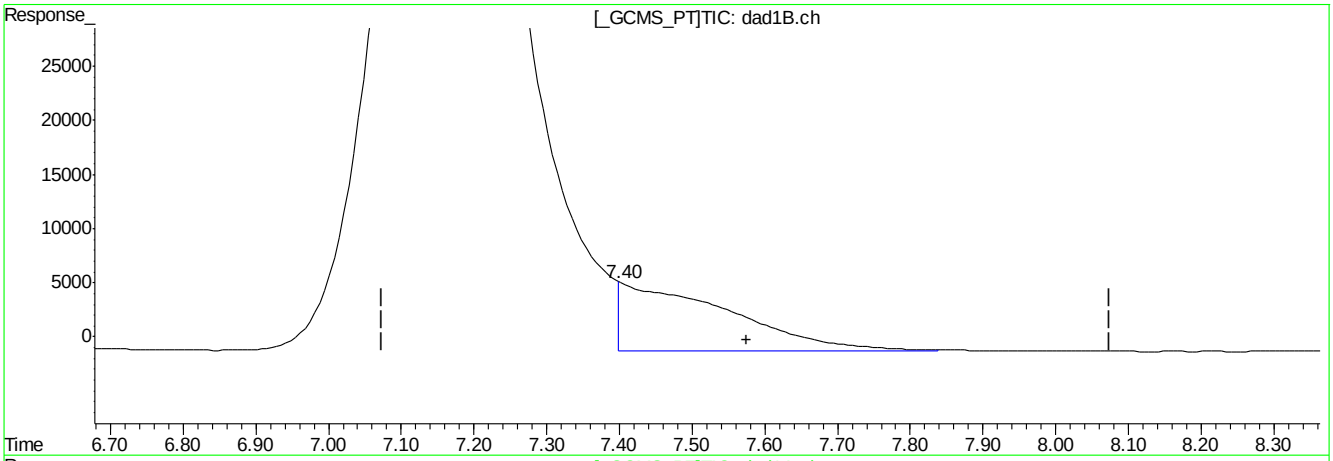
response 0

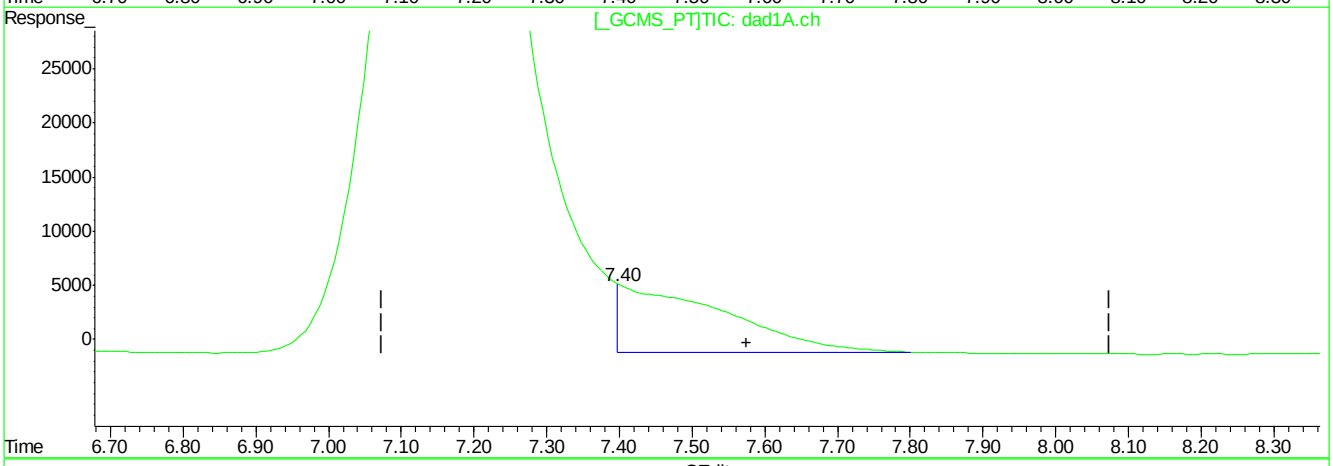
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:54:31 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.40min 148.841ppb m

response 663044

(6) RDX #2

7.40min 140.370ppb m

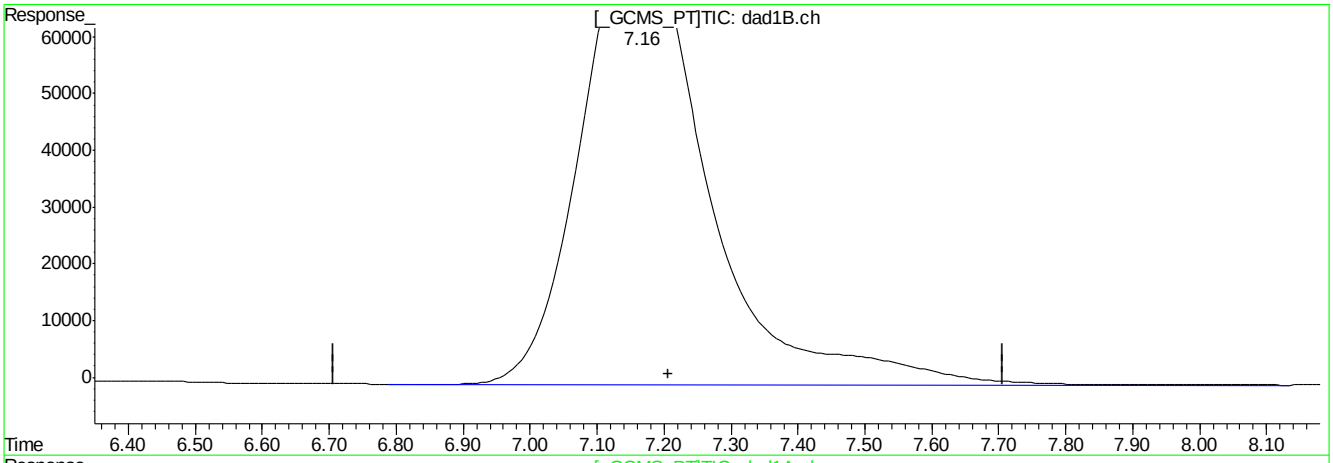
response 625839

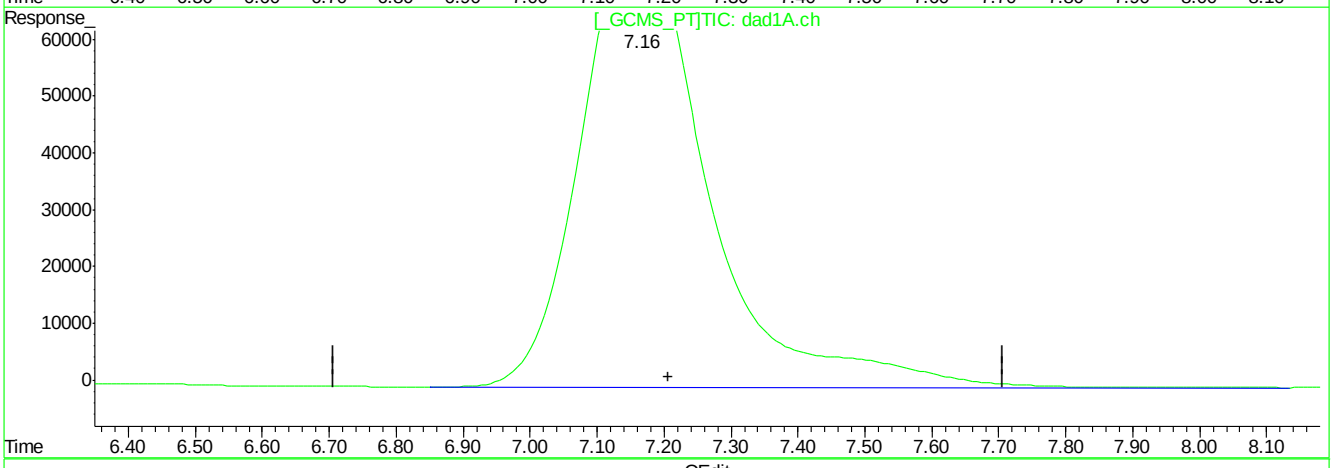
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:55:10 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.16min 1144.230ppb

response 10536397

(5) 1,3,5-Trinitrobenzene #2

7.16min 1146.557ppb

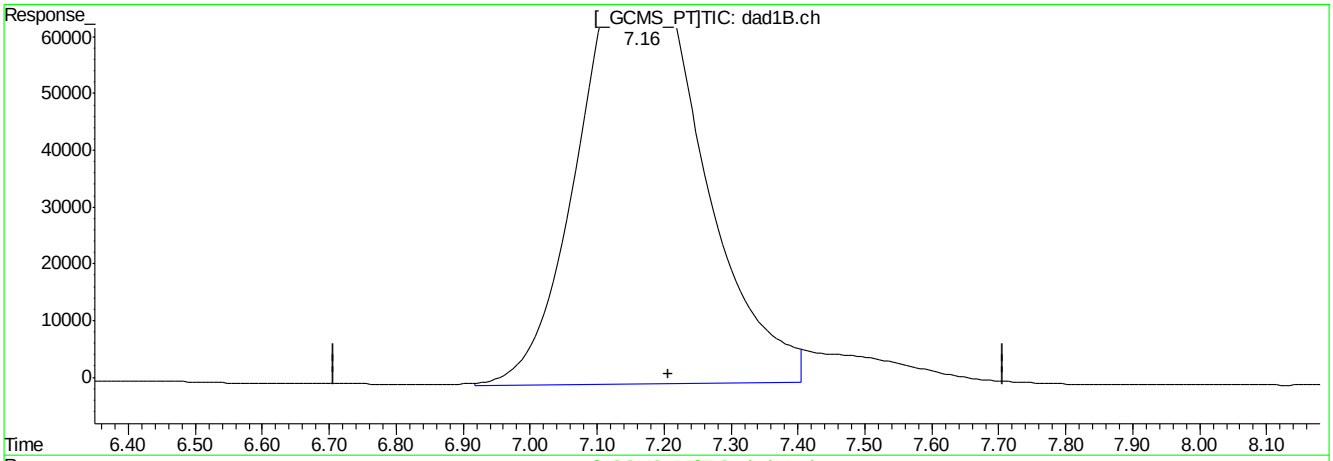
response 10559567

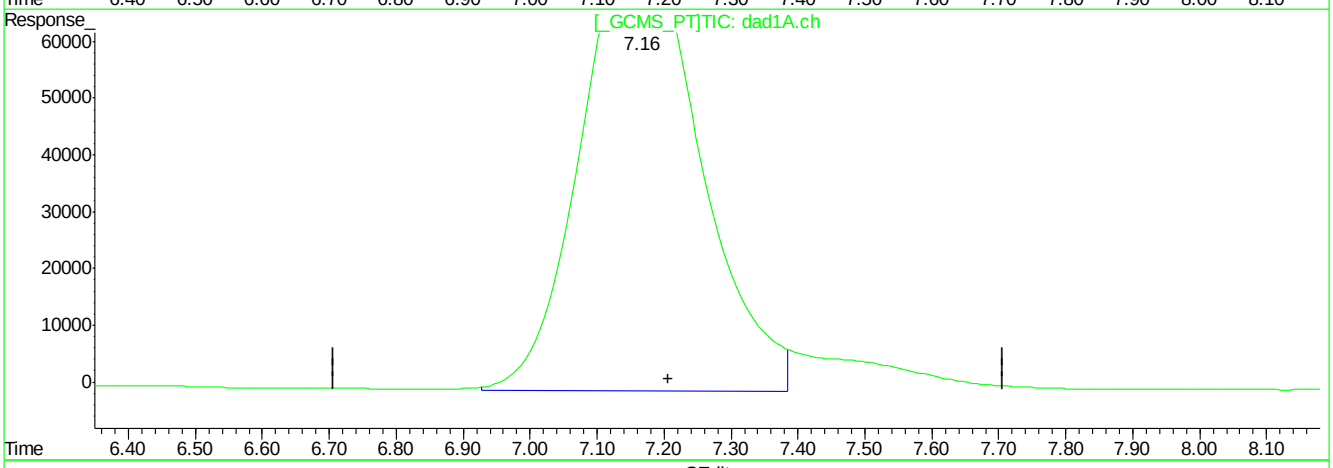
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:55:23 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.16min 1073.205ppb m

response 9882385

(5) 1,3,5-Trinitrobenzene #2

7.16min 1074.382ppb m

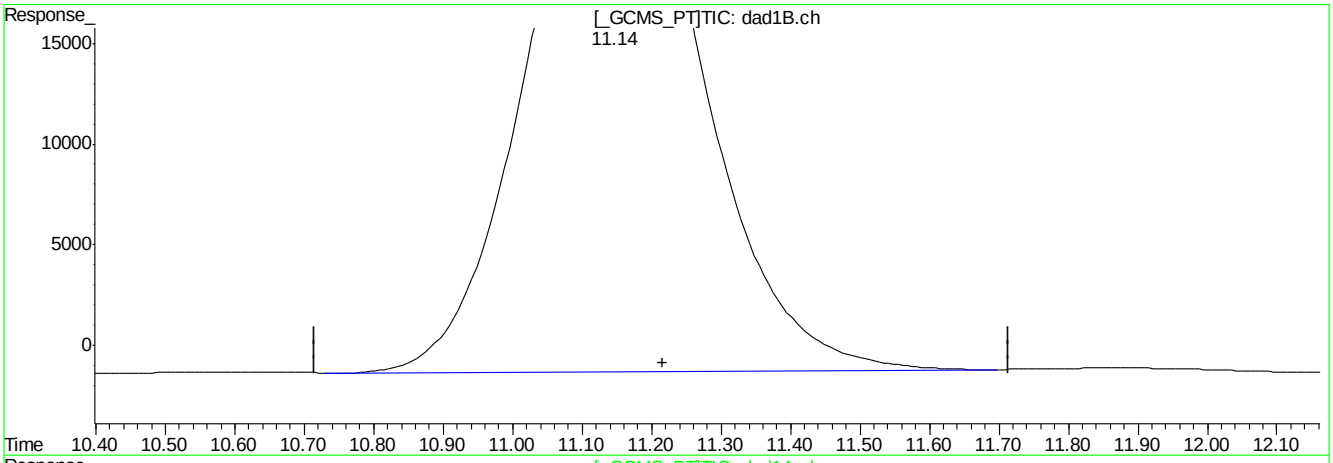
response 9894854

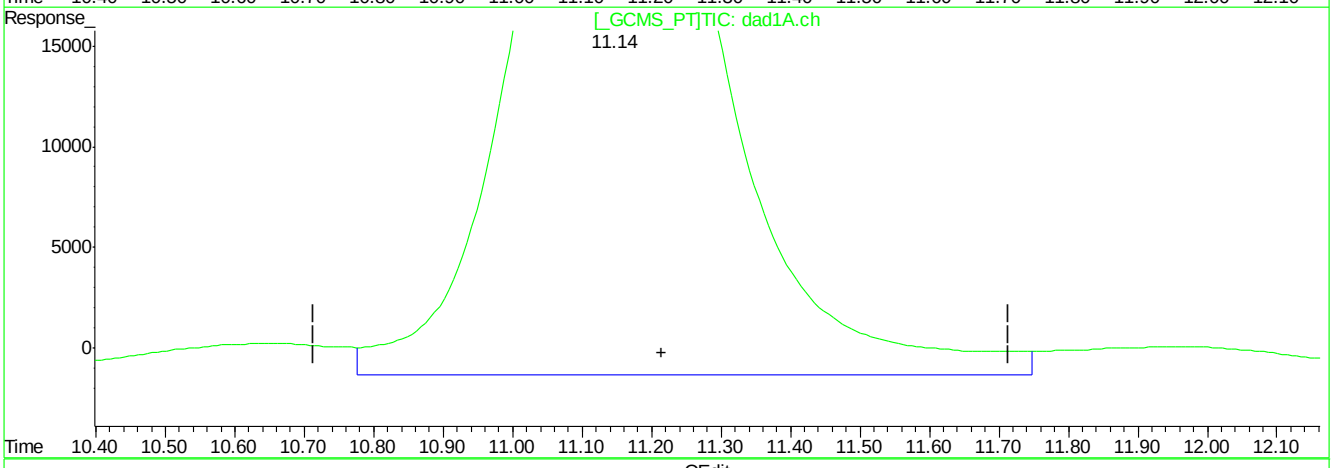
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:55:40 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.15min 554.773ppb

response 4969749

(9) 2,4,6-Trinitrotoluene #2

11.15min 610.232ppb

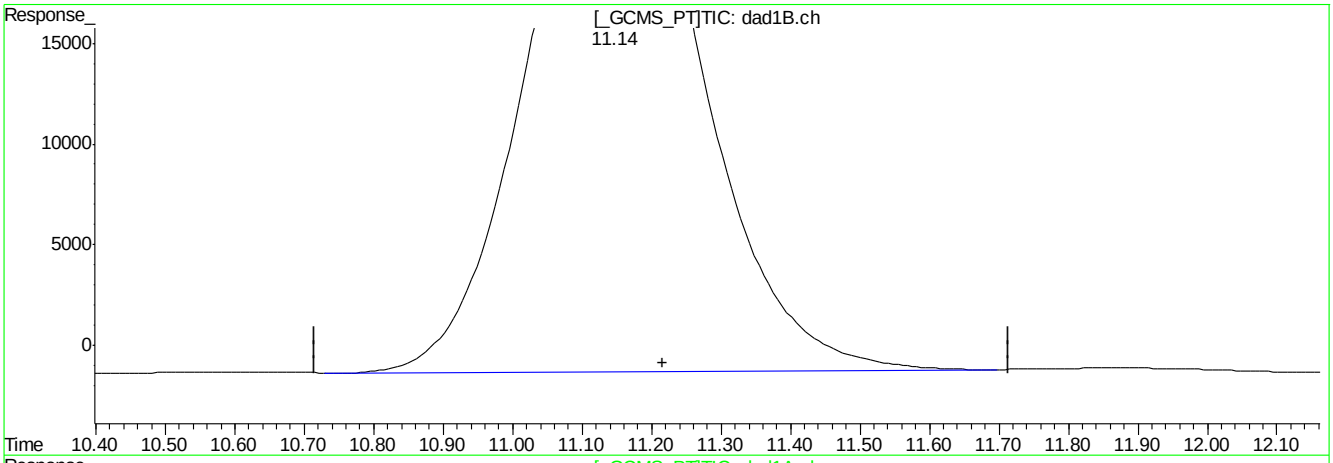
response 7431721

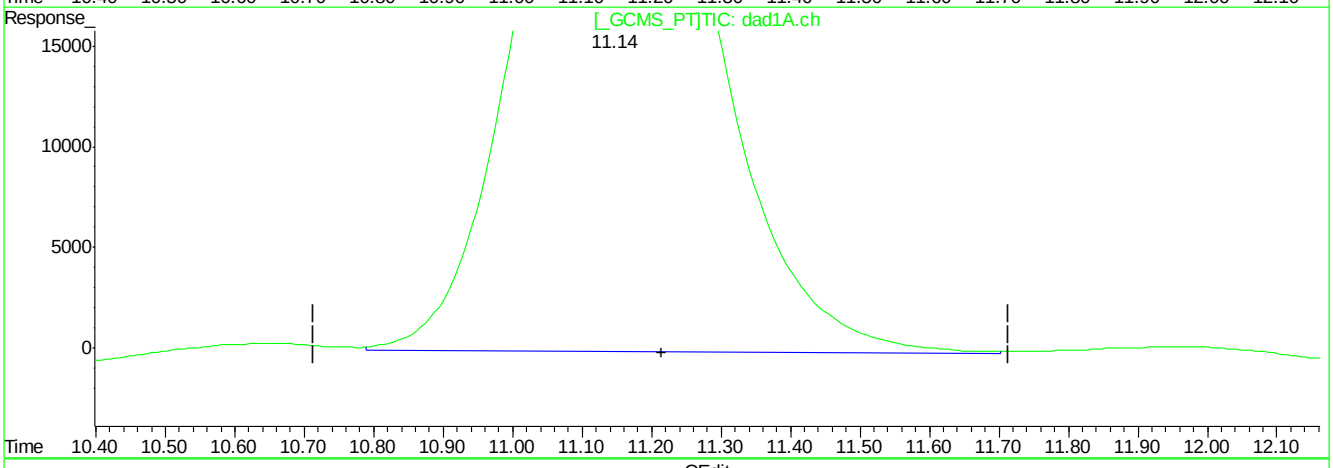
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:55:50 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.15min 554.773ppb

response 4969749

(9) 2,4,6-Trinitrotoluene #2

11.14min 556.180ppb m

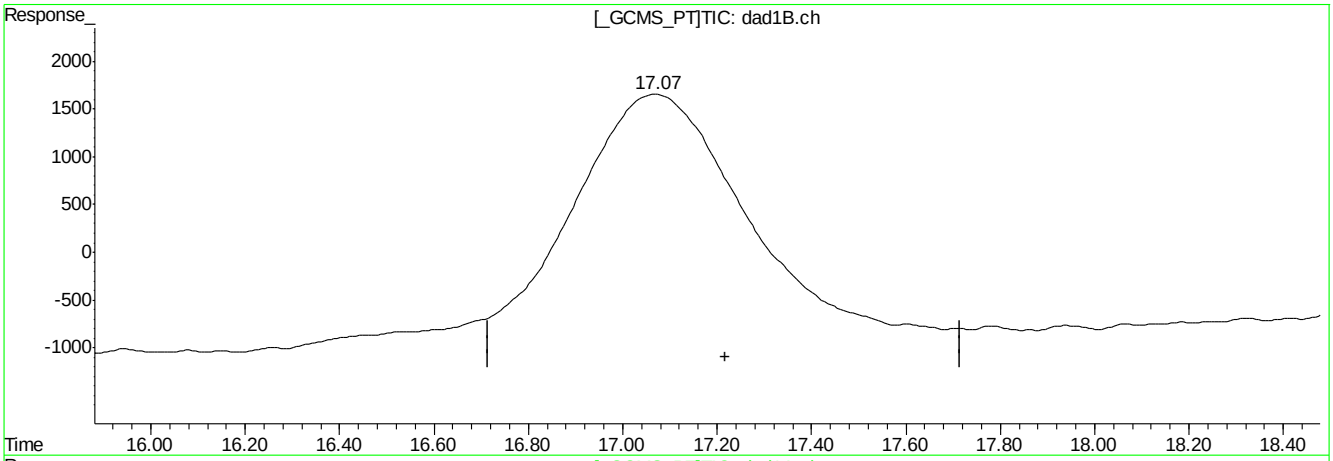
response 6773442

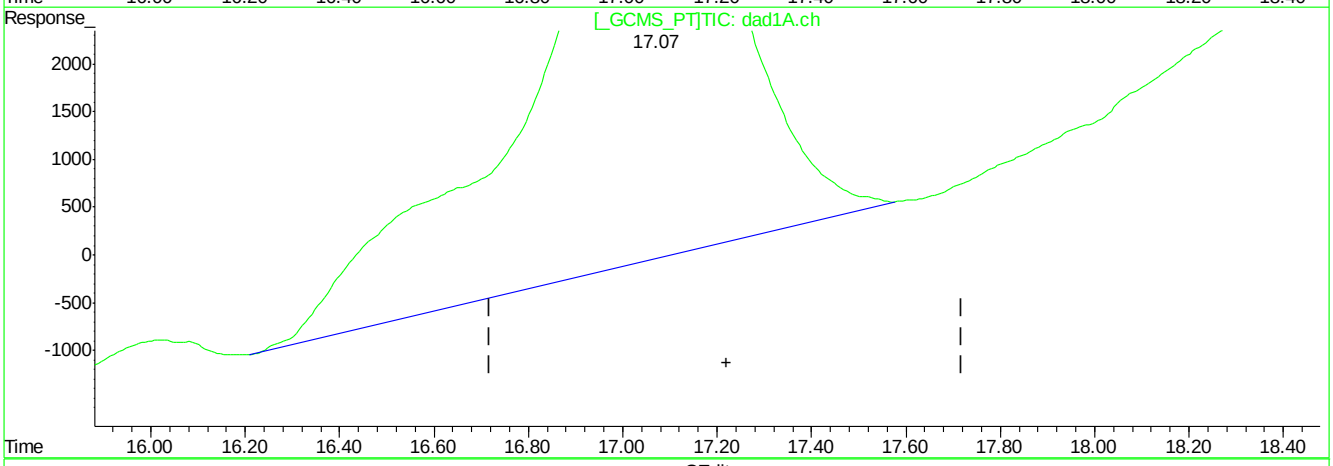
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:55:55 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.07min 126.766ppb

response 681135

(18) 4-Amino-2,6-Dinitrotoluene #2

17.07min 154.379ppb

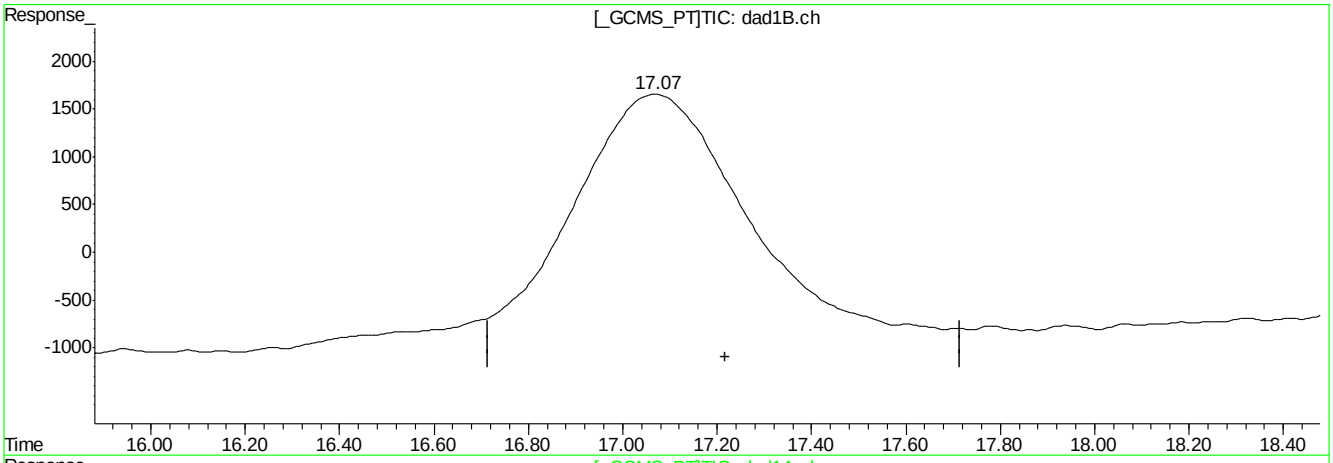
response 1501554

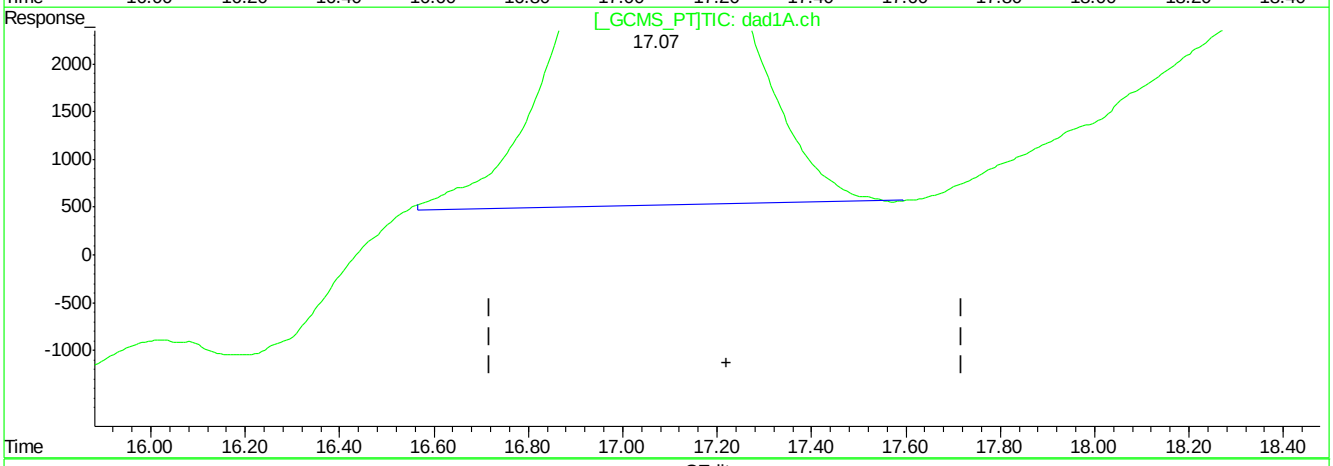
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:56:31 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.07min 126.766ppb

response 681135

(18) 4-Amino-2,6-Dinitrotoluene #2

17.07min 107.818ppb m

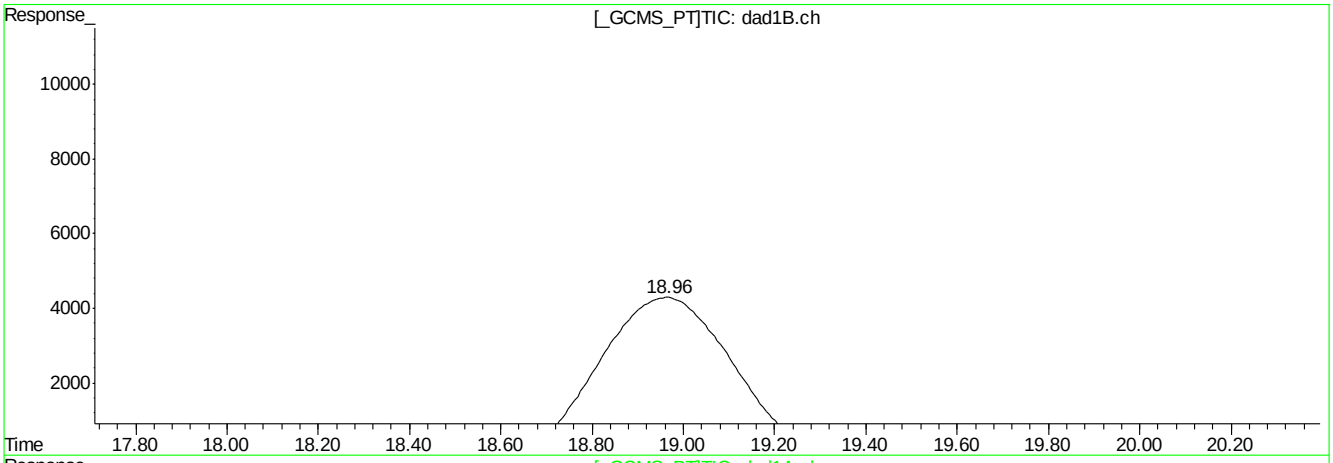
response 1048681

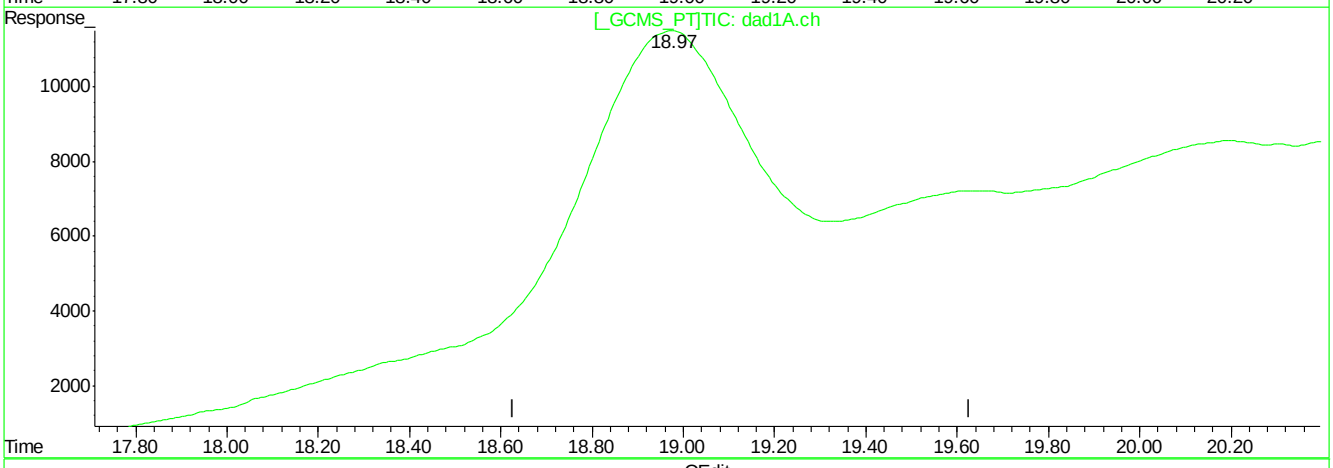
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:56:46 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.96min 133.404ppb

response 1158681

(20) 2-Amino-4,6-Dinitrotoluene #2

18.97min 120.336ppb

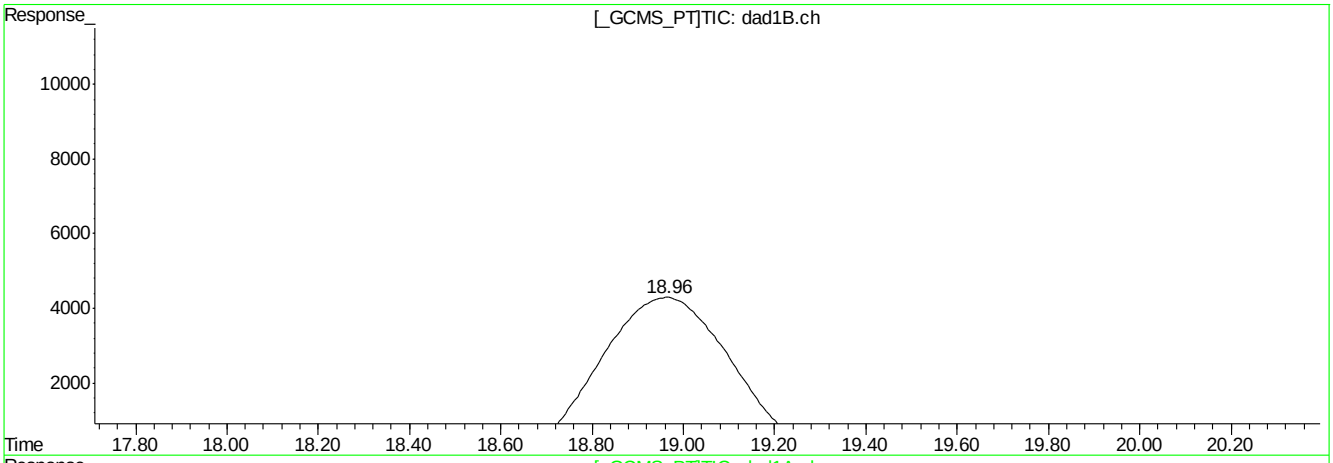
response 1451782

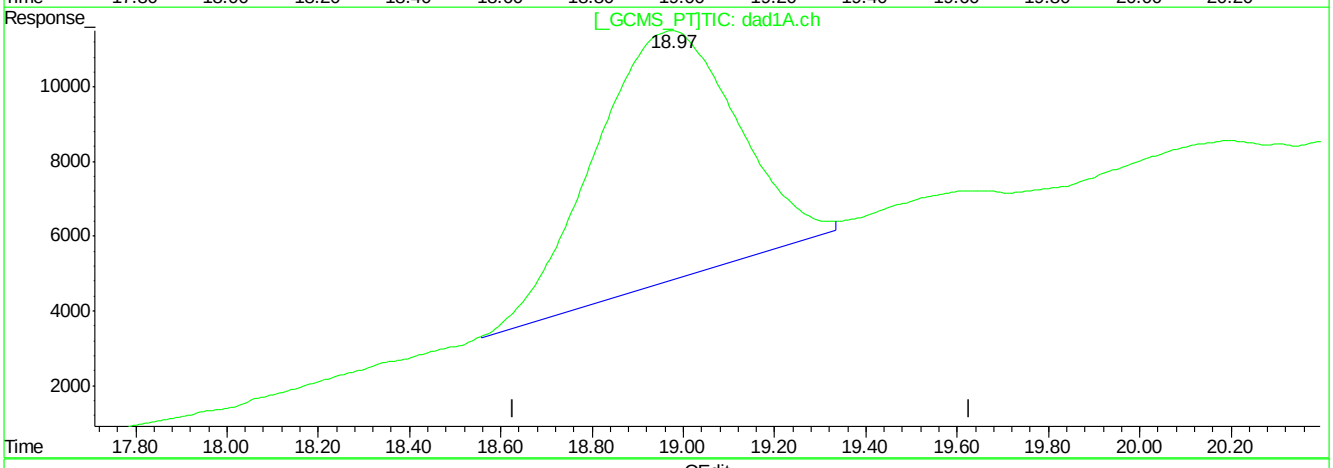
(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:56:56 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624055.D\dad1A.ch
Acq On : 04-May-2022, 18:03:19 Operator: fouads
Sample : fa95241-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:53 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

18.96min 133.404ppb

response 1158681

(20) 2-Amino-4,6-Dinitrotoluene #2

18.97min 121.550ppb m

response 1466424

(+) = Expected Retention Time
GG624055.D GGG3094_012422.M Thu May 05 10:57:04 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/06/22 10:50

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1A.ch
Acq On : 04-May-2022, 00:52:03 Operator: FOUADS
Sample : fa95241-2 Inst : G1315B
Misc : op91013,GBB2196,990,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 04 10:01:38 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.04	11.05	1022185	1760230	463.264	445.822
	Spiked Amount 500.000	Range 70 - 136		Recovery =		92.65%	89.16%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.46	1.46	245191	667825	152.087m	150.910m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.91	2.91	342242	476430	175.747	154.563
6)	1,3,5-Trinitrobe	4.69	4.69	775084	1321785	183.798	197.910
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	6.21	6.20	105919	179227	25.453	25.669m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.84	9.84	1152641	1375084	292.387	290.057
13)	2-Amino-4,6-Dini	10.11	10.12	362870	533356	104.944	102.547
14)	4-Amino-2,6-Dini	10.60	10.61	198491	433339	77.509m	83.960
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

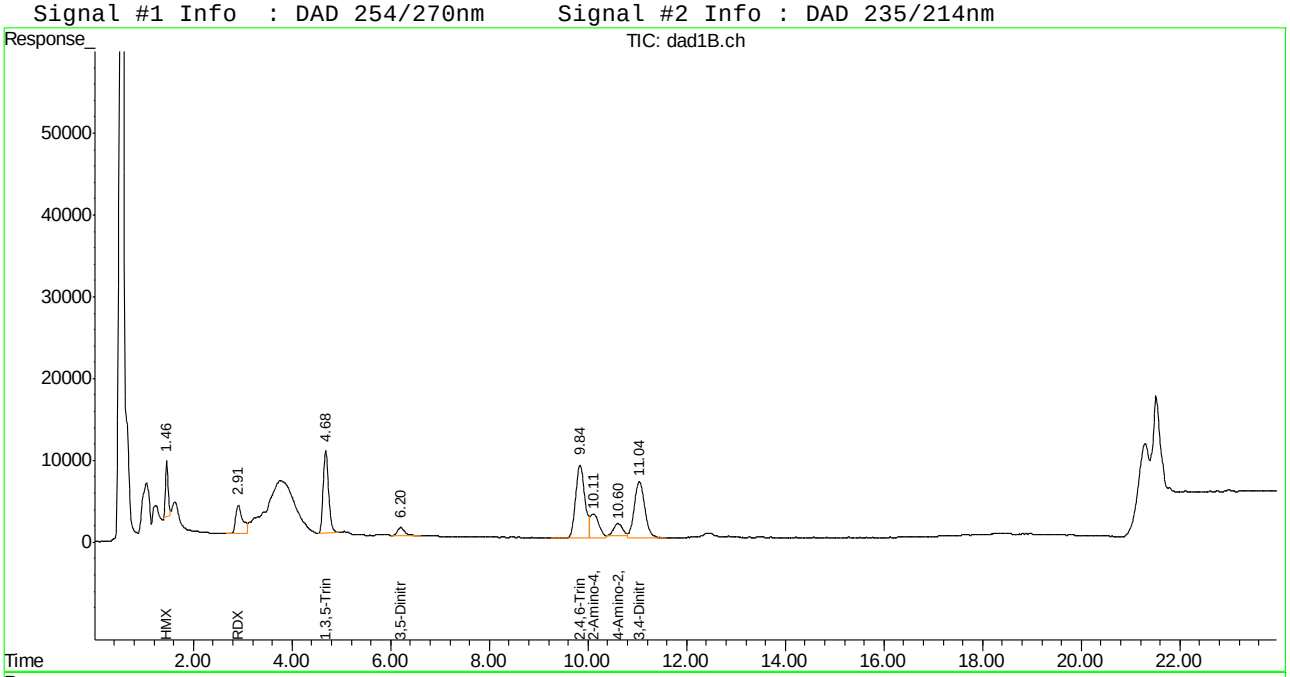
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072815.D BBB2167_041522.M Fri May 06 08:12:18 2022 Page 1

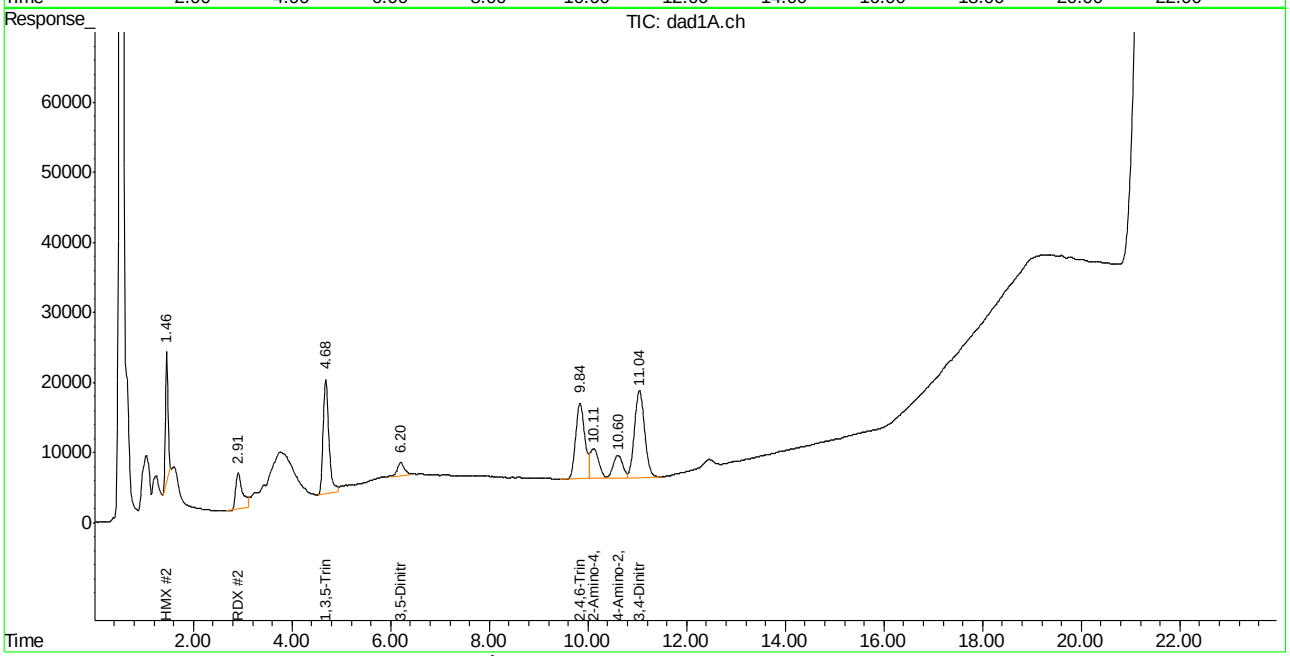
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1A.ch
Acq On : 04-May-2022, 00:52:03 Operator: FOUADS
Sample : fa95241-2 Inst : G1315B
Misc : op91013,GBB2196,990,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:03 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

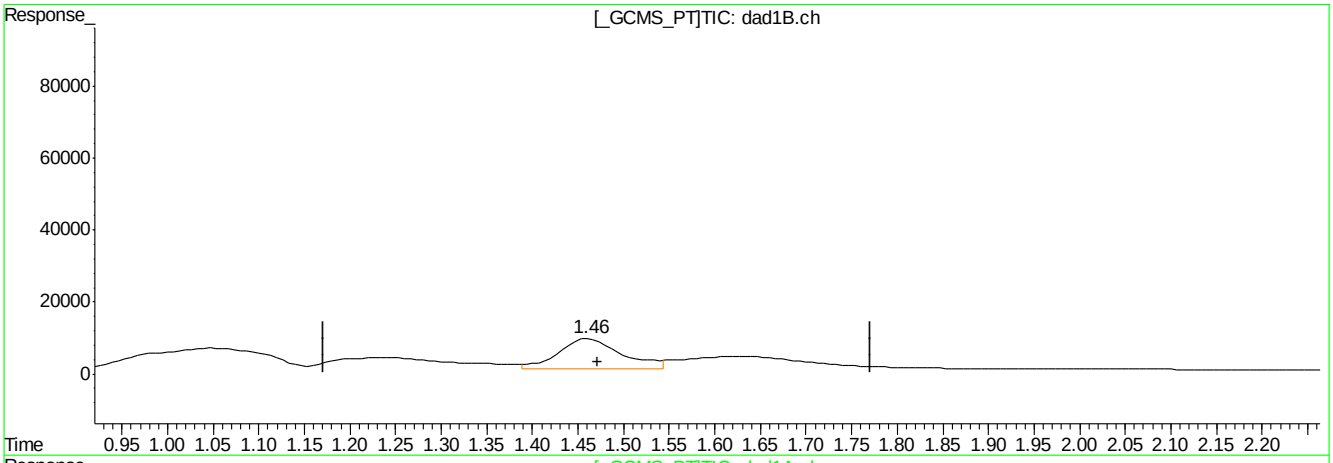
Sample Number: FA95241-2
Lab FileID: BB072815.D
Injection Time: 05/04/22 00:52
Method: SW846 8330B
Analyst approved: 05/05/22 09:14 Fouad Sekkar
Supervisor approved: 05/06/22 10:50 Naresh Jiawan

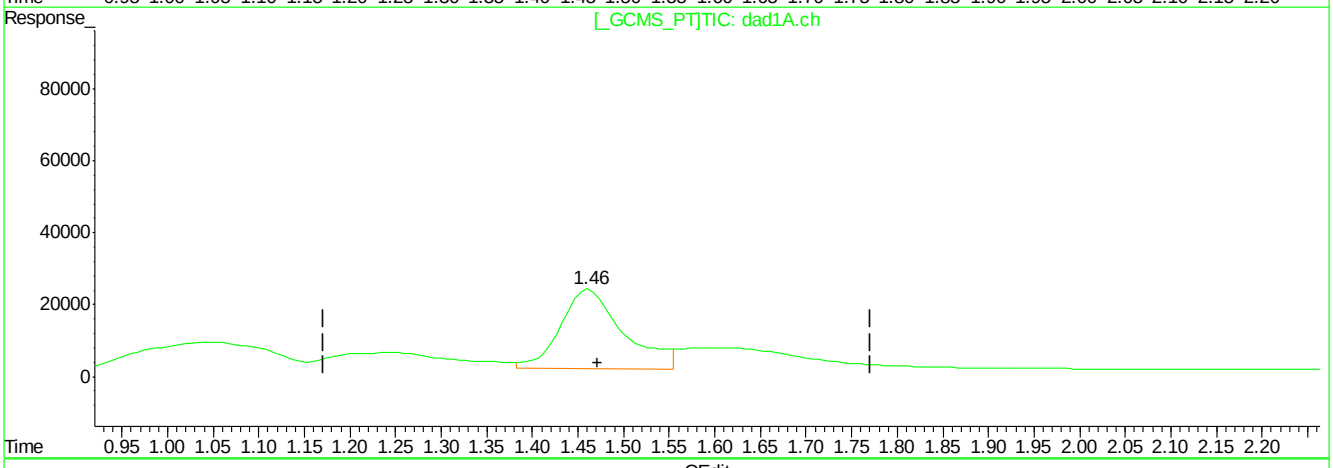
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.46	Poor instrument integration
HMX	2691-41-0	2	1.46	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.20	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.60	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1A.ch
Acq On : 04-May-2022, 00:52:03 Operator: FOUADS
Sample : fa95241-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:01 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.46min 256.294ppb

response 413192

(2) HMX #2

1.46min 238.298ppb

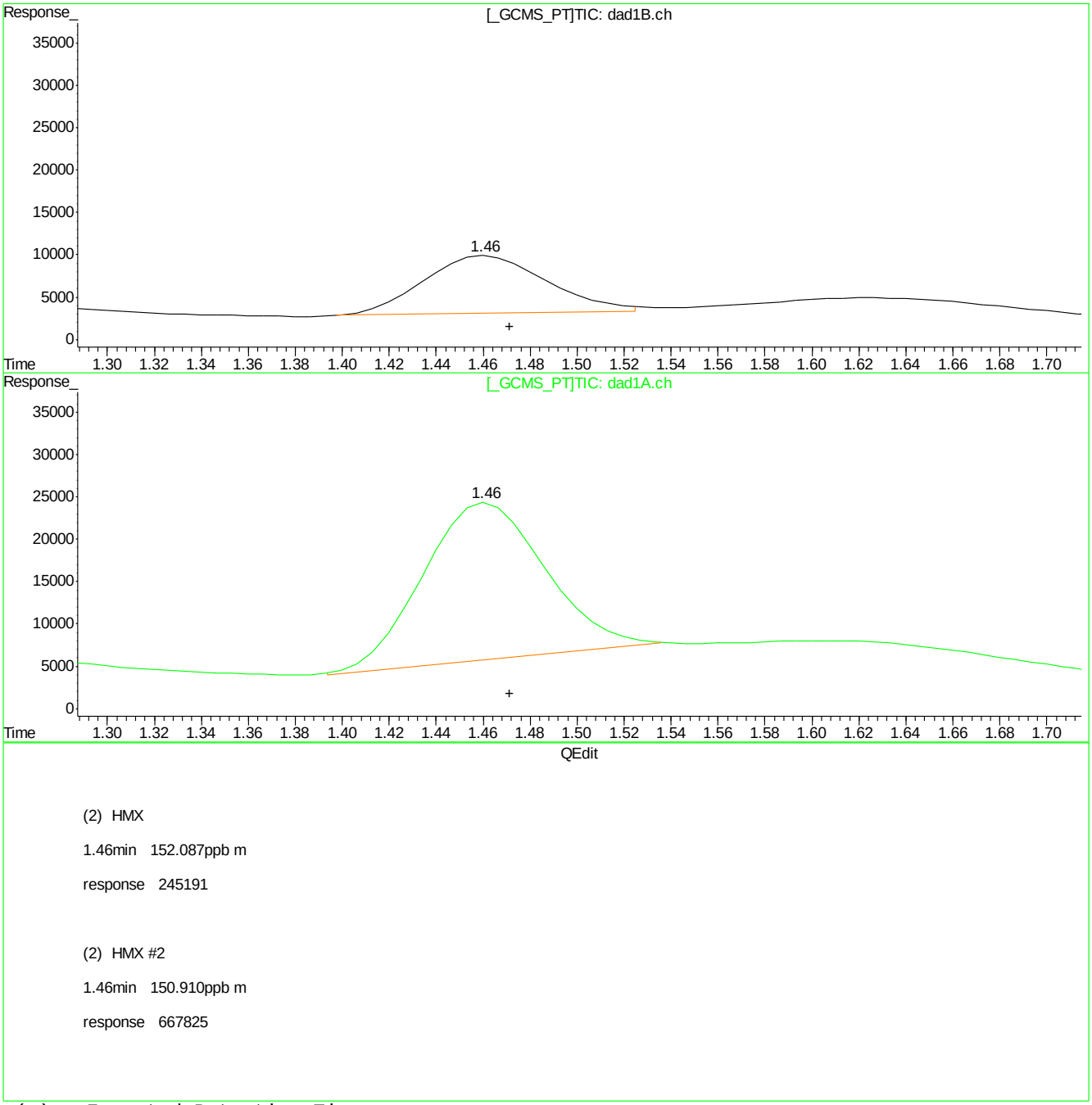
response 1054543

(+) = Expected Retention Time
BB072815.D BBB2167_041522.M Wed May 04 10:01:53 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1A.ch
Acq On : 04-May-2022, 00:52:03 Operator: FOUADS
Sample : fa95241-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:01 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration

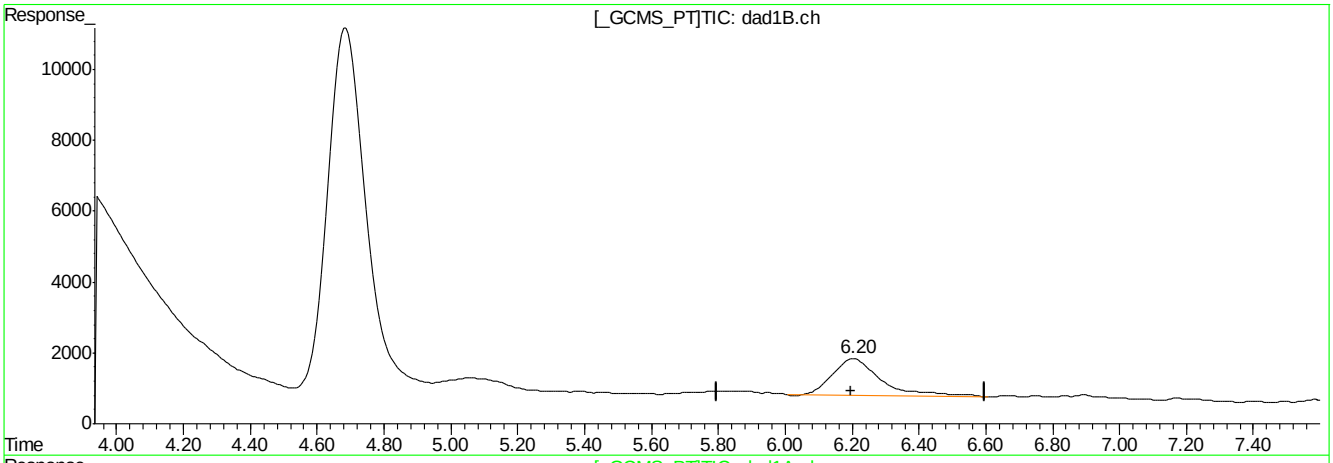


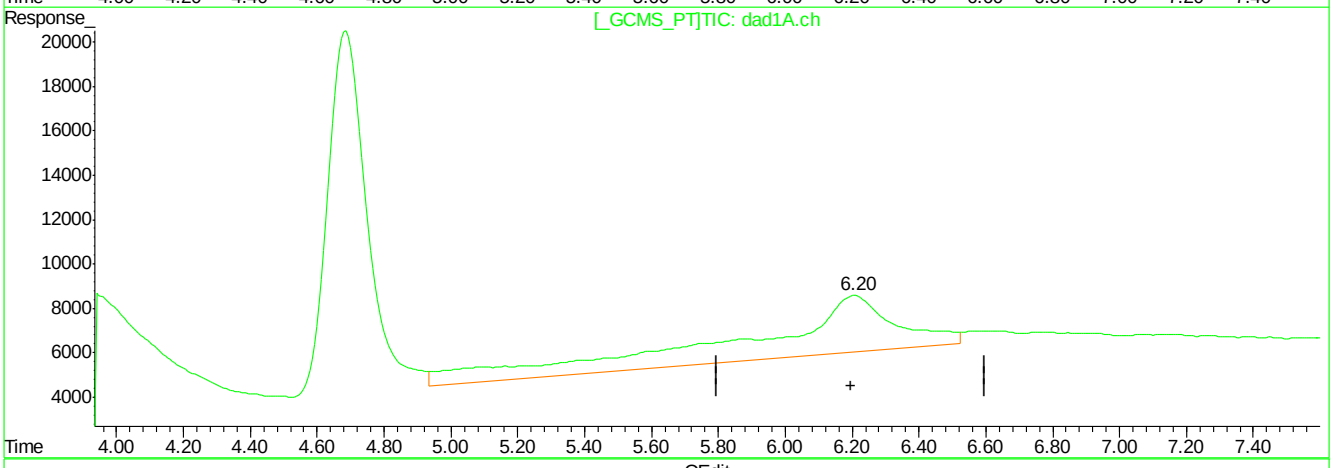
(+) = Expected Retention Time
BB072815.D BBB2167_041522.M Wed May 04 10:02:09 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1A.ch
Acq On : 04-May-2022, 00:52:03 Operator: FOUADS
Sample : fa95241-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:01 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.21min 25.453ppb

response 105919

(8) 3,5-Dinitroaniline #2

6.21min 124.936ppb

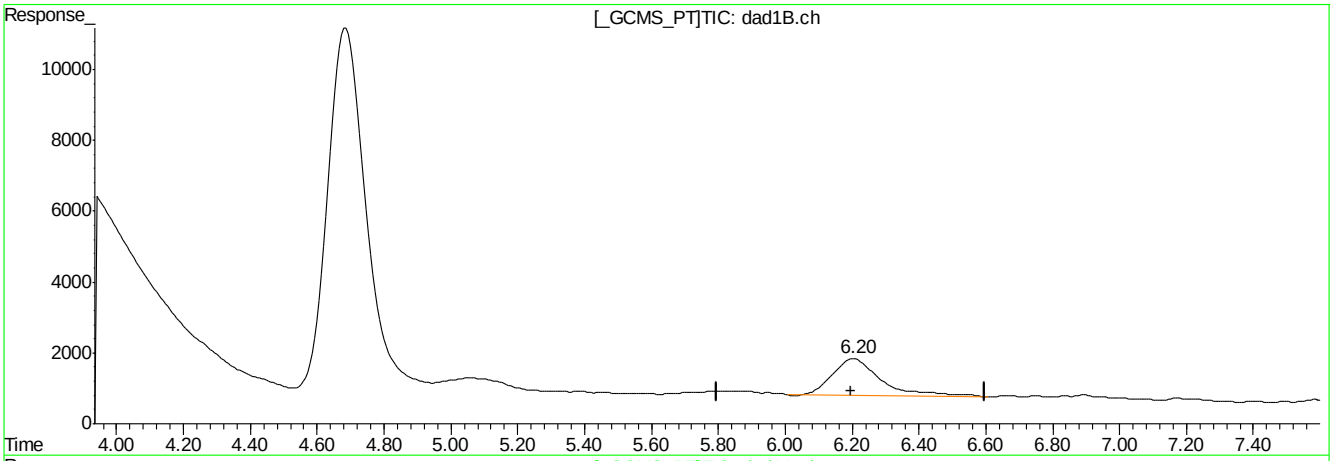
response 872345

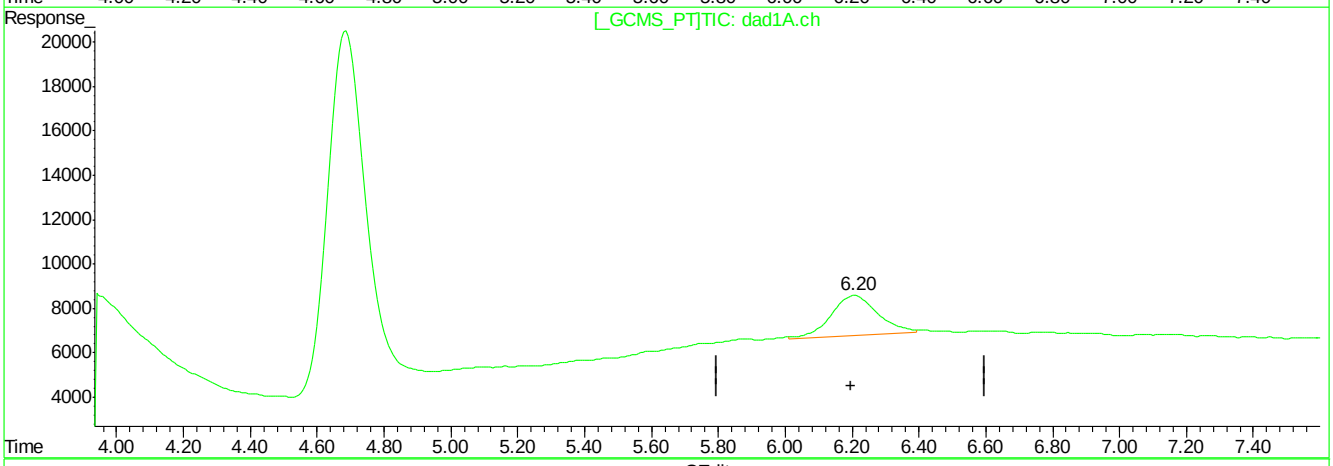
(+) = Expected Retention Time
BB072815.D BBB2167_041522.M Wed May 04 10:02:31 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1A.ch
Acq On : 04-May-2022, 00:52:03 Operator: FOUADS
Sample : fa95241-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:01 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.21min 25.453ppb

response 105919

(8) 3,5-Dinitroaniline #2

6.20min 25.669ppb m

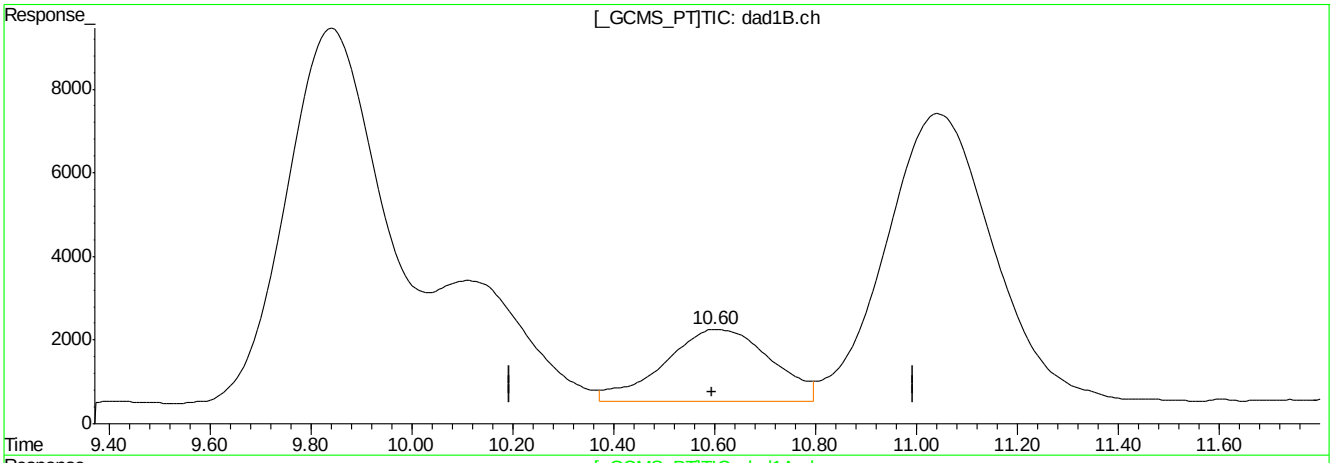
response 179227

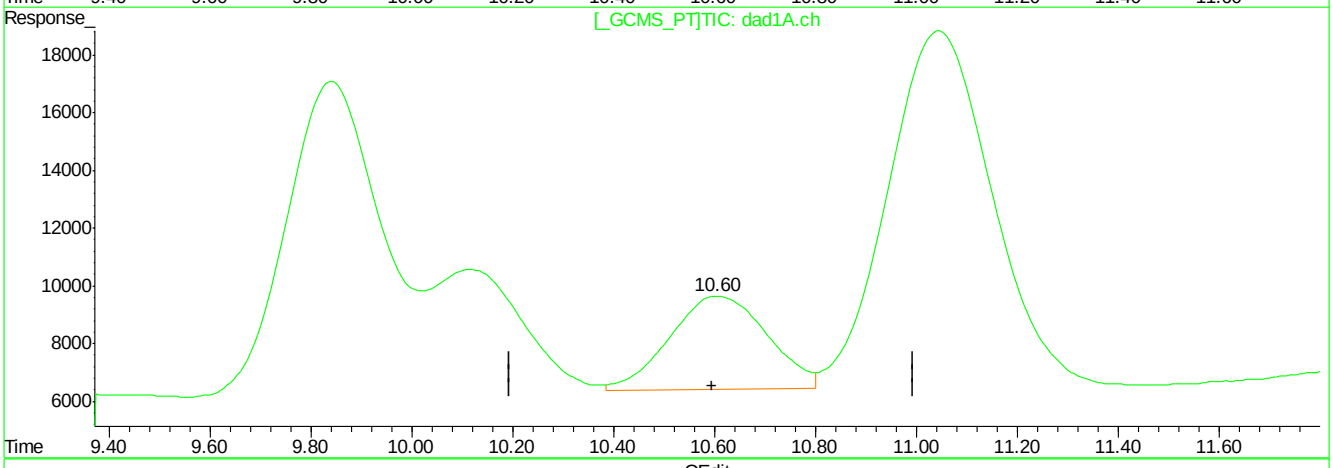
(+) = Expected Retention Time
BB072815.D BBB2167_041522.M Wed May 04 10:02:37 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1A.ch
Acq On : 04-May-2022, 00:52:03 Operator: FOUADS
Sample : fa95241-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:01 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.60min 98.912ppb

response 253299

(14) 4-Amino-2,6-Dinitrotoluene #2

10.61min 83.960ppb

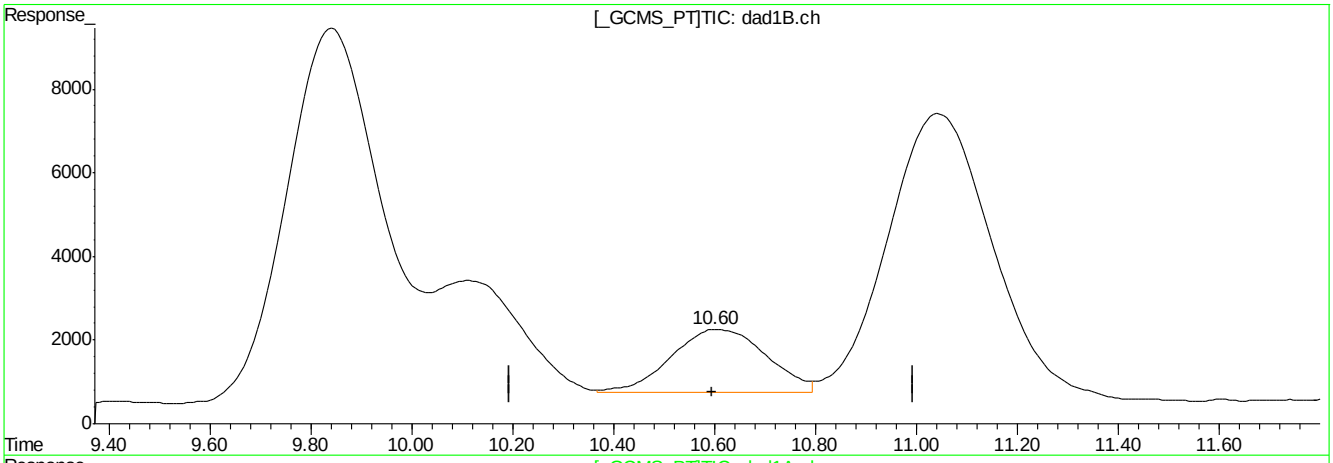
response 433339

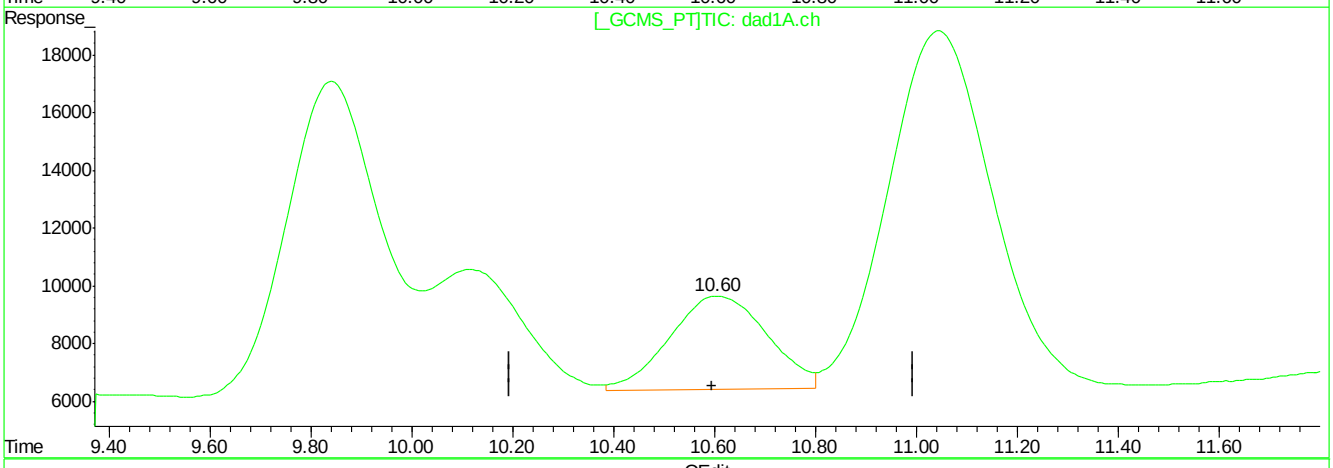
(+) = Expected Retention Time
BB072815.D BBB2167_041522.M Wed May 04 10:02:48 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072815.D\dad1A.ch
Acq On : 04-May-2022, 00:52:03 Operator: FOUADS
Sample : fa95241-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:01 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.60min 77.509ppb m

response 198491

(14) 4-Amino-2,6-Dinitrotoluene #2

10.61min 83.960ppb

response 433339

(+) = Expected Retention Time
BB072815.D BBB2167_041522.M Wed May 04 10:02:58 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 05/06/22 10:50

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624056.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624056.D\dad1A.ch
Acq On : 04-May-2022, 18:34:46 Operator: fouads
Sample : fa95241-2cf Inst : G1315B
Misc : op91013,GGG3135,990,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 05 10:57:34 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.55	13.55	2473320	5270503	496.318	533.705
	Spiked Amount 500.000	Range 70 - 136		Recovery =		99.26%	106.74%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.06	5.06	693628	691036	214.623m	213.821m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.17	7.17	1779979	1776589	193.302	192.902
6)	RDX	7.50	7.50	581586	578401	130.555	129.730
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.16	11.16	2643998	4115528	295.150	337.934
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
15)	3,5-Dinitroanili	15.30	15.31	463158	1020936	47.592	59.510
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.09	17.10	633417	1339261	117.886	137.693
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	18.97	18.98	1038524	1570078	119.569	130.142
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

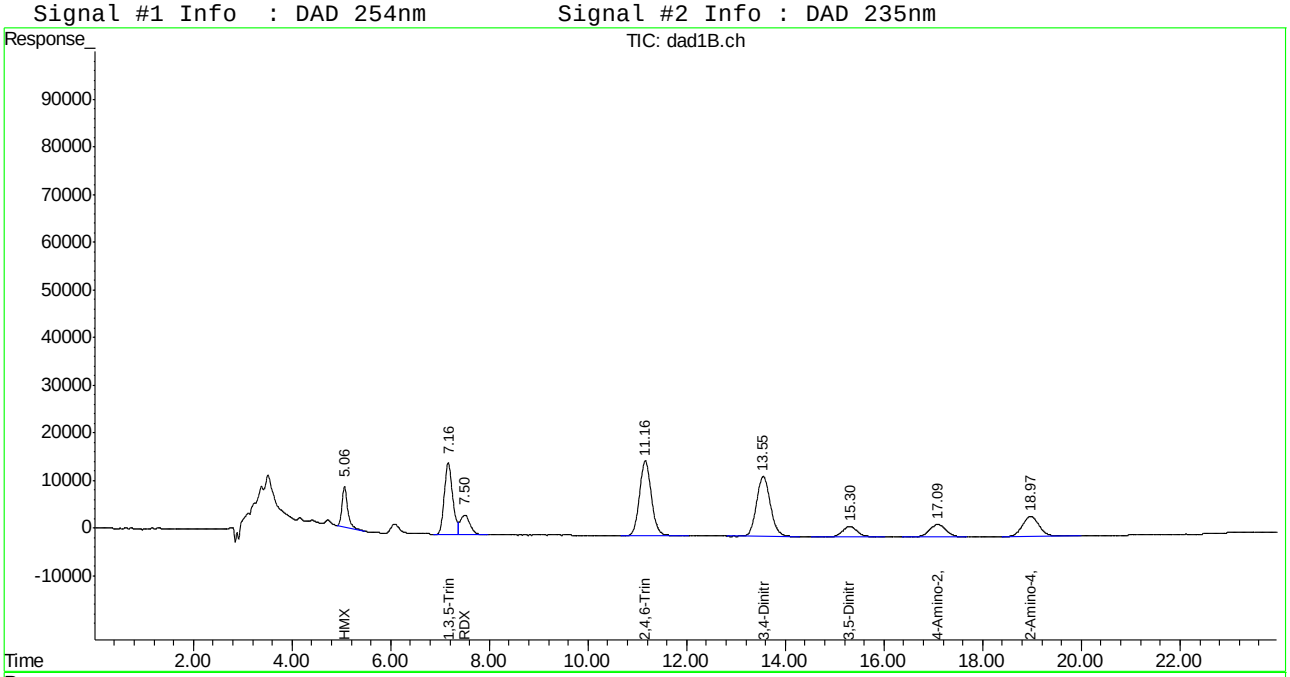
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG624056.D GGG3094_012422.M Thu May 05 14:53:13 2022 Page 1

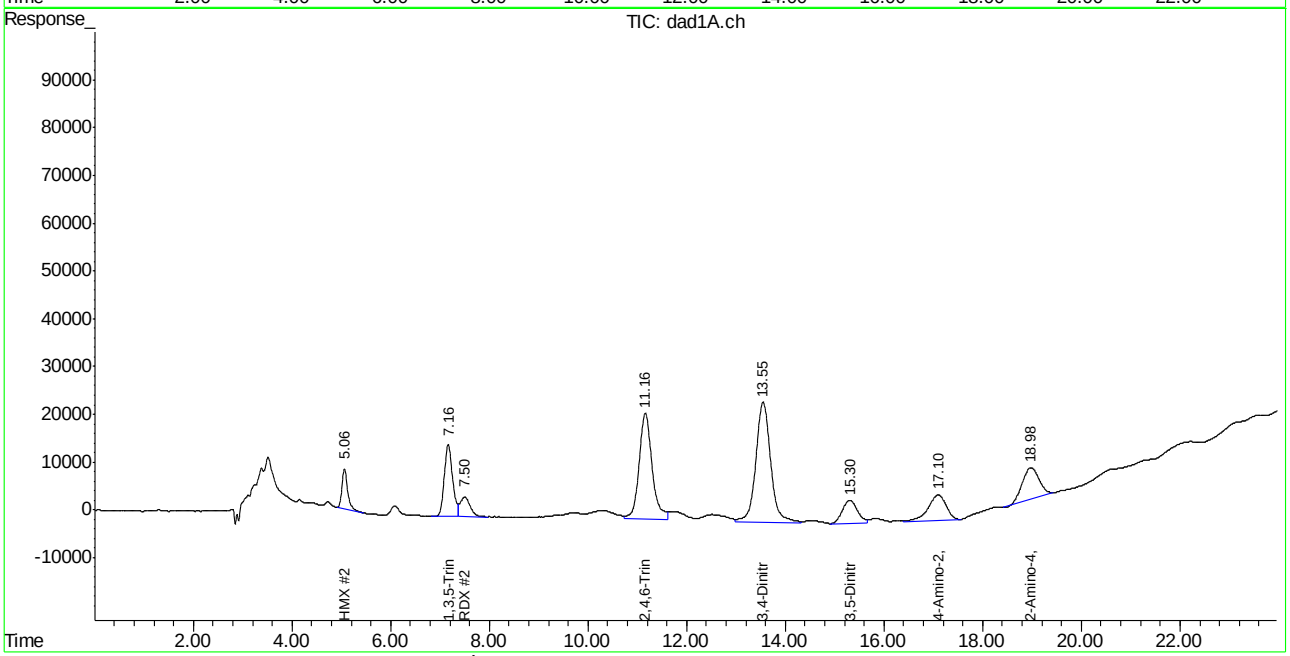
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624056.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624056.D\dad1A.ch
Acq On : 04-May-2022, 18:34:46 Operator: fouads
Sample : fa95241-2cf Inst : G1315B
Misc : op91013,GGG3135,990,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:59 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

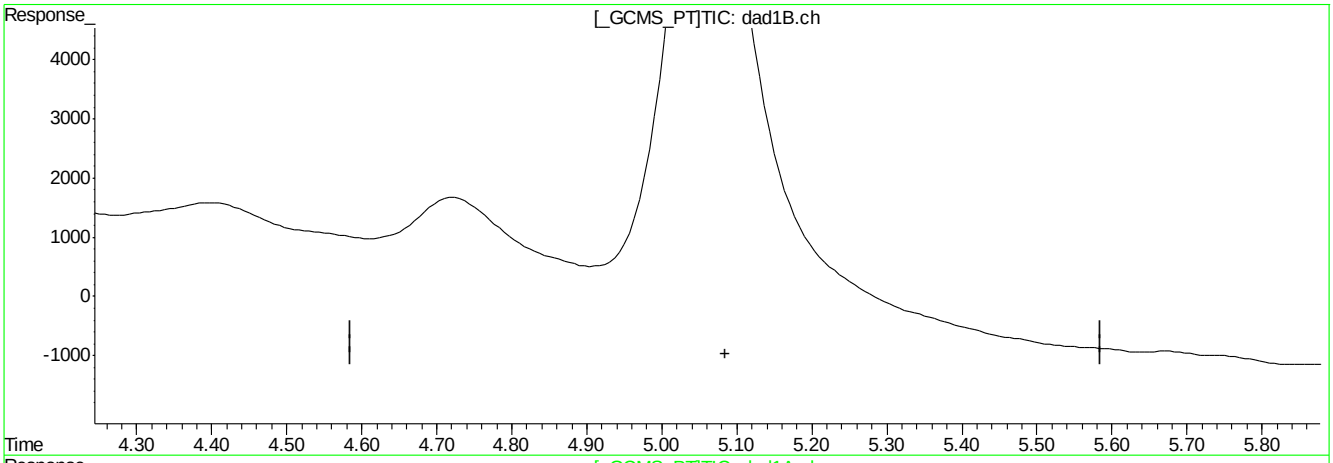
Sample Number: FA95241-2
Lab FileID: GG624056.D
Injection Time: 05/04/22 18:34
Method: SW846 8330B
Analyst approved: 05/05/22 15:05 Fouad Sekkar
Supervisor approved: 05/06/22 10:50 Naresh Jiawan

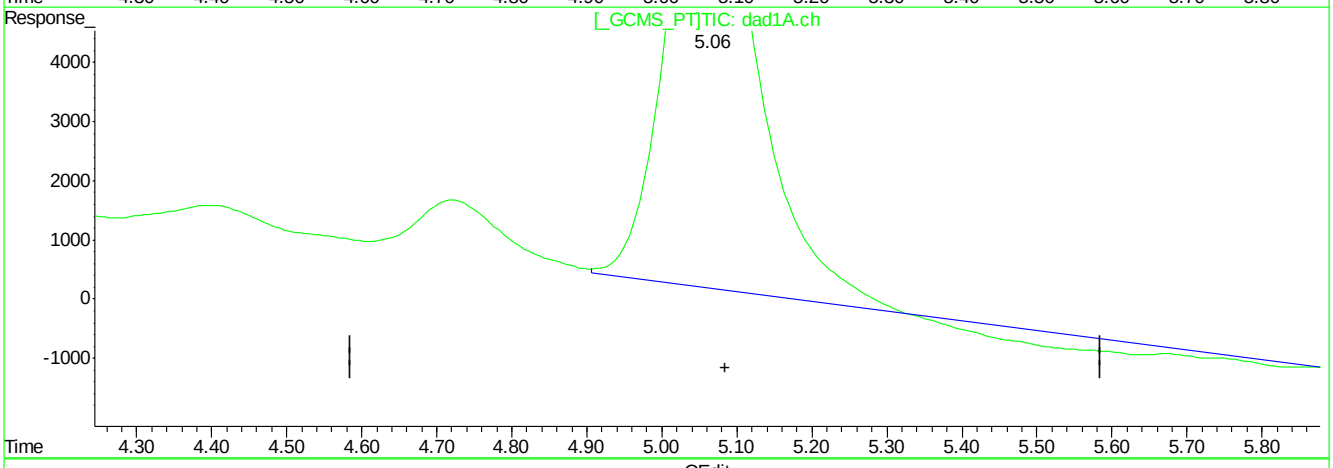
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	5.06	Poor instrument integration
HMX	2691-41-0	2	5.06	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624056.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624056.D\dad1A.ch
Acq On : 04-May-2022, 18:34:46 Operator: fouads
Sample : fa95241-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:57 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

0.00min 0.000ppb

response 0

(2) HMX #2

5.06min 194.783ppb

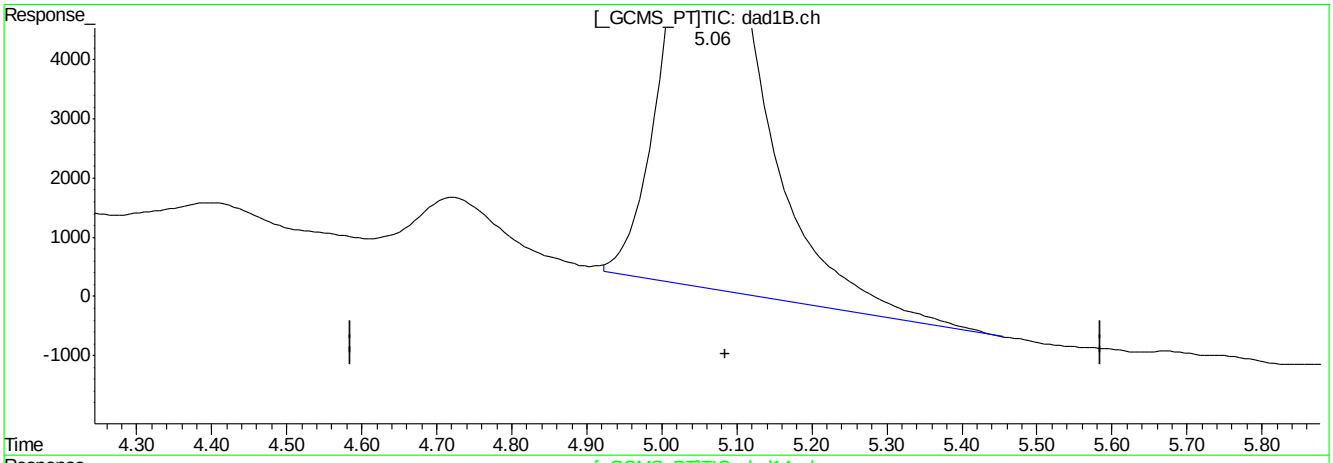
response 629506

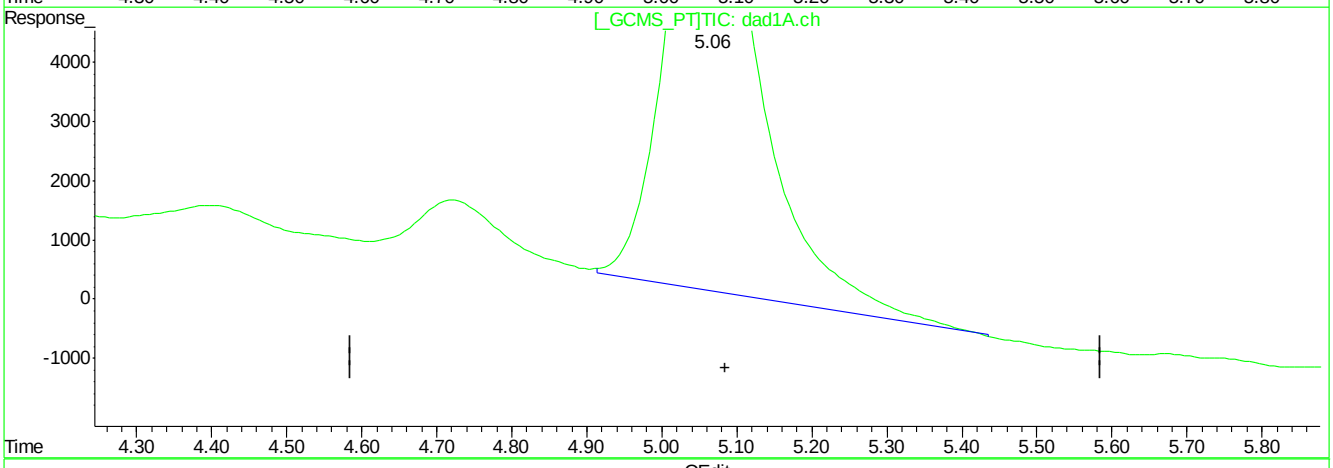
(+) = Expected Retention Time
GG624056.D GGG3094_012422.M Thu May 05 10:58:18 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624056.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624056.D\dad1A.ch
Acq On : 04-May-2022, 18:34:46 Operator: fouads
Sample : fa95241-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 10:57 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.06min 214.623ppb m

response 693628

(2) HMX #2

5.06min 213.821ppb m

response 691036

(+) = Expected Retention Time
GG624056.D GGG3094_012422.M Thu May 05 10:58:30 2022

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072808.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072808.D\dad1A.ch
Acq On : 03-May-2022, 21:12:18 Operator: FOUADS
Sample : op91013-mb Inst : G1315B
Misc : op91013,GBB2196,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 04 09:38:09 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.07	11.07	1063373	1882479	481.931	476.785
	Spiked Amount 500.000	Range 70 - 136		Recovery =		96.39%	95.36%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D.	N.D.
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D.	N.D.
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D.	N.D.
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	18.53	0.00	19637	0	NoCal	N.D.

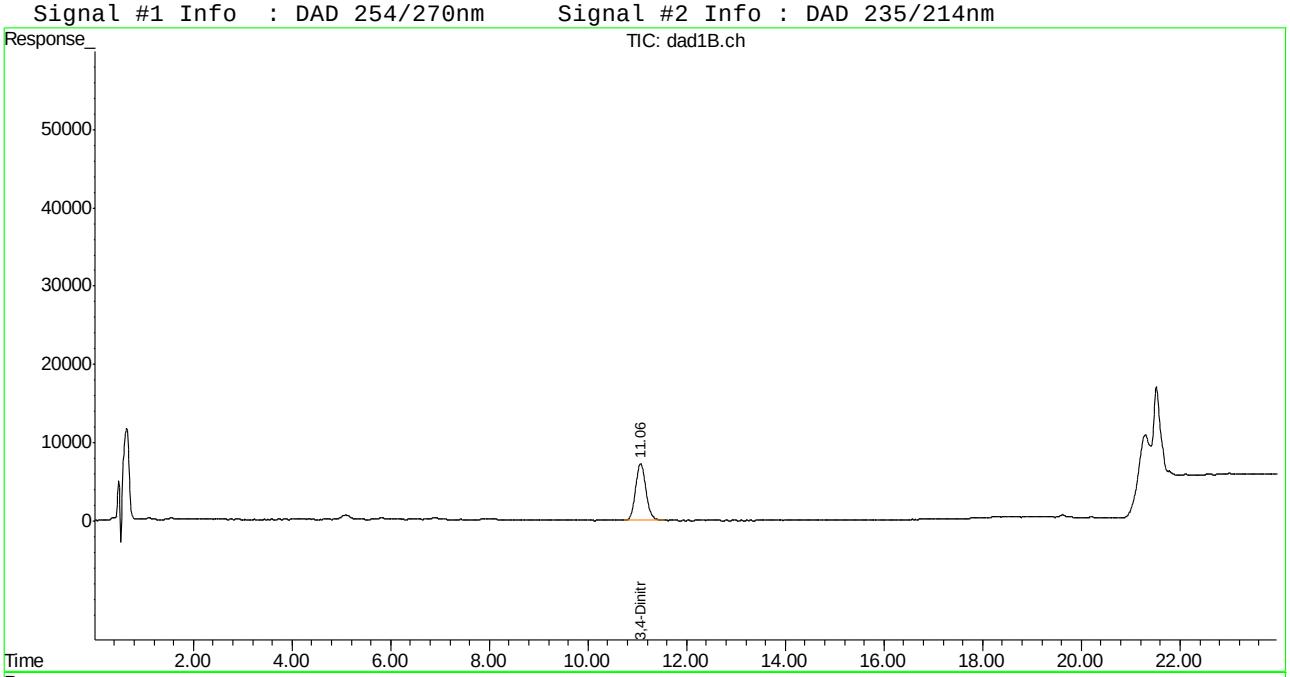
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072808.D BBB2167_041522.M Wed May 04 14:00:55 2022 Page 1

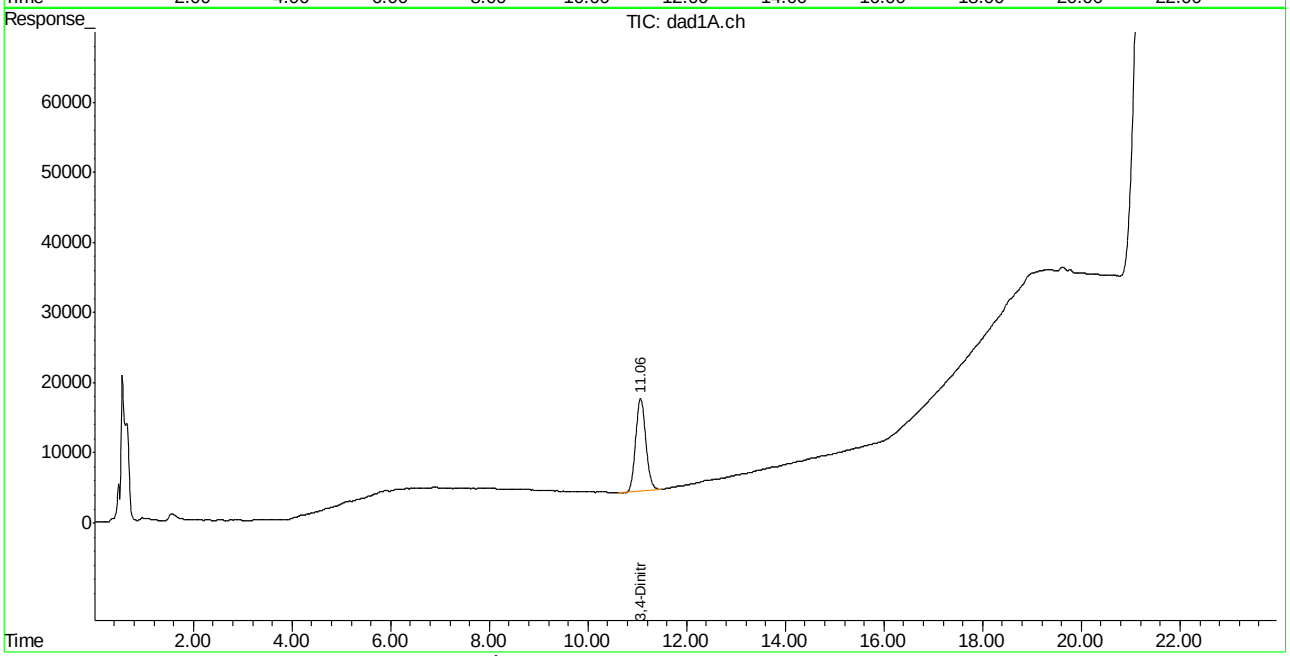
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072808.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072808.D\dad1A.ch
Acq On : 03-May-2022, 21:12:18 Operator: FOUADS
Sample : op91013-mb Inst : G1315B
Misc : op91013,GBB2196,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:54 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624054.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624054.D\dad1A.ch
Acq On : 04-May-2022, 17:31:54 Operator: fouads
Sample : op91013-mb Inst : G1315B
Misc : op91013,GGG3135,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 05 09:45:07 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.58	13.58	2579925	5378359	517.710	544.626
	Spiked Amount 500.000	Range 70 - 136		Recovery =		103.54%	108.93%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D.	N.D.
2)	HMX	0.00	0.00	0	0	N.D.	N.D.
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
18)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D.	N.D.
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

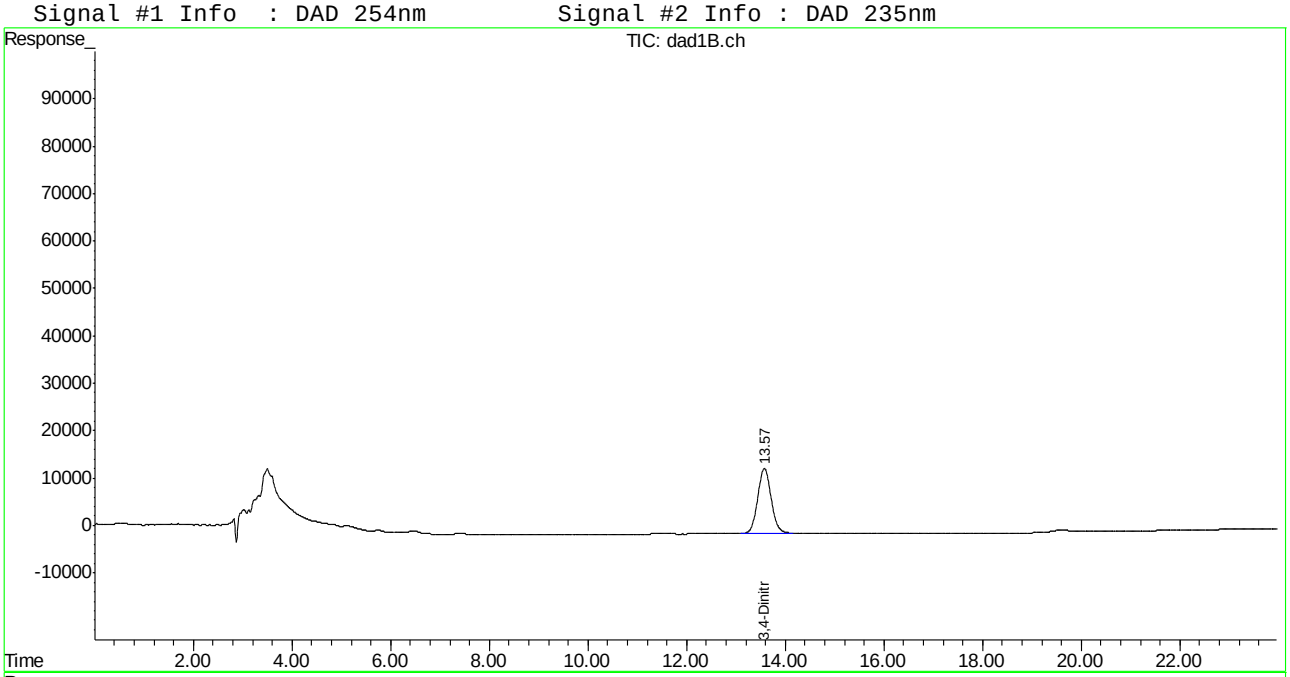
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG624054.D GGG3094_012422.M Thu May 05 14:53:11 2022 Page 1

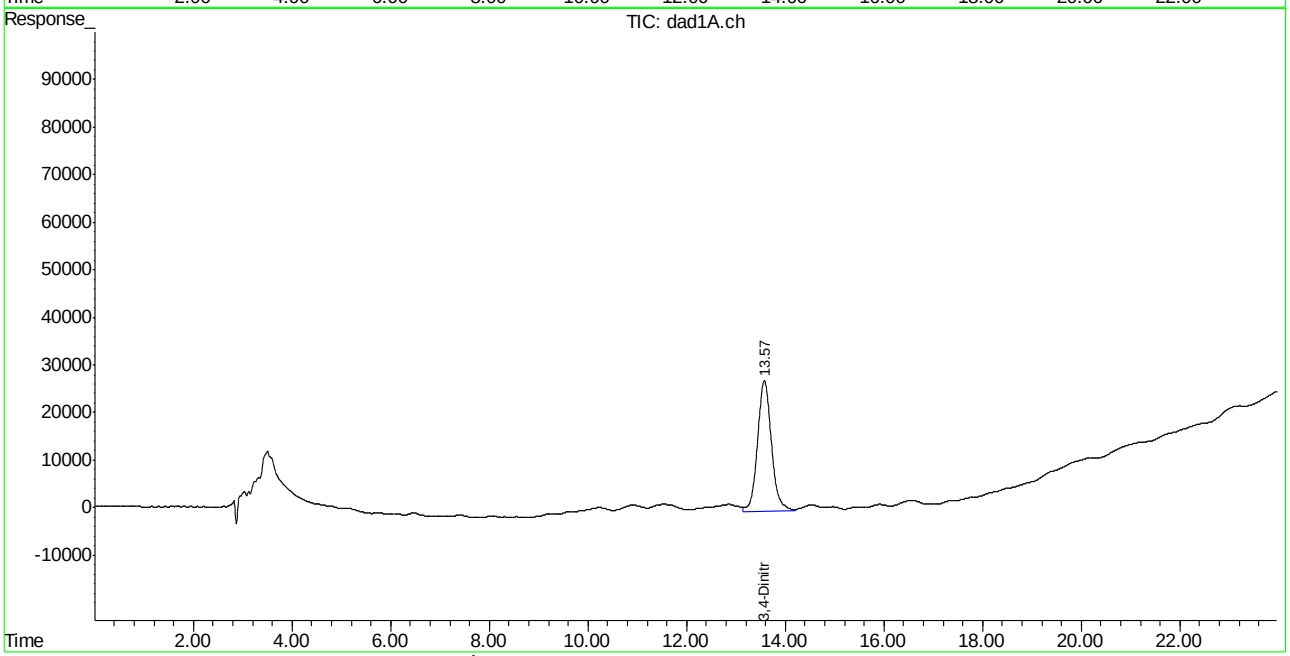
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624054.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624054.D\dad1A.ch
Acq On : 04-May-2022, 17:31:54 Operator: fouads
Sample : op91013-mb Inst : G1315B
Misc : op91013,GGG3135,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 9:45 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/06/22 10:50

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072809.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072809.D\dad1A.ch
Acq On : 03-May-2022, 21:43:34 Operator: FOUADS
Sample : op95013-bs Inst : G1315B
Misc : op91013,GBB2196,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 04 09:54:57 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.04	11.05	1115557	1945921	505.581	492.853
	Spiked Amount 500.000	Range 70 - 136		Recovery =		101.12%	98.57%
	Target Compounds						
1)	TNX	1.33	1.33	587664	885079	171.868	169.960
2)	HMX	1.46	1.46	802924	2216807	498.036	500.937
3)	DNX	1.71	1.71	1264135	2040234	430.807	438.036
4)	MNX	2.29	2.29	1401139	2139545	517.588	515.740
5)	RDX	2.91	2.91	922336	1463904	473.636	474.918
6)	1,3,5-Trinitrobe	4.69	4.69	2051738	3167436	486.535	474.257
7)	1,3-Dinitrobenze	5.87	5.87	2690261	2174625	490.514	567.181
8)	3,5-Dinitroanili	6.21	6.21	2038359	3632116	489.837	520.187
9)	Nitrobenzene	7.44	7.44	1363782	1342493	422.797	425.661
10)	Nitroglycerin	0.00	9.09	0	646611	N.D.	485.027 #
11)	Tetryl	9.40	9.40	1040170	1632056	329.616	321.348
12)	2,4,6-Trinitroto	9.84	9.84	1525332	1957840	386.927	412.982
13)	2-Amino-4,6-Dini	10.12	10.12	1704664	2554100	492.996	491.073
14)	4-Amino-2,6-Dini	10.61	10.61	1254548	2458239	489.893	476.286
16)	2,4-Dinitrotolue	11.75	11.75	2353813	1573337	484.077	481.380
17)	2,6-Dinitrotolue	12.21	12.21	1359708	1811557	482.781	485.871
18)	o-Nitrotoluene	15.25	15.26	967414	1231853	418.580	389.192
19)	p-Nitrotoluene	15.82	15.83	1555448	1202341	432.020	399.967
20)	m-Nitrotoluene	16.68	16.68	1427235	1547585	421.261	380.362
21)	PETN	0.00	18.55	0	770389	N.D. d	515.340m

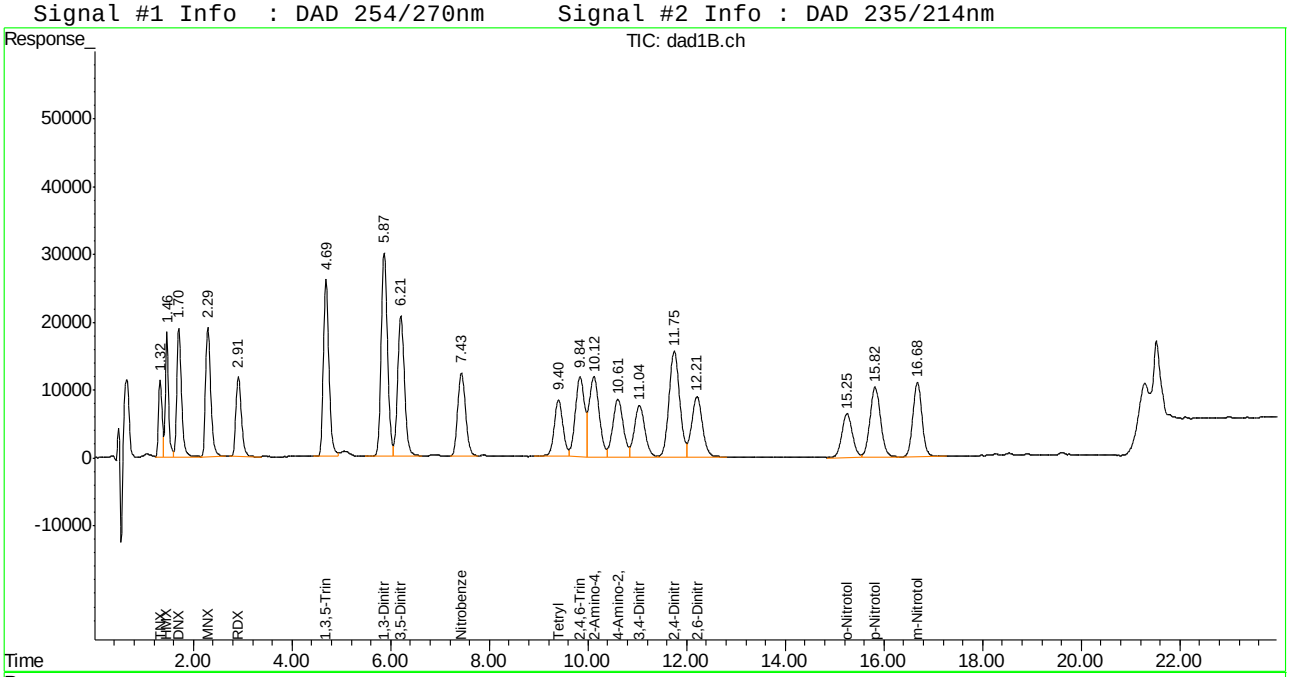
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072809.D BBB2167_041522.M Wed May 04 14:00:56 2022 Page 1

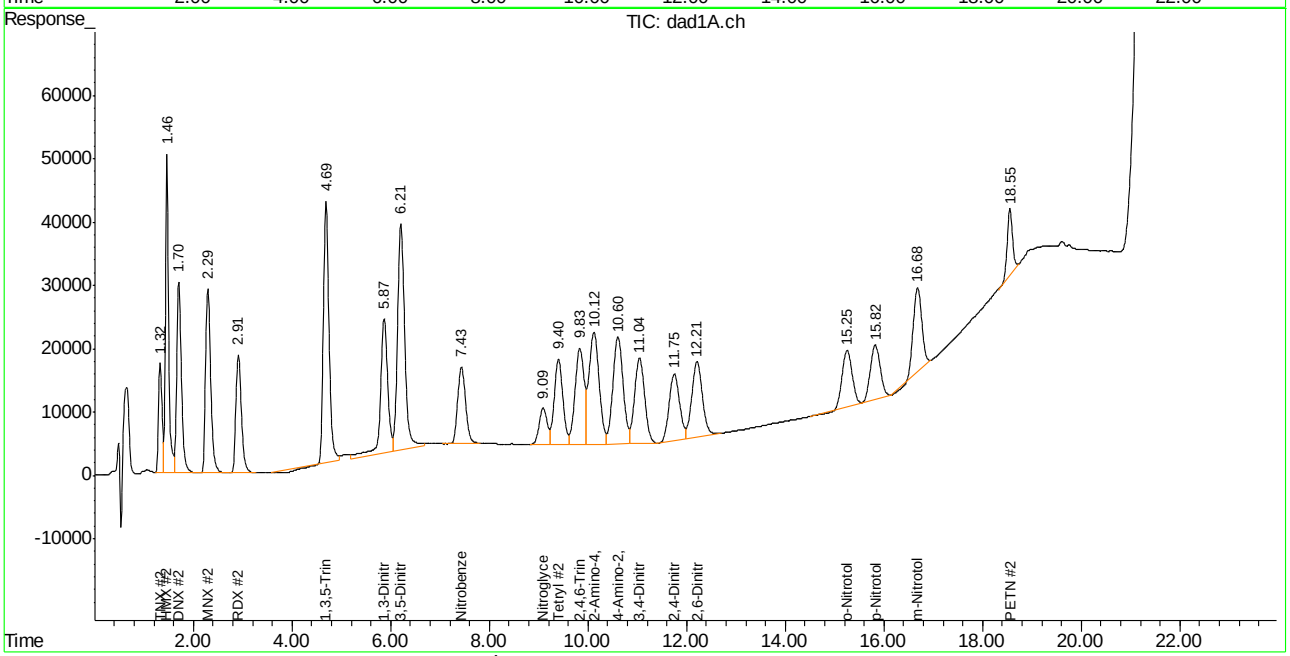
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072809.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072809.D\dad1A.ch
Acq On : 03-May-2022, 21:43:34 Operator: FOUADS
Sample : op95013-bs Inst : G1315B
Misc : op91013,GBB2196,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:56 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

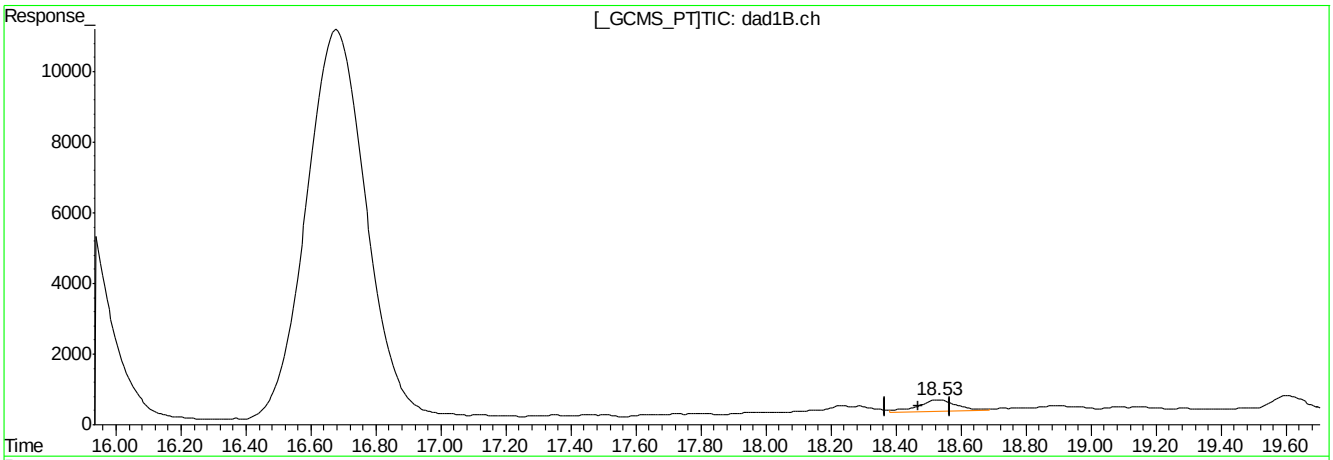
Sample Number:	OP91013-BS	**Method:**	SW846 8330B
Lab FileID:	BB072809.D	**Analyst approved:**	05/05/22 09:14 Fouad Sekkar
Injection Time:	05/03/22 21:43	**Supervisor approved:**	05/06/22 10:50 Naresh Jiawan

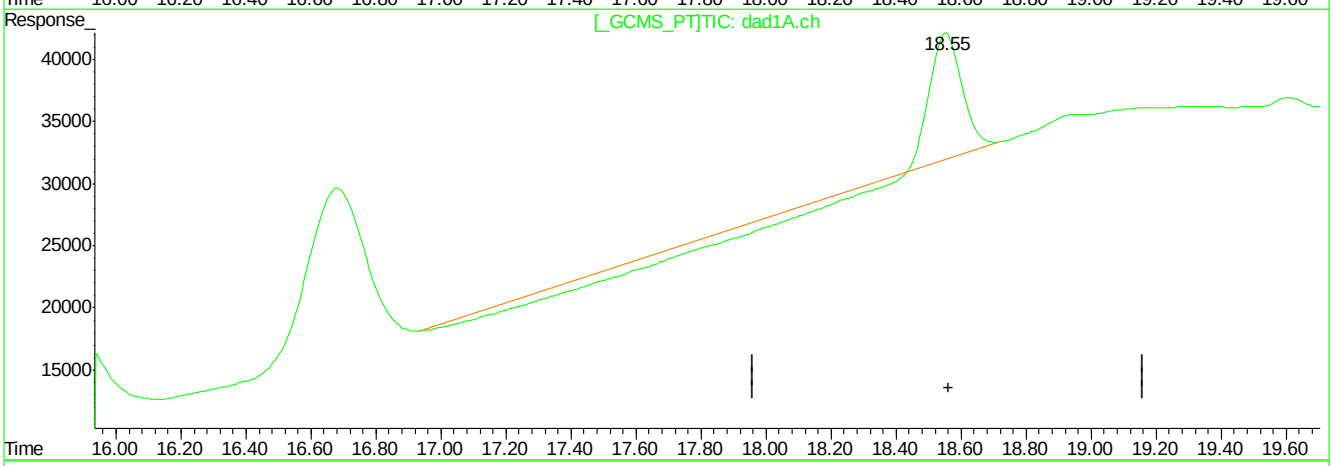
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.55	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072809.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072809.D\dad1A.ch
Acq On : 03-May-2022, 21:43:34 Operator: FOUADS
Sample : op95013-bs Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:54 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.53min 0.000ppb

response 28226

(21) PETN #2

18.56min 59.344ppb

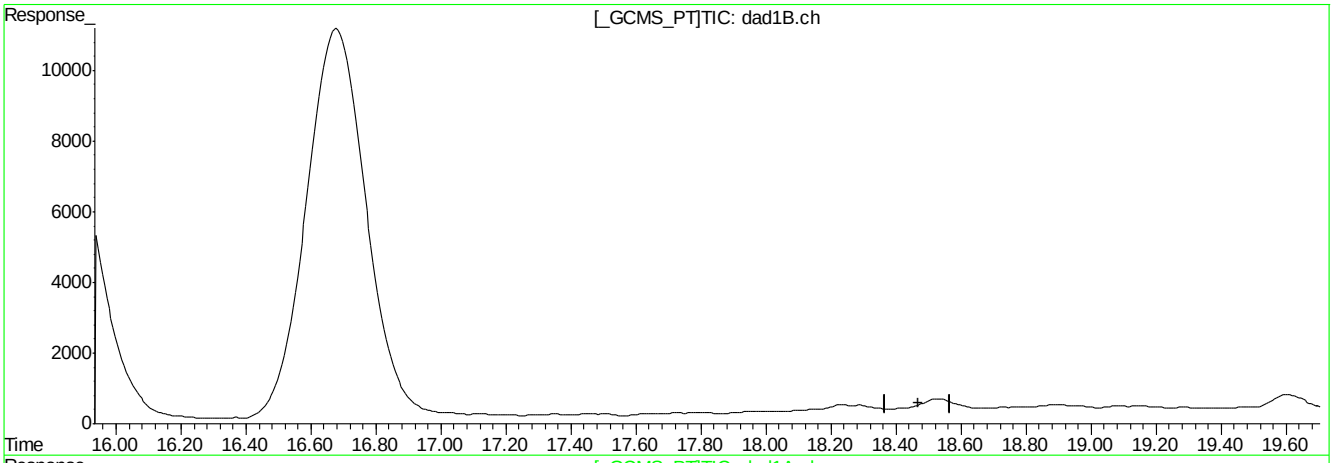
response 88714

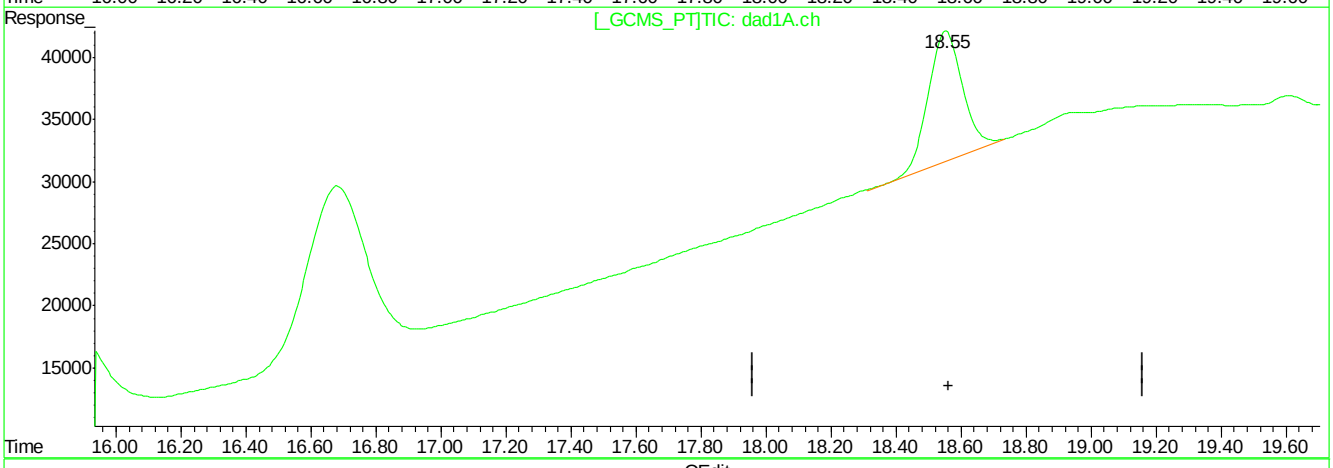
(+) = Expected Retention Time
BB072809.D BBB2167_041522.M Wed May 04 09:56:02 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072809.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072809.D\dad1A.ch
Acq On : 03-May-2022, 21:43:34 Operator: FOUADS
Sample : op95013-bs Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:54 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.55min 515.340ppb m

response 770389

(+) = Expected Retention Time
BB072809.D BBB2167_041522.M Wed May 04 09:56:10 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/06/22 10:50

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072813.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072813.D\dad1A.ch
Acq On : 03-May-2022, 23:49:05 Operator: FOUADS
Sample : op91013-ms Inst : G1315B
Misc : op91013,GBB2196,480,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 04 09:59:50 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.04	11.04	935937	1654694	424.176	419.093
	Spiked Amount 500.000	Range 70 - 136		Recovery =		84.84%	83.82%
	Target Compounds						
1)	TNX	1.33	1.33	677332	928002	198.092	178.203
2)	HMX	1.46	1.46	1034989	2839459	641.981	641.639
3)	DNX	1.71	1.71	1393316	2245861	474.831	482.184
4)	MNX	2.30	2.30	1292975	1940800	477.631	467.832
5)	RDX	2.91	2.91	905290	1413253	464.882	458.486
6)	1,3,5-Trinitrobe	4.69	4.69	3764936	6256573	892.791	936.791
7)	1,3-Dinitrobenze	5.87	5.87	2352492	2064913	428.928	538.567
8)	3,5-Dinitroanili	6.21	6.21	1821765	3271891	437.788	468.596
9)	Nitrobenzene	7.44	7.44	1328694	1316967	411.919	417.568
10)	Nitroglycerin	0.00	9.08	0	579486	N.D.	434.676 #
11)	Tetryl	9.40	9.40	929307	1461330	294.485	287.733
12)	2,4,6-Trinitroto	9.84	9.83	2277364	2857722	577.693	602.800
13)	2-Amino-4,6-Dini	10.12	10.12	1663292	2507663	481.031	482.145
14)	4-Amino-2,6-Dini	10.61	10.61	1184511	2339903	462.544	453.358
16)	2,4-Dinitrotolue	11.74	11.74	2031966	1353243	417.887	414.040
17)	2,6-Dinitrotolue	12.20	12.21	1294895	1881877	459.768	504.732
18)	o-Nitrotoluene	15.24	15.24	983081	1331534	425.359	420.685
19)	p-Nitrotoluene	15.81	15.81	1498259	1179876	416.136	392.494
20)	m-Nitrotoluene	16.66	16.67	1397022	1550138	412.344	380.989
21)	PETN	0.00	18.54	0	674989	N.D. d	451.524m

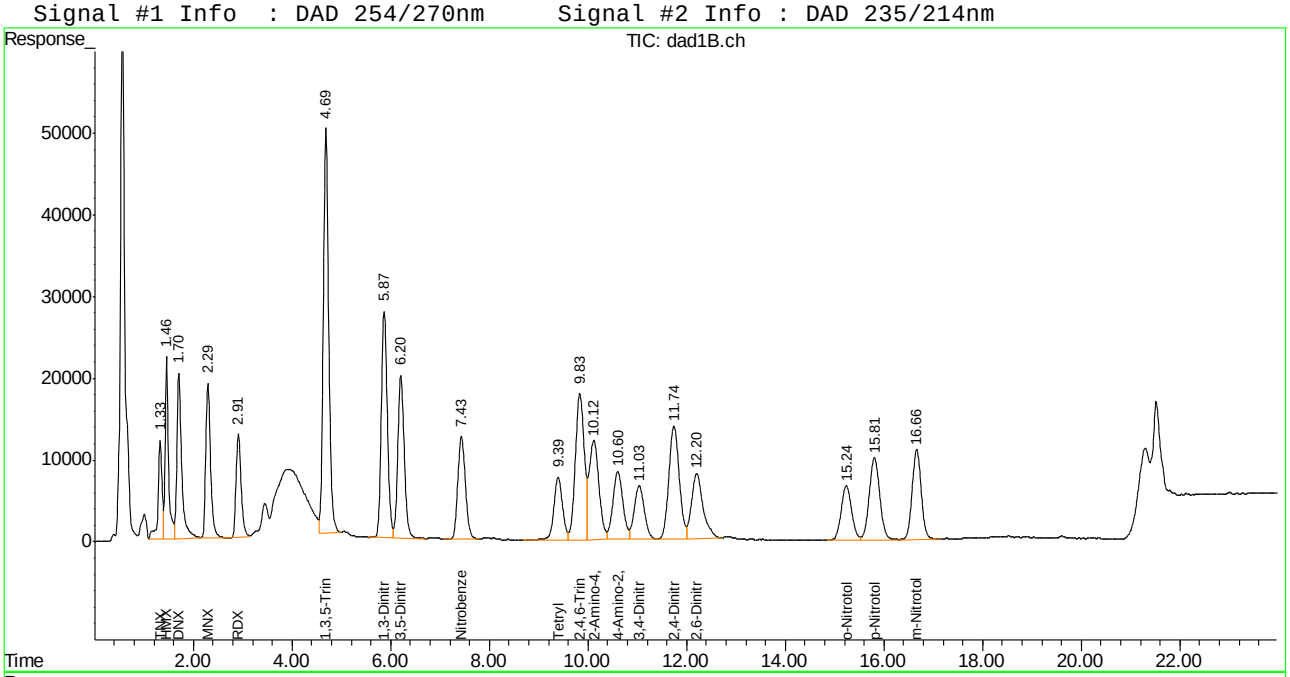
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072813.D BBB2167_041522.M Fri May 06 08:12:16 2022 Page 1

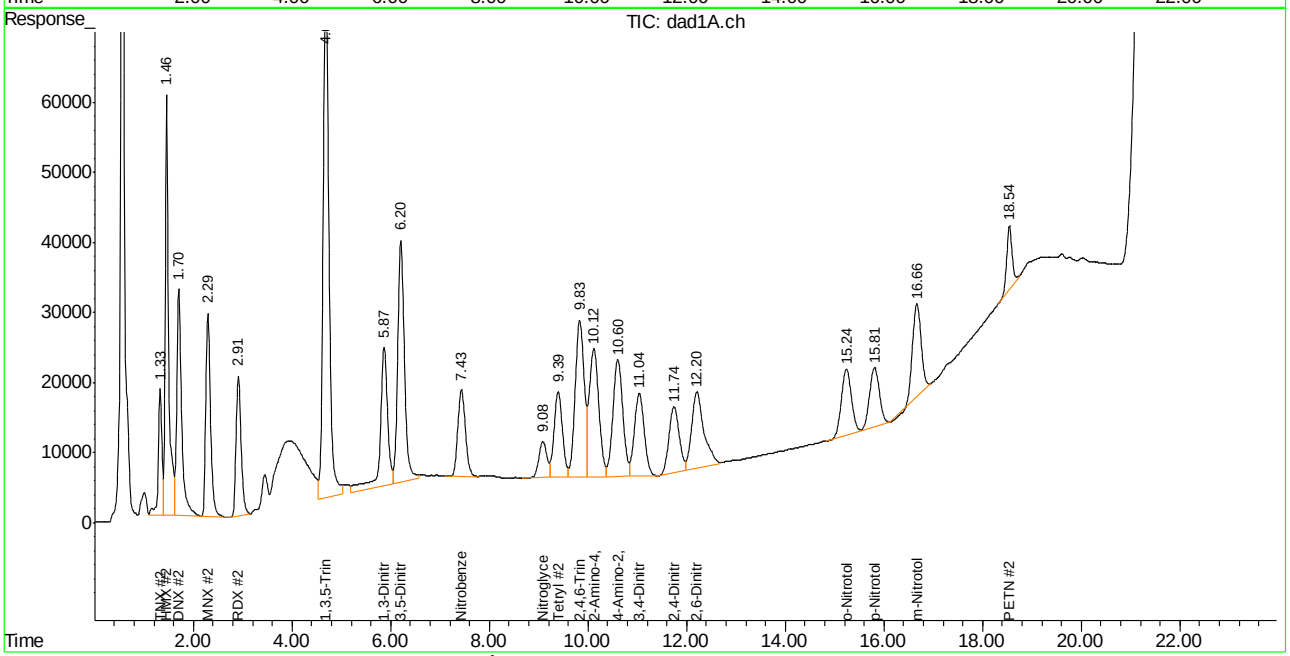
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072813.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072813.D\dad1A.ch
Acq On : 03-May-2022, 23:49:05 Operator: FOUADS
Sample : op91013-ms Inst : G1315B
Misc : op91013,GBB2196,480,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:00 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

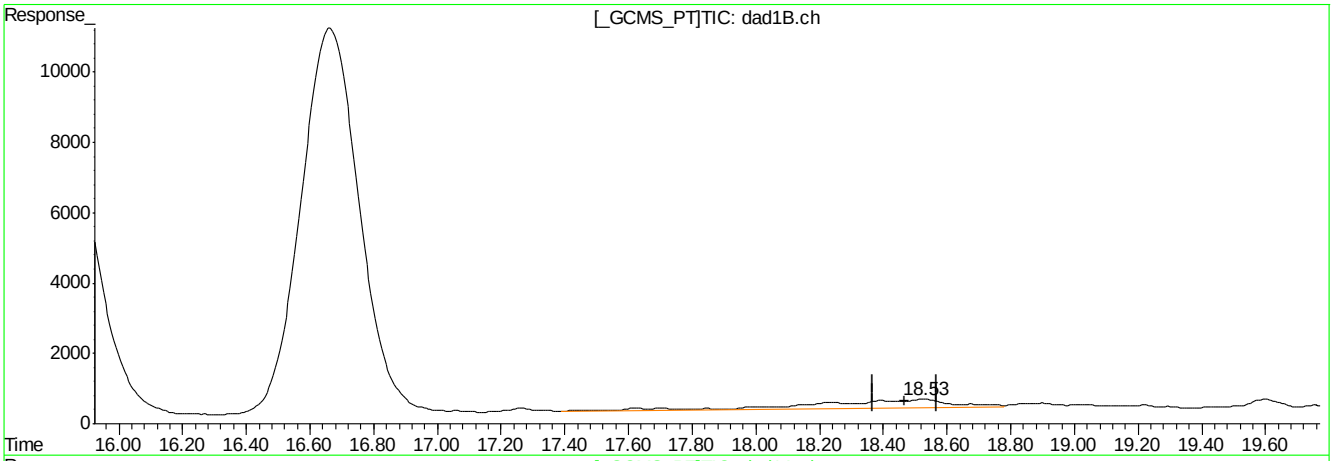
Sample Number:	OP91013-MS	**Method:**	SW846 8330B
Lab FileID:	BB072813.D	**Analyst approved:**	05/05/22 09:14 Fouad Sekkar
Injection Time:	05/03/22 23:49	**Supervisor approved:**	05/06/22 10:50 Naresh Jiawan

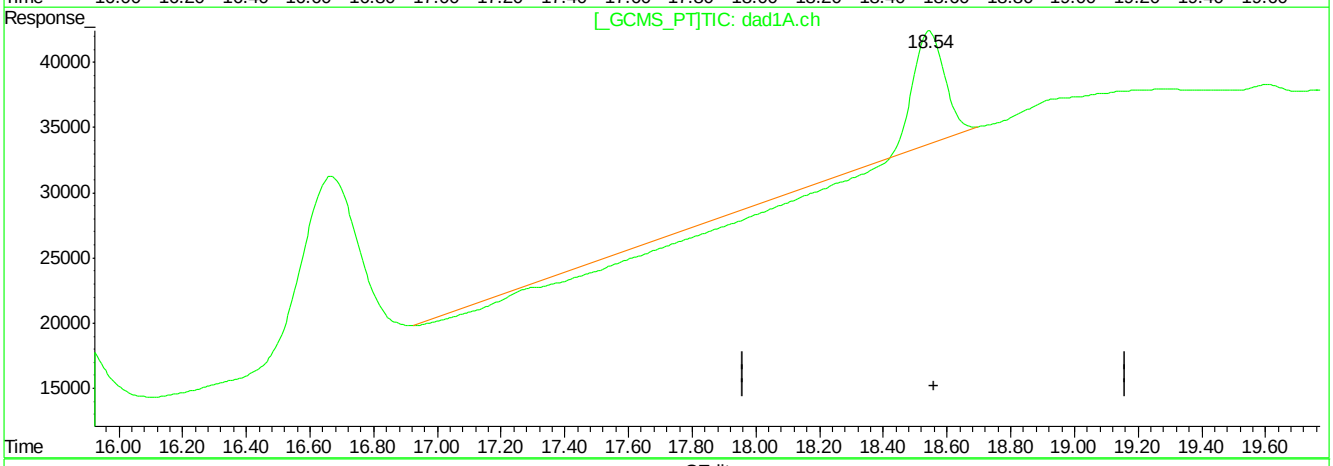
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.54	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072813.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072813.D\dad1A.ch
Acq On : 03-May-2022, 23:49:05 Operator: FOUADS
Sample : op91013-ms Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:59 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.53min 0.000ppb

response 78025

(21) PETN #2

18.55min 43.206ppb

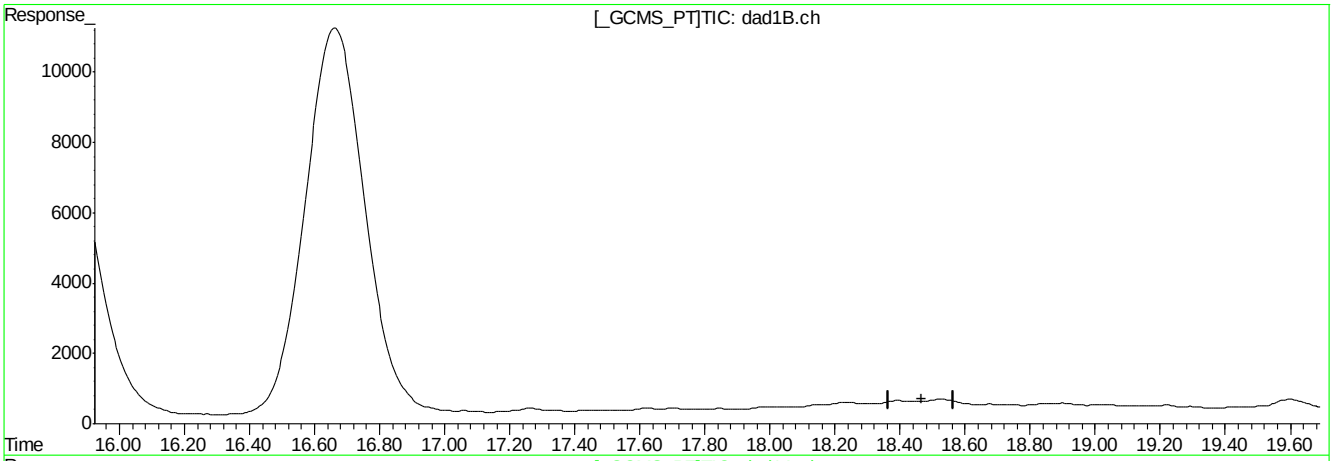
response 64590

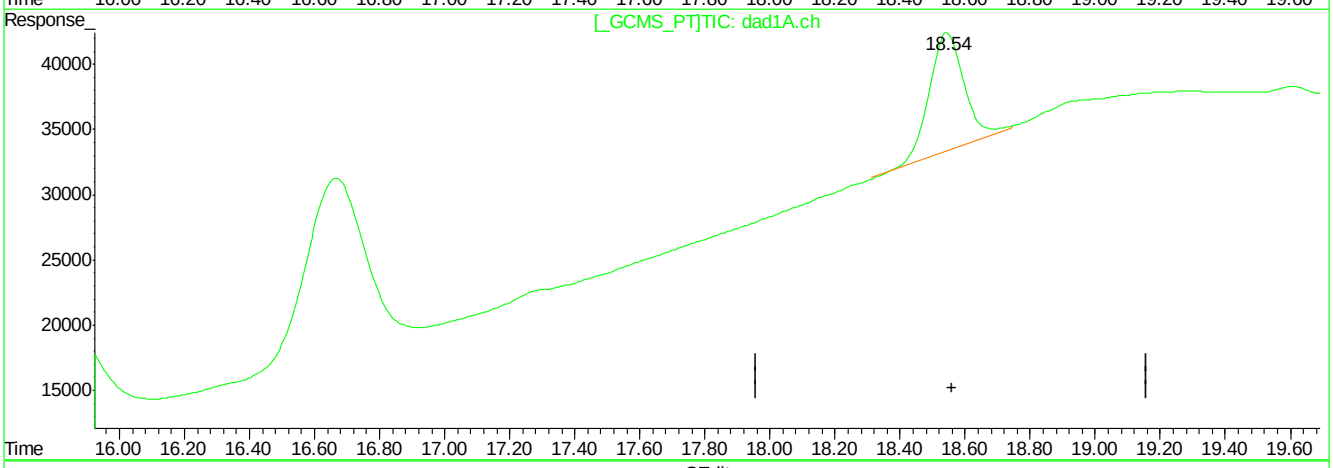
(+) = Expected Retention Time
BB072813.D BBB2167_041522.M Wed May 04 10:00:27 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072813.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072813.D\dad1A.ch
Acq On : 03-May-2022, 23:49:05 Operator: FOUADS
Sample : op91013-ms Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 9:59 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.54min 451.524ppb m

response 674989

(+) = Expected Retention Time
BB072813.D BBB2167_041522.M Wed May 04 10:00:35 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/06/22 10:50

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072814.D\dad1B.ch Vial: 23
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072814.D\dad1A.ch
Acq On : 04-May-2022, 00:20:28 Operator: FOUADS
Sample : op91013-msd Inst : G1315B
Misc : op91013,GBB2196,480,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 04 10:00:44 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.03	11.03	1090955	1956778	494.431	495.603
	Spiked Amount 500.000	Range 70 - 136		Recovery =		98.89%	99.12%
	Target Compounds						
1)	TNX	1.33	1.33	775117	1106576	226.690	212.494
2)	HMX	1.46	1.46	1126963	2892871	699.031	653.709
3)	DNX	1.71	1.71	1601213	2393106	545.681	513.797
4)	MNX	2.29	2.29	1515442	2251781	559.812	542.794
5)	RDX	2.91	2.91	1075319	1629552	552.195	528.658
6)	1,3,5-Trinitrobe	4.69	4.69	4545917	7173991	1077.987	1074.155
7)	1,3-Dinitrobenze	5.86	5.86	2742140	2437318	499.973	635.696
8)	3,5-Dinitroanili	6.20	6.20	2132482	3925186	512.456	562.161
9)	Nitrobenzene	7.43	7.43	1574623	1497667	488.161	474.862
10)	Nitroglycerin	0.00	9.08	0	666613	N.D.	500.031 #
11)	Tetryl	9.39	9.39	1052661	1663667	333.574	327.572
12)	2,4,6-Trinitroto	9.83	9.83	2642845	3318473	670.403	699.990
13)	2-Amino-4,6-Dini	10.11	10.11	1910707	2906313	552.585	558.792
14)	4-Amino-2,6-Dini	10.60	10.60	1372931	2736085	536.121	530.119
16)	2,4-Dinitrotolue	11.74	11.74	2356559	1584145	484.642	484.687
17)	2,6-Dinitrotolue	12.20	12.20	1503155	2198004	533.714	589.519
18)	o-Nitrotoluene	15.23	15.24	1133910	1509025	490.619	476.762
19)	p-Nitrotoluene	15.80	15.80	1741084	1369000	483.580	455.407
20)	m-Nitrotoluene	16.66	16.66	1646782	1786374	486.063	439.051
21)	PETN	0.00	18.54	0	783900	N.D. d	524.378m

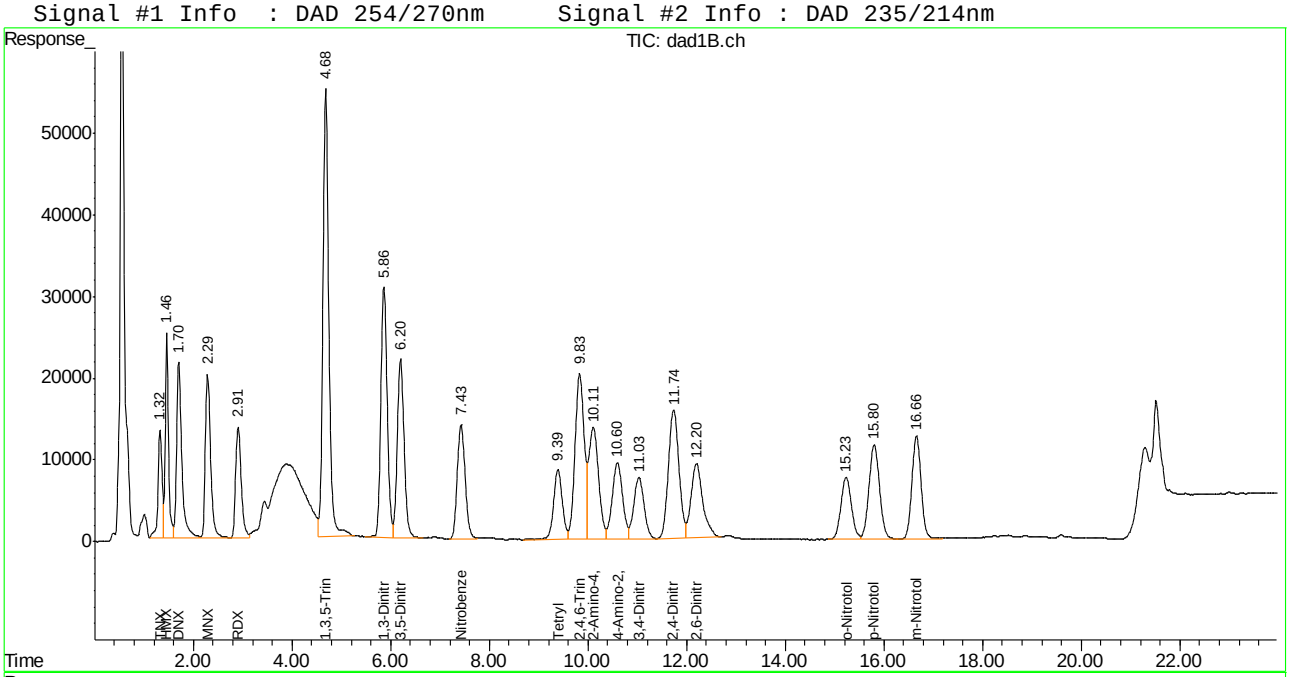
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072814.D BBB2167_041522.M Fri May 06 08:12:17 2022 Page 1

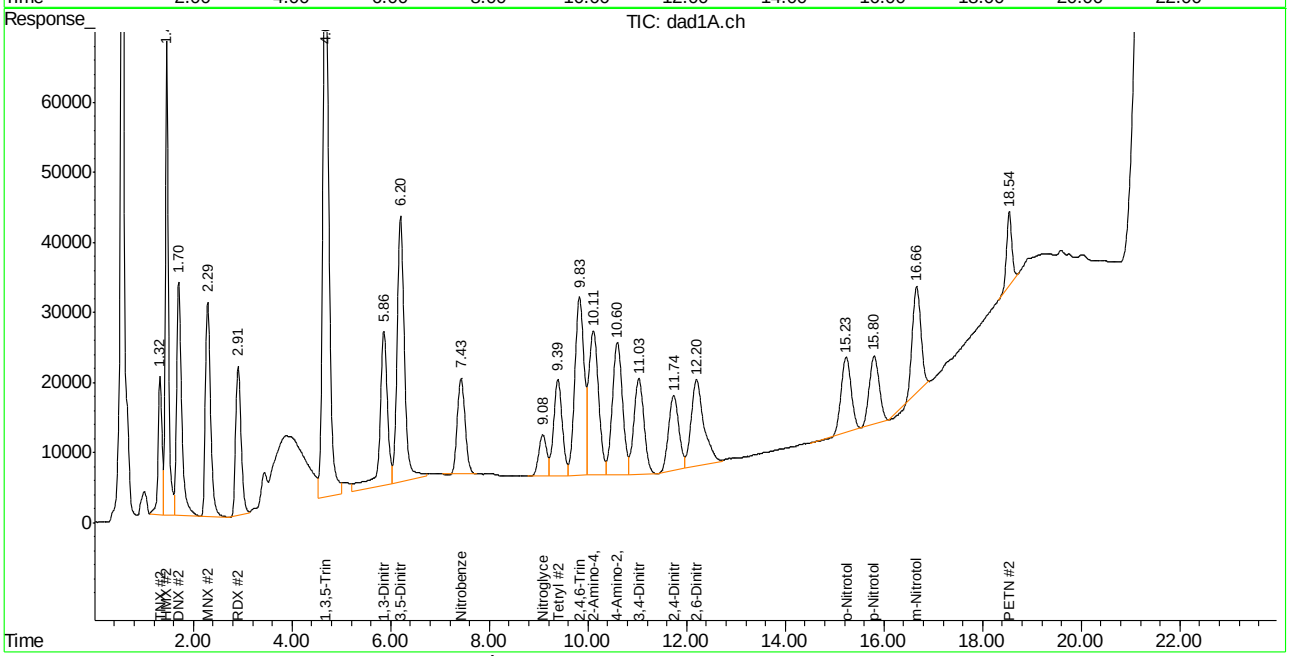
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072814.D\dad1B.ch Vial: 23
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072814.D\dad1A.ch
Acq On : 04-May-2022, 00:20:28 Operator: FOUADS
Sample : op91013-msd Inst : G1315B
Misc : op91013,GBB2196,480,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:01 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: OP91013-MSD
Lab FileID: BB072814.D
Injection Time: 05/04/22 00:20

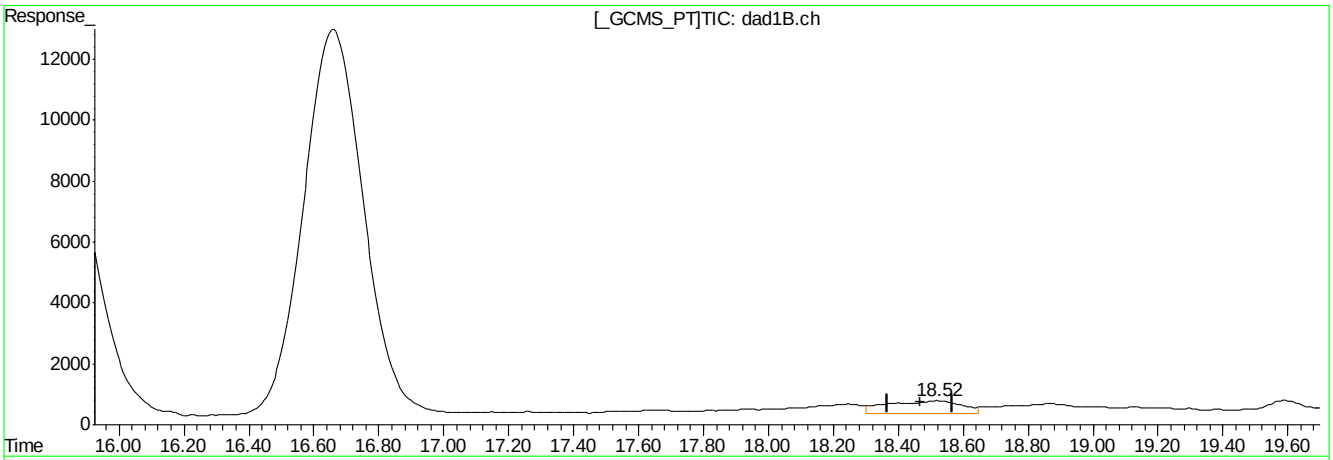
Method: SW846 8330B
Analyst approved: 05/05/22 09:14 Fouad Sekkar
Supervisor approved: 05/06/22 10:50 Naresh Jiawan

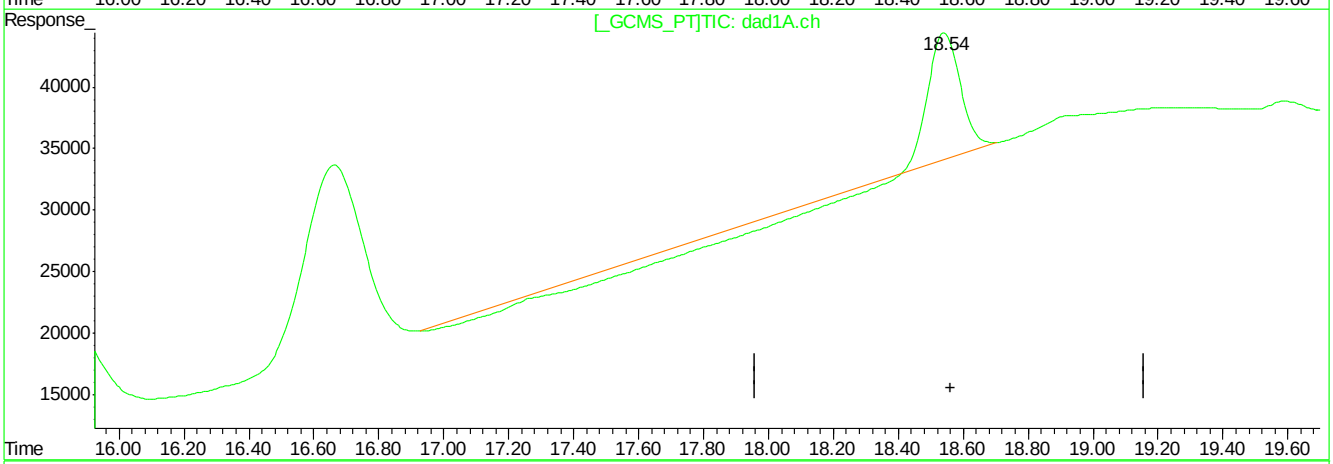
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.54	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072814.D\dad1B.ch Vial: 23
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072814.D\dad1A.ch
Acq On : 04-May-2022, 00:20:28 Operator: FOUADS
Sample : op91013-msd Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:00 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.52min 0.000ppb

response 67739

(21) PETN #2

18.54min 113.327ppb

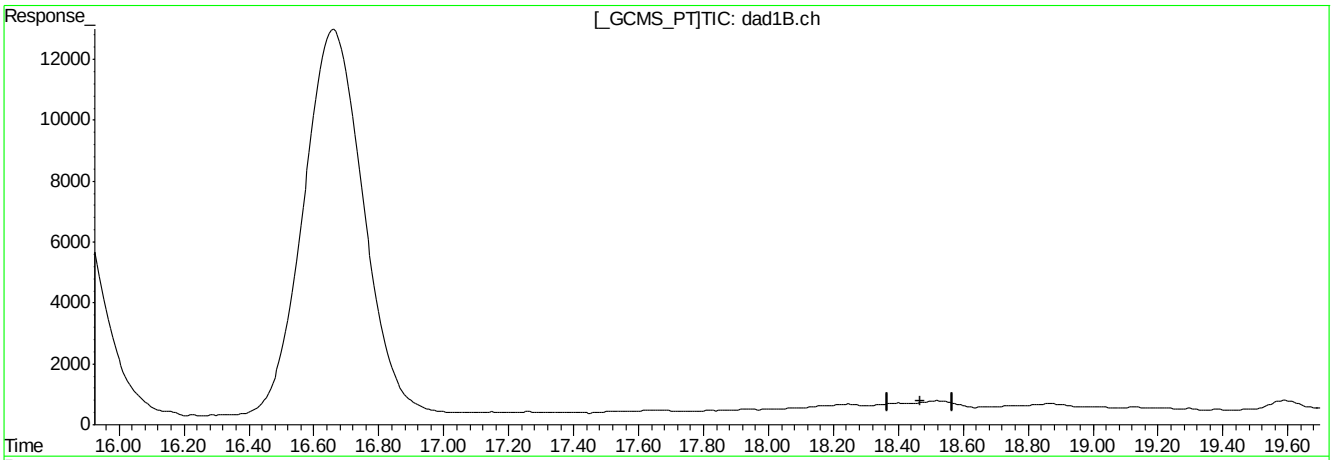
response 169414

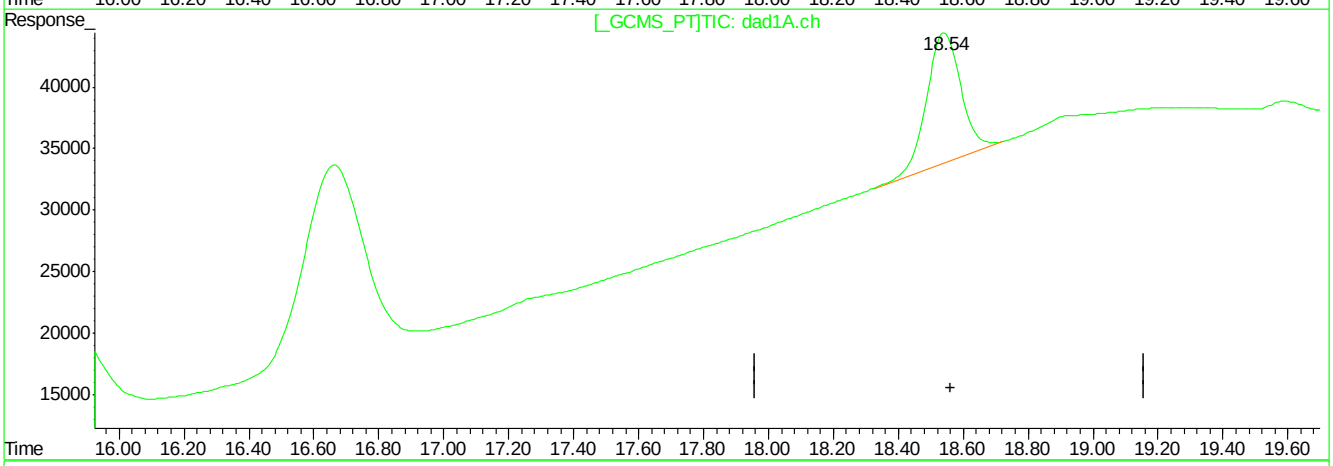
(+) = Expected Retention Time
BB072814.D BBB2167_041522.M Wed May 04 10:01:09 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072814.D\dad1B.ch Vial: 23
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072814.D\dad1A.ch
Acq On : 04-May-2022, 00:20:28 Operator: FOUADS
Sample : op91013-msd Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 10:00 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.54min 524.378ppb m

response 783900

(+) = Expected Retention Time
BB072814.D BBB2167_041522.M Wed May 04 10:01:17 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/18/22 15:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14:45 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.44	11.44	97493	125801	43.900	29.802
	Spiked Amount 500.000	Range 70 - 136		Recovery =		8.78%#	5.96%#
	Target Compounds						
1)	TNX	1.35	1.35	65629	108158	20.384	21.534
2)	HMX	1.50	1.50	77201	263303	44.417	59.702
3)	DNX	1.75	1.75	132479	251763	45.292	56.064
4)	MNX	2.36	2.36	144040	229734	54.249	56.379
5)	RDX	3.00	3.00	94147	150353	48.800	49.520
6)	1,3,5-Trinitrobe	4.79	4.79	184448	292657	46.194	46.617m
7)	1,3-Dinitrobenze	6.01	6.00	247305	184948	46.557	47.573m
8)	3,5-Dinitroanili	6.40	6.40	191291	317404	46.781	40.080m
9)	Nitrobenzene	7.63	7.64	144036	153451	46.169	48.039
10)	Nitroglycerin	0.00	9.25	0	57068	N.D.	46.686 #
11)	Tetryl	9.71	9.70	146514	210257	51.427	47.251
12)	2,4,6-Trinitroto	10.11	10.11	178265	186475	46.580	41.752
13)	2-Amino-4,6-Dini	10.54	10.53	159606	193053	48.764	42.708
14)	4-Amino-2,6-Dini	11.06	11.06	115712	154266	49.657	30.852
16)	2,4-Dinitrotolue	12.11	12.12	223540	120170	48.637	42.515
17)	2,6-Dinitrotolue	12.58	12.61	126120	152718	45.149	43.062
18)	o-Nitrotoluene	15.65	15.68	99354	160611	45.679	53.199m
19)	p-Nitrotoluene	16.22	16.26	151866	95770	44.323	36.662m
20)	m-Nitrotoluene	17.00	17.04	147528	140358	46.136	36.990m
21)	PETN	0.00	18.68	0	60740	N.D.	42.155m#

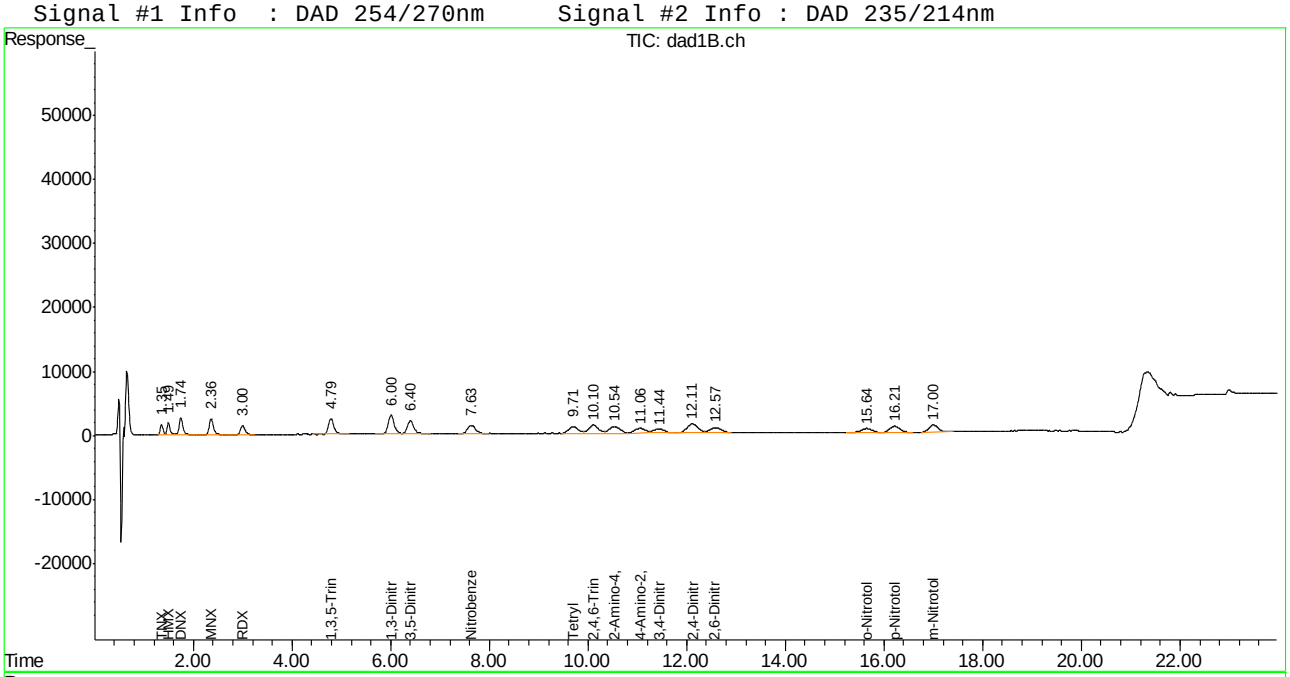
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072463.D BBB2167_041522.M Mon Apr 18 11:19:48 2022 Page 1

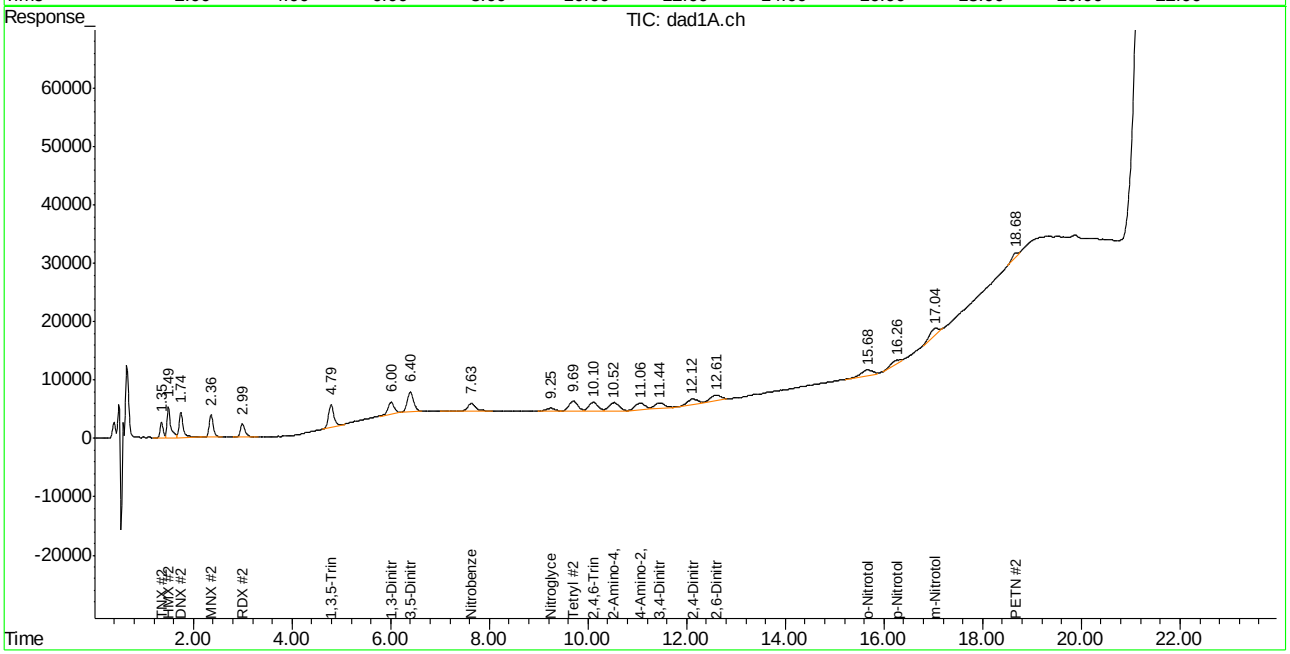
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

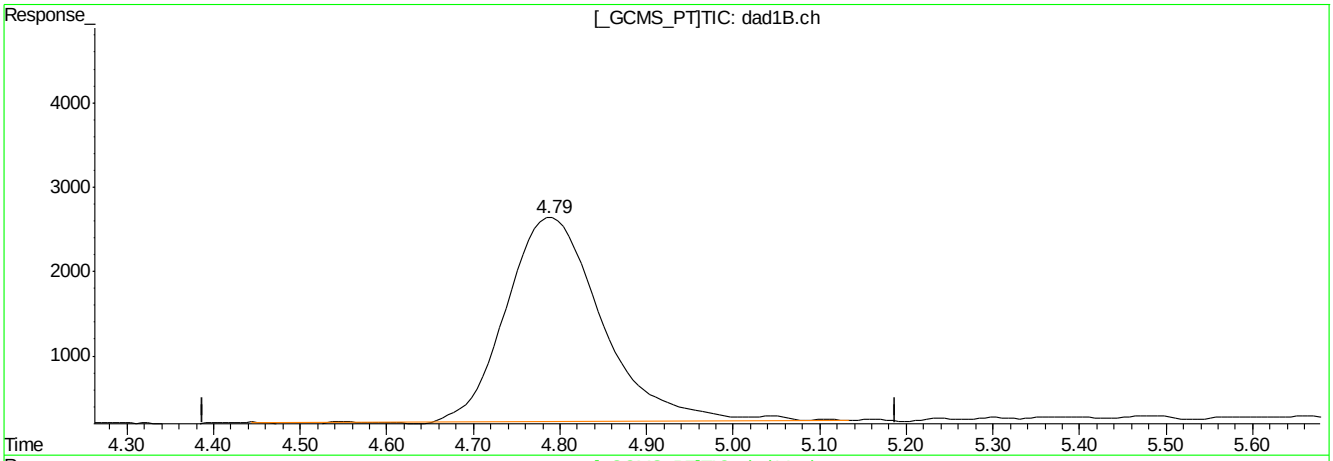
Sample Number: GBB2188-IC2188
Lab FileID: BB072463.D
Injection Time: 04/15/22 09:31
Method: SW846 8330A
Analyst approved: 04/18/22 11:39 Fouad Sekkar
Supervisor approved: 04/18/22 15:15 Naresh Jiawan

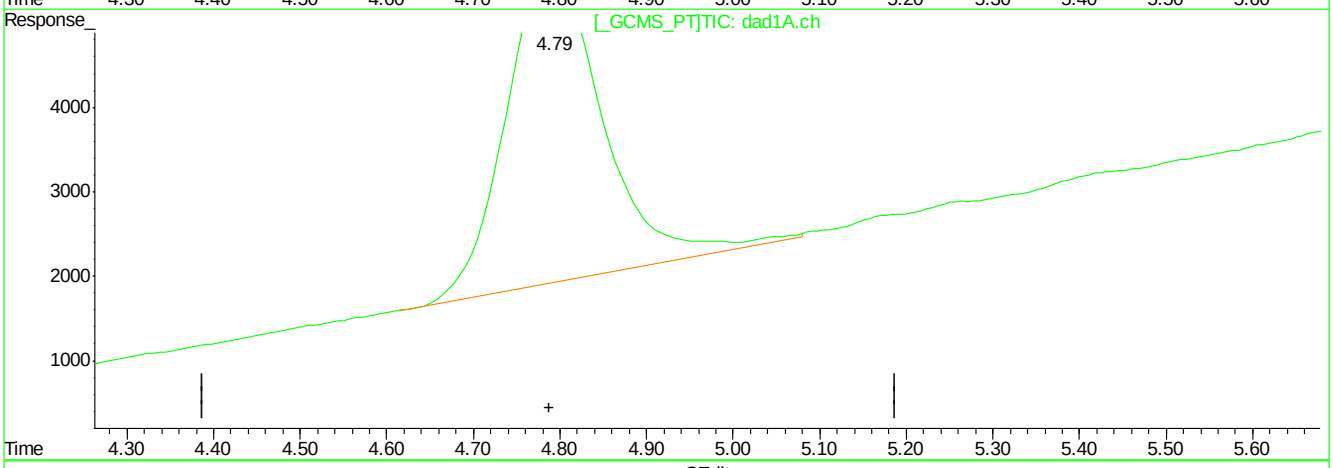
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.79	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.00	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.40	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.68	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.26	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.04	Poor instrument integration
PETN	78-11-5	2	18.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.79min 46.194ppb

response 184448

(6) 1,3,5-Trinitrobenzene #2

4.79min 46.617ppb m

response 292657

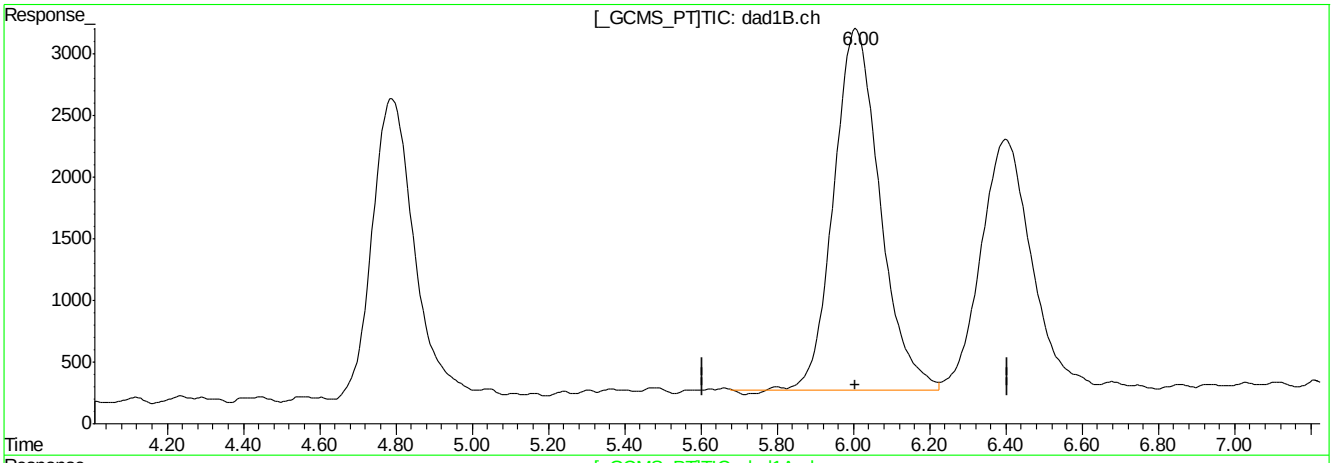
(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:27:26 2022

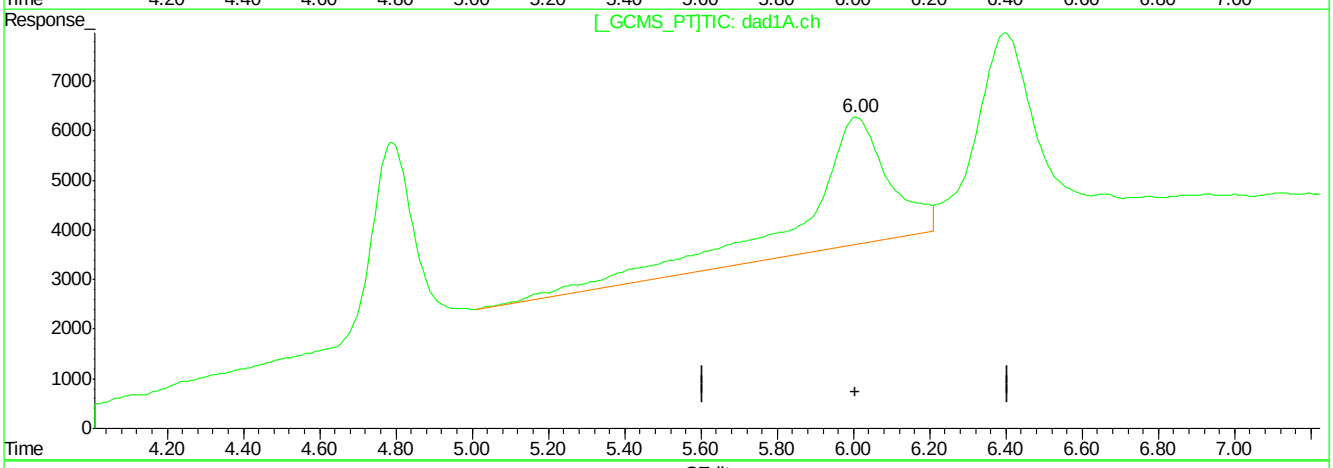
BB072463.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.01min 46.557ppb

response 247305

(7) 1,3-Dinitrobenzene #2

6.01min 103.959ppb

response 404155

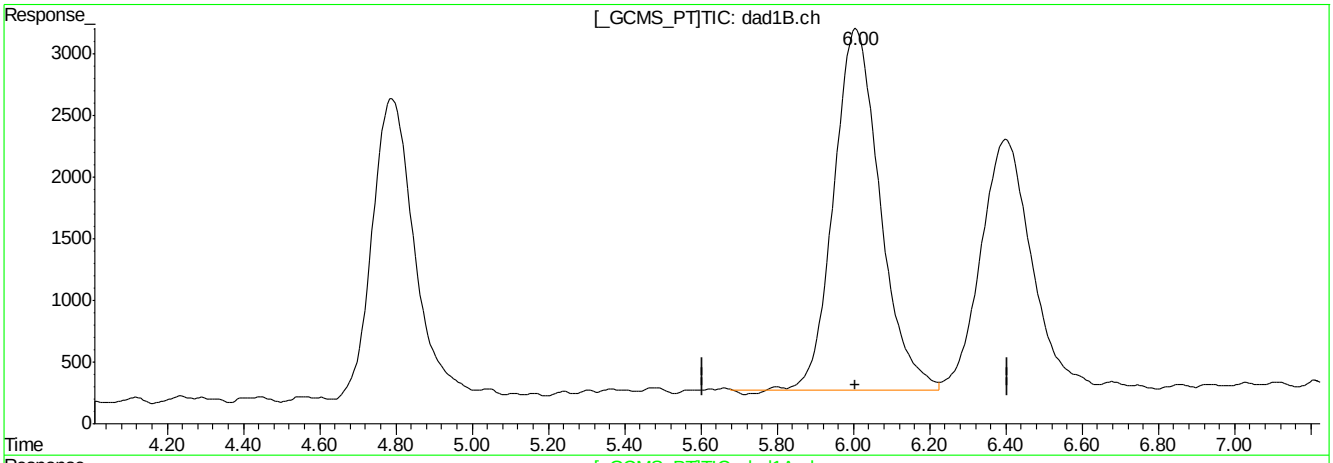
(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:27:32 2022

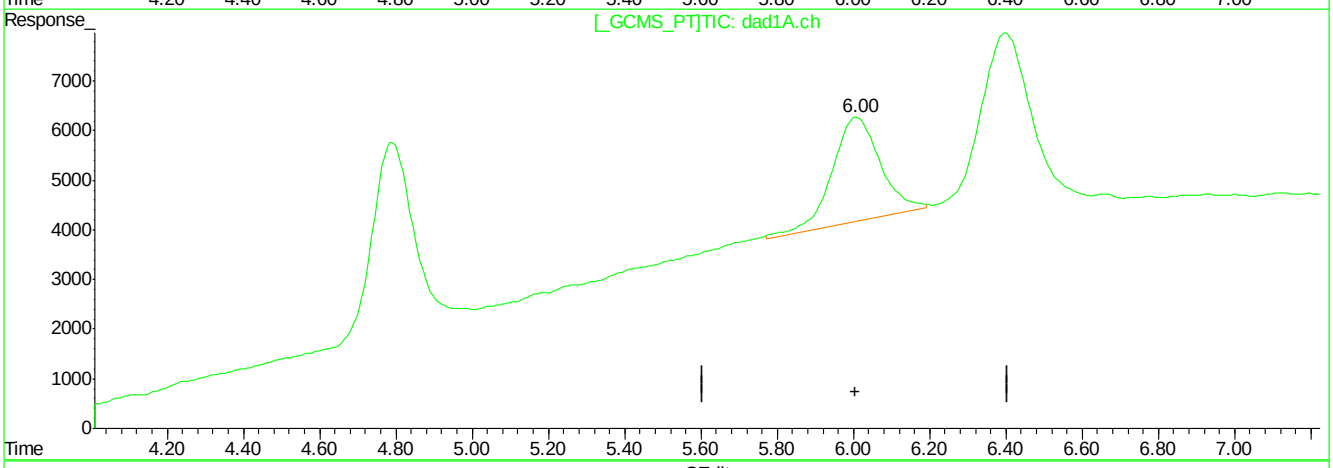
BB072463.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.01min 46.557ppb

response 247305

(7) 1,3-Dinitrobenzene #2

6.00min 47.573ppb m

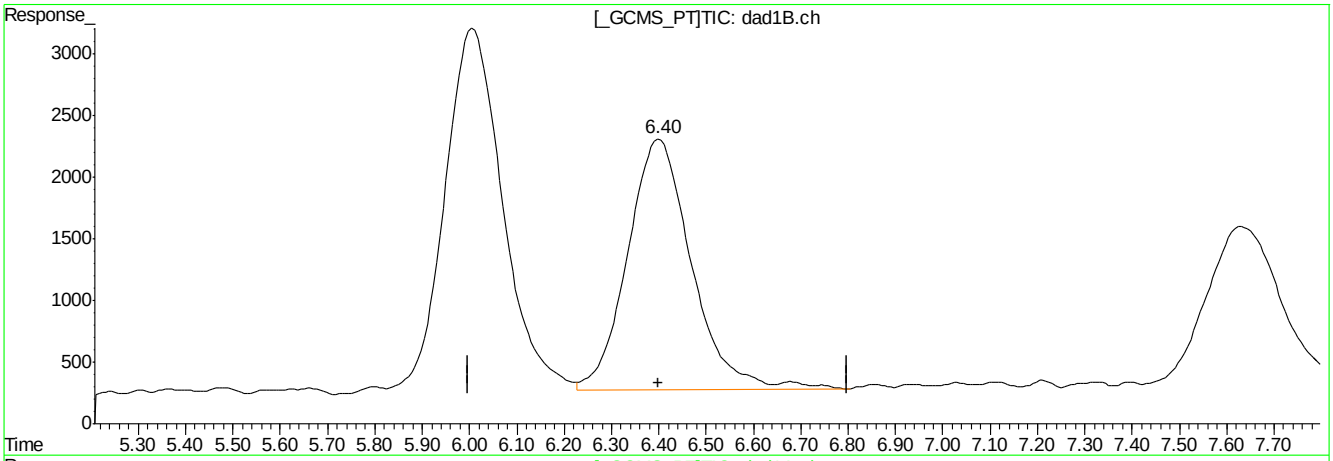
response 184948

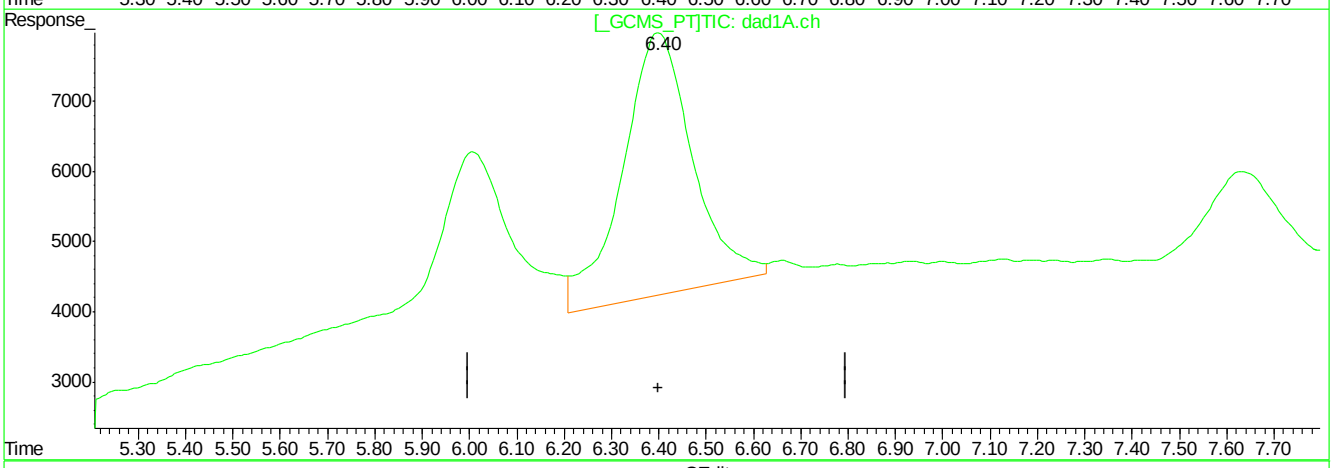
(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:27:42 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.40min 46.781ppb

response 191291

(8) 3,5-Dinitroaniline #2

6.40min 48.595ppb

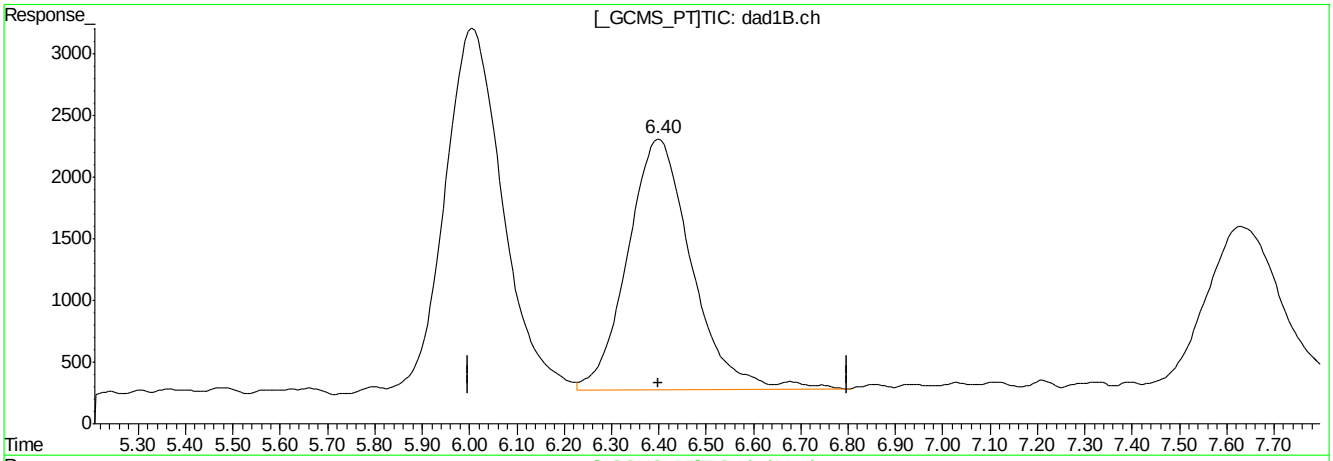
response 384844

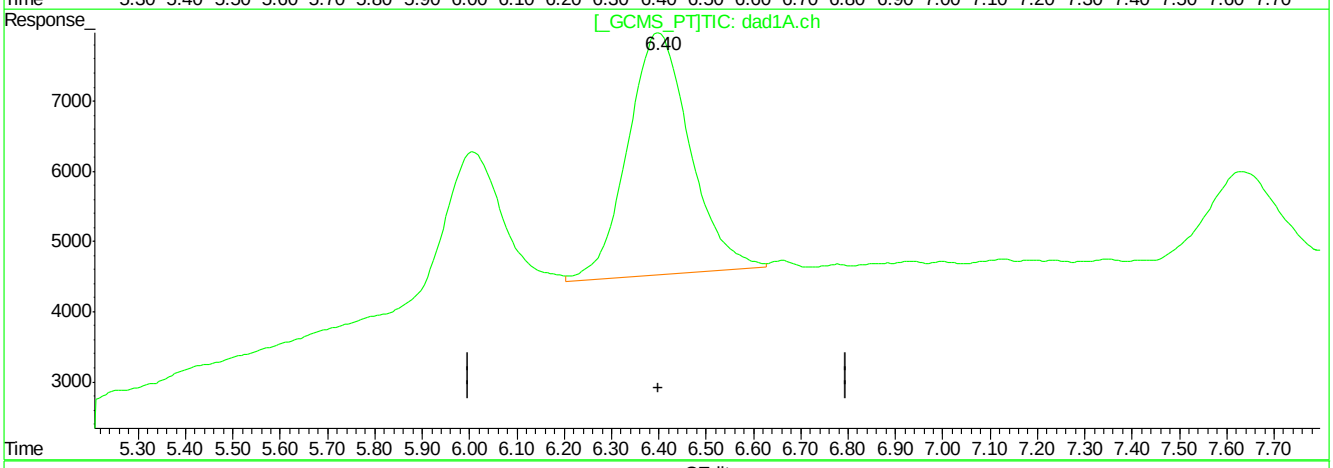
(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:27:47 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.40min 46.781ppb

response 191291

(8) 3,5-Dinitroaniline #2

6.40min 40.080ppb m

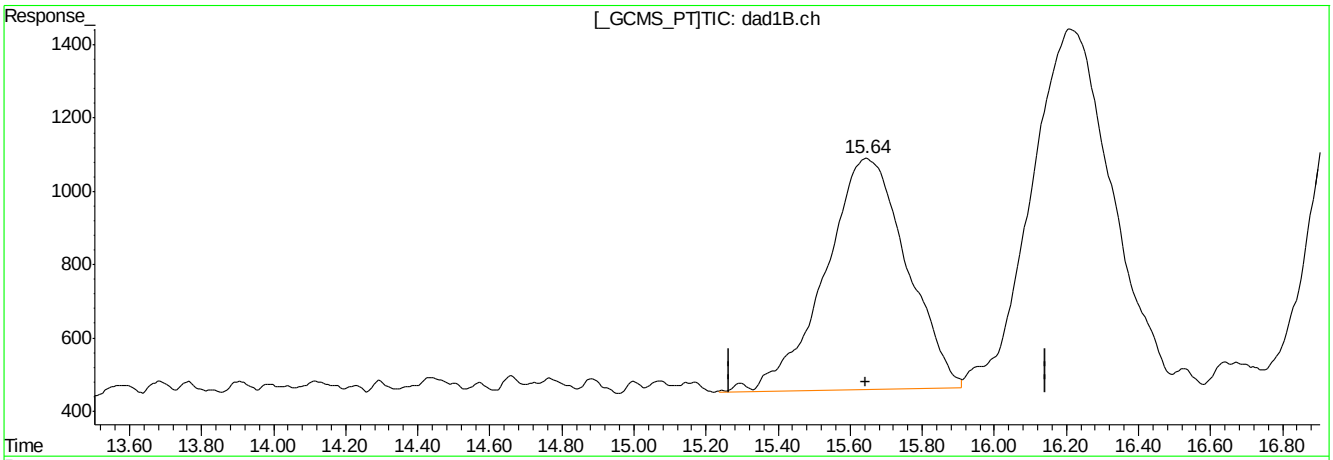
response 317404

(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:27:52 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



QEdit

(18) o-Nitrotoluene

15.65min 45.679ppb

response 99354

(18) o-Nitrotoluene #2

15.67min 35.104ppb

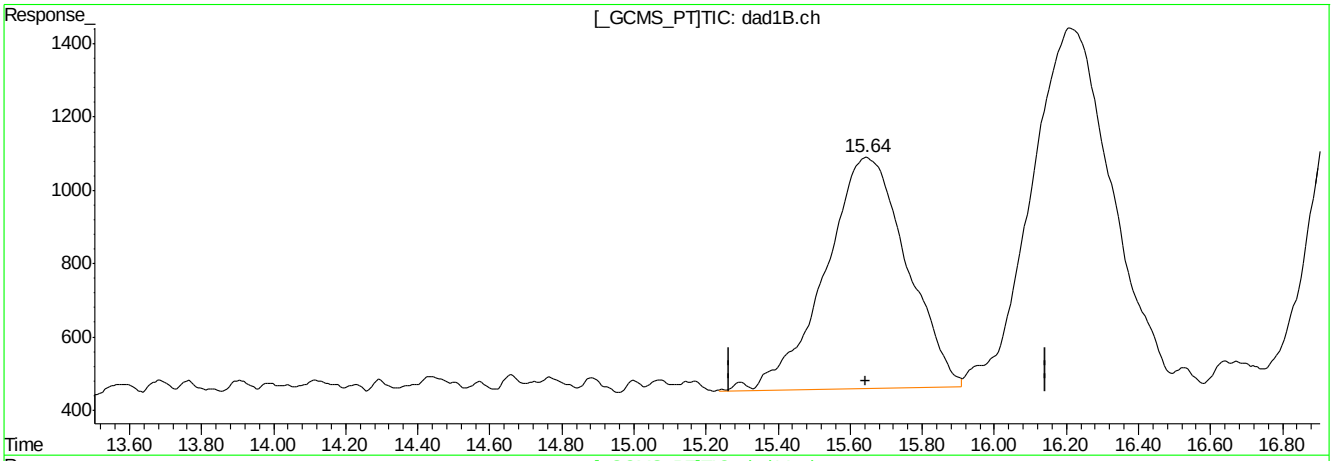
response 105981

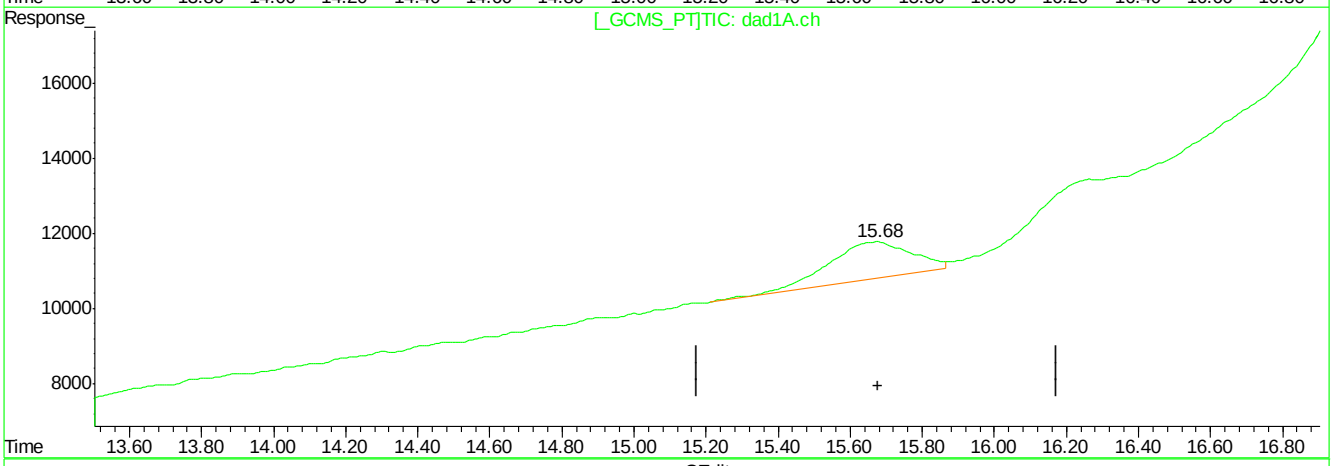
(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:28:20 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.65min 45.679ppb

response 99354

(18) o-Nitrotoluene #2

15.68min 53.199ppb m

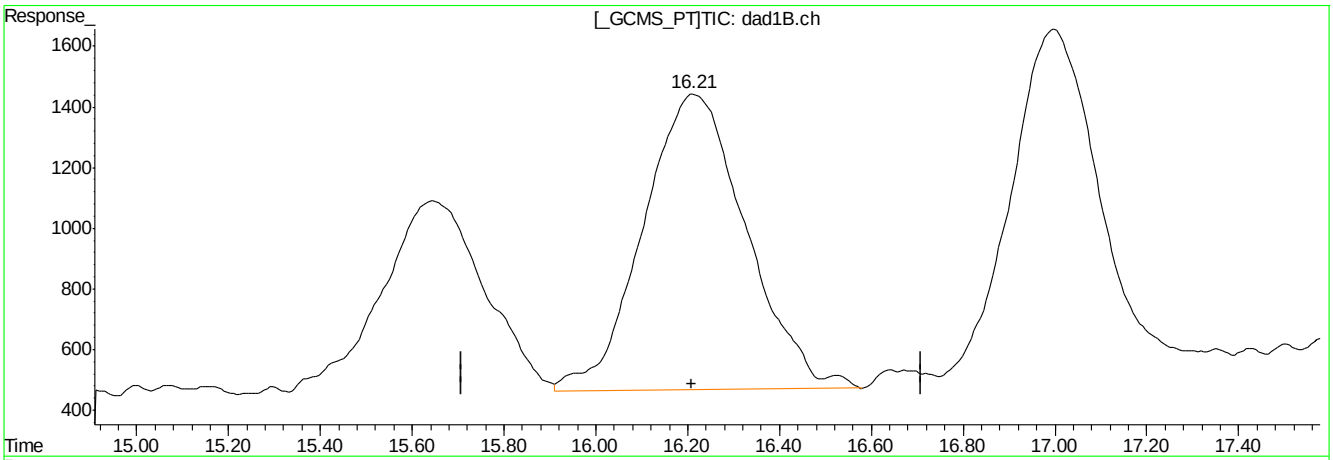
response 160611

(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:28:30 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.22min 44.323ppb

response 151866

(19) p-Nitrotoluene #2

0.00min 0.000ppb

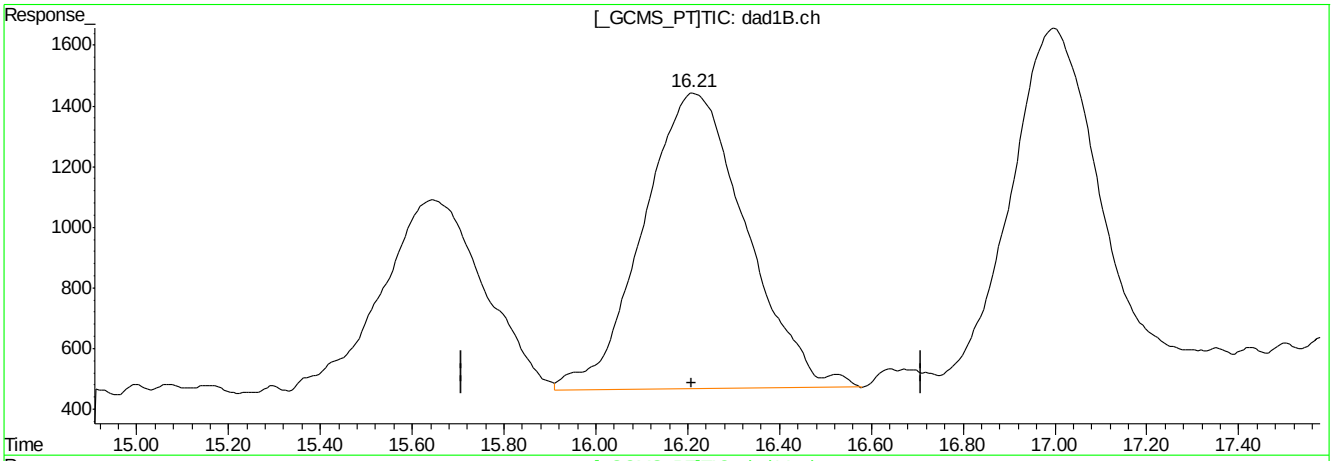
response 0

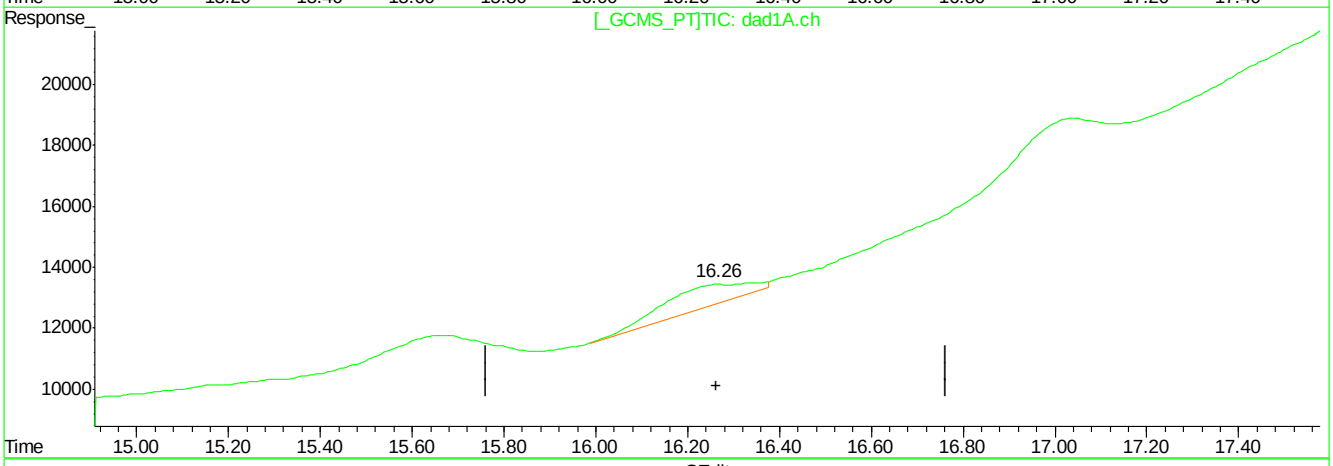
(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:28:40 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.22min 44.323ppb

response 151866

(19) p-Nitrotoluene #2

16.26min 36.662ppb m

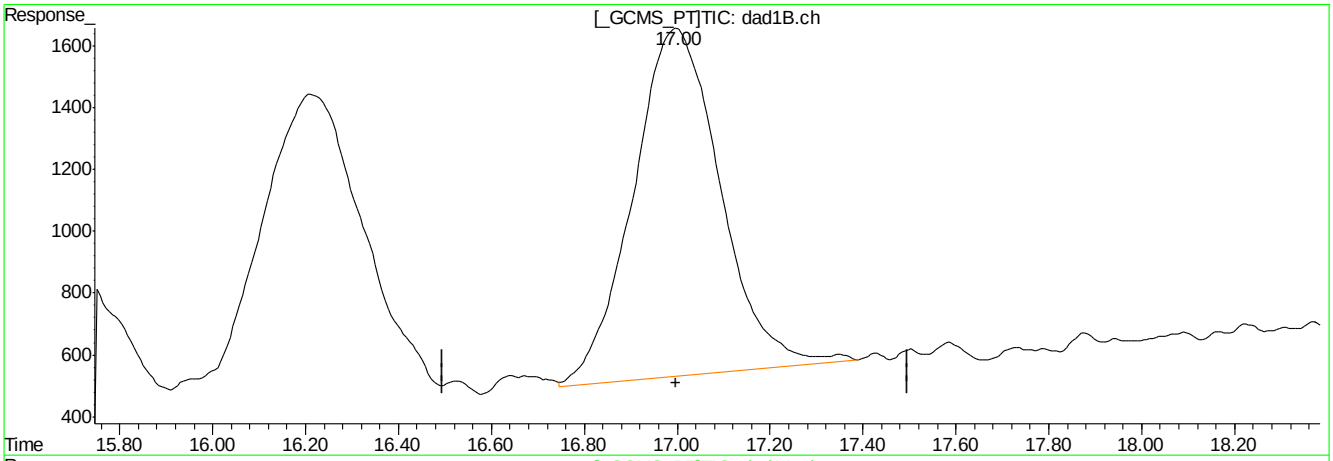
response 95770

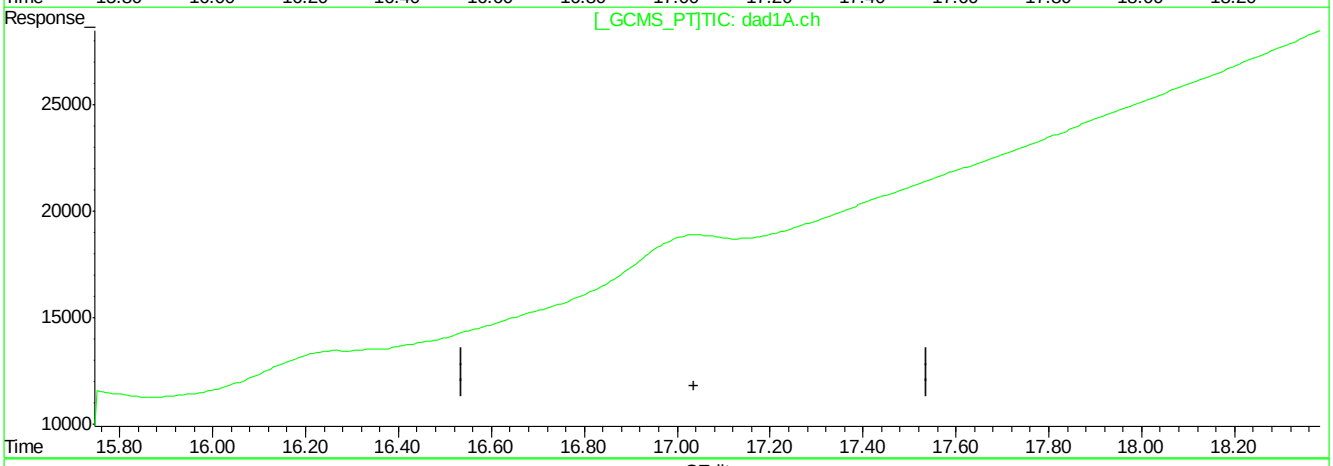
(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:28:57 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.00min 46.136ppb

response 147528

(20) m-Nitrotoluene #2

0.00min 0.000ppb

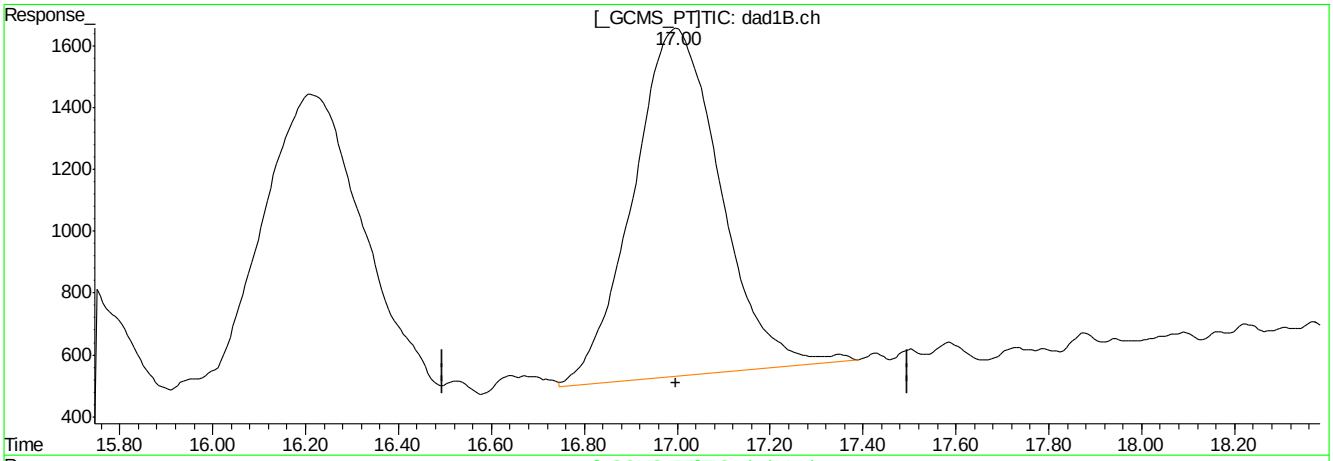
response 0

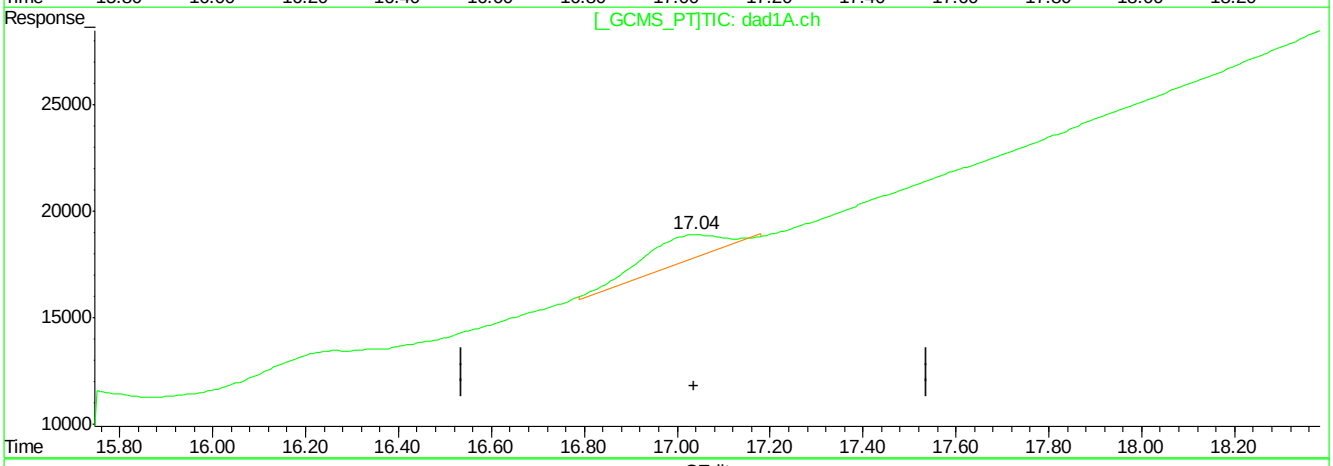
(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:29:02 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.00min 46.136ppb

response 147528

(20) m-Nitrotoluene #2

17.04min 36.990ppb m

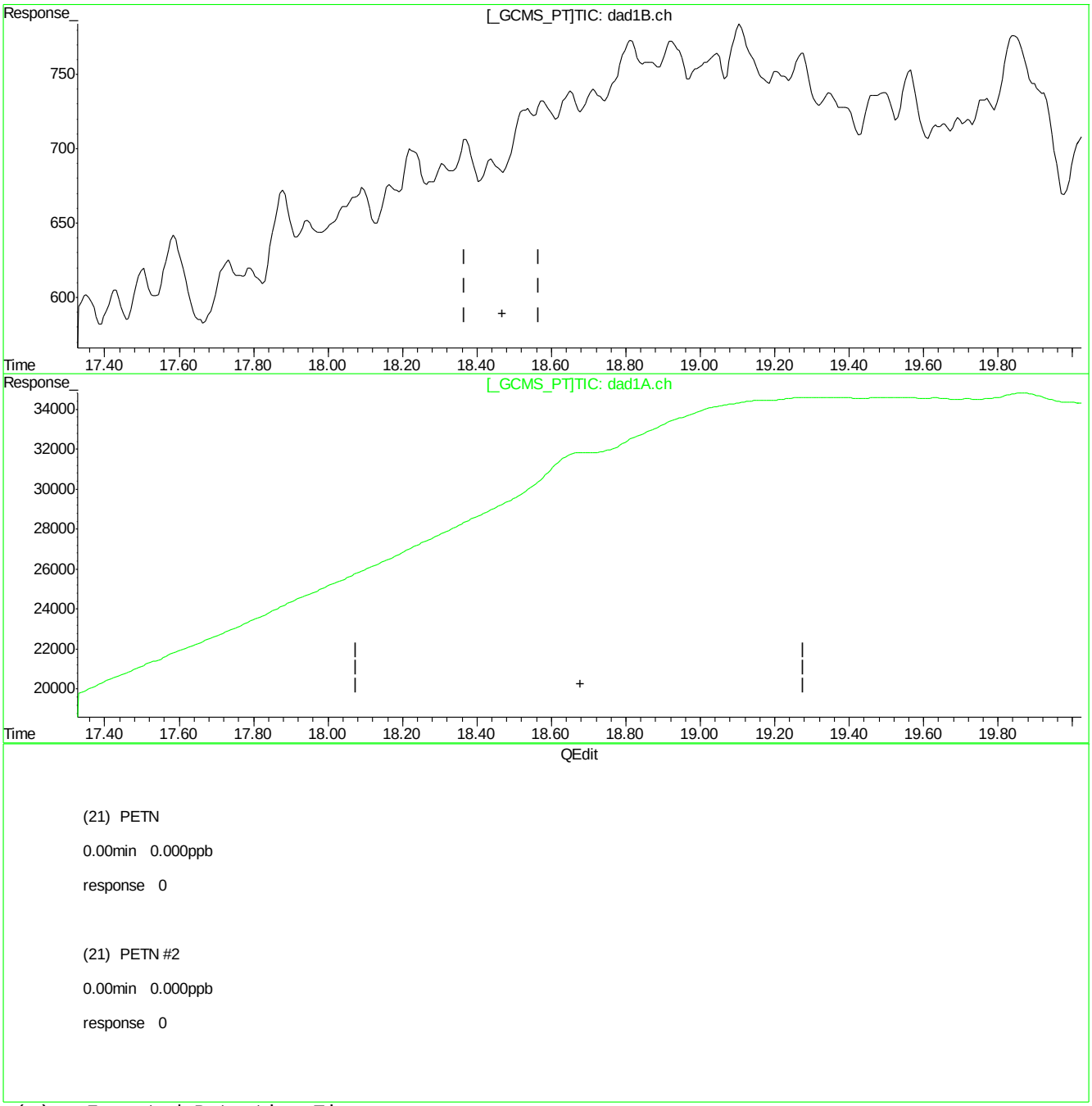
response 140358

(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:29:14 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration

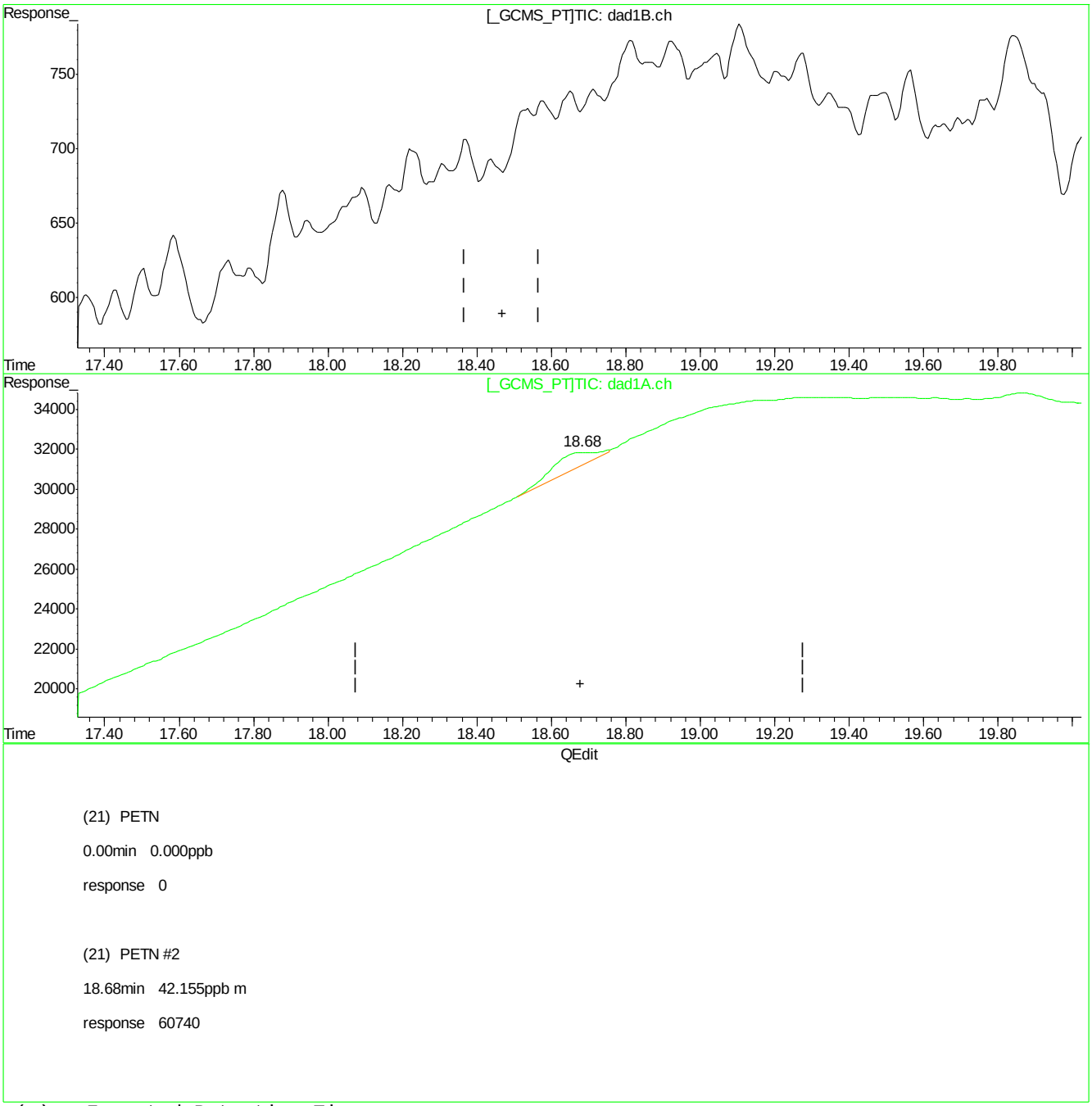


(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:29:20 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:14 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration

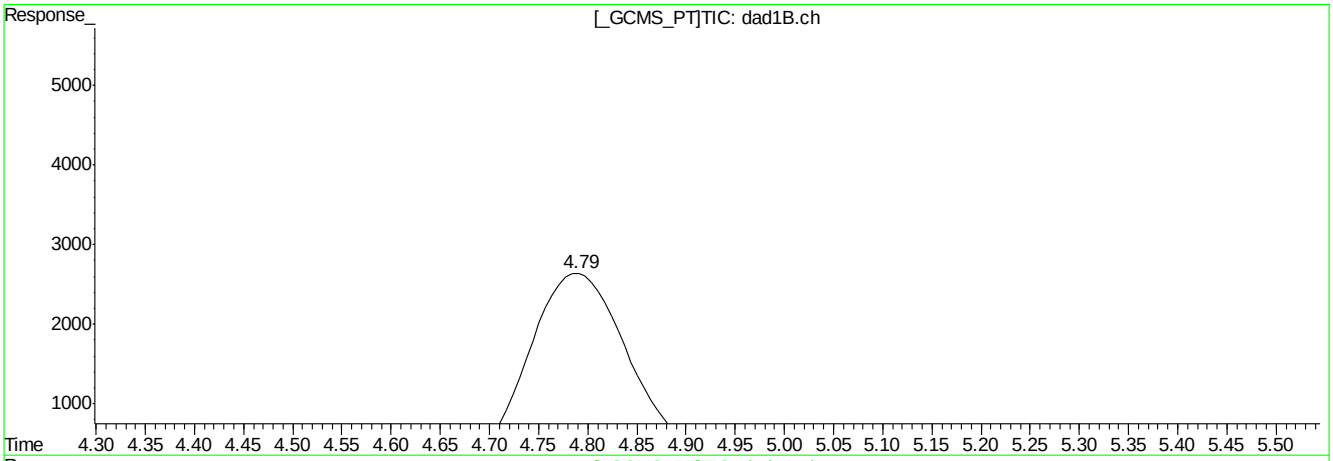


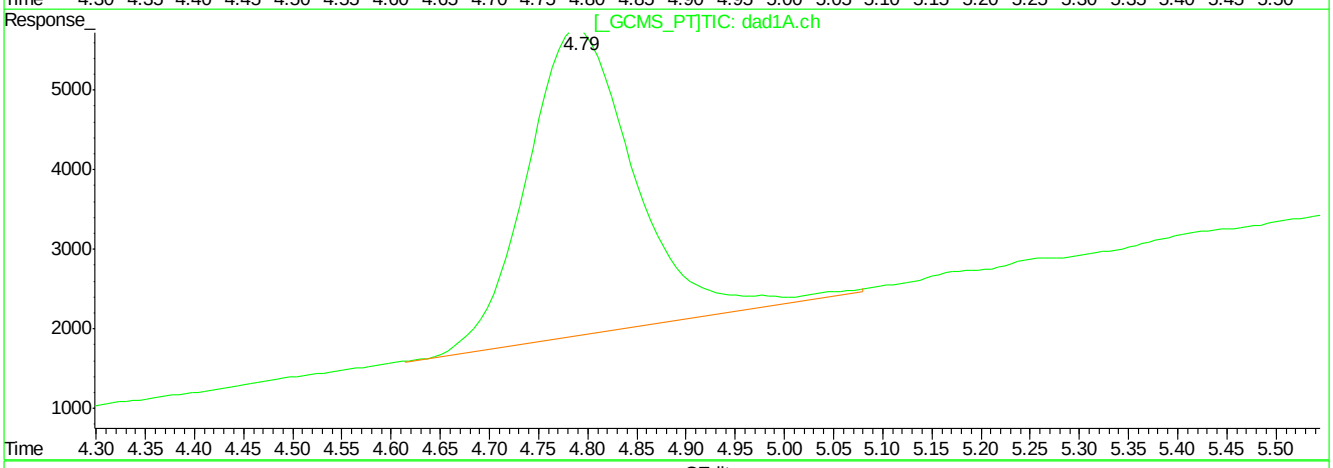
(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Fri Apr 15 11:29:26 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072463.D\dad1A.ch
Acq On : 15-Apr-2022, 09:31:21 Operator: FOUADS
Sample : ic2188-20 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 14:37:09 2022
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.79min 46.194ppb

response 184448

(6) 1,3,5-Trinitrobenzene #2

4.79min 46.617ppb m

response 292657

(+) = Expected Retention Time
BB072463.D BBB2167_041522.M Mon Apr 18 12:08:28 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/18/22 15:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15:16 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.46	11.47	148913	218893	67.053	51.856
Spiked Amount 500.000	Range 70 - 136		Recovery =		13.41%#	10.37%#
Target Compounds						
1) TNX	1.35	1.35	111452	171269	34.616	34.099
2) HMX	1.50	1.50	146873	480210	84.503	108.883
3) DNX	1.75	1.75	220029	401557	75.224	89.420
4) MNX	2.36	2.36	217201	351596	81.804	86.285
5) RDX	3.00	3.00	136195	211846	70.595	69.774
6) 1,3,5-Trinitrobe	4.79	4.79	275522	444535	69.003	70.810m
7) 1,3-Dinitrobenze	6.01	6.01	376019	760543	70.789	195.631 #
8) 3,5-Dinitroanili	6.40	6.40	276800	495762	67.692	62.601m
9) Nitrobenzene	7.64	7.64	216500	223019	69.397	69.818
10) Nitroglycerin	0.00	9.28	0	89872	N.D.	73.522 #
11) Tetryl	9.73	9.73	229565	325352	80.578	73.116
12) 2,4,6-Trinitroto	10.13	10.12	272405	297499	71.178	66.611
13) 2-Amino-4,6-Dini	10.56	10.57	244291	305404	74.637	67.562
14) 4-Amino-2,6-Dini	11.08	11.08	179912	274239	77.207	54.845
16) 2,4-Dinitrotolue	12.14	12.14	325721	180899	70.870	64.000
17) 2,6-Dinitrotolue	12.61	12.61	195263	213165	69.901	60.106
18) o-Nitrotoluene	15.67	15.68	150879	219491	69.368	72.702m
19) p-Nitrotoluene	16.24	16.29	226104	163444	65.990	62.569m
20) m-Nitrotoluene	17.03	17.04	218865	287899	68.446	75.873m
21) PETN	0.00	18.68	0	78757	N.D.	54.660m#

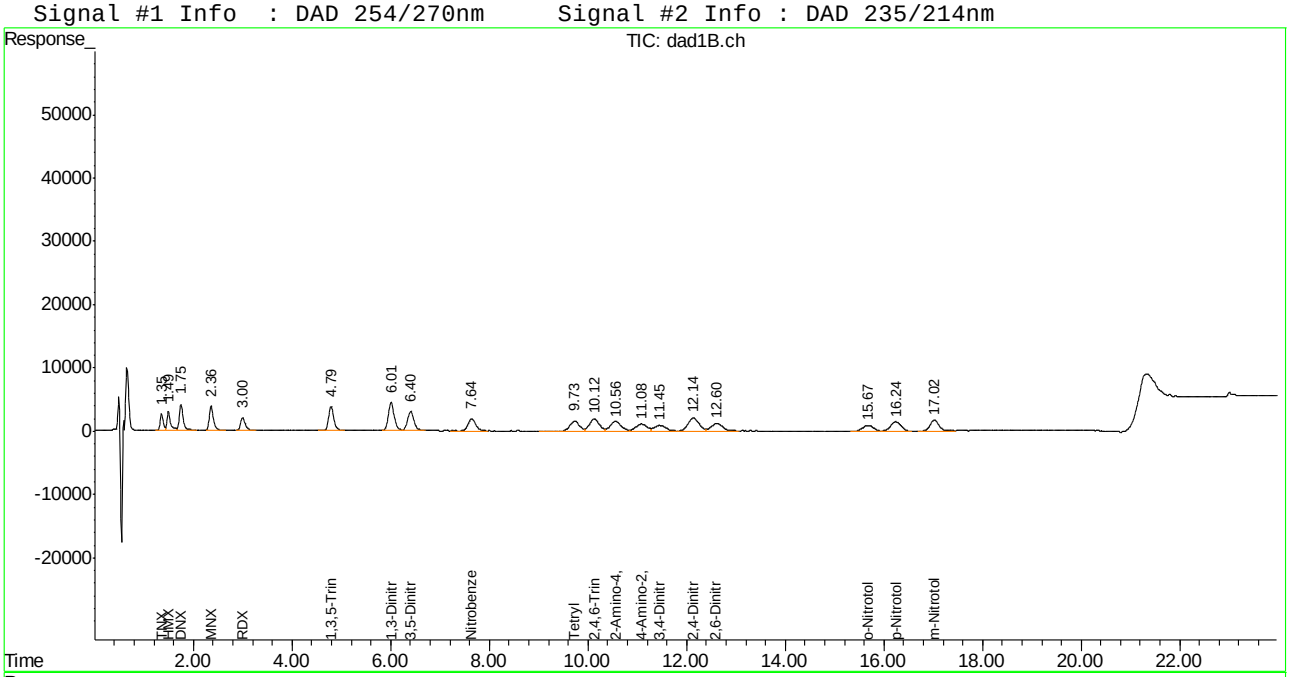
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072464.D BBB2167_041522.M Mon Apr 18 11:19:49 2022 Page 1

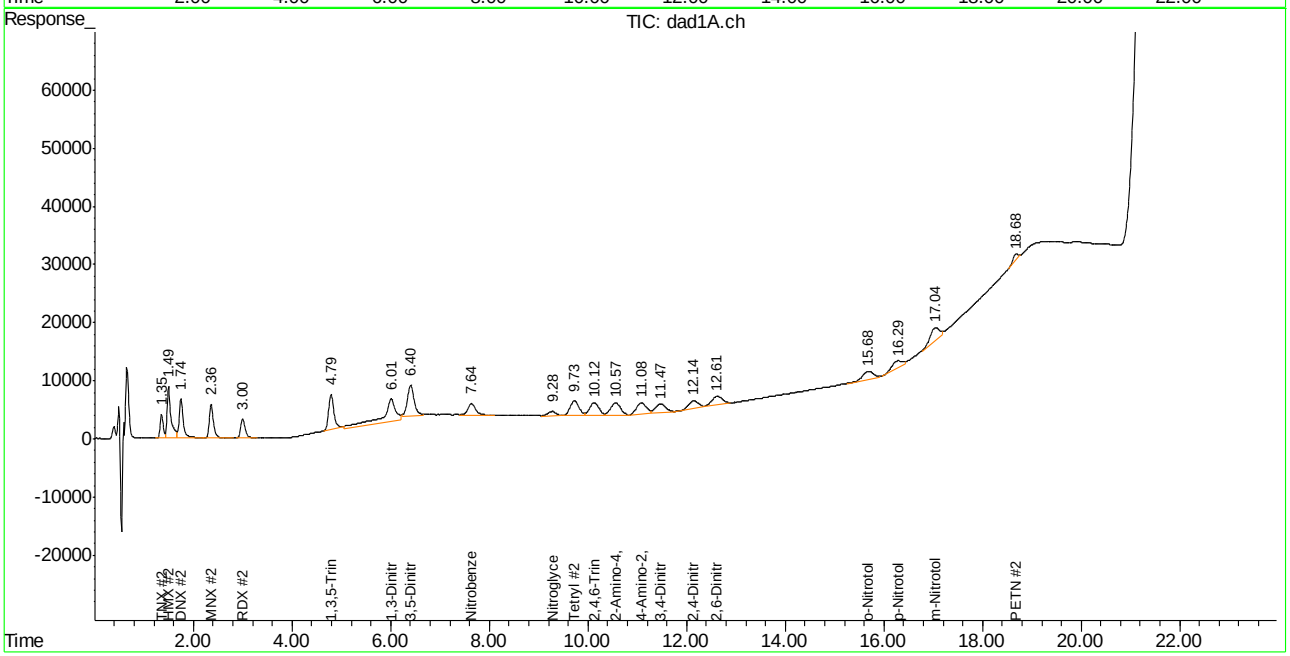
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:26 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

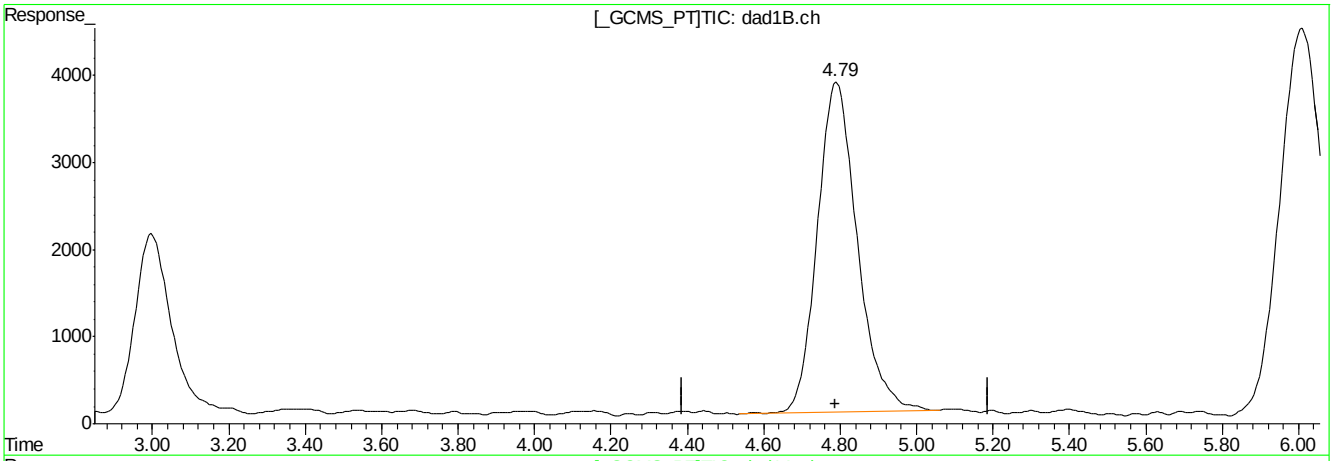
Sample Number: GBB2188-IC2188
Lab FileID: BB072464.D
Injection Time: 04/15/22 10:02
Method: SW846 8330A
Analyst approved: 04/18/22 11:39 Fouad Sekkar
Supervisor approved: 04/18/22 15:15 Naresh Jiawan

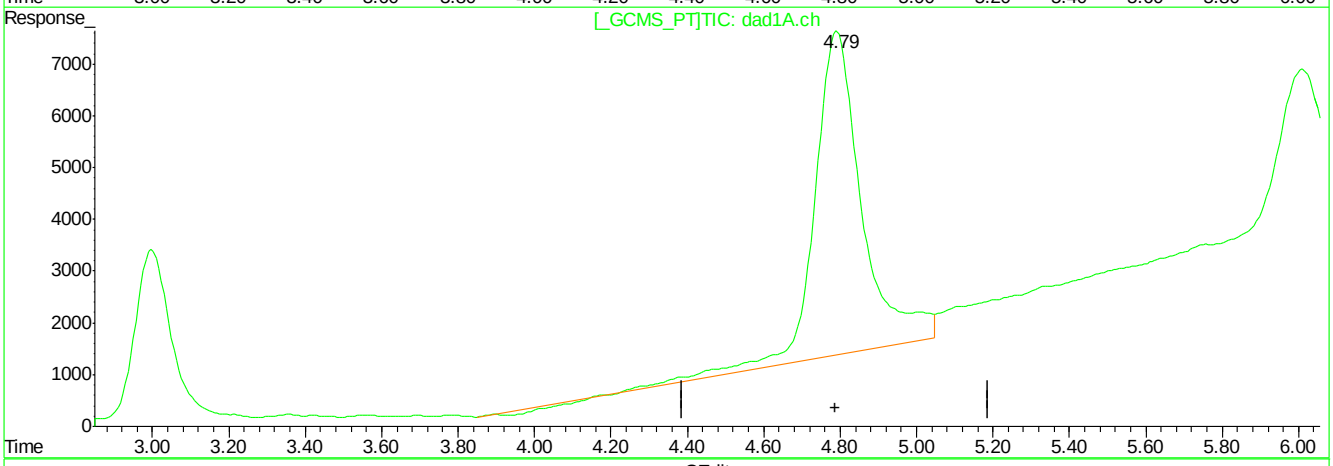
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.79	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.40	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.68	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.29	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.04	Poor instrument integration
PETN	78-11-5	2	18.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.79min 69.003ppb

response 275522

(6) 1,3,5-Trinitrobenzene #2

4.79min 84.120ppb

response 528096

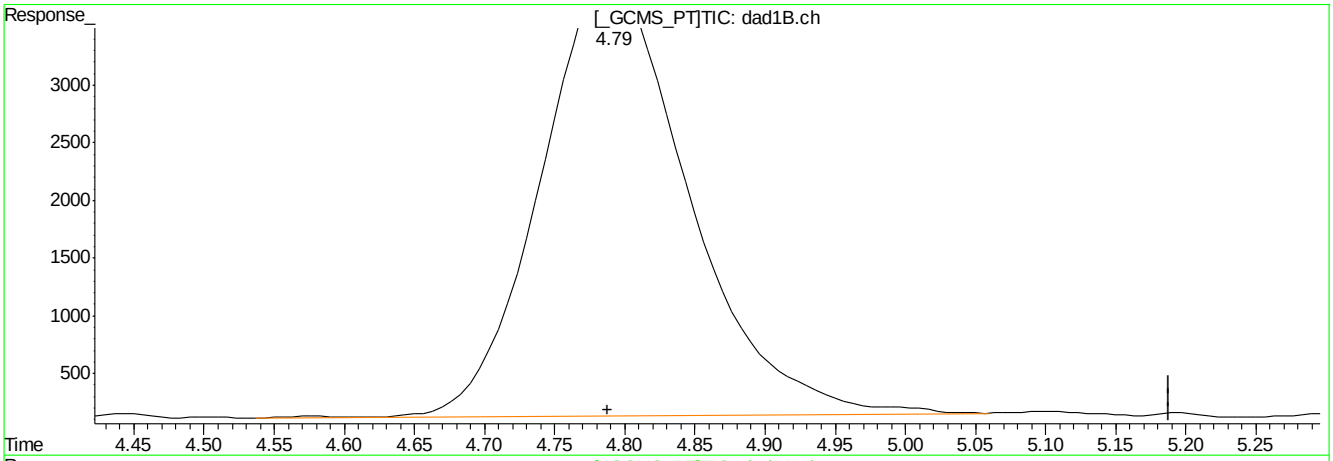
(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:24:29 2022

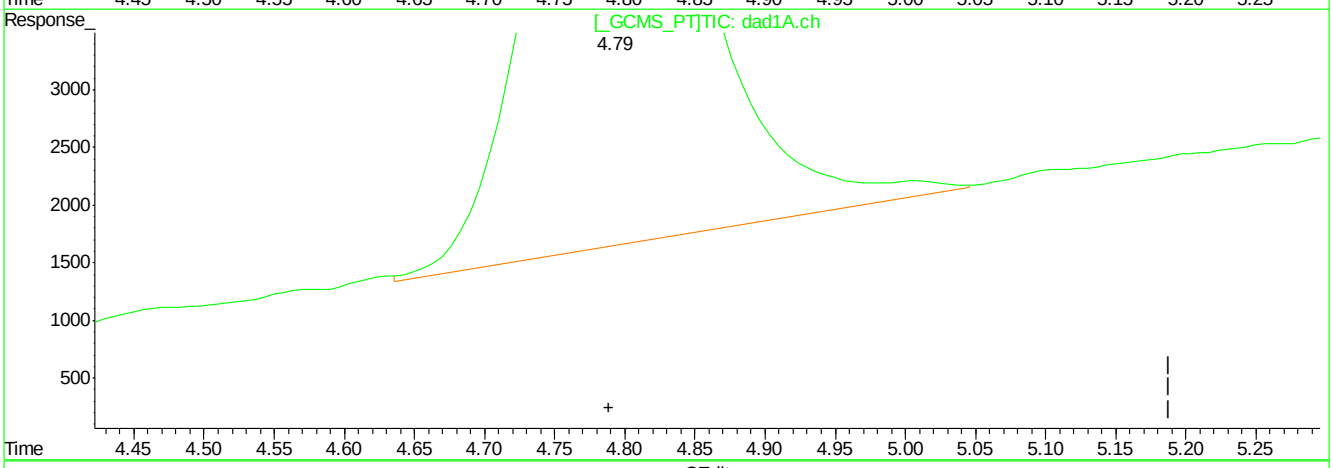
BB072464.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.79min 69.003ppb

response 275522

(6) 1,3,5-Trinitrobenzene #2

4.79min 70.810ppb m

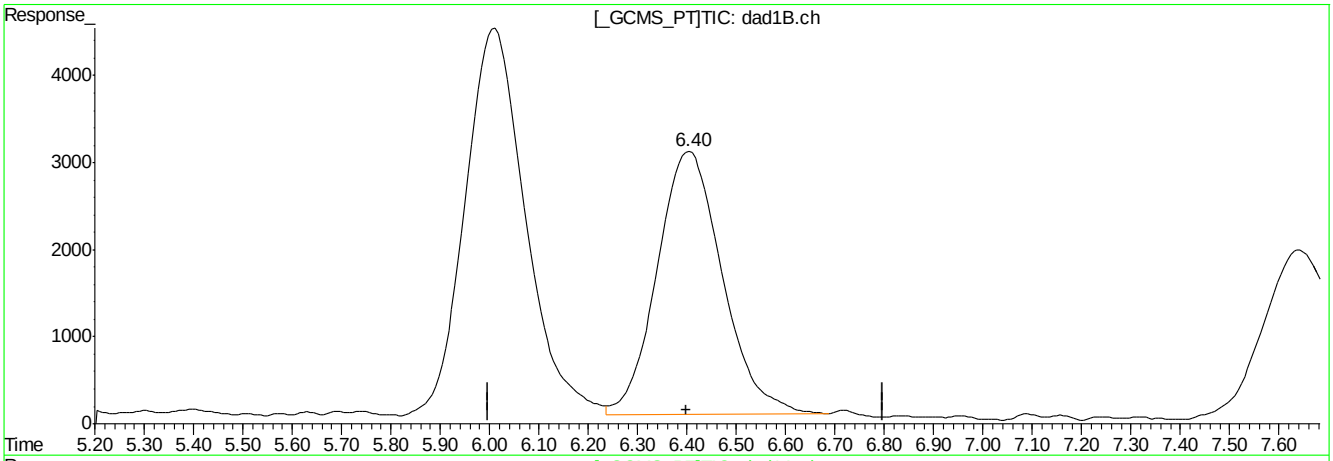
response 444535

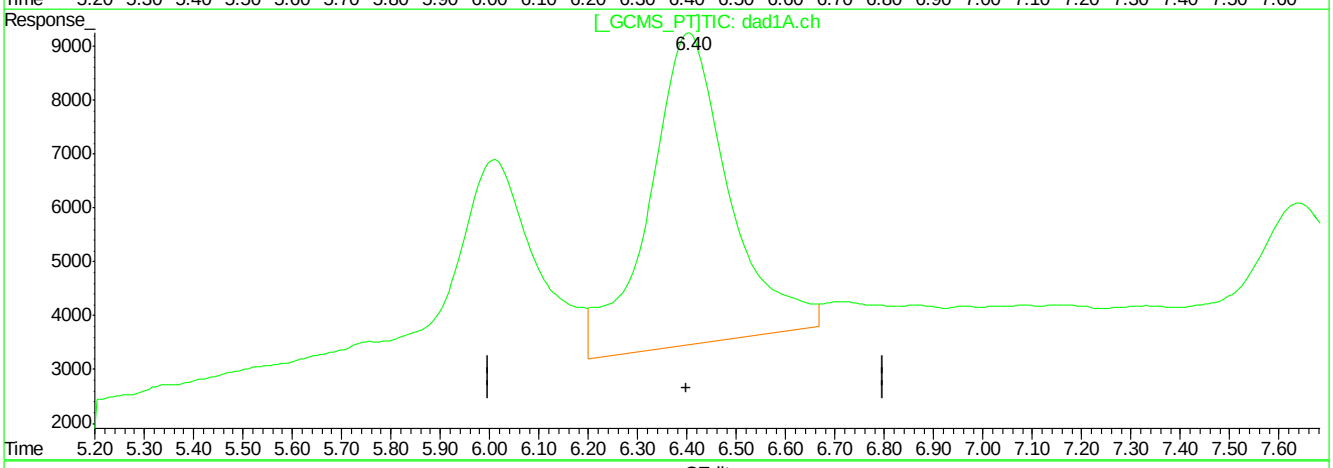
(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:24:39 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.40min 67.692ppb

response 276800

(8) 3,5-Dinitroaniline #2

6.40min 82.046ppb

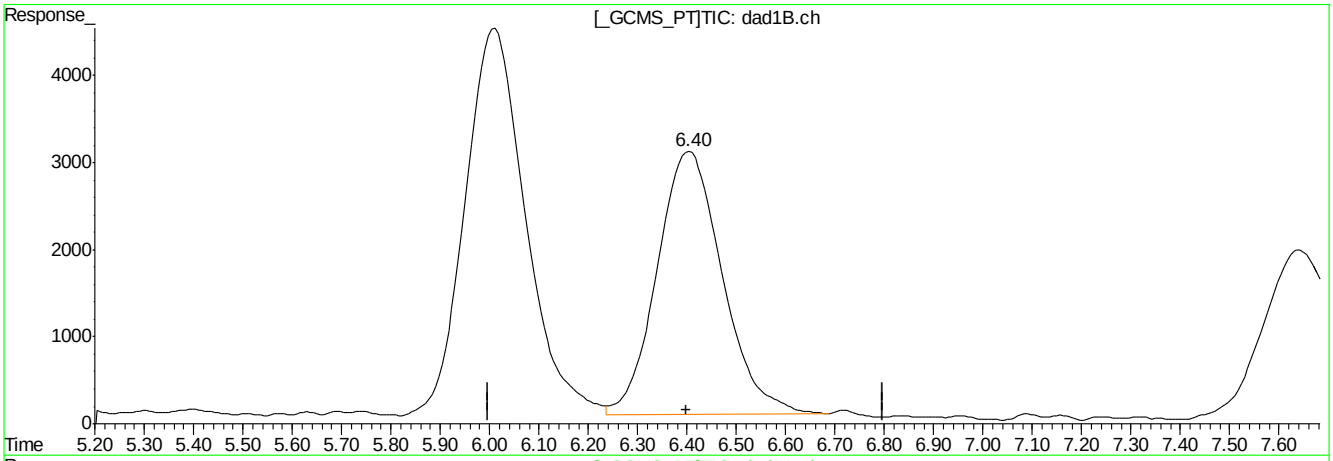
response 649754

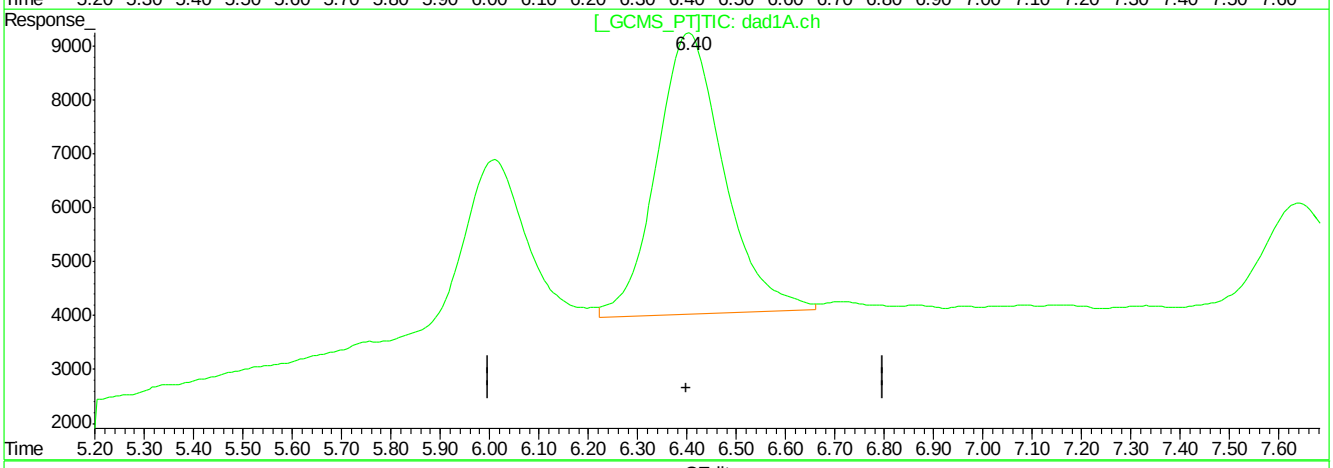
(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:24:45 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.40min 67.692ppb

response 276800

(8) 3,5-Dinitroaniline #2

6.40min 62.601ppb m

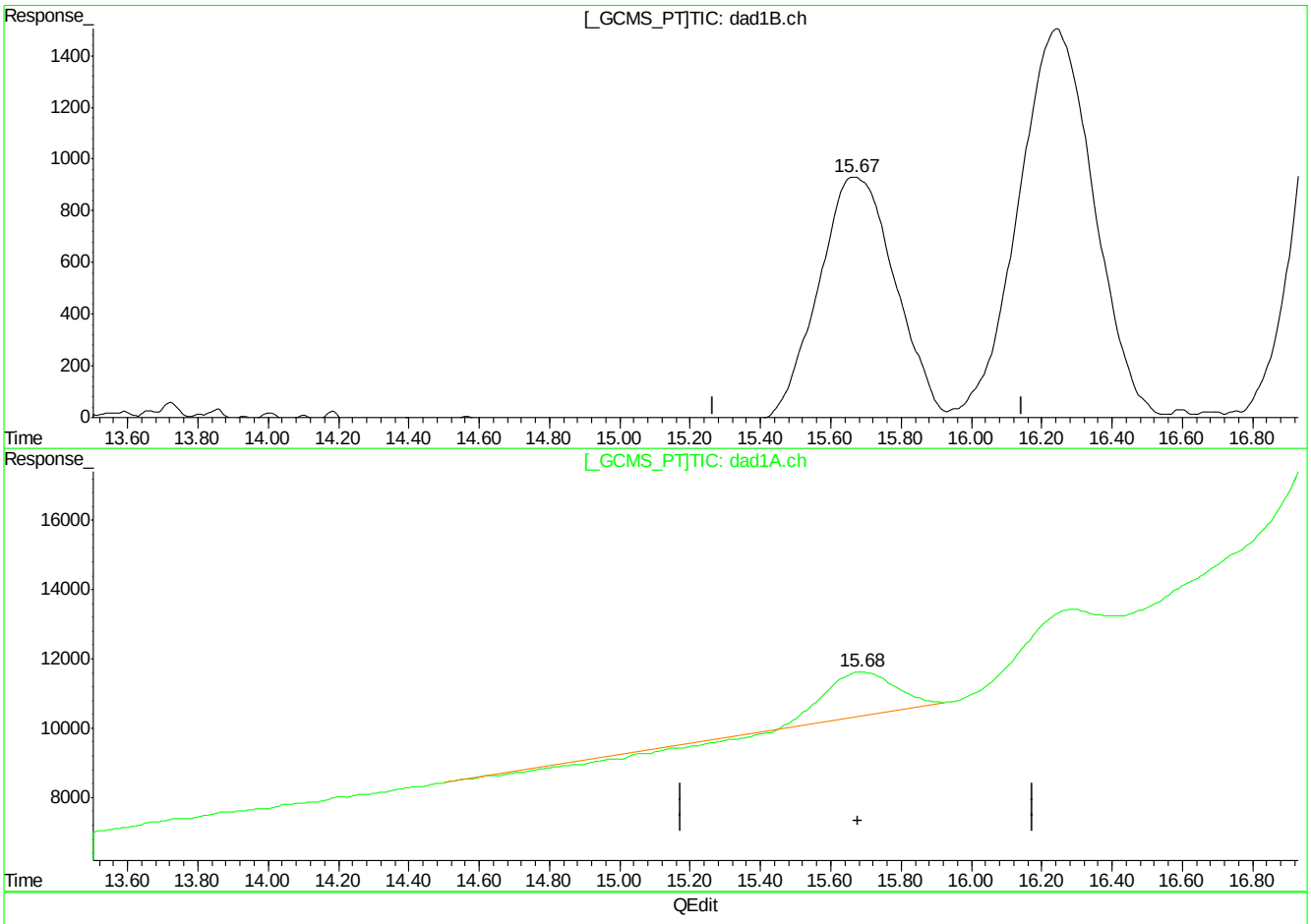
response 495762

(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:24:50 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.67min 69.368ppb

response 150879

(18) o-Nitrotoluene #2

15.69min 46.160ppb

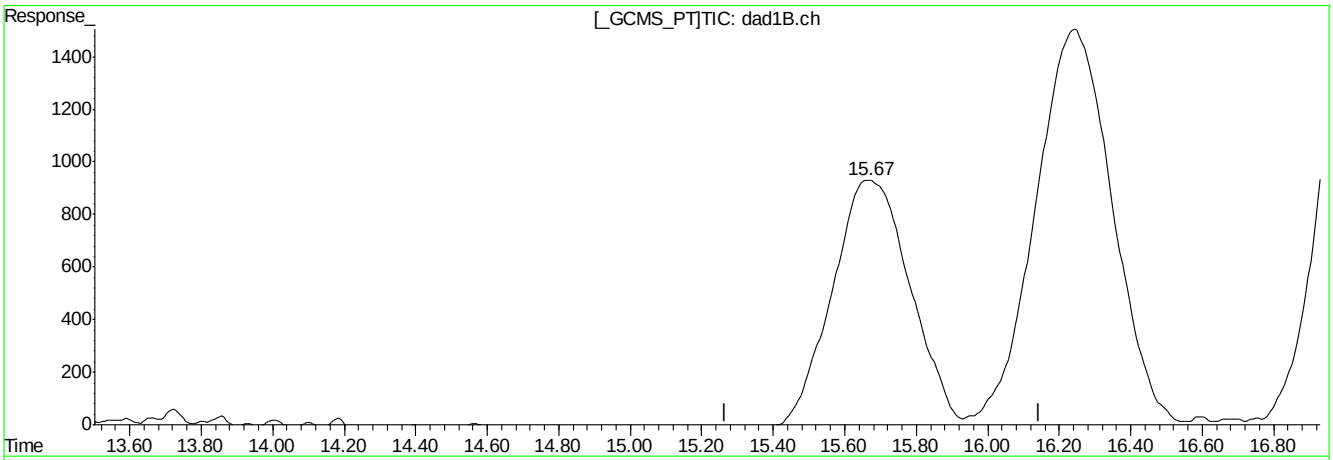
response 139361

(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:25:30 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.67min 69.368ppb

response 150879

(18) o-Nitrotoluene #2

15.68min 72.702ppb m

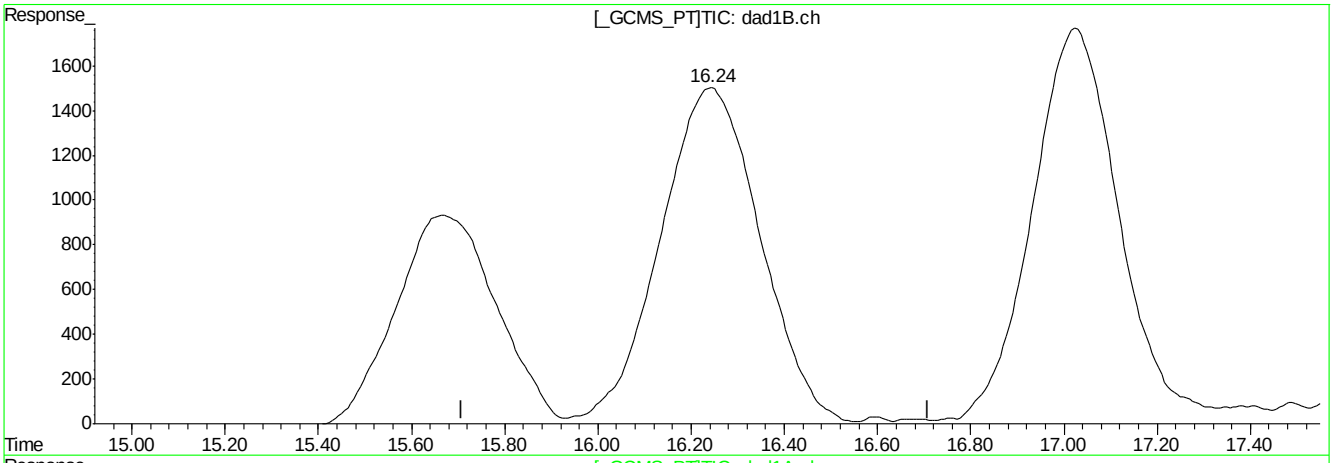
response 219491

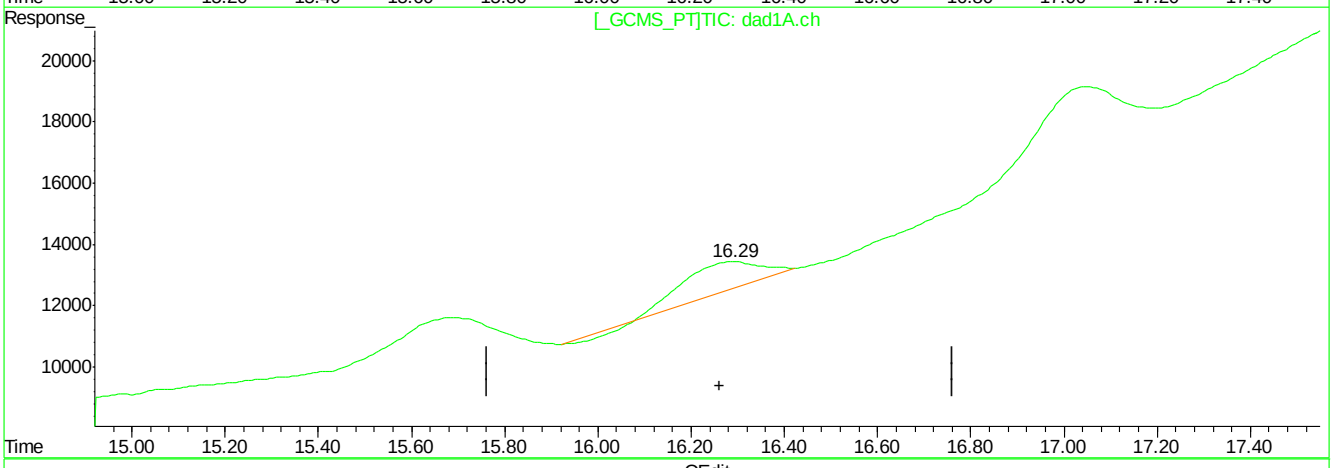
(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:25:47 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.24min 65.990ppb

response 226104

(19) p-Nitrotoluene #2

16.29min 36.418ppb

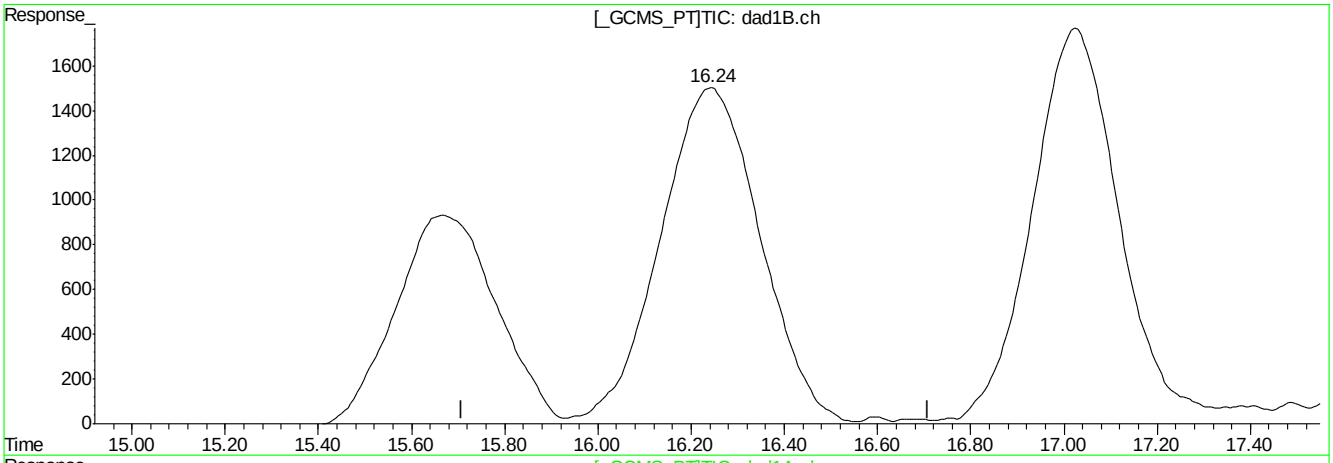
response 95134

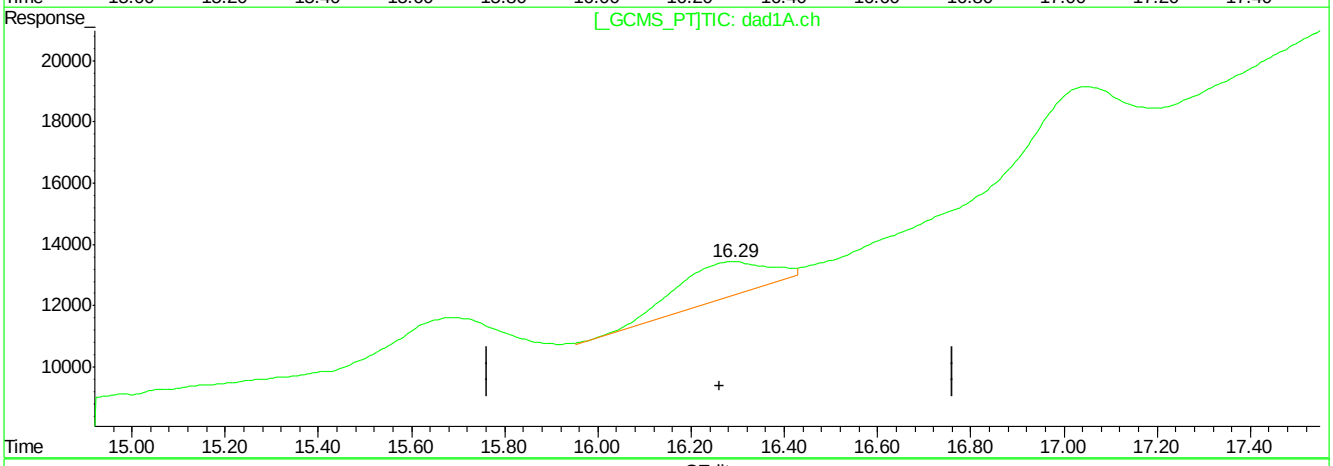
(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:25:53 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.24min 65.990ppb

response 226104

(19) p-Nitrotoluene #2

16.29min 62.569ppb m

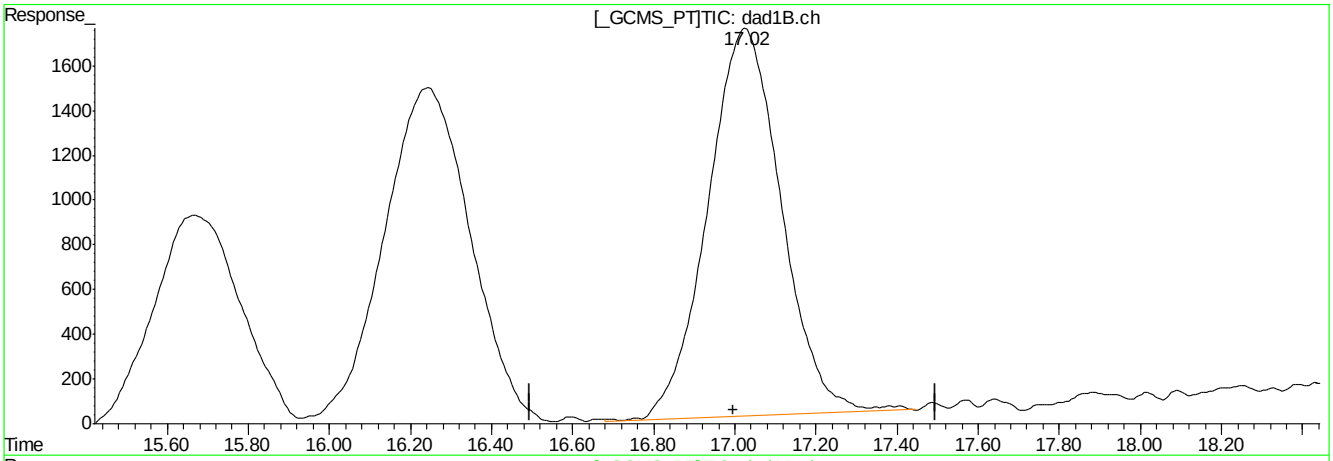
response 163444

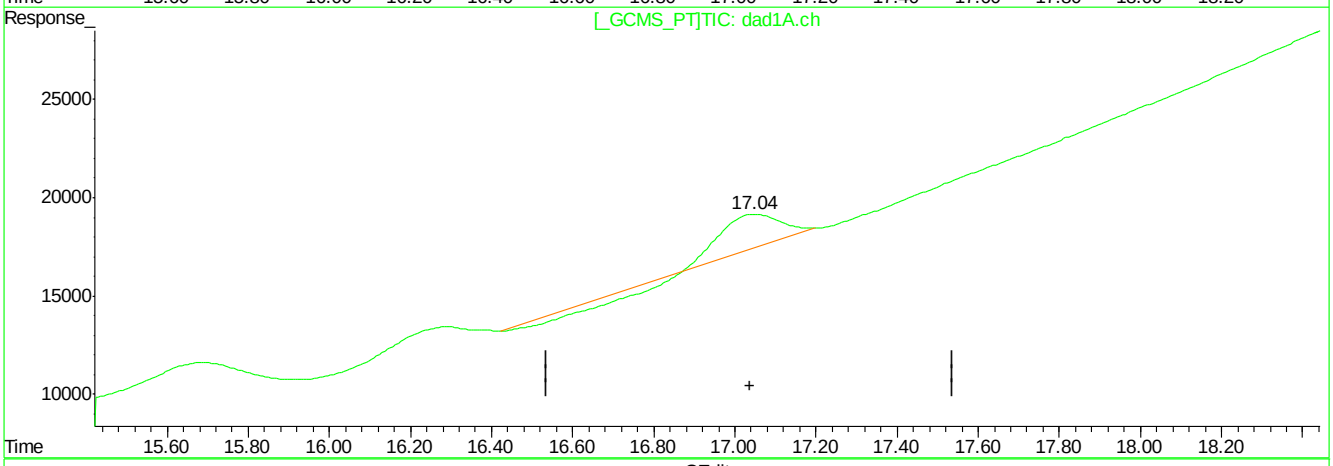
(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:26:03 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.03min 68.446ppb

response 218865

(20) m-Nitrotoluene #2

17.05min 25.189ppb

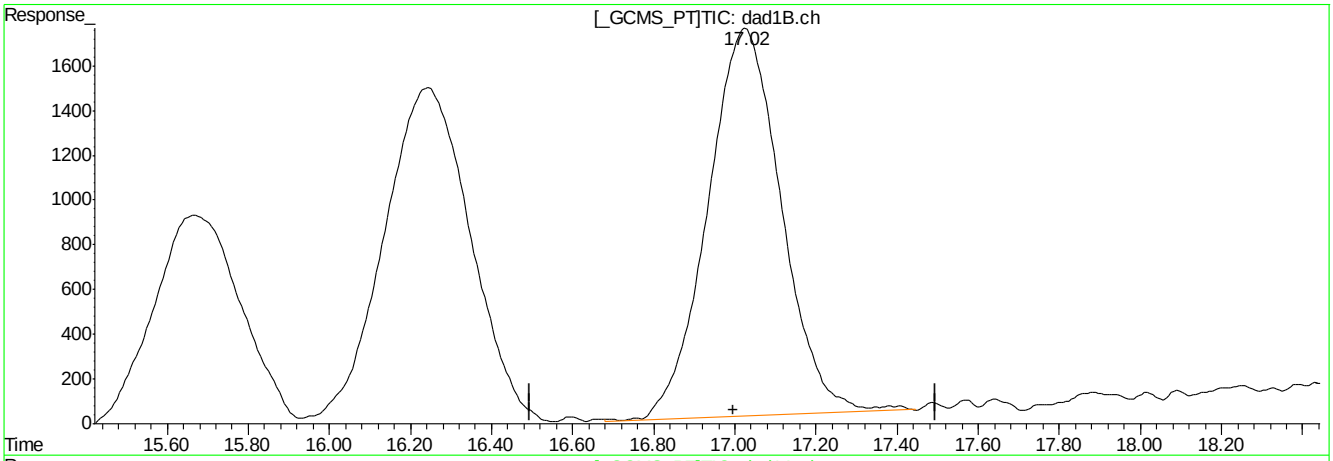
response 95580

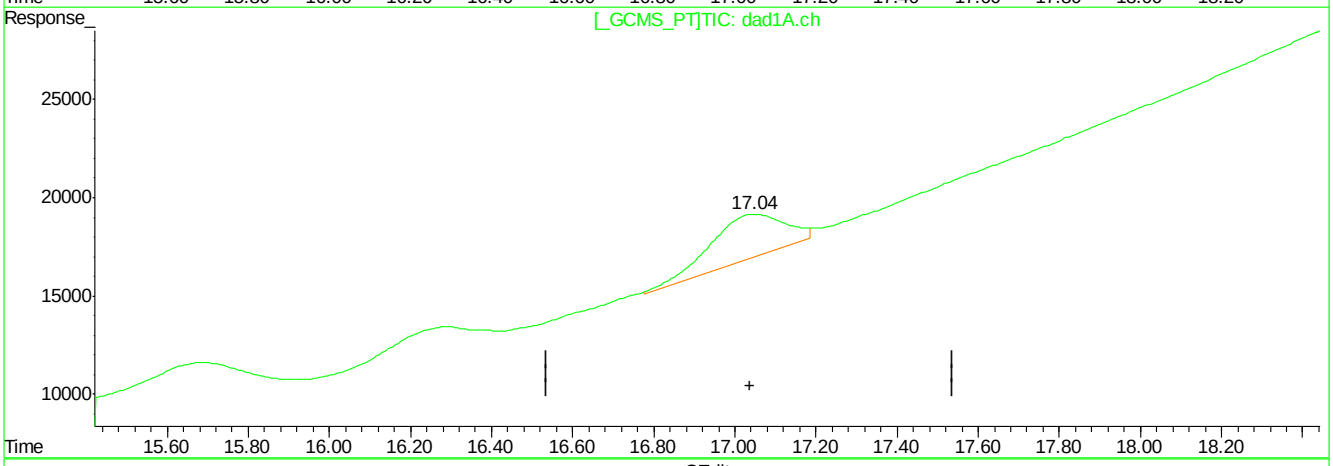
(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:26:09 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.03min 68.446ppb

response 218865

(20) m-Nitrotoluene #2

17.04min 75.873ppb m

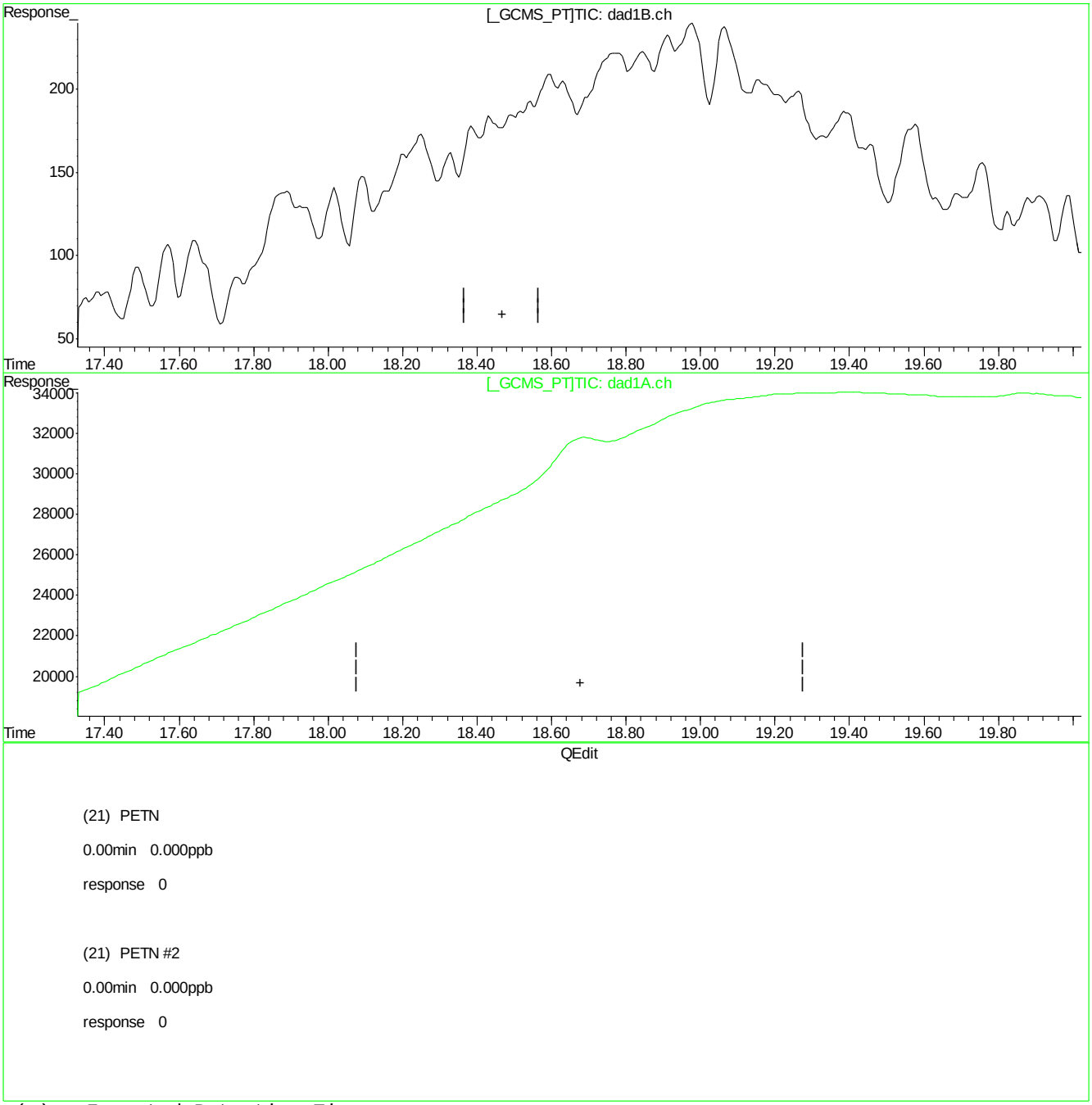
response 287899

(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:26:29 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration

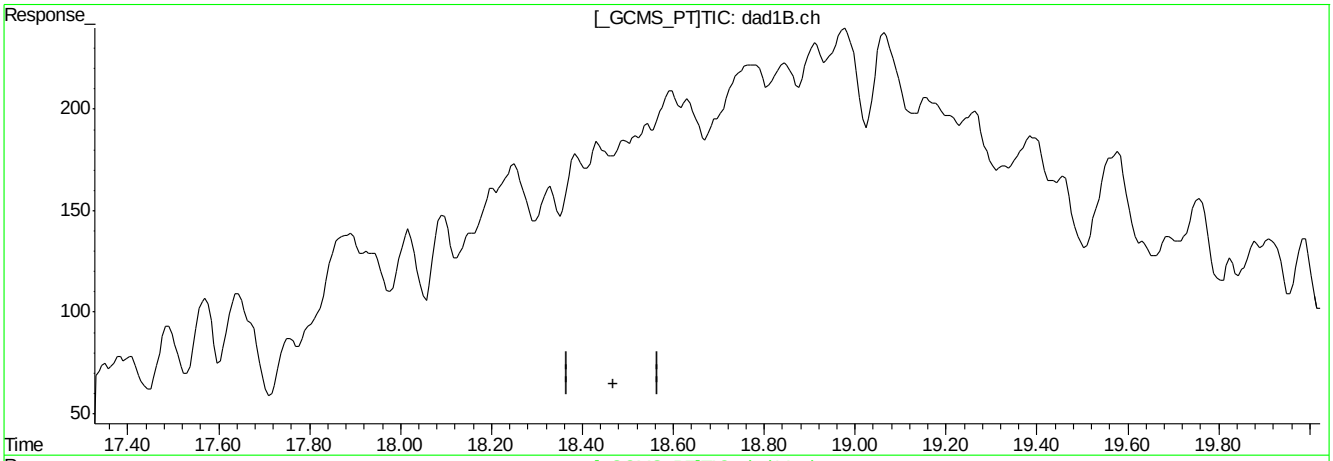


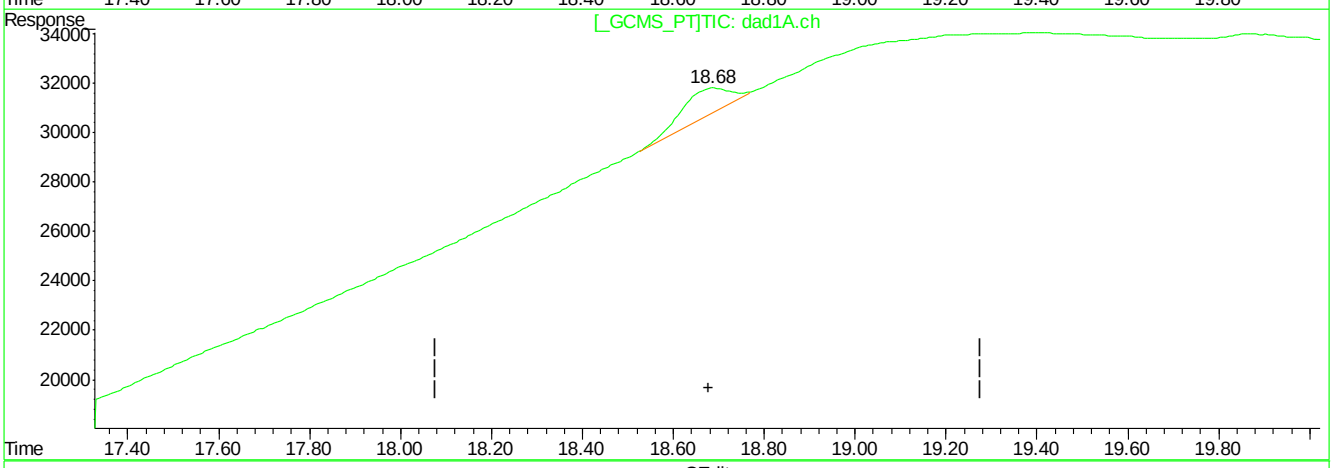
(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:26:33 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072464.D\dad1A.ch
Acq On : 15-Apr-2022, 10:02:22 Operator: FOUADS
Sample : ic2188-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:15 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 54.660ppb m

response 78757

(+) = Expected Retention Time
BB072464.D BBB2167_041522.M Fri Apr 15 11:26:45 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/18/22 15:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29:42 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.52	249089	387803	112.161	91.871
Spiked Amount	500.000	Range	70 - 136	Recovery	=	22.43%#	18.37%#
	Target Compounds						
1)	TNX	1.36	1.36	182176	283872	56.582	56.518
2)	HMX	1.50	1.50	200295	582320	115.239	132.035
3)	DNX	1.76	1.76	347580	584290	118.832	130.112
4)	MNX	2.38	2.38	368981	563777	138.969	138.357
5)	RDX	3.02	3.02	226239	360756	117.268	118.819
6)	1,3,5-Trinitrobe	4.81	4.81	483518	764092	121.095m	121.712m
7)	1,3-Dinitrobenze	6.04	6.03	634035	463765	119.362	119.292m
8)	3,5-Dinitroanili	6.44	6.44	484434	969140	118.470	122.376
9)	Nitrobenzene	7.67	7.67	375524	379303	120.370	118.743
10)	Nitroglycerin	0.00	9.30	0	150281	N.D.	122.942 #
11)	Tetryl	9.78	9.78	367303	547021	128.924	122.932
12)	2,4,6-Trinitroto	10.17	10.17	454498	485662	118.758	108.741
13)	2-Amino-4,6-Dini	10.62	10.62	396167	490406	121.039	108.489
14)	4-Amino-2,6-Dini	11.14	11.15	293564	474660	125.979	94.927
16)	2,4-Dinitrotolue	12.19	12.20	553918	344062	120.520	121.726
17)	2,6-Dinitrotolue	12.66	12.67	316912	411647	113.449	116.072
18)	o-Nitrotoluene	15.72	15.72	261444	354560	120.201	117.440m
19)	p-Nitrotoluene	16.29	16.31	403784	282743	117.846	108.238m
20)	m-Nitrotoluene	17.06	17.07	391265	551085	122.360	145.233m
21)	PETN	0.00	18.70	0	142949	N.D.	99.211m#

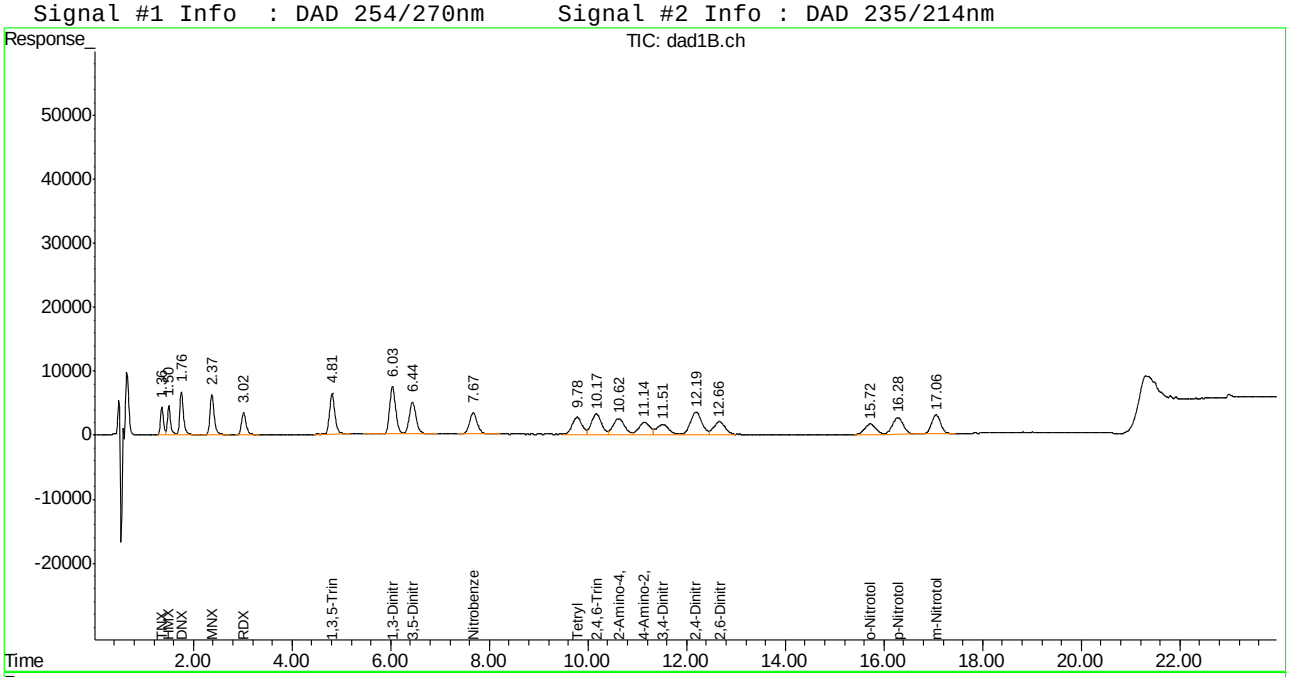
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072465.D BBB2167_041522.M Mon Apr 18 11:19:50 2022 Page 1

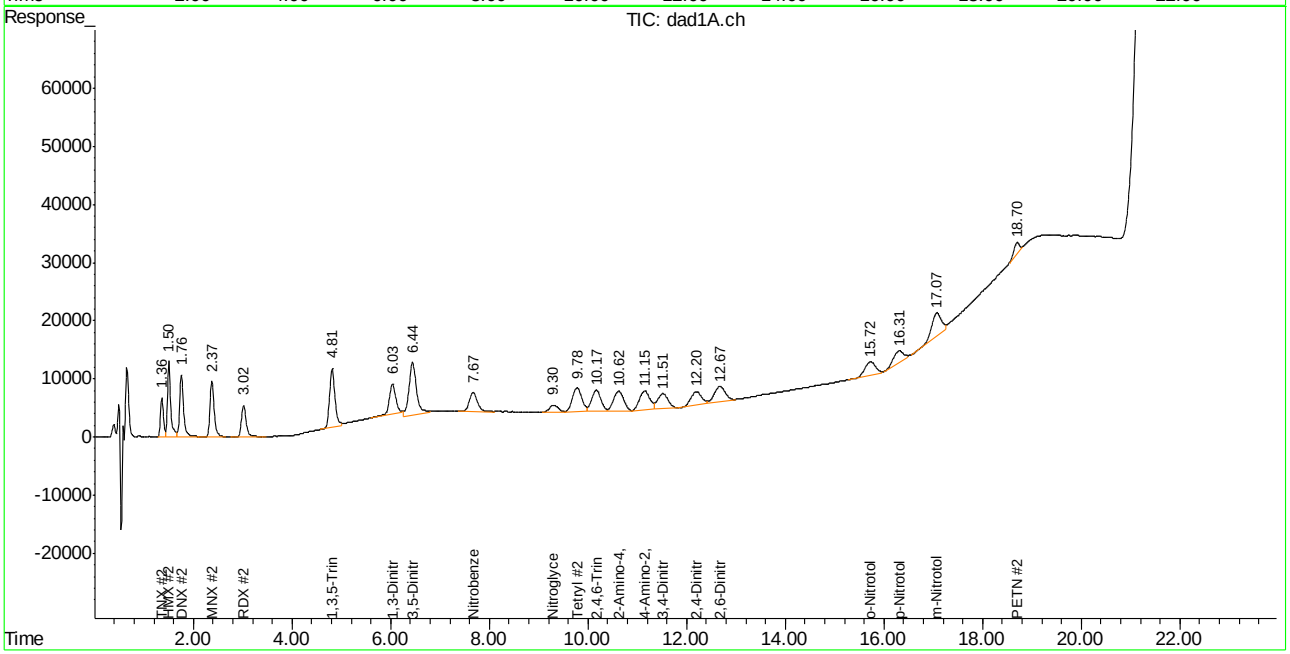
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:32 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

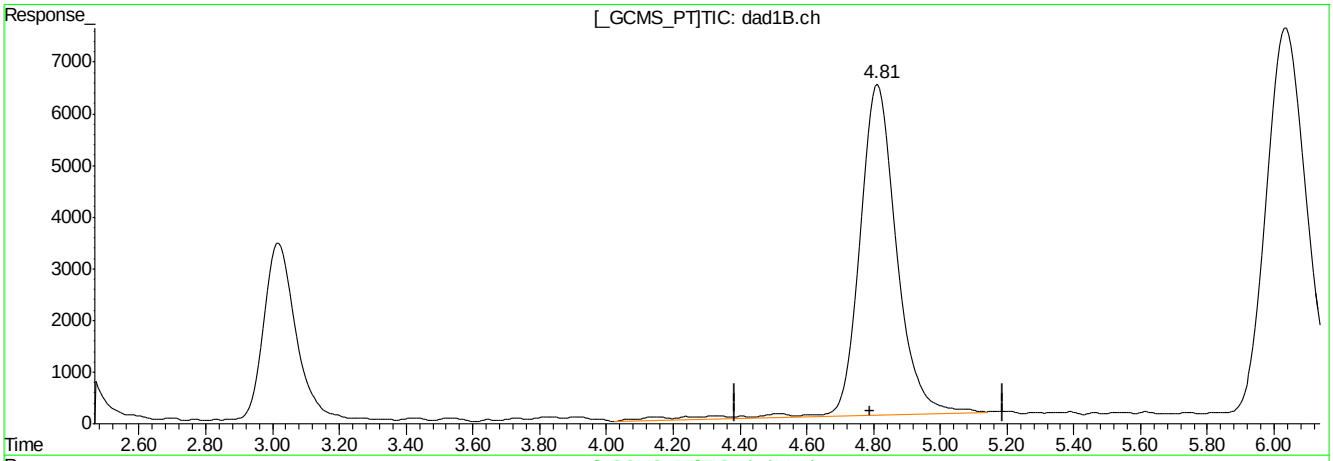
Sample Number: GBB2188-IC2188
Lab FileID: BB072465.D
Injection Time: 04/15/22 10:33
Method: SW846 8330A
Analyst approved: 04/18/22 11:39 Fouad Sekkar
Supervisor approved: 04/18/22 15:15 Naresh Jiawan

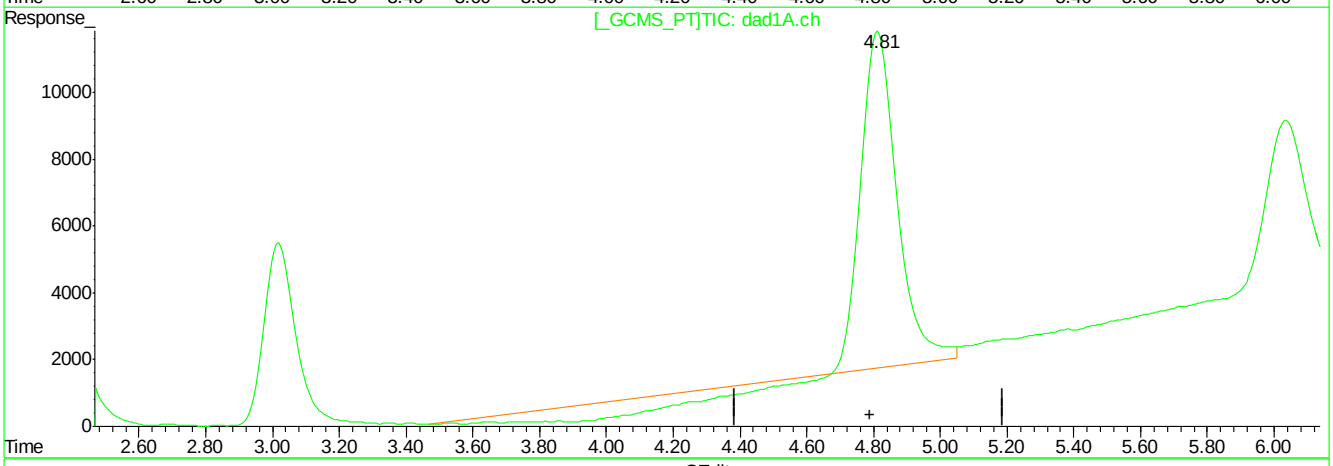
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	4.81	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.81	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.03	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.72	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.31	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.07	Poor instrument integration
PETN	78-11-5	2	18.70	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.81min 123.091ppb

response 491490

(6) 1,3,5-Trinitrobenzene #2

4.81min 89.154ppb

response 559700

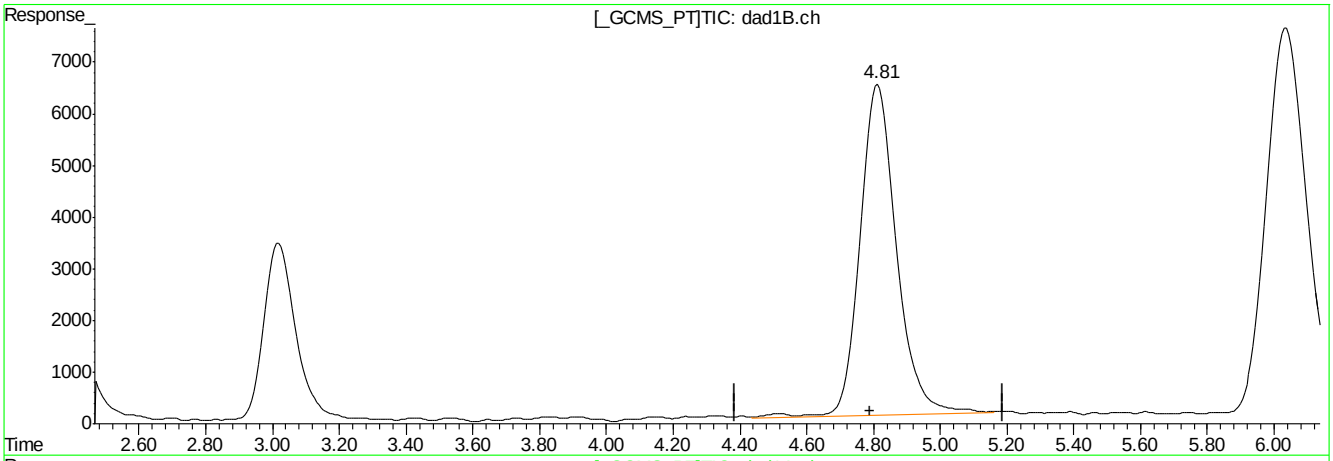
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:30:15 2022

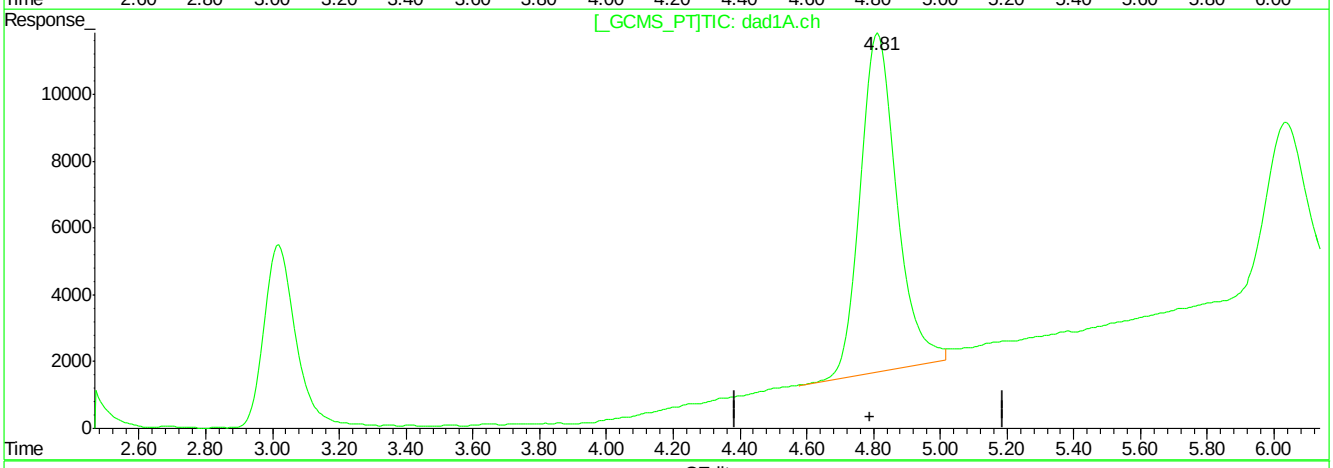
BB072465.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.81min 121.095ppb m

response 483518

(6) 1,3,5-Trinitrobenzene #2

4.81min 121.712ppb m

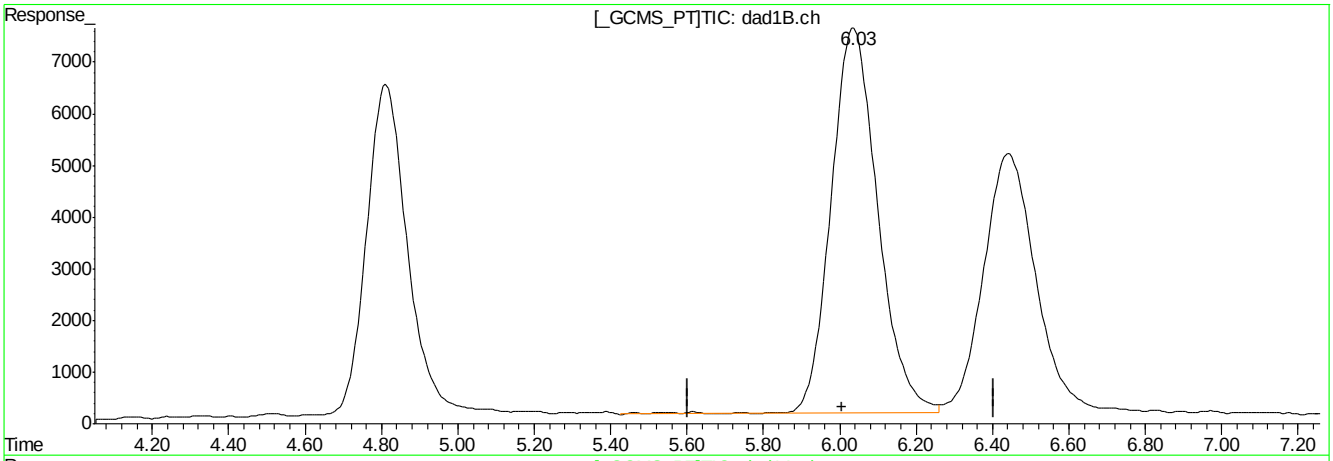
response 764092

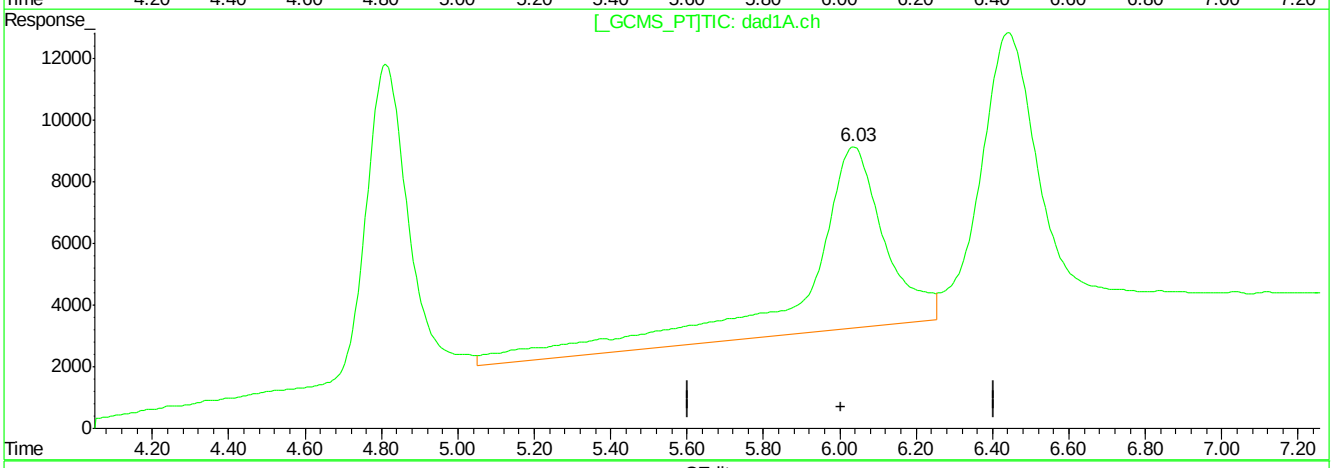
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:30:48 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.04min 119.362ppb

response 634035

(7) 1,3-Dinitrobenzene #2

6.04min 224.626ppb

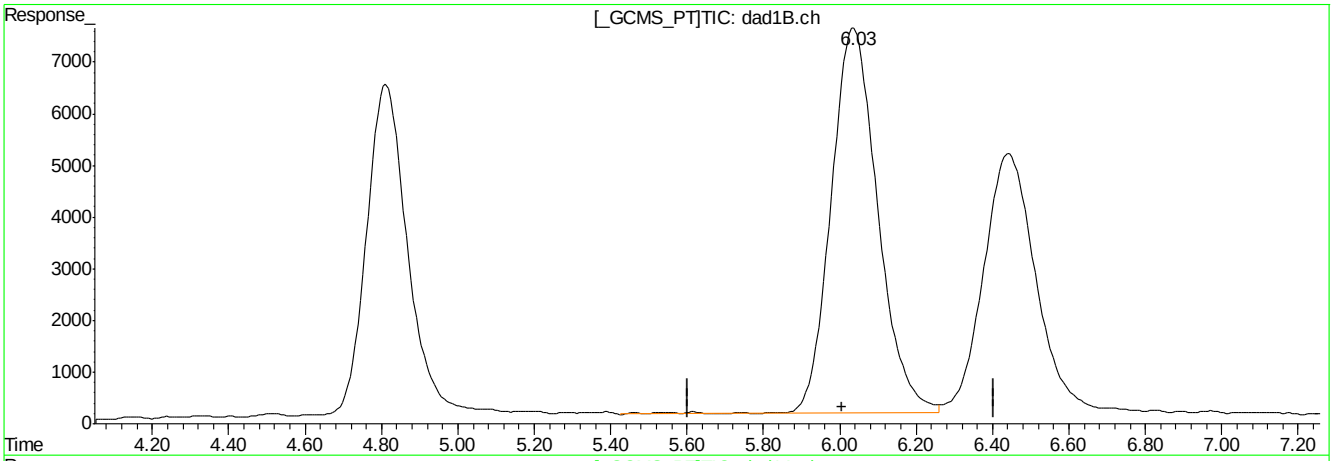
response 873264

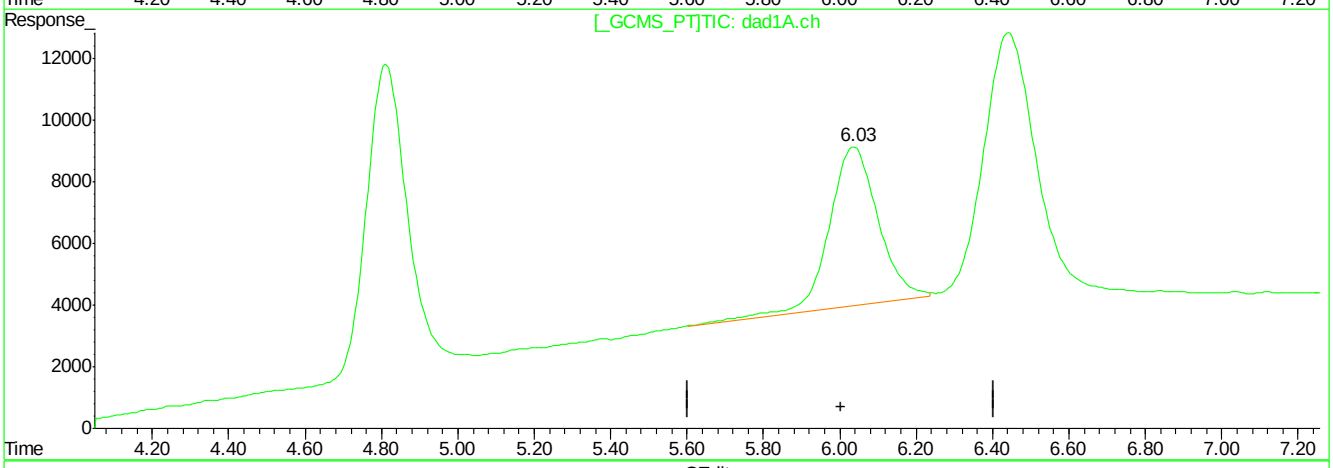
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:30:53 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.04min 119.362ppb

response 634035

(7) 1,3-Dinitrobenzene #2

6.03min 119.292ppb m

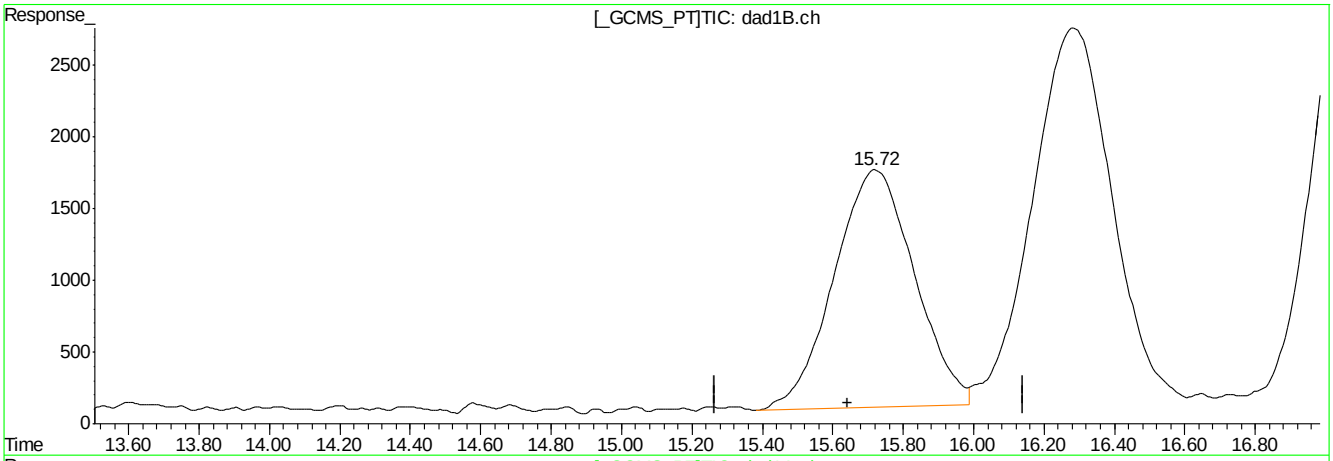
response 463765

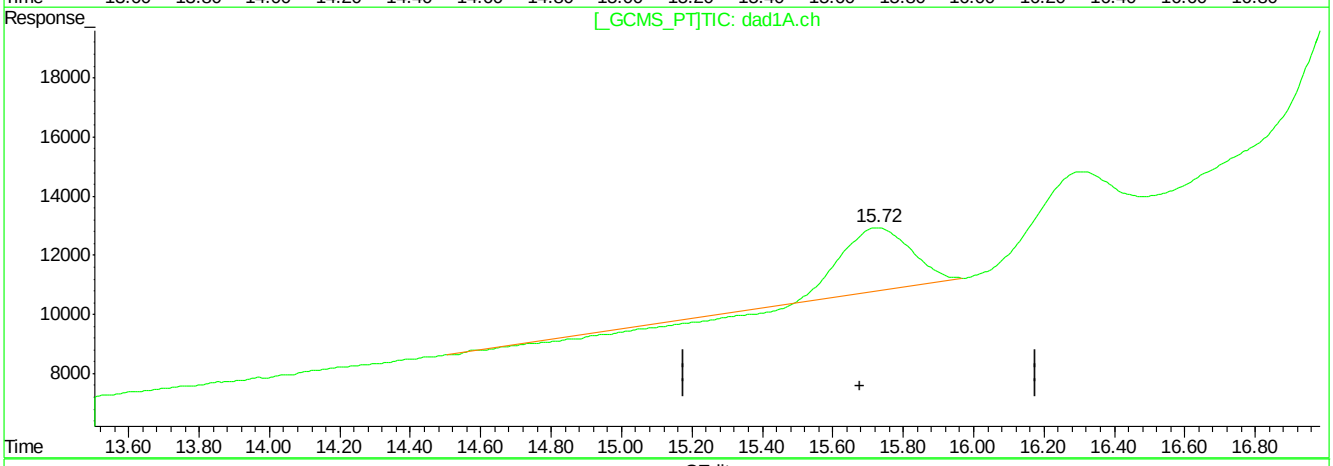
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:31:09 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.72min 120.201ppb

response 261444

(18) o-Nitrotoluene #2

15.73min 79.395ppb

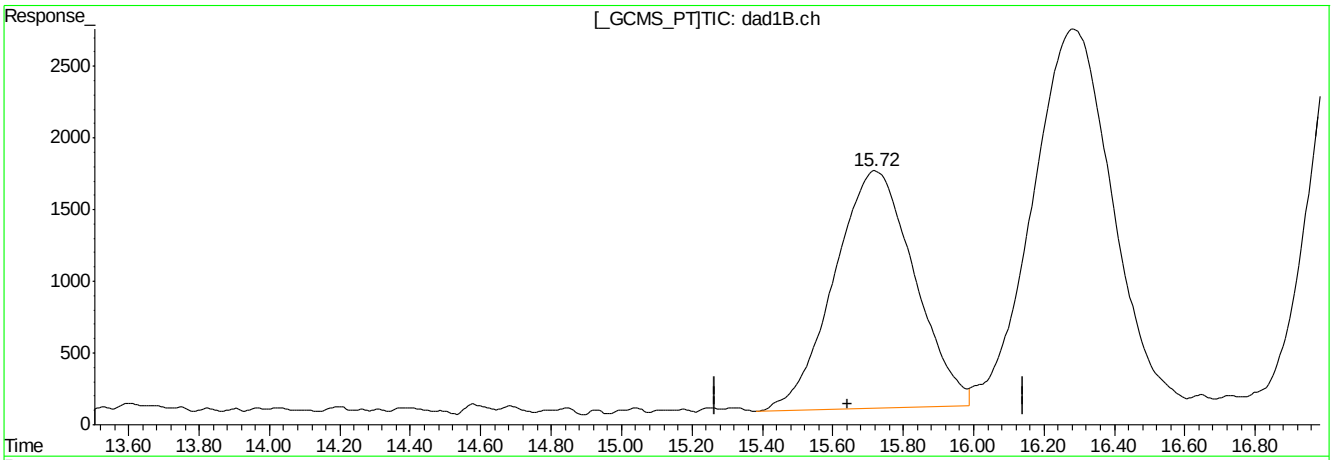
response 239697

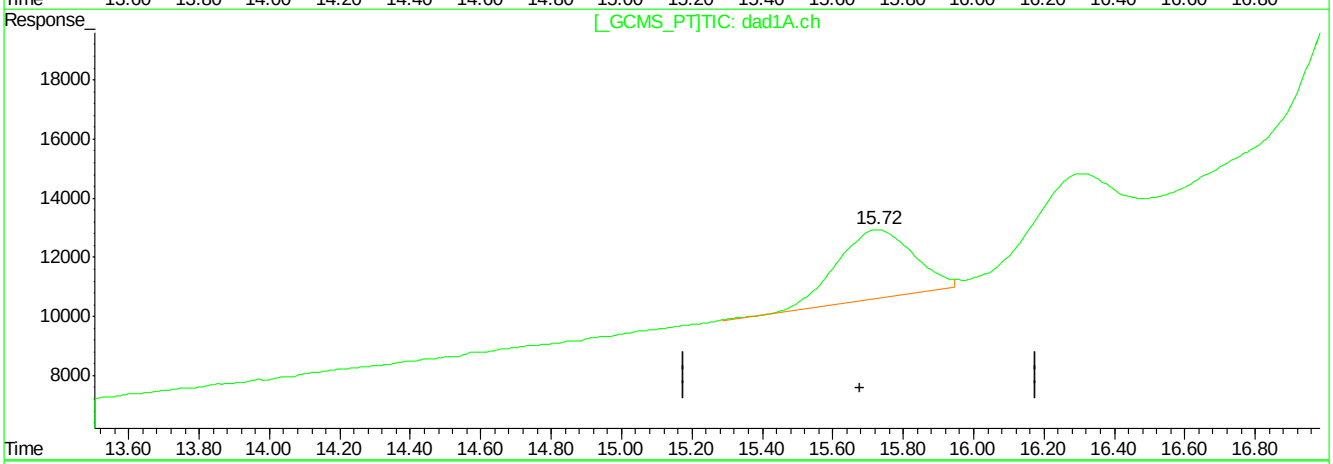
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:31:34 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.72min 120.201ppb

response 261444

(18) o-Nitrotoluene #2

15.72min 117.440ppb m

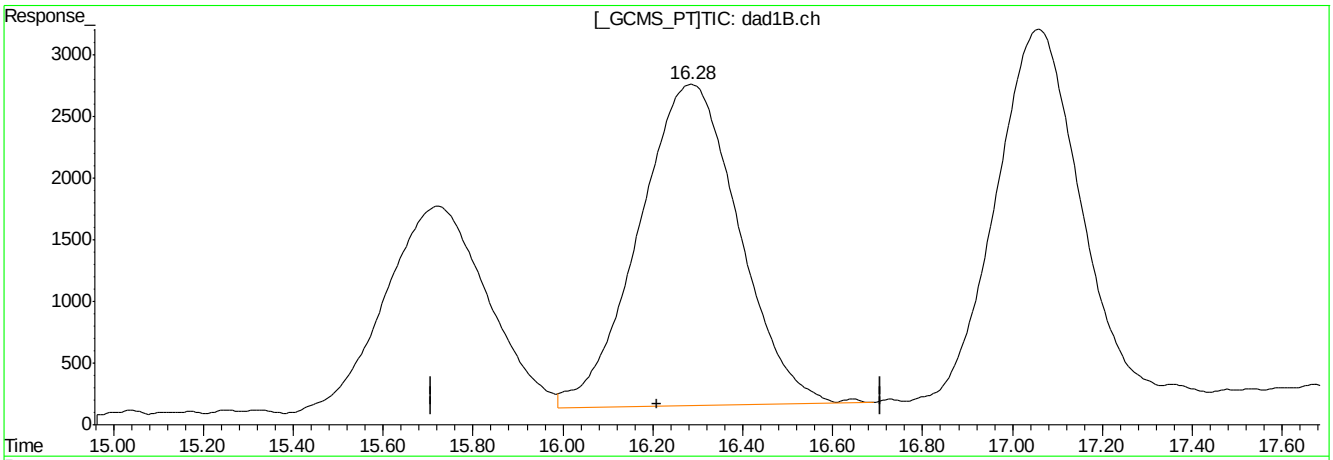
response 354560

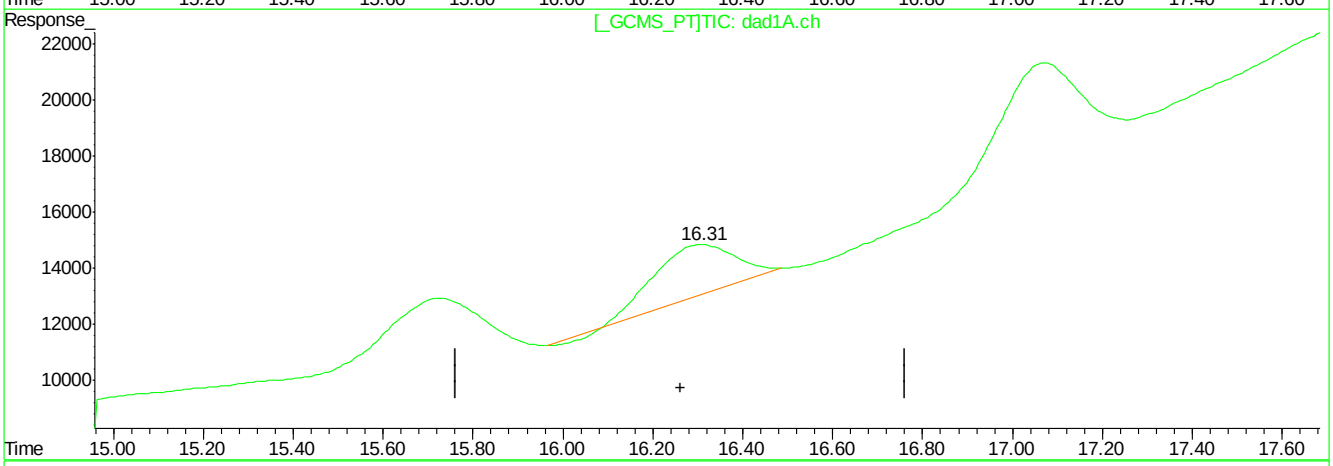
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:31:41 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.29min 117.846ppb

response 403784

(19) p-Nitrotoluene #2

16.31min 85.889ppb

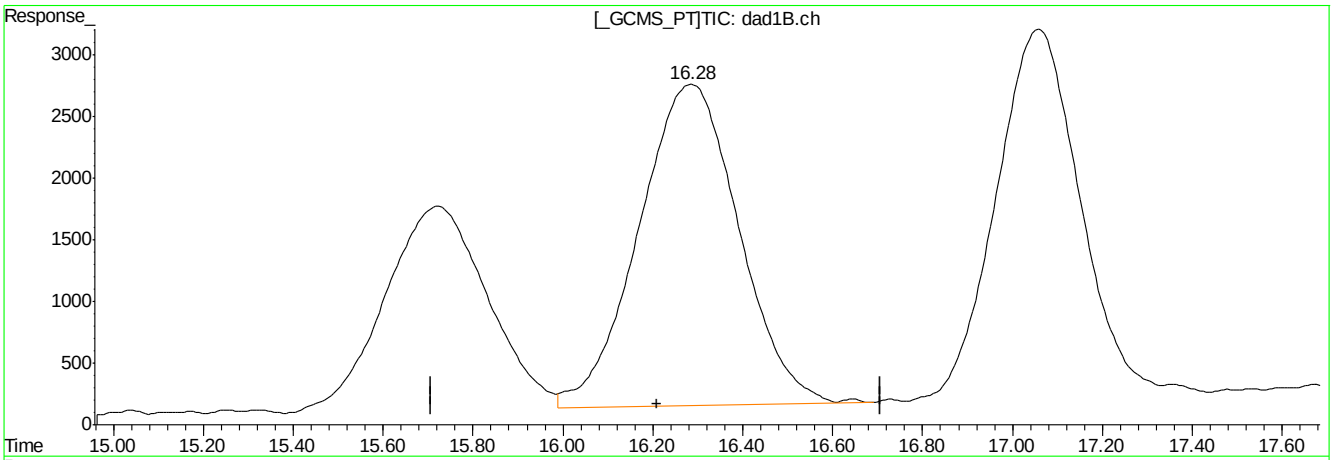
response 224363

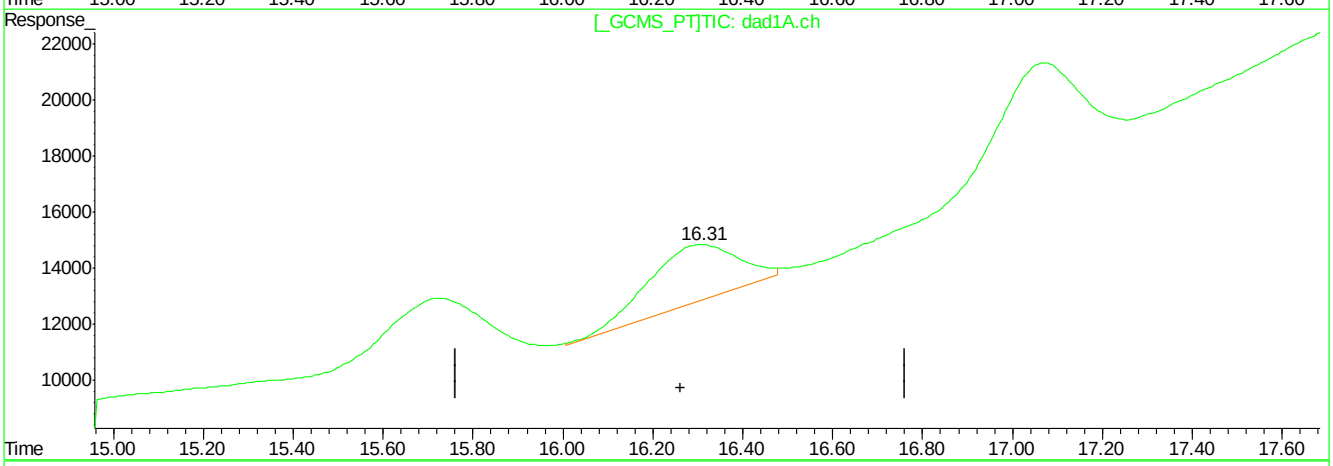
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:31:47 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.29min 117.846ppb

response 403784

(19) p-Nitrotoluene #2

16.31min 108.238ppb m

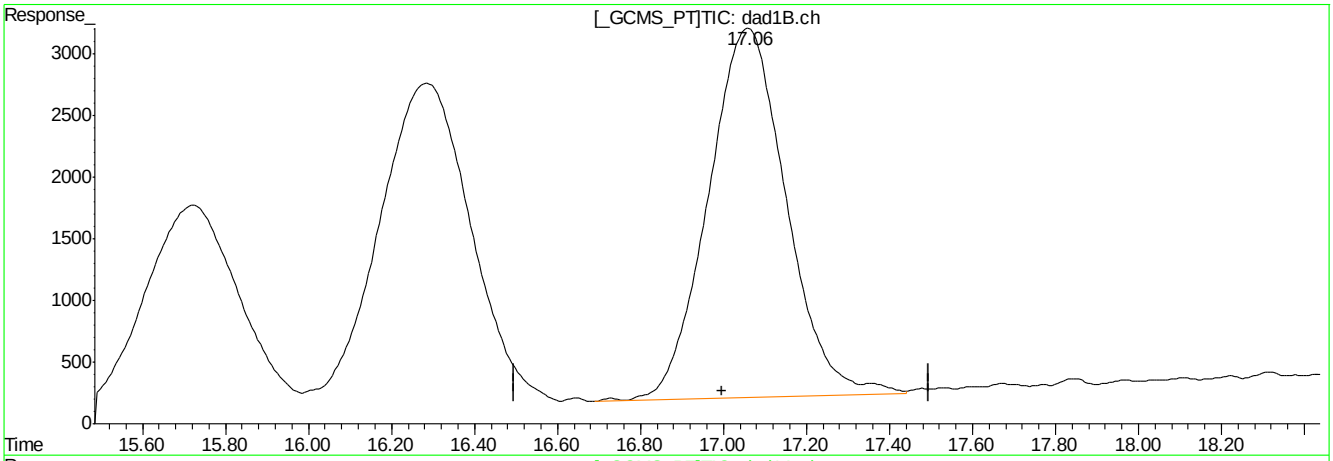
response 282743

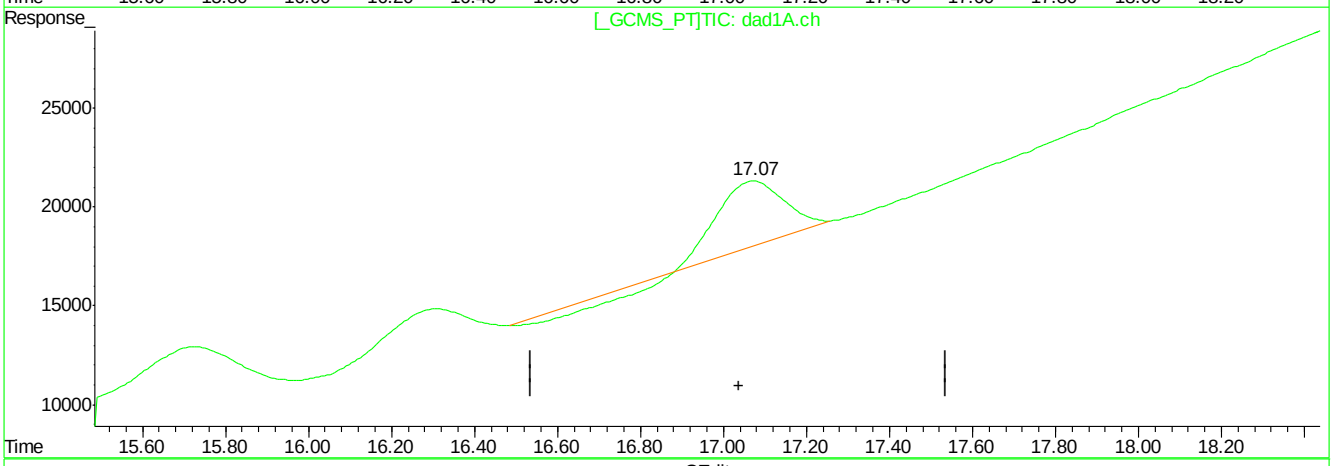
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:31:55 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.06min 122.360ppb

response 391265

(20) m-Nitrotoluene #2

17.07min 77.374ppb

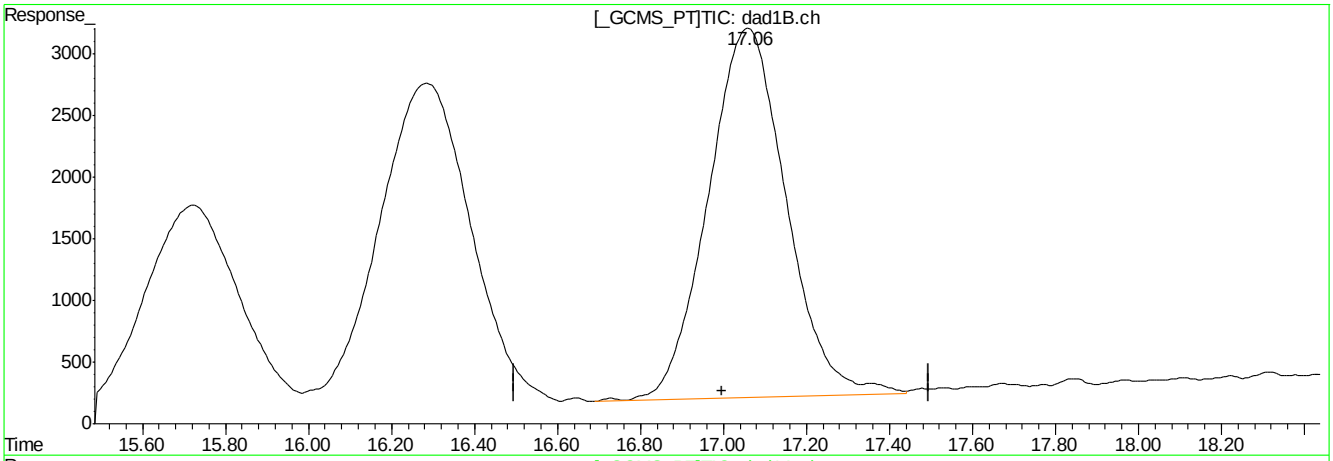
response 293593

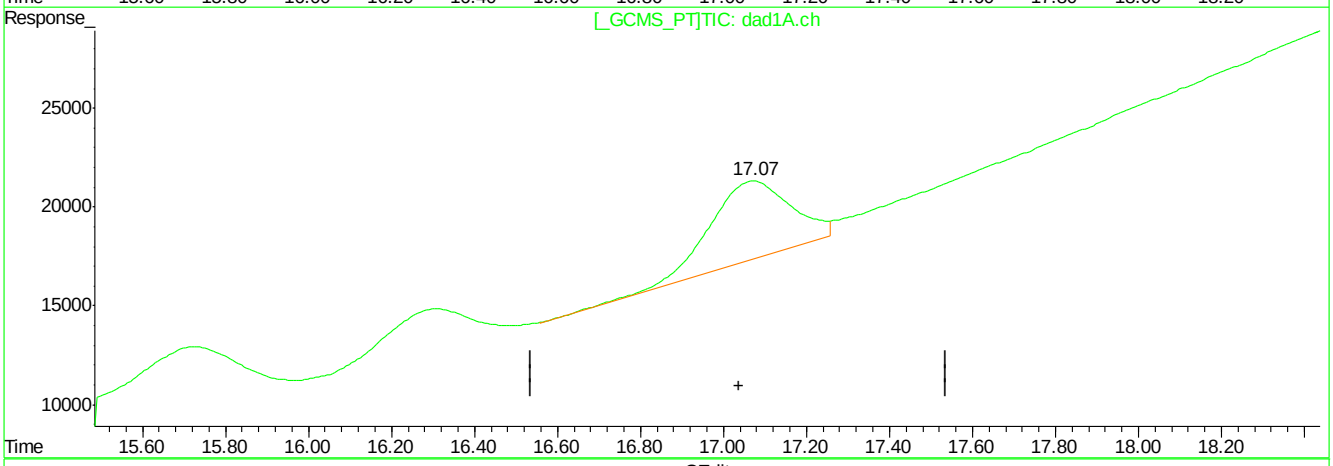
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:32:01 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.06min 122.360ppb

response 391265

(20) m-Nitrotoluene #2

17.07min 145.233ppb m

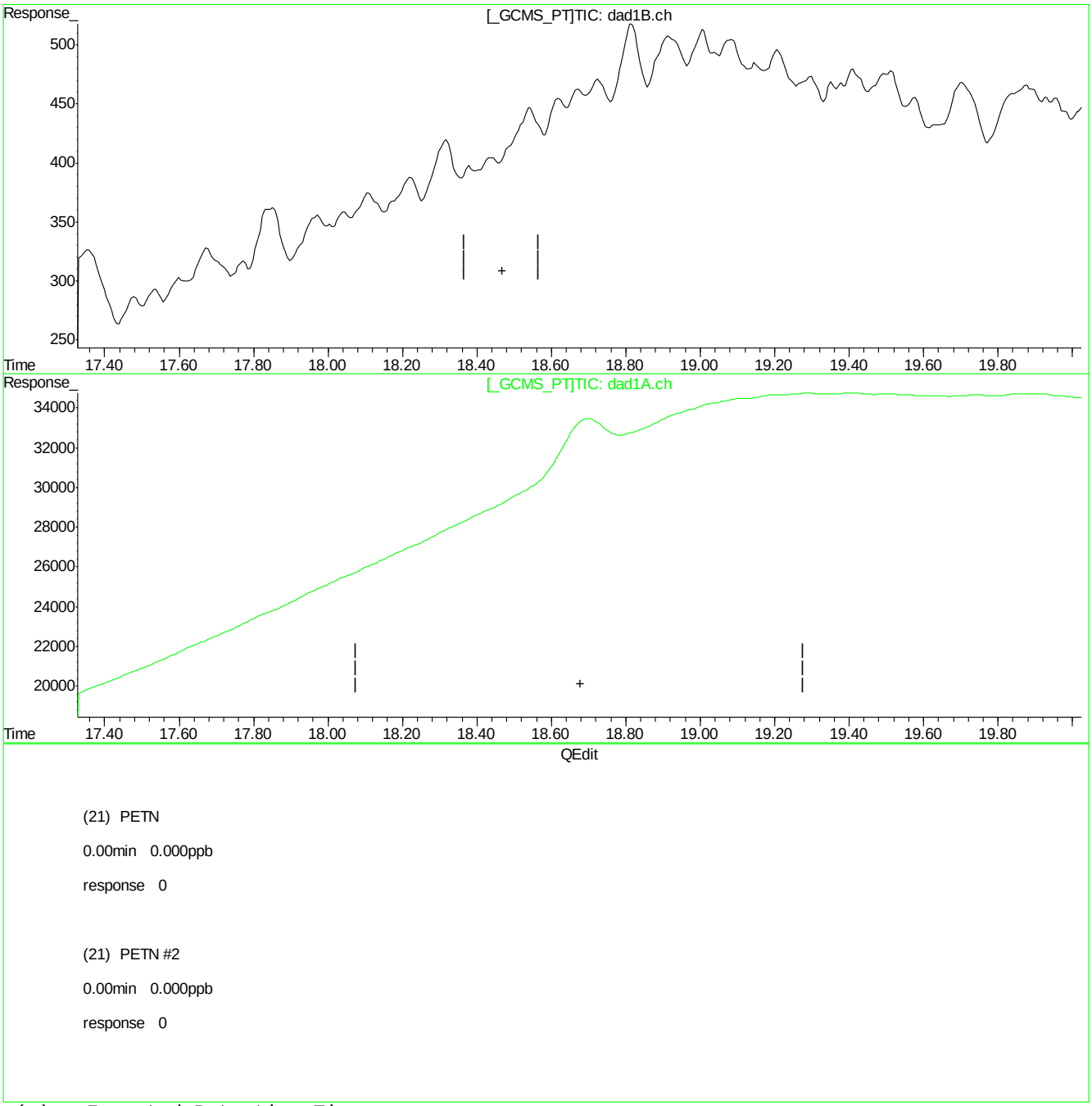
response 551085

(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:32:08 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration

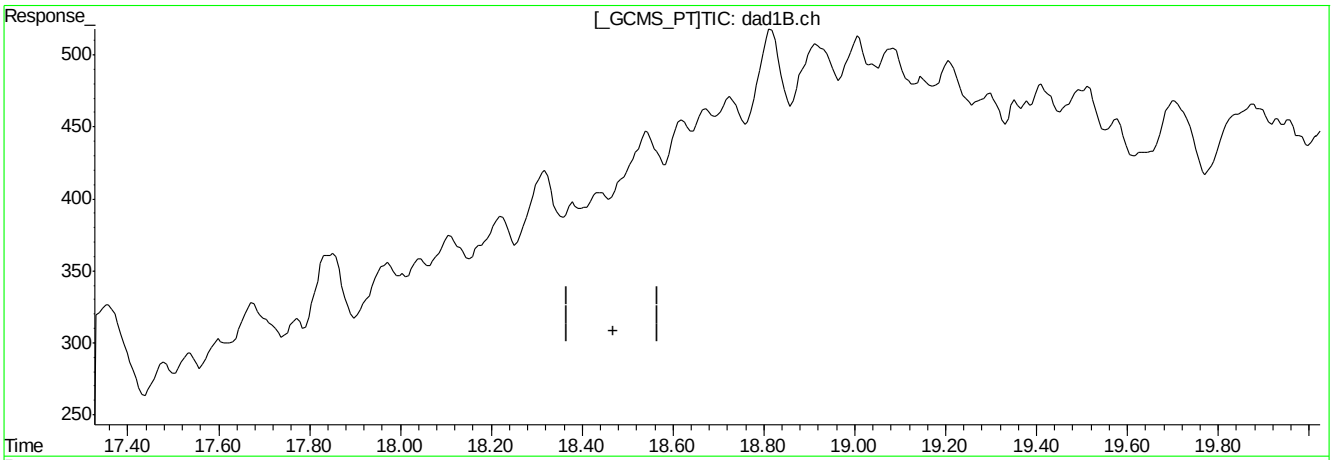


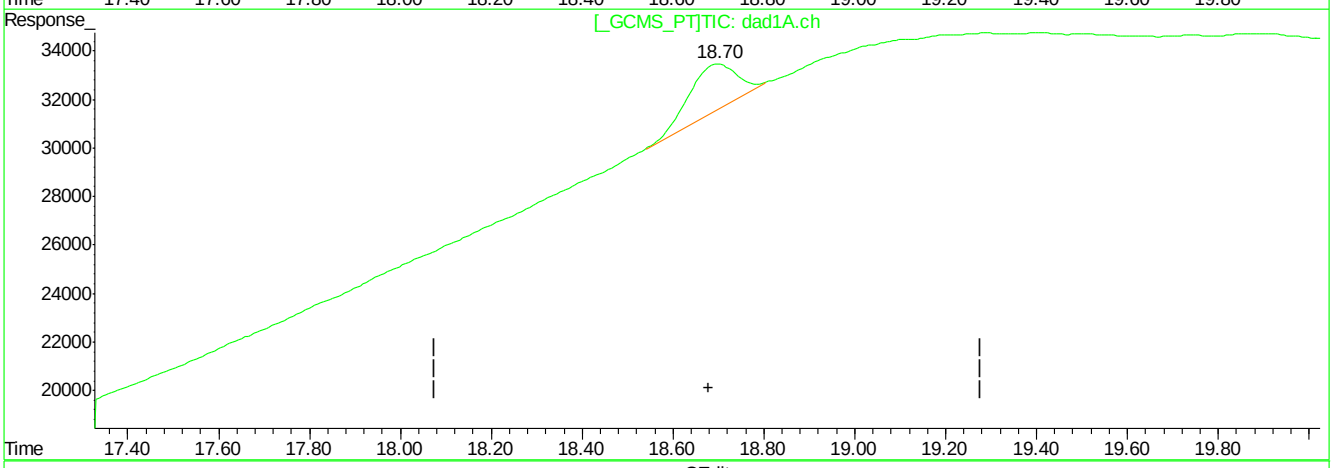
(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:32:13 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072465.D\dad1A.ch
Acq On : 15-Apr-2022, 10:33:25 Operator: FOUADS
Sample : ic2188-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:29 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.70min 99.211ppb m

response 142949

(+) = Expected Retention Time
BB072465.D BBB2167_041522.M Fri Apr 15 11:32:27 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/18/22 15:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47:49 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.50	11.51	440254	711265	198.240	168.500
	Spiked Amount 500.000	Range 70 - 136		Recovery =		39.65%#	33.70%#
	Target Compounds						
1)	TNX	1.36	1.36	324340	498011	100.736	99.152
2)	HMX	1.50	1.51	360029	1065051	207.141	241.490
3)	DNX	1.76	1.76	603196	986583	206.223	219.697
4)	MNX	2.38	2.38	632357	962655	238.164	236.246
5)	RDX	3.02	3.02	390800	614594	202.566	202.423
6)	1,3,5-Trinitrobe	4.81	4.81	825985	1328431	206.864	211.605
7)	1,3-Dinitrobenze	6.04	6.03	1104032	759676	207.843	195.408m
8)	3,5-Dinitroanili	6.45	6.45	837782	1579623	204.882	199.464
9)	Nitrobenzene	7.67	7.67	630191	635634	202.000	198.990
10)	Nitroglycerin	0.00	9.31	0	252775	N.D.	206.790 #
11)	Tetryl	9.78	9.78	624539	953686	219.214	214.321
12)	2,4,6-Trinitroto	10.17	10.17	785550	872724	205.260	195.406
13)	2-Amino-4,6-Dini	10.62	10.62	688520	880078	210.360	194.693
14)	4-Amino-2,6-Dini	11.15	11.15	512583	867823	219.968	173.555
16)	2,4-Dinitrotolue	12.19	12.19	971060	624138	211.281	220.814
17)	2,6-Dinitrotolue	12.66	12.66	566169	713613	202.678	201.217
18)	o-Nitrotoluene	15.72	15.72	445587	701981	204.863	232.516m
19)	p-Nitrotoluene	16.28	16.29	699076	515447	204.029	197.320m
20)	m-Nitrotoluene	17.06	17.06	656502	773466	205.308	203.840m
21)	PETN	0.00	18.69	0	282676	N.D.	196.185m#

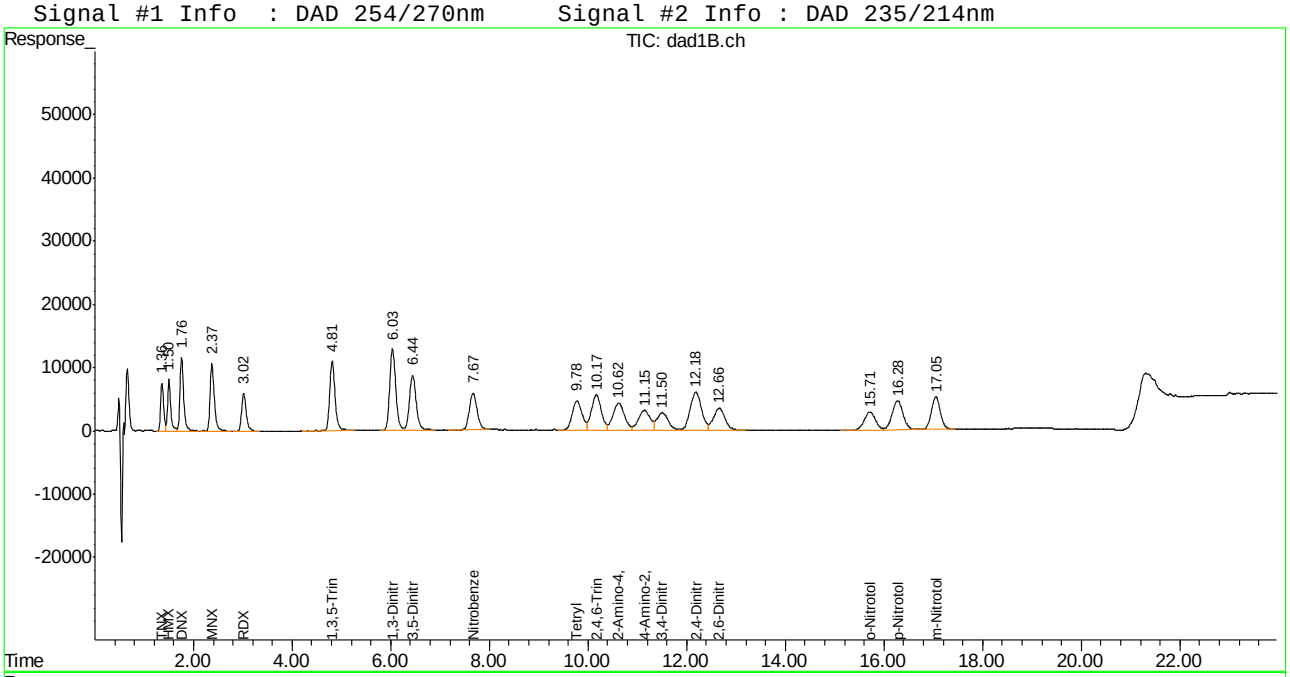
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072466.D BBB2167_041522.M Mon Apr 18 11:19:51 2022 Page 1

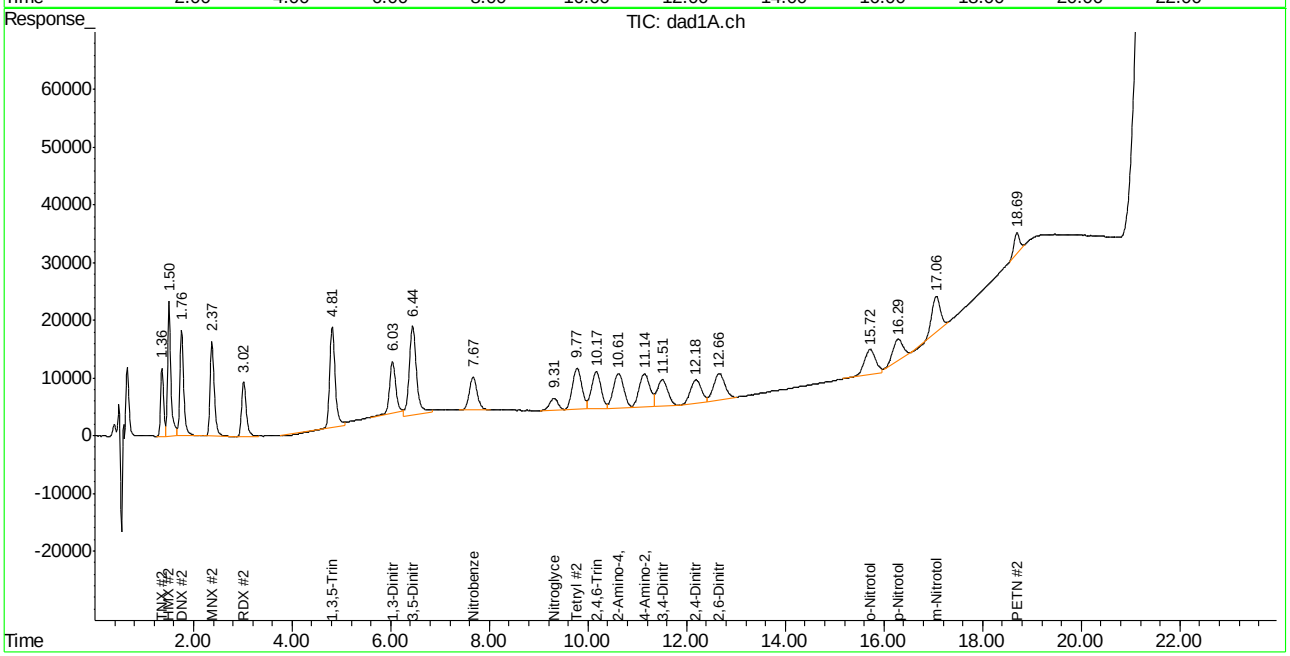
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:50 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

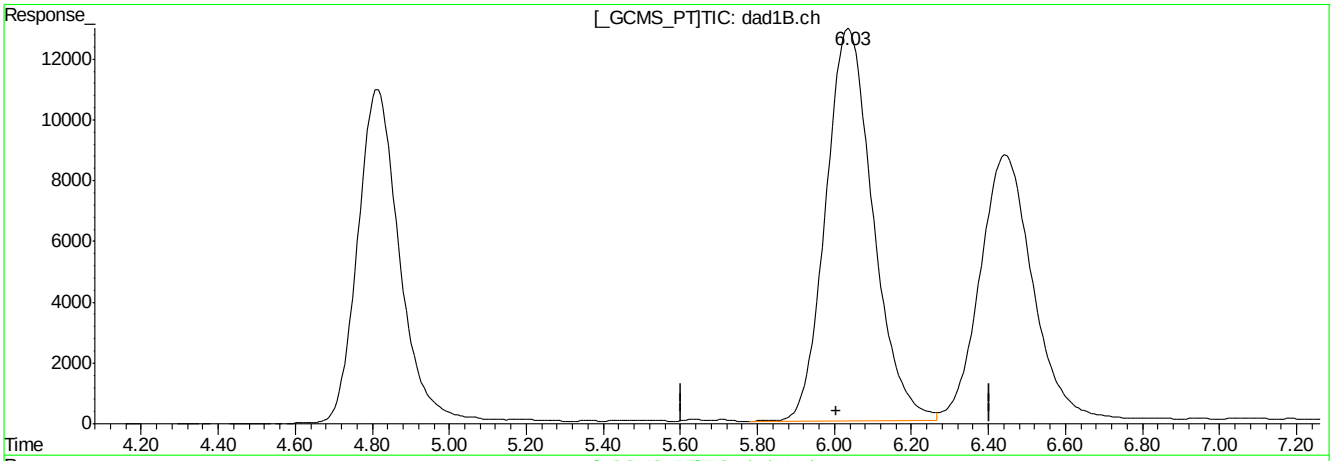
Sample Number: GBB2188-IC2188
Lab FileID: BB072466.D
Injection Time: 04/15/22 11:04
Method: SW846 8330A
Analyst approved: 04/18/22 11:39 Fouad Sekkar
Supervisor approved: 04/18/22 15:15 Naresh Jiawan

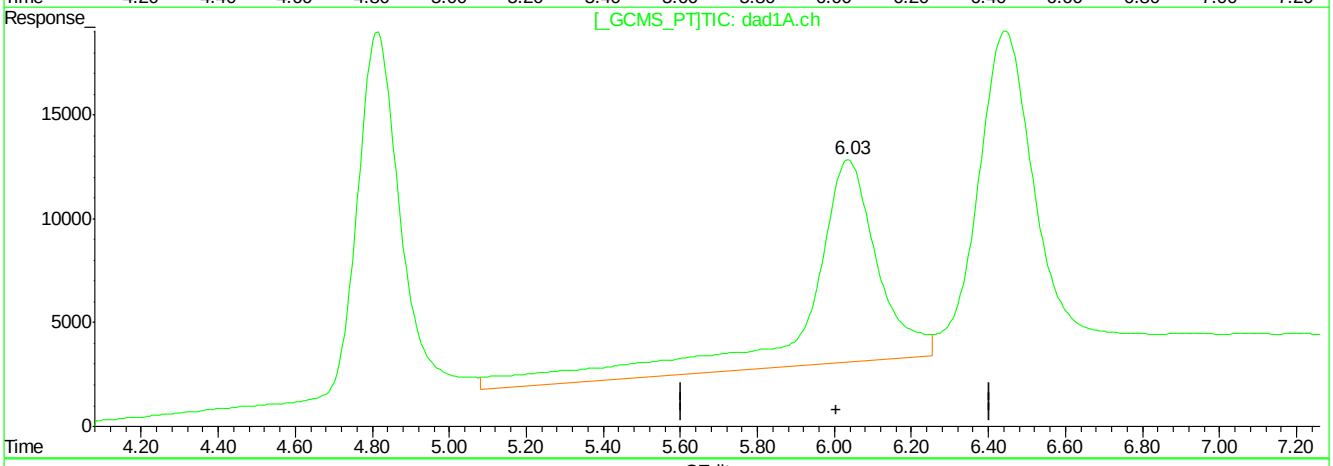
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.03	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.72	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.29	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.06	Poor instrument integration
PETN	78-11-5	2	18.69	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.04min 207.843ppb

response 1104032

(7) 1,3-Dinitrobenzene #2

6.04min 333.187ppb

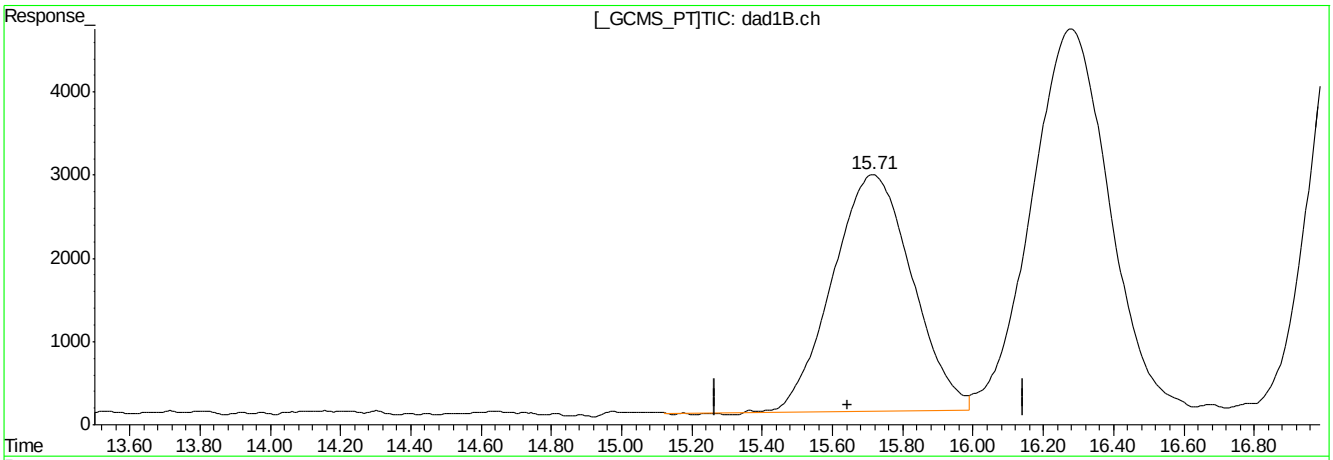
response 1295309

(+) = Expected Retention Time
BB072466.D BBB2167_041522.M Fri Apr 15 11:48:15 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.72min 204.863ppb

response 445587

(18) o-Nitrotoluene #2

15.72min 154.208ppb

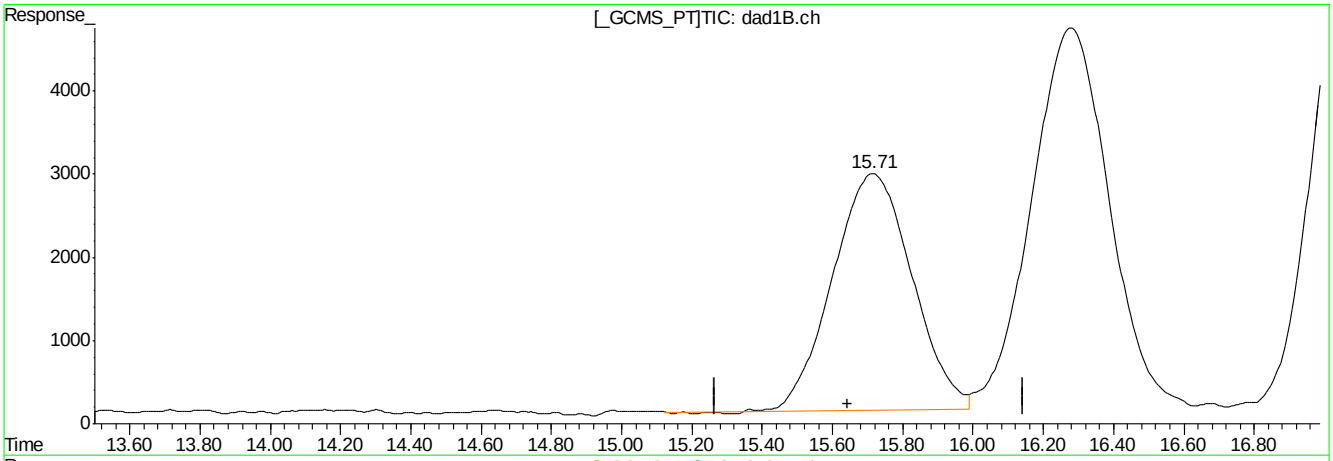
response 465562

(+) = Expected Retention Time
BB072466.D BBB2167_041522.M Fri Apr 15 11:49:05 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.72min 204.863ppb

response 445587

(18) o-Nitrotoluene #2

15.72min 232.516ppb m

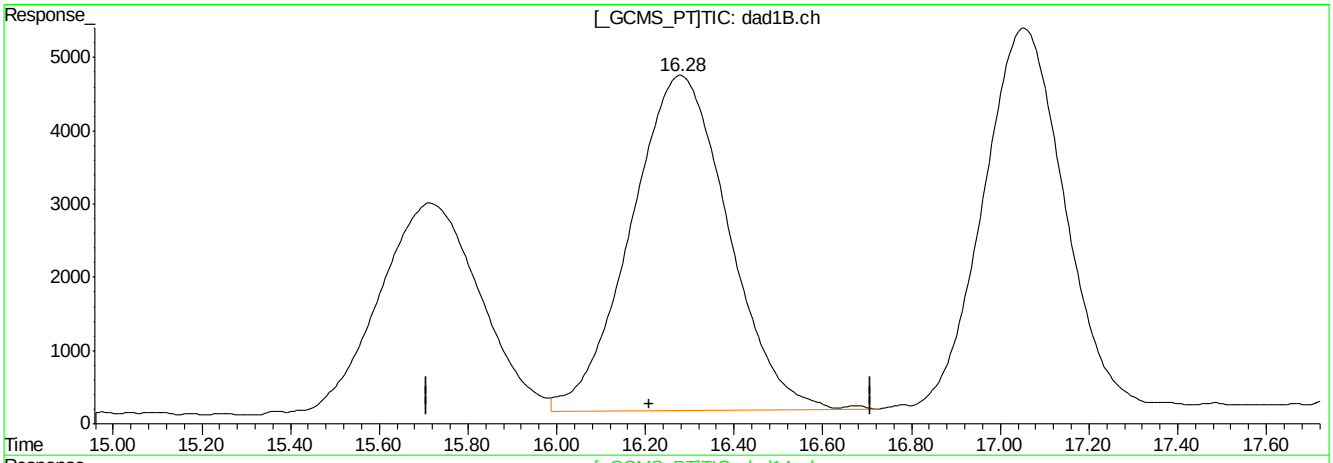
response 701981

(+) = Expected Retention Time
BB072466.D BBB2167_041522.M Fri Apr 15 11:49:12 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.28min 204.029ppb

response 699076

(19) p-Nitrotoluene #2

16.29min 180.782ppb

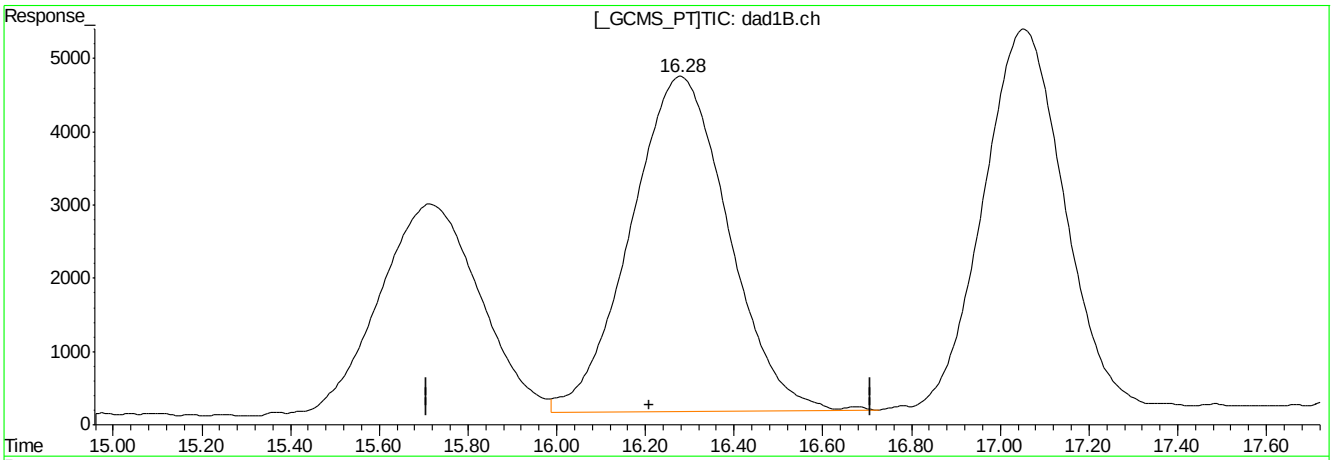
response 472245

(+) = Expected Retention Time
BB072466.D BBB2167_041522.M Fri Apr 15 11:49:32 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.28min 204.029ppb

response 699076

(19) p-Nitrotoluene #2

16.29min 197.320ppb m

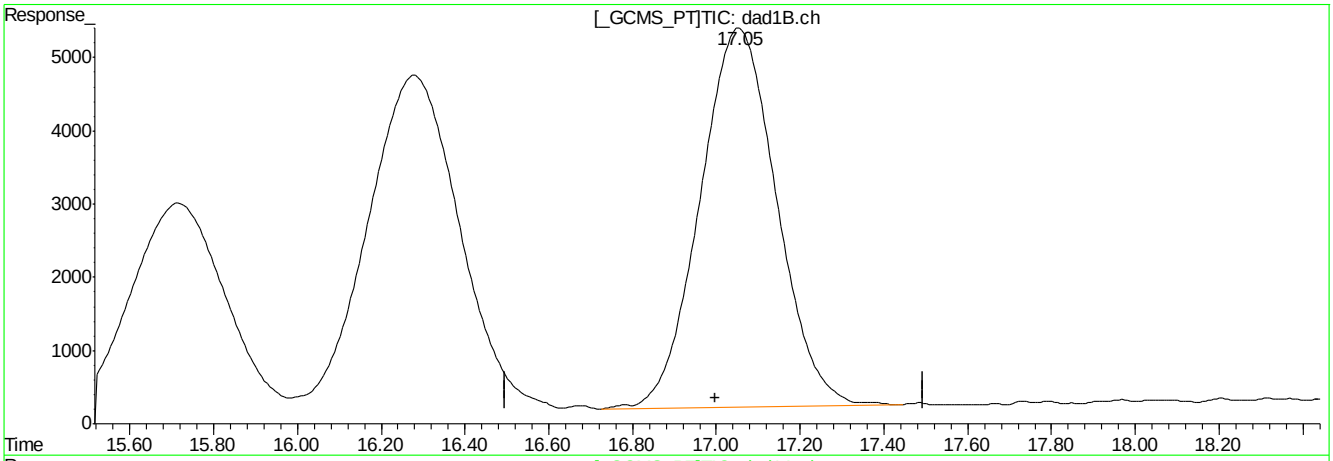
response 515447

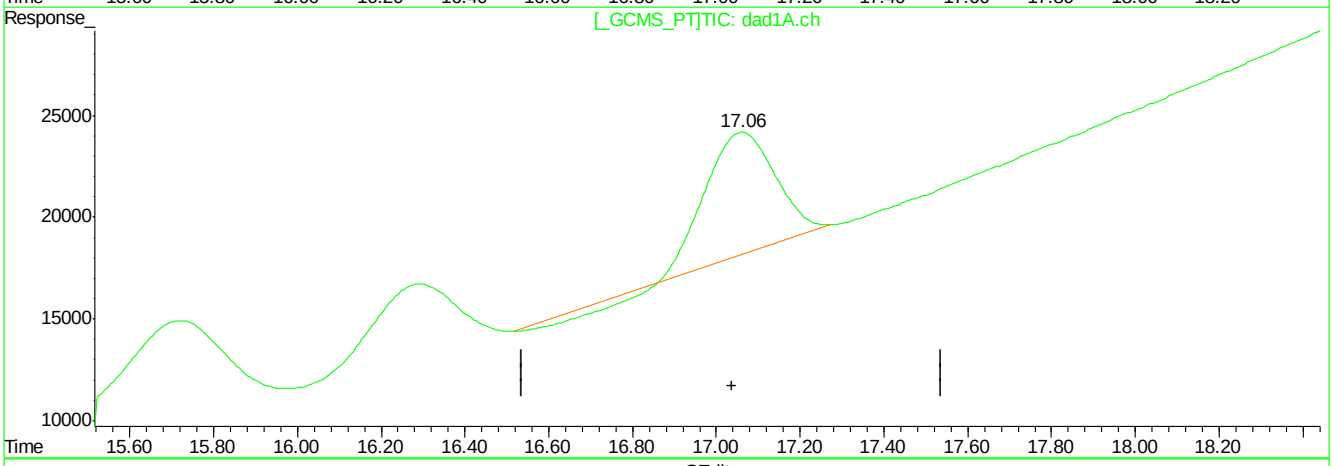
(+) = Expected Retention Time
BB072466.D BBB2167_041522.M Fri Apr 15 11:49:40 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.06min 205.308ppb

response 656502

(20) m-Nitrotoluene #2

17.06min 168.536ppb

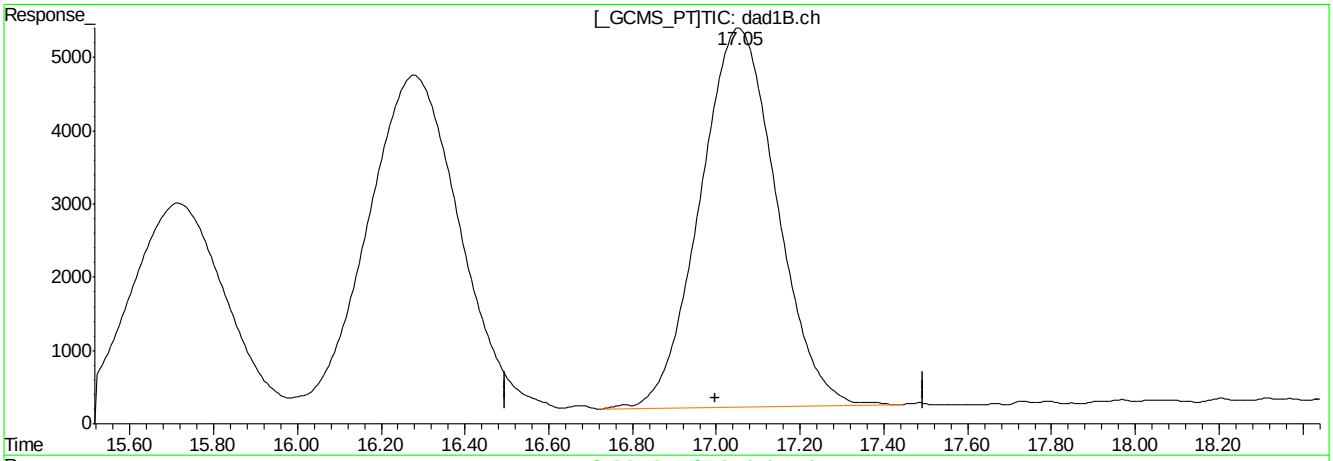
response 639505

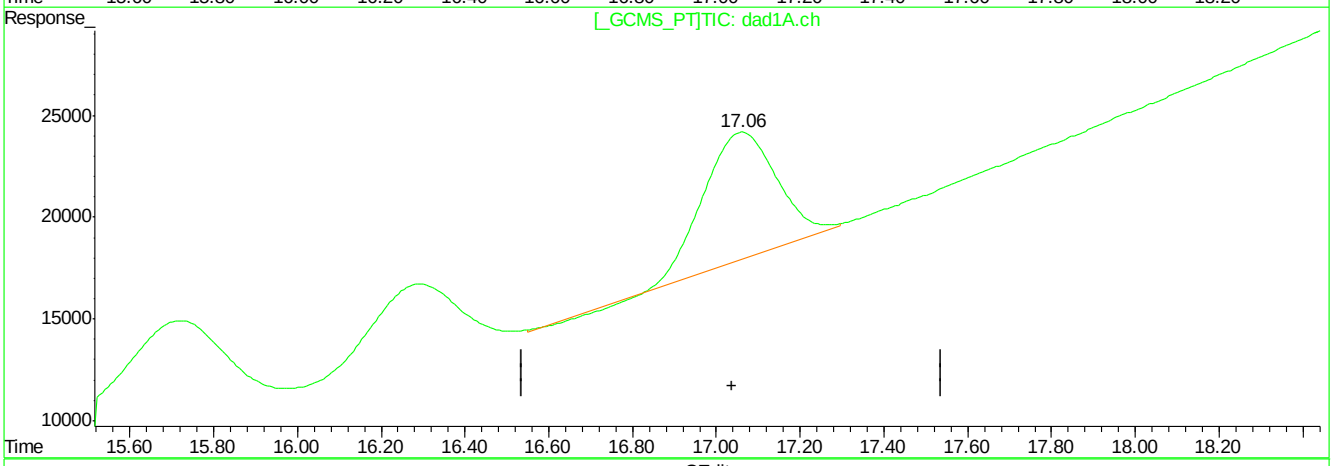
(+) = Expected Retention Time
BB072466.D BBB2167_041522.M Fri Apr 15 11:49:45 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.06min 205.308ppb

response 656502

(20) m-Nitrotoluene #2

17.06min 203.840ppb m

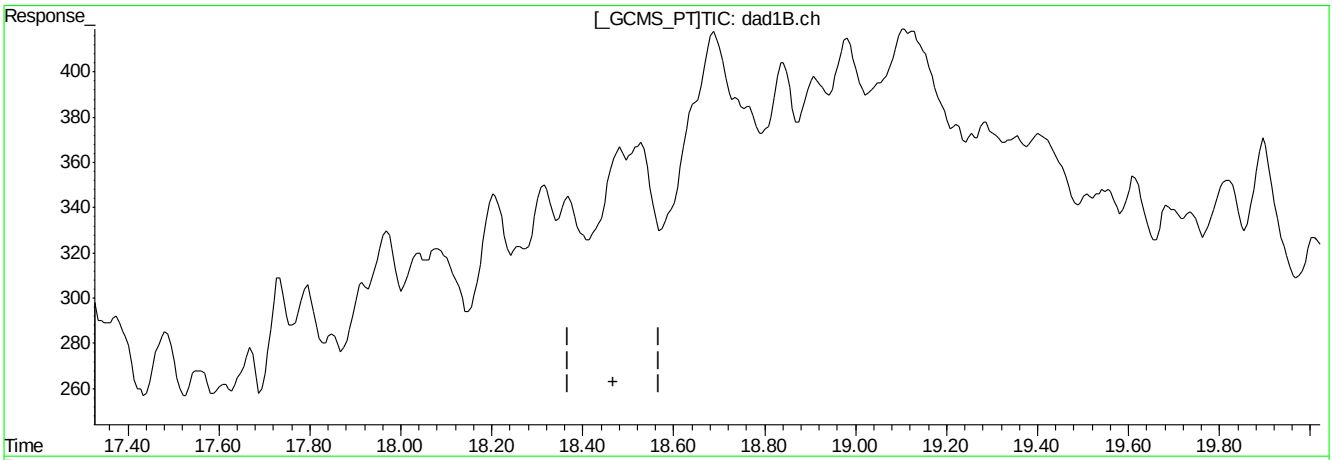
response 773466

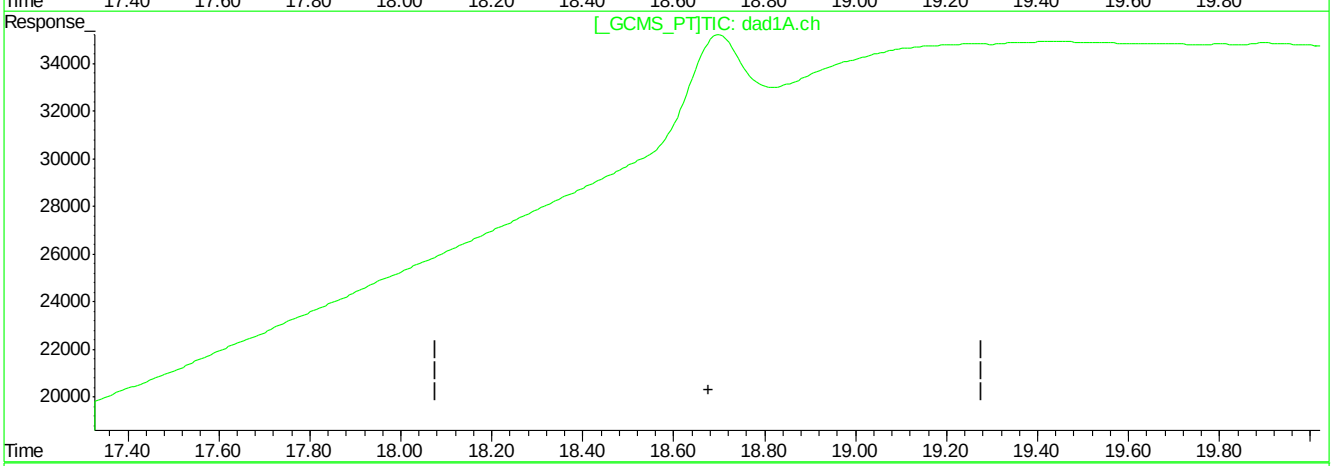
(+) = Expected Retention Time
BB072466.D BBB2167_041522.M Fri Apr 15 11:49:54 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

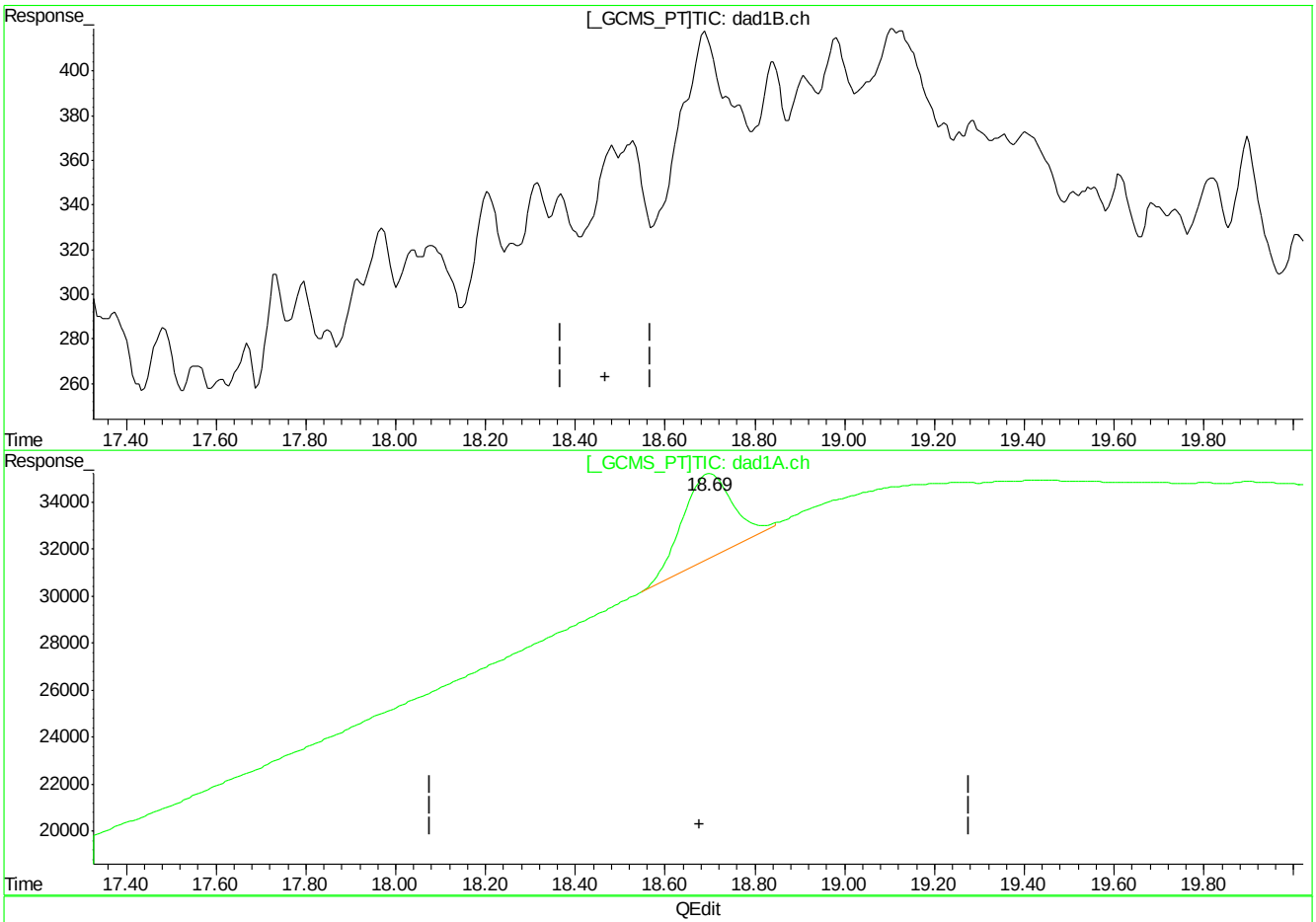
response 0

(+) = Expected Retention Time
BB072466.D BBB2167_041522.M Fri Apr 15 11:49:59 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072466.D\dad1A.ch
Acq On : 15-Apr-2022, 11:04:30 Operator: FOUADS
Sample : ic2188-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 11:47 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.69min 196.185ppb m

response 282676

(+) = Expected Retention Time
BB072466.D BBB2167_041522.M Fri Apr 15 11:50:05 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/18/22 15:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:03:49 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.52	11.52	1087312	1839903	489.600	435.876
	Spiked Amount 500.000	Range 70 - 136		Recovery =		97.92%	87.18%
	Target Compounds						
1)	TNX	1.36	1.36	820915	1251873	254.967	249.244
2)	HMX	1.51	1.51	817609	2277558	470.408	516.414
3)	DNX	1.76	1.76	1494737	2358964	511.025	525.305
4)	MNX	2.38	2.38	1597281	2433067	601.582	597.101
5)	RDX	3.02	3.02	979718	1546990	507.824	509.517
6)	1,3,5-Trinitrobe	4.82	4.82	2083949	3177509	521.915	506.144
7)	1,3-Dinitrobenze	6.04	6.04	2743931	1916751	516.568	493.038m
8)	3,5-Dinitroanili	6.45	6.45	2074239	3634369	507.261	458.923
9)	Nitrobenzene	7.67	7.67	1595718	1580496	511.489	494.785
10)	Nitroglycerin	0.00	9.31	0	606924	N.D.	496.512 #
11)	Tetryl	9.79	9.79	1561695	2416551	548.158	543.070
12)	2,4,6-Trinitroto	10.18	10.18	1955652	2248138	511.001	503.366
13)	2-Amino-4,6-Dini	10.63	10.63	1706844	2379369	521.482	526.369
14)	4-Amino-2,6-Dini	11.16	11.16	1260064	2360741	540.740	472.123
16)	2,4-Dinitrotolue	12.20	12.20	2405077	1551432	523.291	548.881
17)	2,6-Dinitrotolue	12.67	12.67	1408056	1817292	504.058	512.420
18)	o-Nitrotoluene	15.72	15.72	1152625	1711261	529.929	566.819m
19)	p-Nitrotoluene	16.28	16.28	1782212	1333587	520.147	510.515
20)	m-Nitrotoluene	17.05	17.05	1681552	1975120	525.872	520.525m
21)	PETN	0.00	18.69	0	709574	N.D.	492.465m#

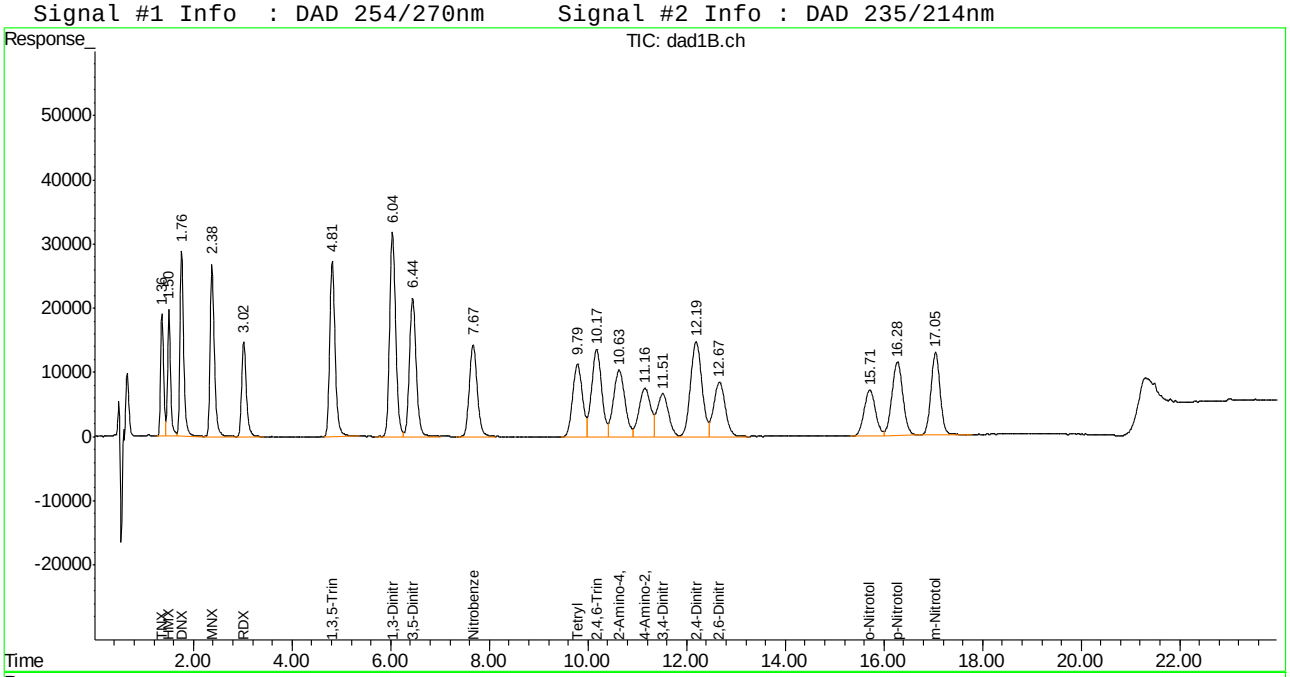
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072467.D BBB2167_041522.M Mon Apr 18 11:19:52 2022 Page 1

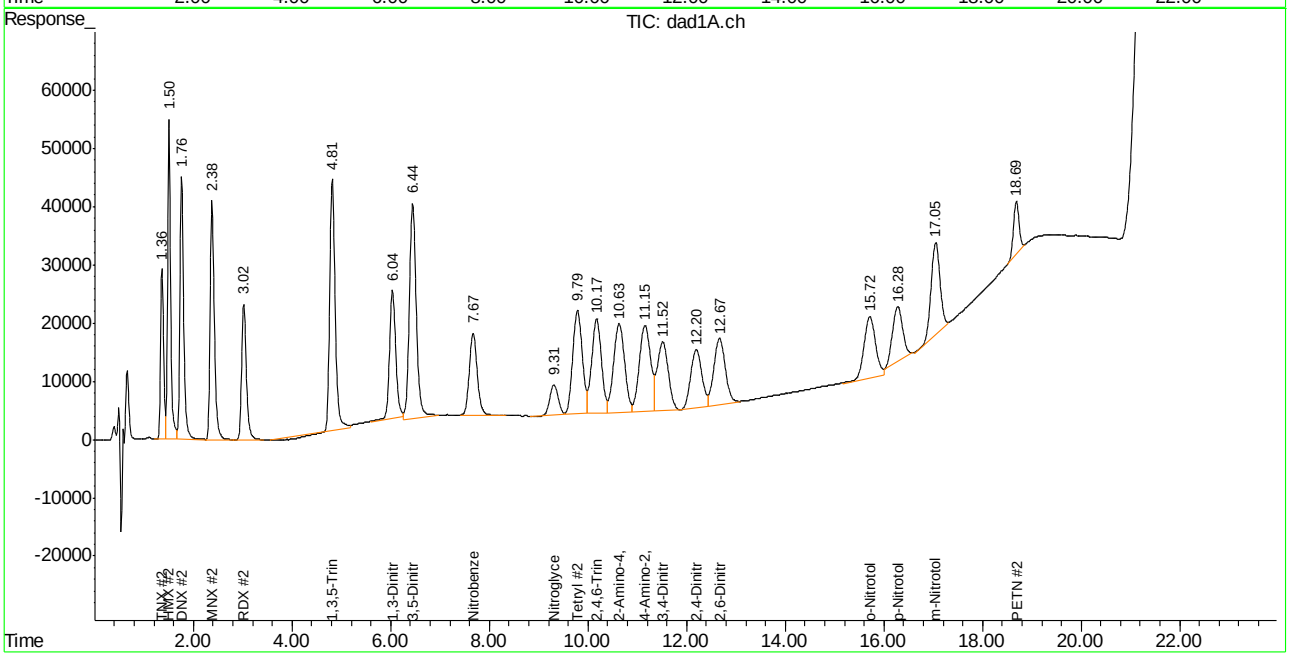
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:05 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

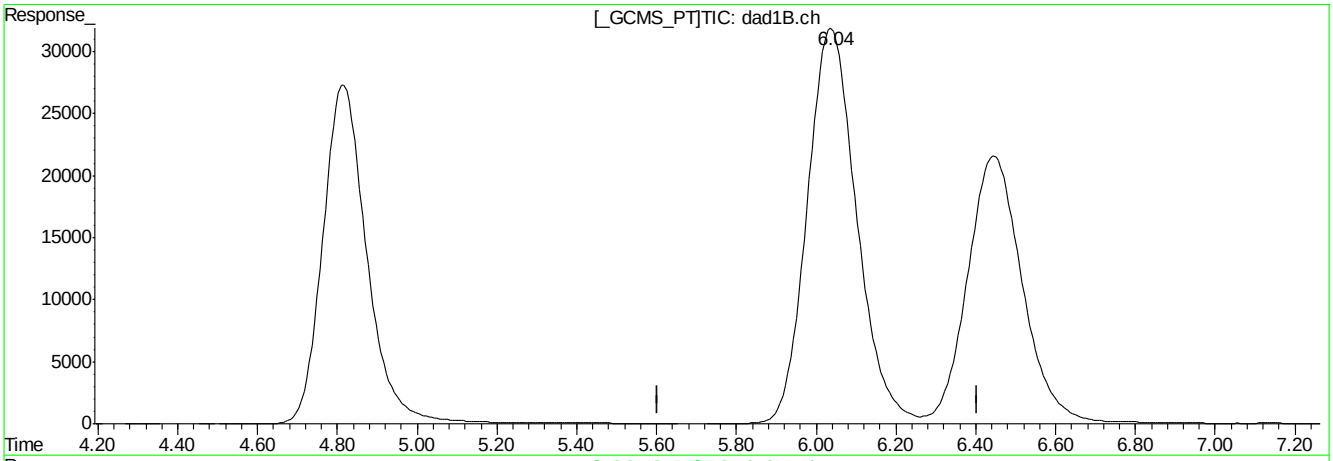
Sample Number: GBB2188-IC2188
Lab FileID: BB072467.D
Injection Time: 04/15/22 11:35
Method: SW846 8330A
Analyst approved: 04/18/22 11:39 Fouad Sekkar
Supervisor approved: 04/18/22 15:15 Naresh Jiawan

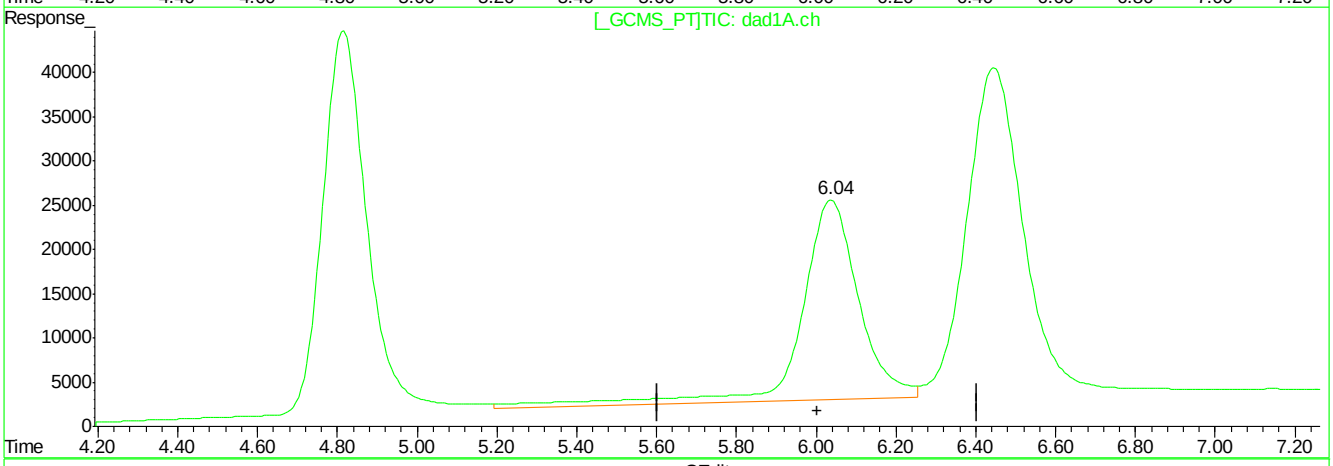
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.04	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.72	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.05	Poor instrument integration
PETN	78-11-5	2	18.69	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:03 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.04min 516.568ppb

response 2743931

(7) 1,3-Dinitrobenzene #2

6.04min 591.784ppb

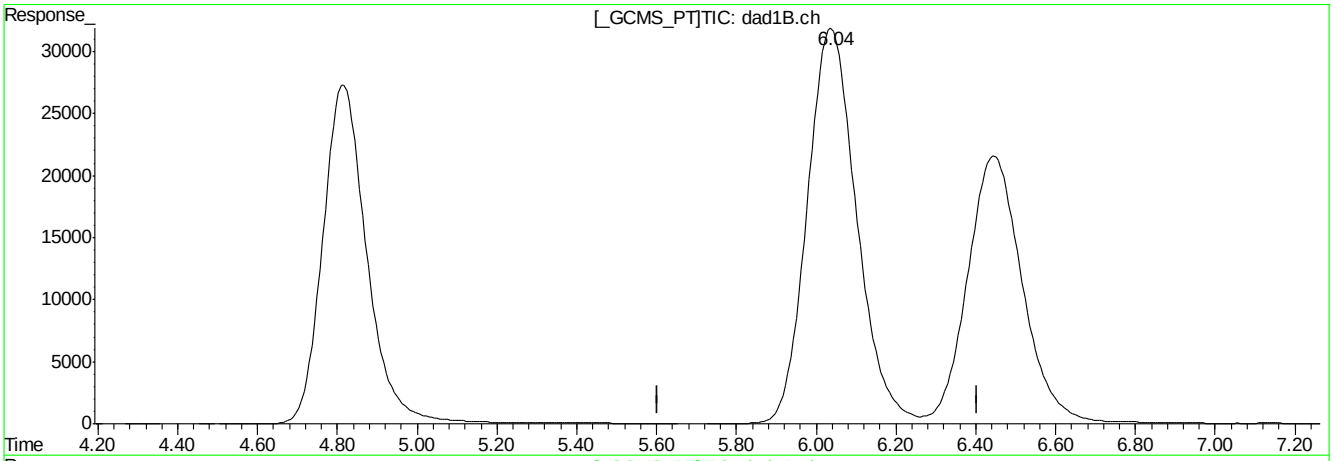
response 2300640

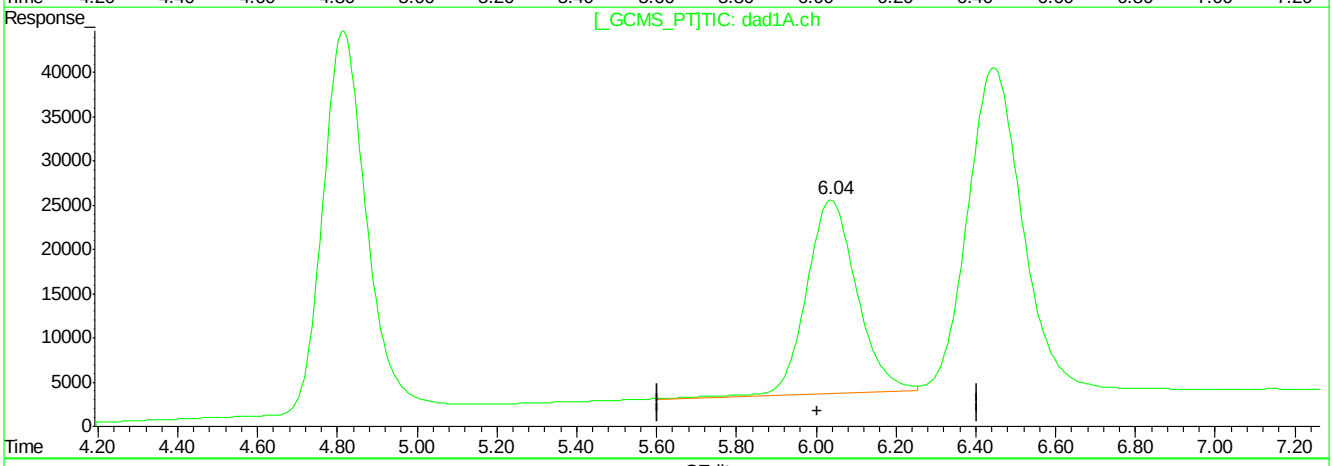
(+) = Expected Retention Time
BB072467.D BBB2167_041522.M Fri Apr 15 13:04:11 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:03 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.04min 516.568ppb

response 2743931

(7) 1,3-Dinitrobenzene #2

6.04min 493.038ppb m

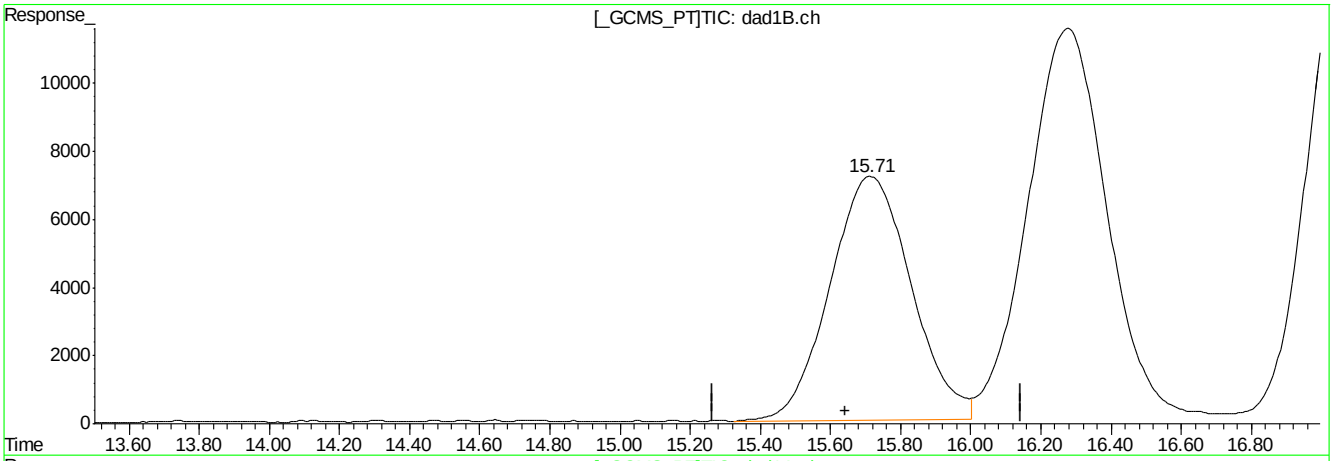
response 1916751

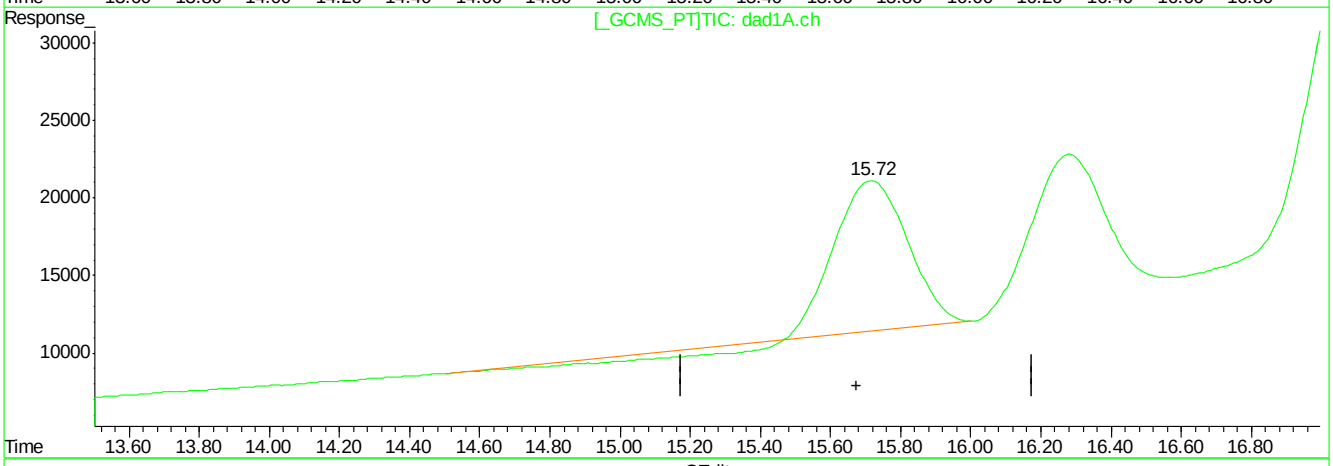
(+) = Expected Retention Time
BB072467.D BBB2167_041522.M Fri Apr 15 13:04:26 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:03 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.72min 529.929ppb

response 1152625

(18) o-Nitrotoluene #2

15.72min 418.400ppb

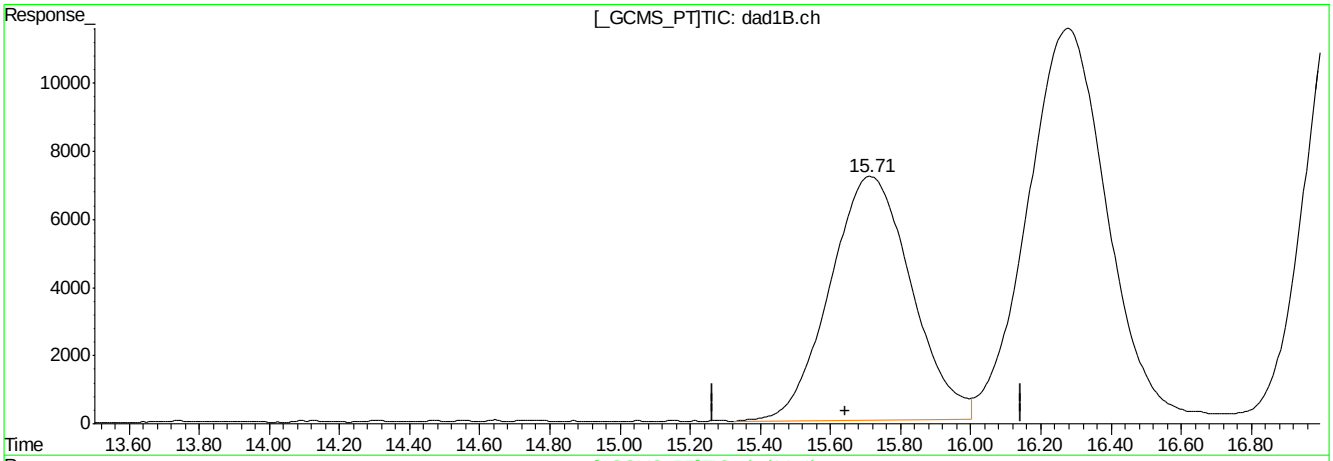
response 1263177

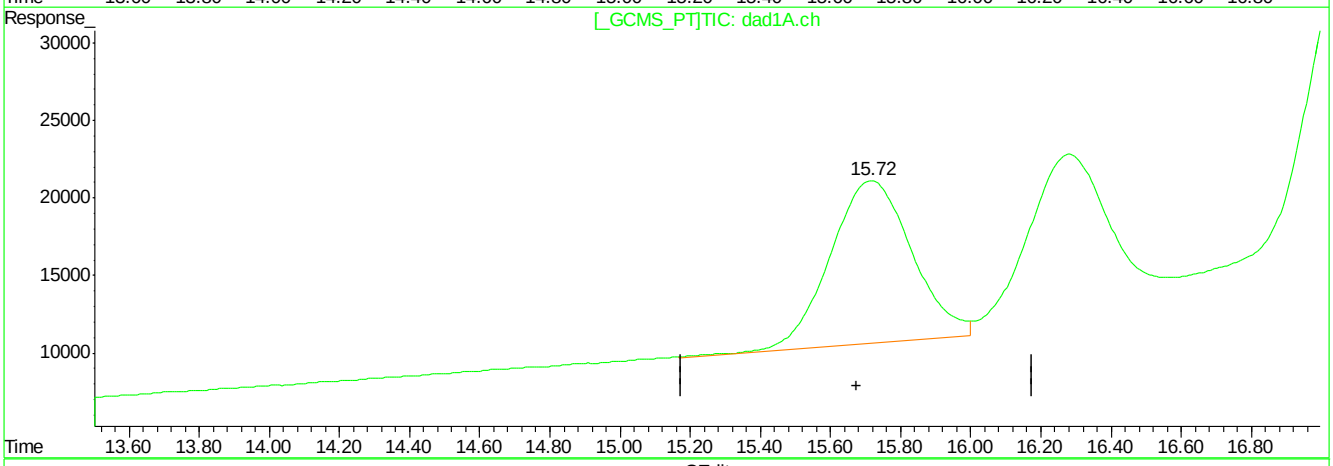
(+) = Expected Retention Time
BB072467.D BBB2167_041522.M Fri Apr 15 13:04:47 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:03 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.72min 529.929ppb

response 1152625

(18) o-Nitrotoluene #2

15.72min 566.819ppb m

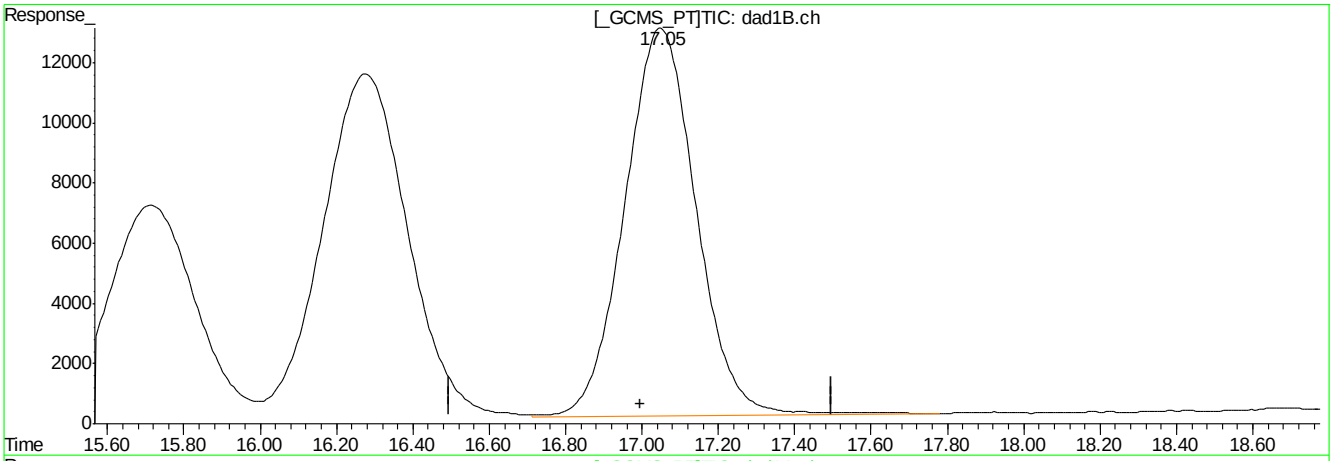
response 1711261

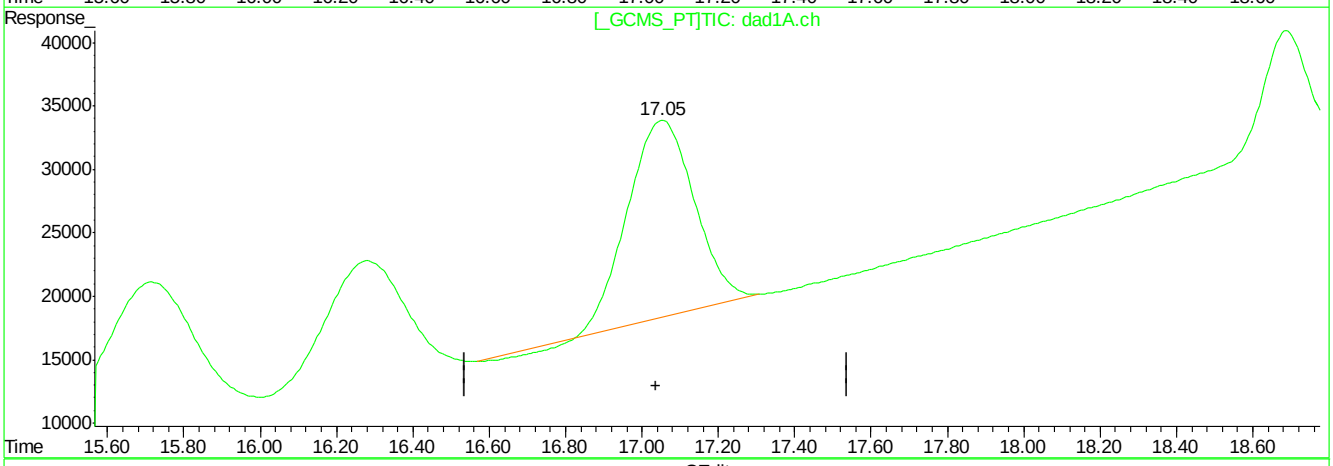
(+) = Expected Retention Time
BB072467.D BBB2167_041522.M Fri Apr 15 13:04:54 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:03 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.05min 525.872ppb

response 1681552

(20) m-Nitrotoluene #2

17.05min 490.704ppb

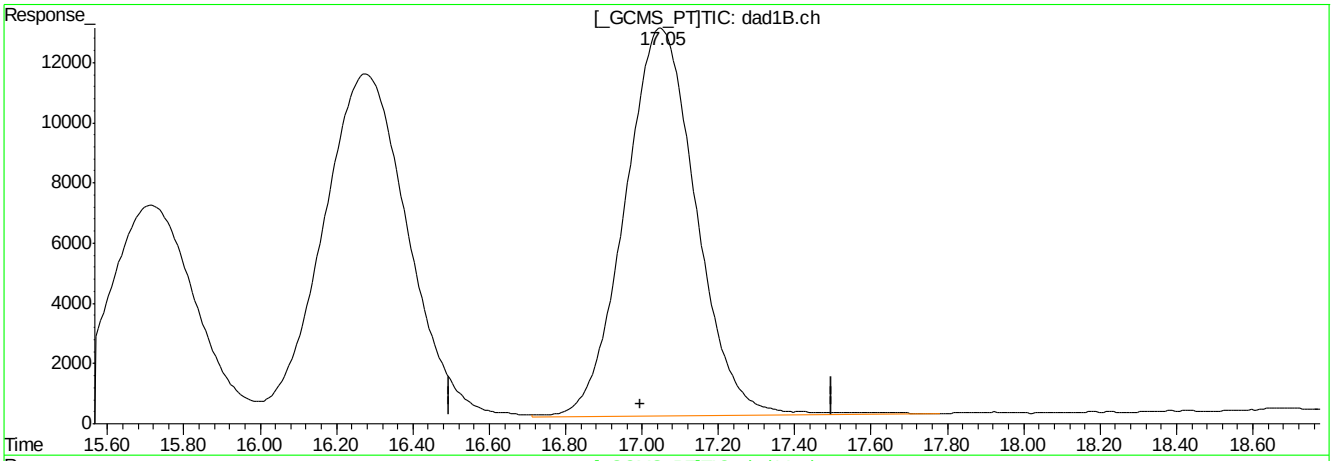
response 1861964

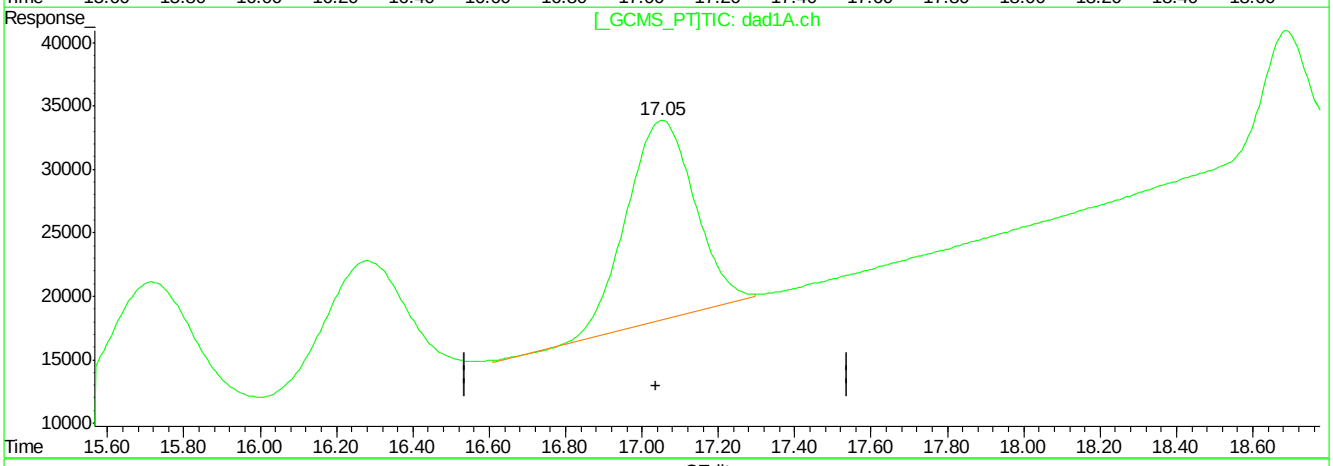
(+) = Expected Retention Time
BB072467.D BBB2167_041522.M Fri Apr 15 13:05:02 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:03 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.05min 525.872ppb

response 1681552

(20) m-Nitrotoluene #2

17.05min 520.525ppb m

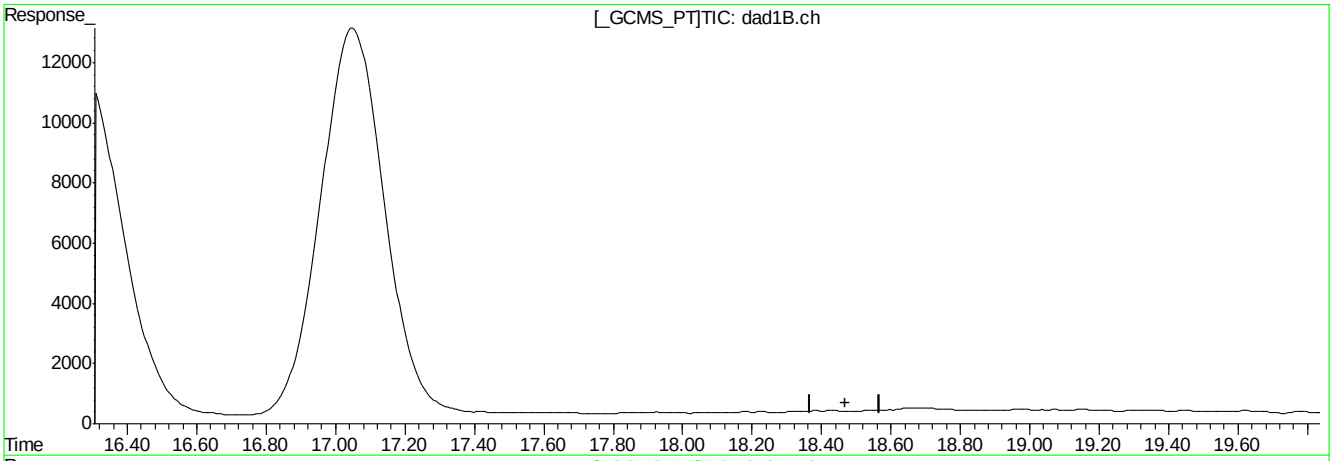
response 1975120

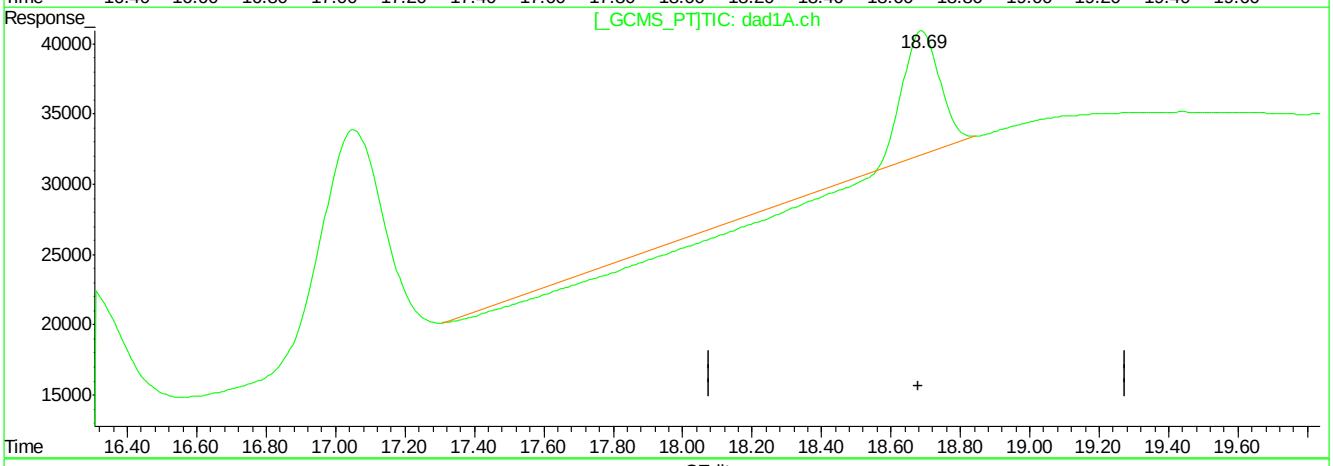
(+) = Expected Retention Time
BB072467.D BBB2167_041522.M Fri Apr 15 13:05:19 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:03 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.69min 154.116ppb

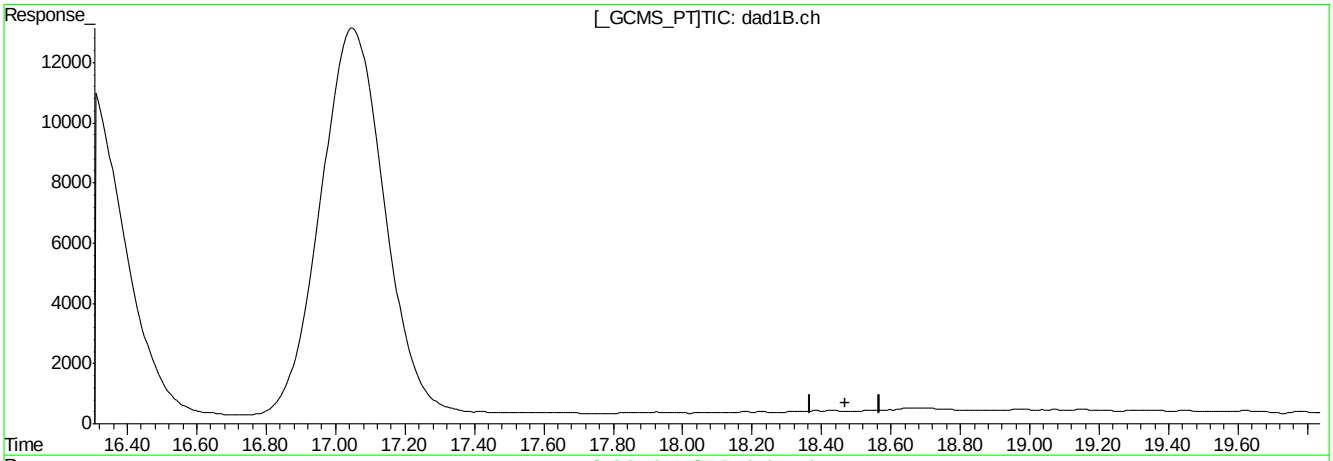
response 222060

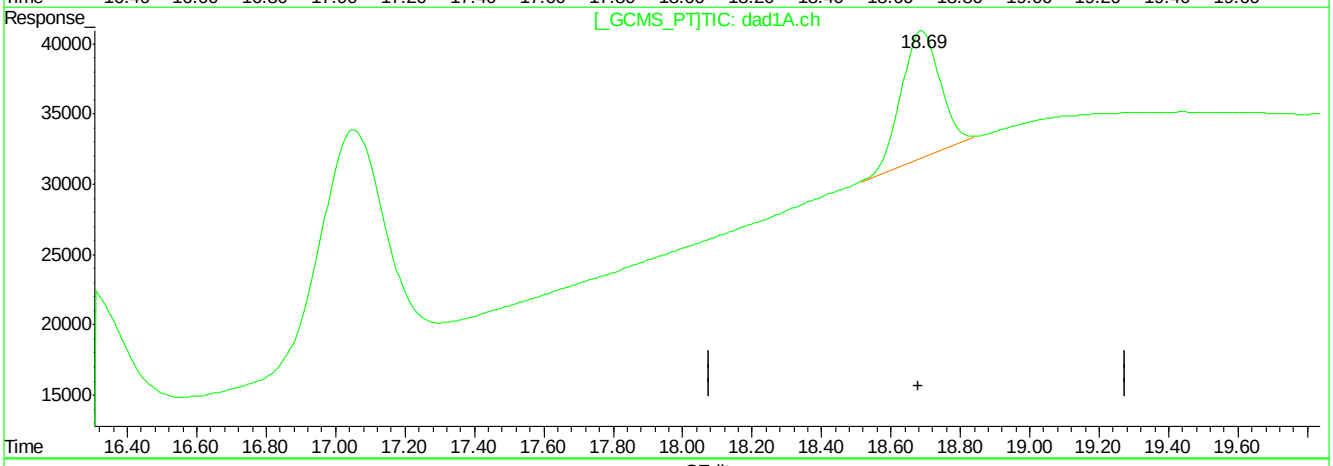
(+) = Expected Retention Time
BB072467.D BBB2167_041522.M Fri Apr 15 13:05:24 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072467.D\dad1A.ch
Acq On : 15-Apr-2022, 11:35:34 Operator: FOUADS
Sample : ic2188-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:03 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.69min 492.465ppb m

response 709574

(+) = Expected Retention Time
BB072467.D BBB2167_041522.M Fri Apr 15 13:05:35 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/18/22 15:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1A.ch
Acq On : 15-Apr-2022, 12:06:47 Operator: FOUADS
Sample : icc2188-1000 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:06:07 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.52	11.52	2214484	3817348	997.148	904.335
Spiked Amount	500.000	Range	70 - 136	Recovery	=	199.43%#	180.87%#
	Target Compounds						
1)	TNX	1.36	1.36	1632460	2490195	507.024	495.790
2)	HMX	1.51	1.51	1658030	4604189	953.940	1043.956
3)	DNX	1.76	1.76	2974049	4717102	1016.777	1050.425
4)	MNX	2.38	2.38	3182812	4876962	1198.738	1196.860
5)	RDX	3.02	3.02	1963330	3106883	1017.666	1023.284
6)	1,3,5-Trinitrobe	4.82	4.82	4219785	6733769	1056.825	1072.618
7)	1,3-Dinitrobenze	6.04	6.04	5496833	3911324	1034.826	1006.094m
8)	3,5-Dinitroanili	6.45	6.45	4168869	7171595	1019.508	905.579
9)	Nitrobenzene	7.67	7.67	3217741	3172736	1031.409	993.247
10)	Nitroglycerin	0.00	9.31	0	1308895	N.D.	1070.780 #
11)	Tetryl	9.79	9.79	3177799	5023464	1115.414	1128.920
12)	2,4,6-Trinitroto	10.18	10.18	3965285	4698775	1036.107	1052.072
13)	2-Amino-4,6-Dini	10.63	10.63	3475464	5043689	1061.838	1115.776
14)	4-Amino-2,6-Dini	11.15	11.15	2574412	4996153	1104.776	999.176
16)	2,4-Dinitrotolue	12.20	12.20	4872382	3182244	1060.122	1125.847
17)	2,6-Dinitrotolue	12.67	12.67	2829369	3704656	1012.861	1044.599
18)	o-Nitrotoluene	15.72	15.72	2294497	3279649	1054.915	1086.314m
19)	p-Nitrotoluene	16.28	16.28	3581685	2776950	1045.332	1063.054
20)	m-Nitrotoluene	17.06	17.06	3349852	3927522	1047.600	1035.062
21)	PETN	0.00	18.69	0	1502890	N.D.	1043.049m#

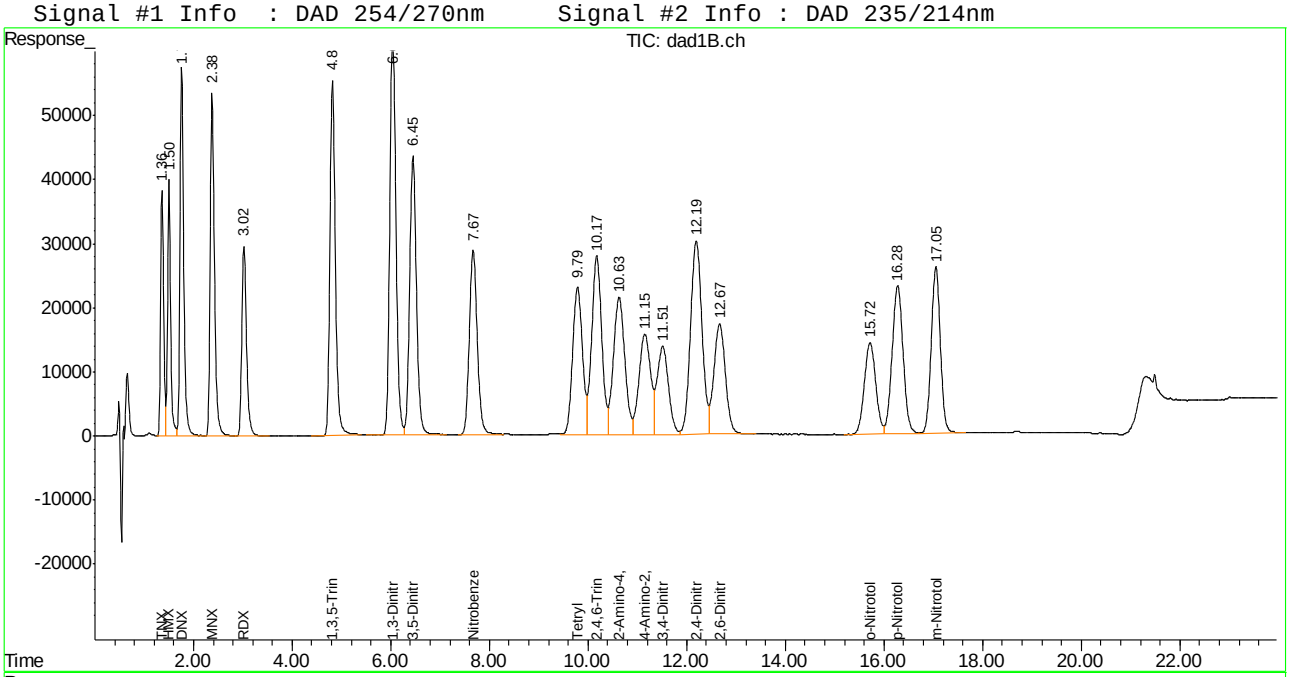
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072468.D BBB2167_041522.M Mon Apr 18 11:19:53 2022 Page 1

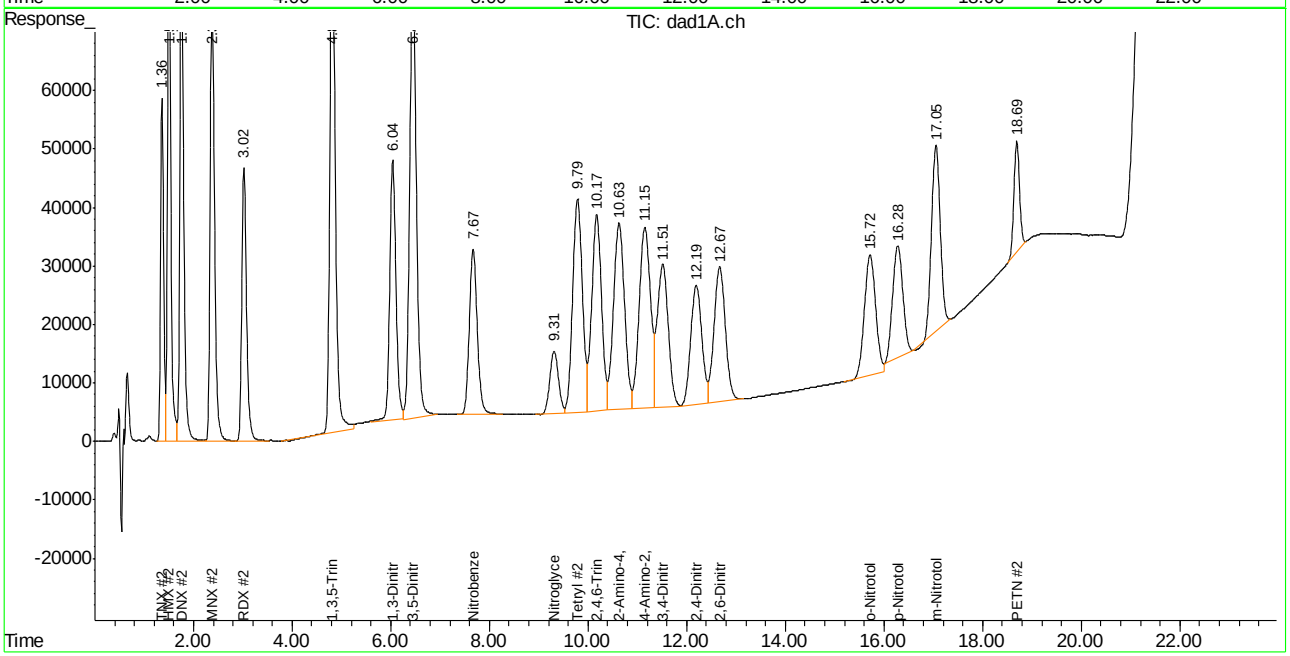
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1A.ch
Acq On : 15-Apr-2022, 12:06:47 Operator: FOUADS
Sample : icc2188-1000 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:07 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

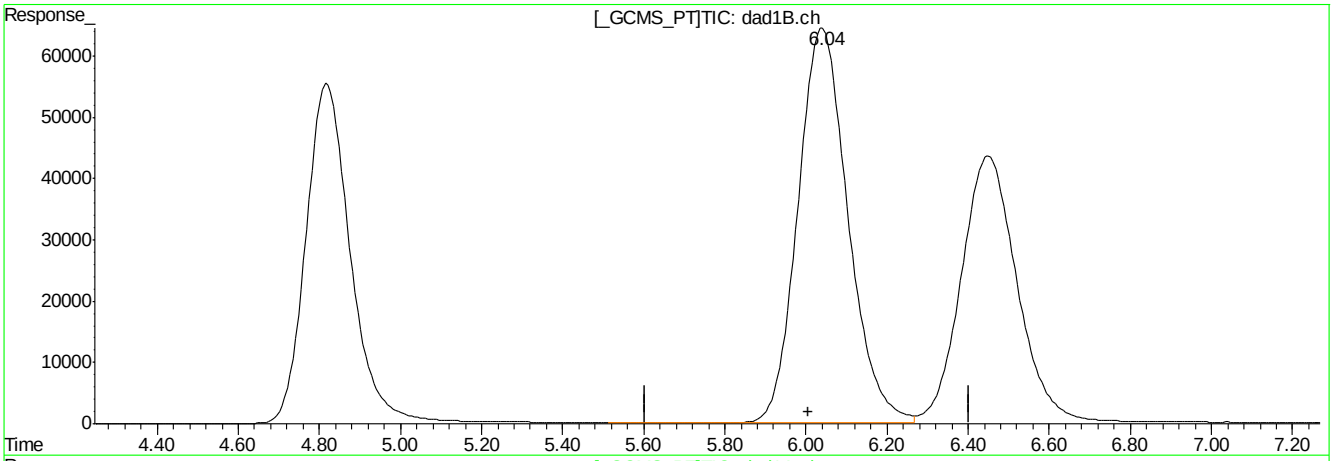
Sample Number: GBB2188-ICC2188 **Method:** SW846 8330A
Lab FileID: BB072468.D **Analyst approved:** 04/18/22 11:39 Fouad Sekkar
Injection Time: 04/15/22 12:06 **Supervisor approved:** 04/18/22 15:15 Naresh Jiawan

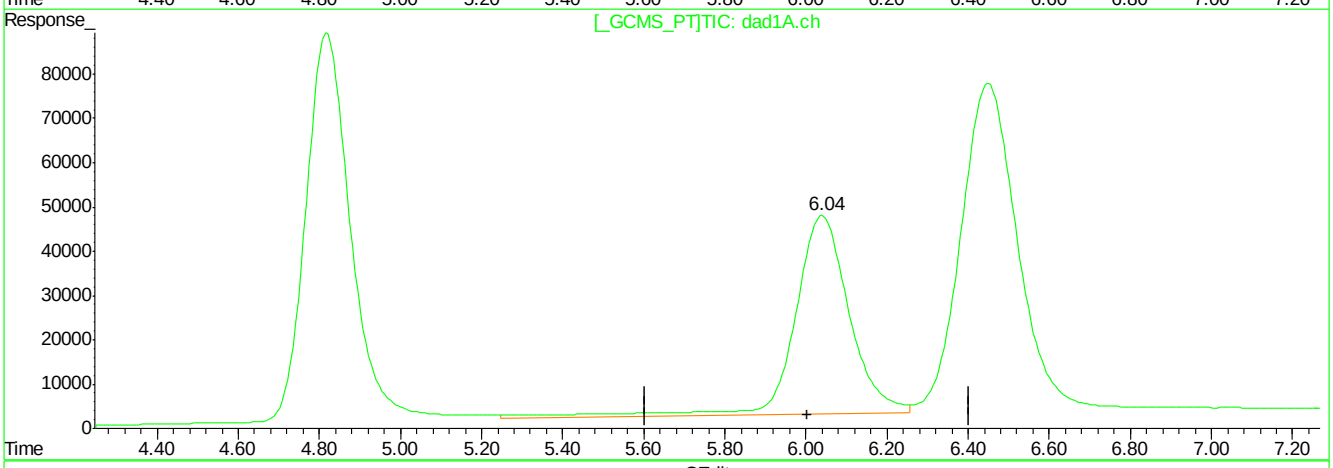
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.04	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.72	Poor instrument integration
PETN	78-11-5	2	18.69	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1A.ch
Acq On : 15-Apr-2022, 12:06:47 Operator: FOUADS
Sample : ic2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:06 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.04min 1034.826ppb

response 5496833

(7) 1,3-Dinitrobenzene #2

6.04min 1091.786ppb

response 4244466

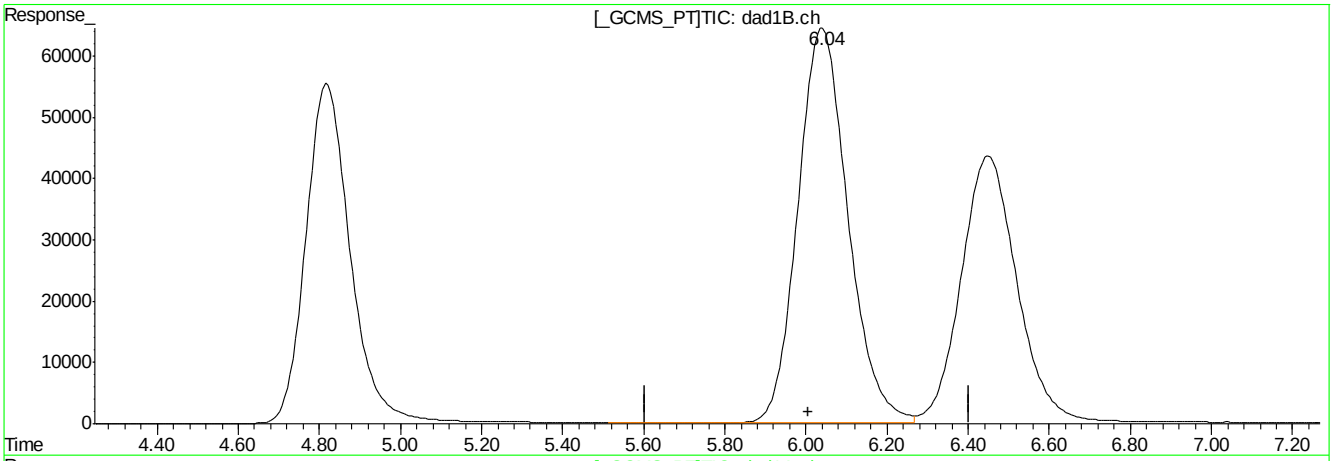
(+) = Expected Retention Time
BB072468.D BBB2167_041522.M Fri Apr 15 13:06:29 2022

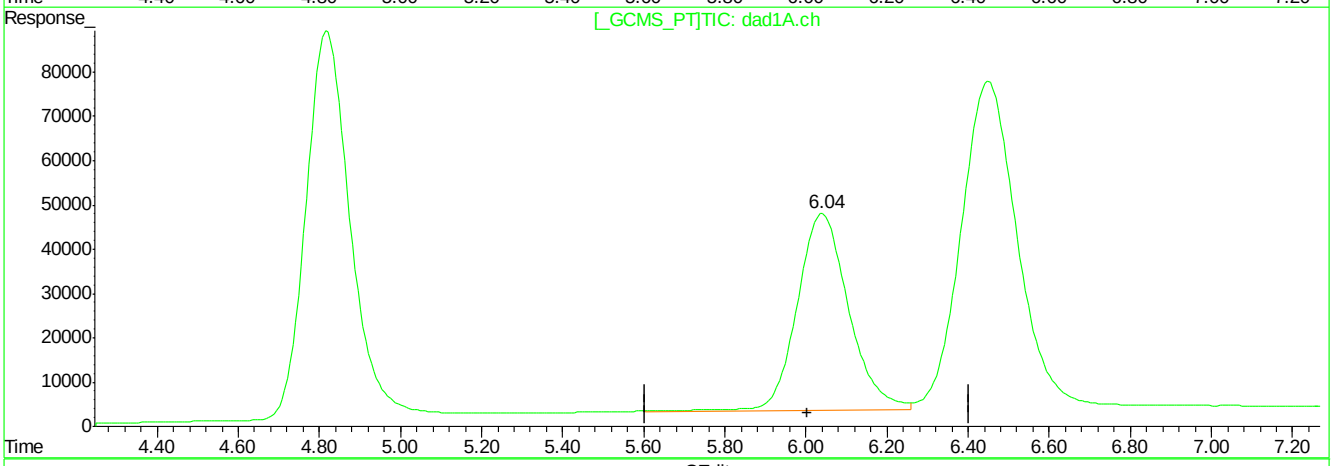
BB072468.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1A.ch
Acq On : 15-Apr-2022, 12:06:47 Operator: FOUADS
Sample : ic2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:06 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.04min 1034.826ppb

response 5496833

(7) 1,3-Dinitrobenzene #2

6.04min 1006.094ppb m

response 3911324

(+) = Expected Retention Time
BB072468.D BBB2167_041522.M Fri Apr 15 13:06:43 2022

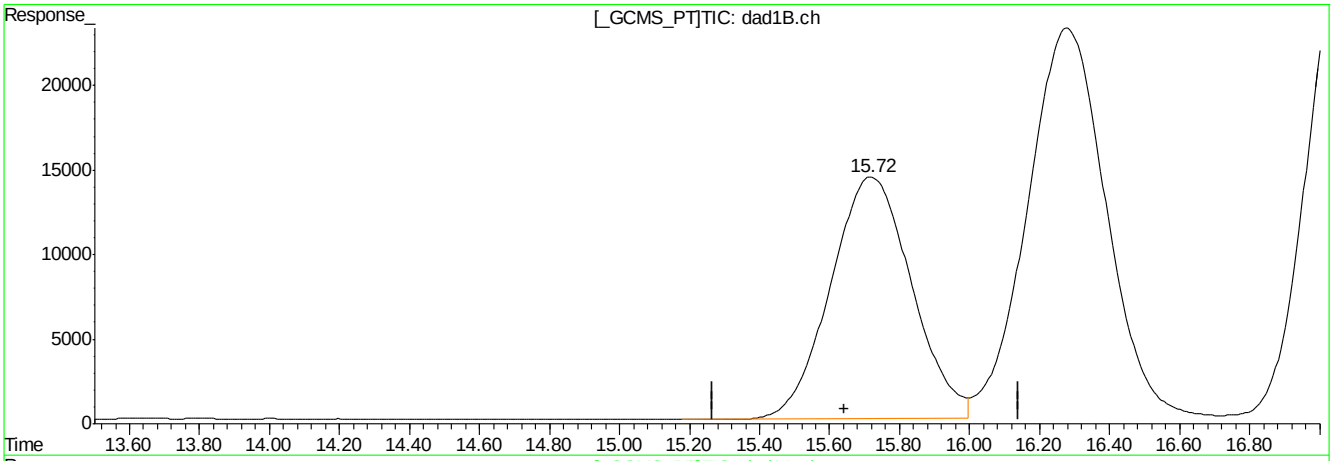
BB072468.D edits: 1,3-Dinitrobenzene

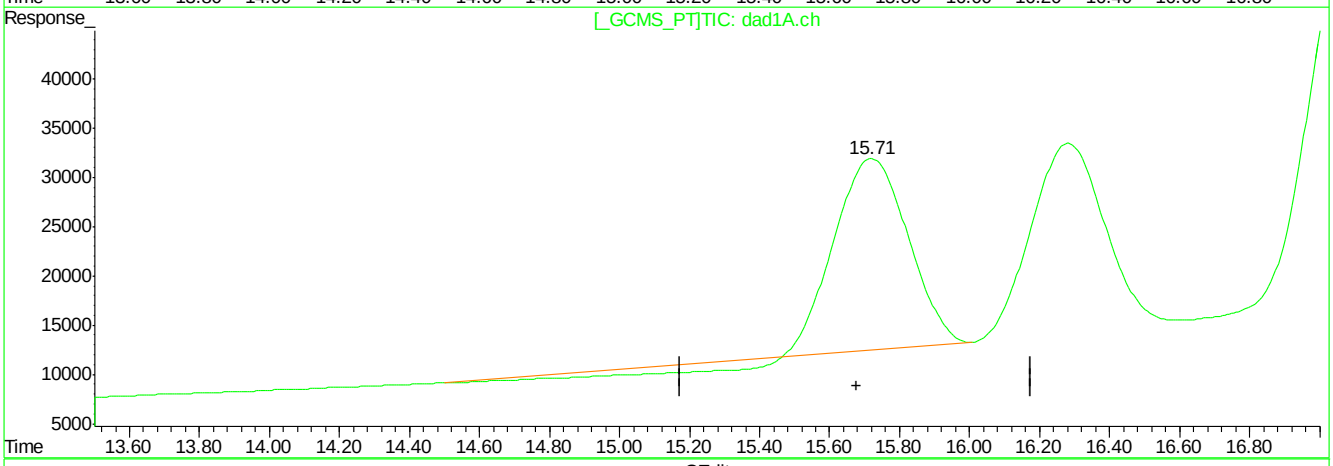
FA95241

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1A.ch
Acq On : 15-Apr-2022, 12:06:47 Operator: FOUADS
Sample : ic2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:06 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.72min 1054.915ppb

response 2294497

(18) o-Nitrotoluene #2

15.72min 853.981ppb

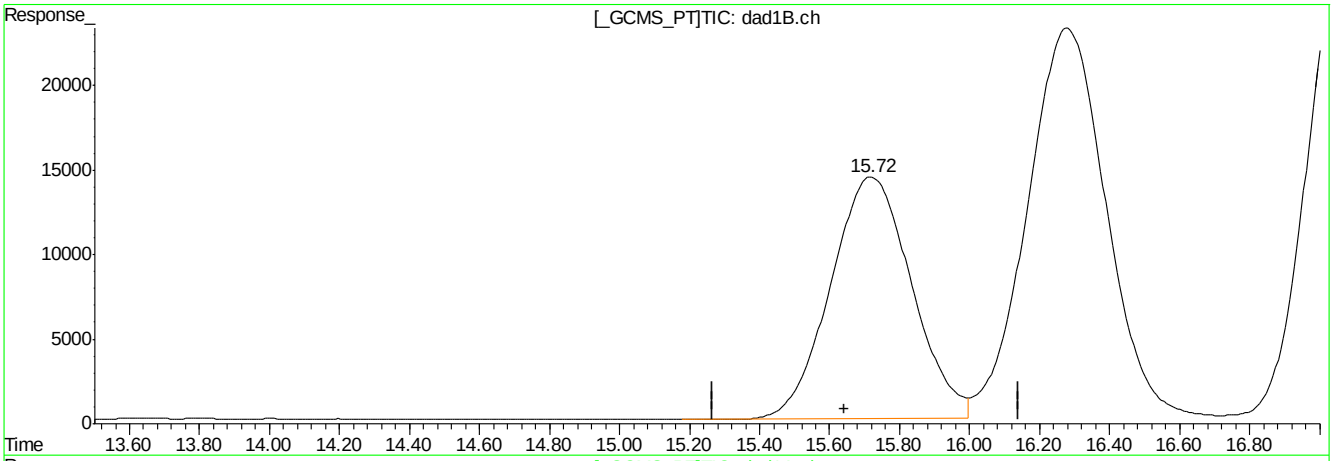
response 2578221

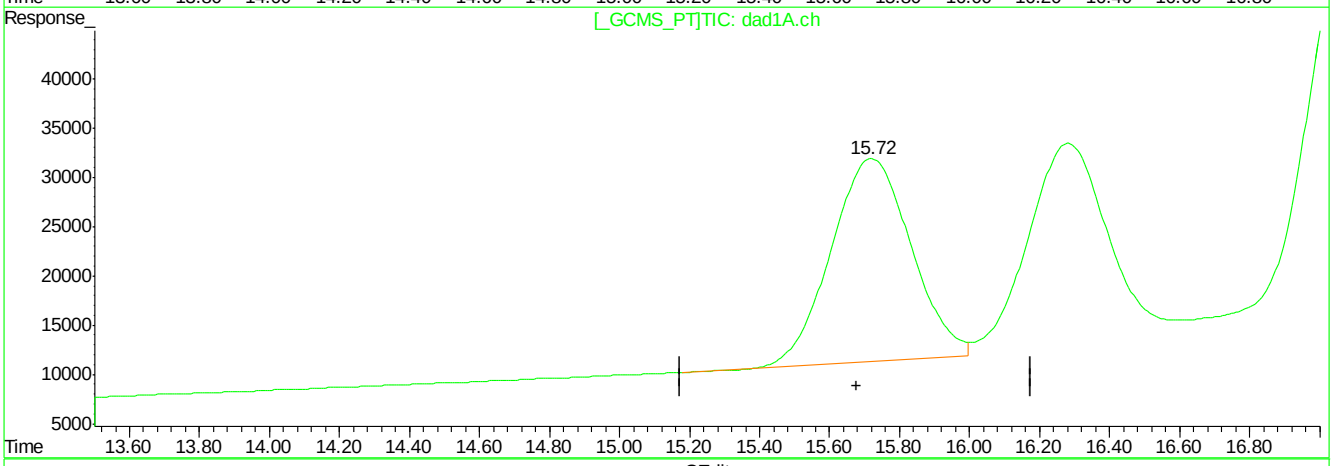
(+) = Expected Retention Time
BB072468.D BBB2167_041522.M Fri Apr 15 13:07:05 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1A.ch
Acq On : 15-Apr-2022, 12:06:47 Operator: FOUADS
Sample : ic2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:06 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.72min 1054.915ppb

response 2294497

(18) o-Nitrotoluene #2

15.72min 1086.314ppb m

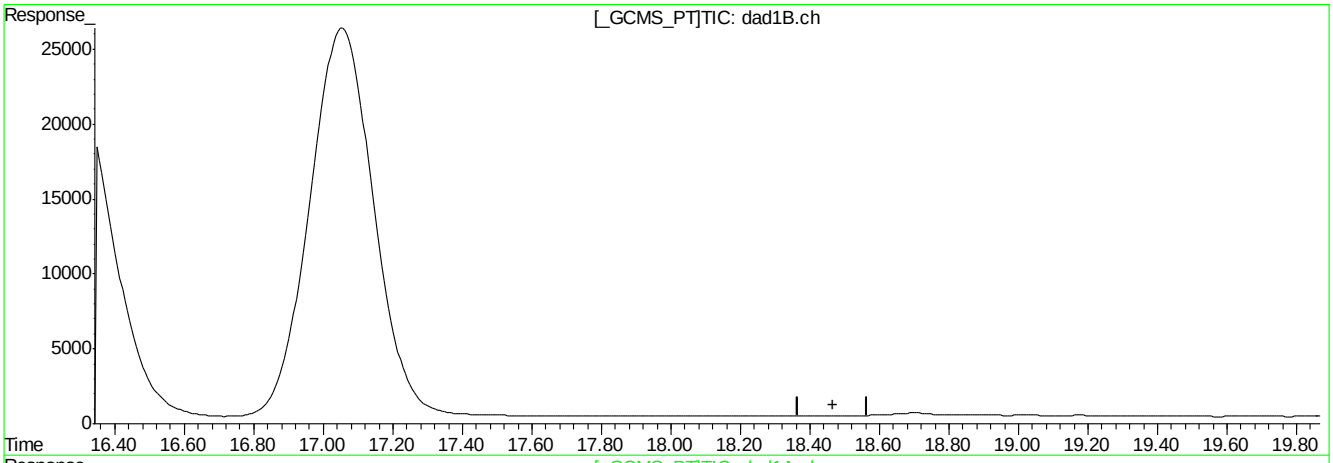
response 3279649

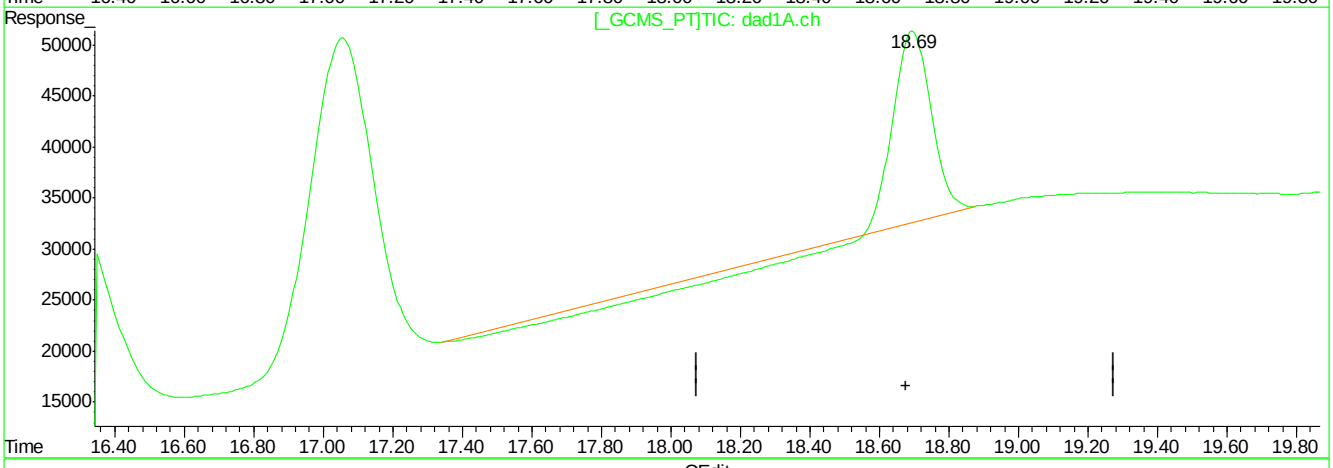
(+) = Expected Retention Time
BB072468.D BBB2167_041522.M Fri Apr 15 13:07:29 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1A.ch
Acq On : 15-Apr-2022, 12:06:47 Operator: FOUADS
Sample : ic2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:06 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.70min 677.197ppb

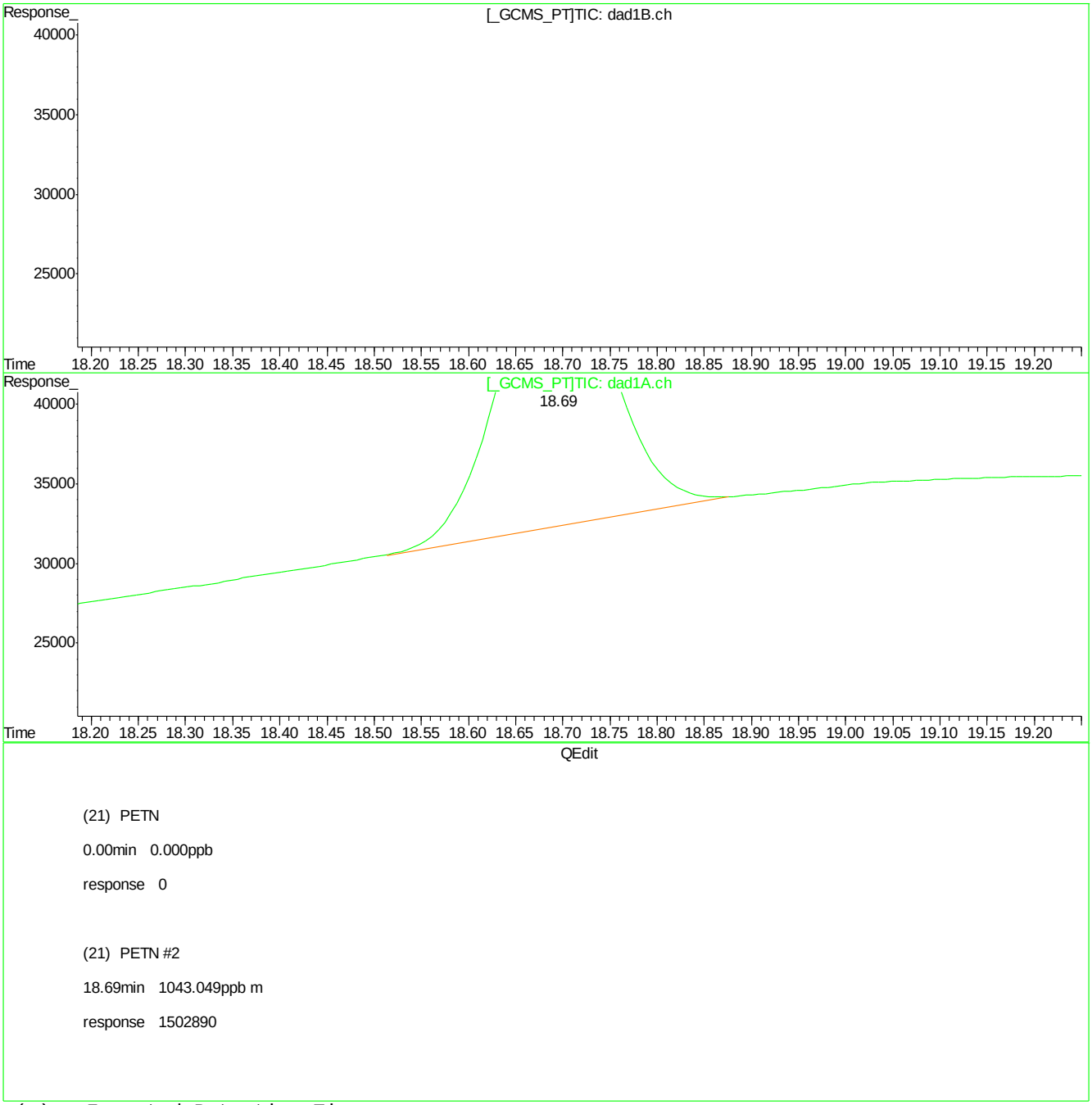
response 975748

(+) = Expected Retention Time
BB072468.D BBB2167_041522.M Fri Apr 15 13:07:40 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072468.D\dad1A.ch
Acq On : 15-Apr-2022, 12:06:47 Operator: FOUADS
Sample : ic2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:06 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration



(+) = Expected Retention Time
BB072468.D BBB2167_041522.M Fri Apr 15 13:07:55 2022

BB072469.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 04/18/22 15:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1A.ch
Acq On : 15-Apr-2022, 12:37:56 Operator: FOUADS
Sample : ic2188-2500 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:10:46 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.51	5335750	9417491	2402.608	2231.017
	Spiked Amount 500.000	Range 70 - 136		Recovery =		480.52%#	446.20%#
	Target Compounds						
1)	TNX	1.36	1.36	3906982	5950431	1213.465	1184.712
2)	HMX	1.50	1.50	3901577	10680277	2244.753	2421.650
3)	DNX	1.76	1.76	7118826	11163503	2433.805	2485.939
4)	MNX	2.37	2.37	7654161	11711687	2882.776	2874.176
5)	RDX	3.02	3.02	4718982	7460707	2446.022	2457.260
6)	1,3,5-Trinitrobe	4.81	4.81	10251369	16259692	2567.406	2589.997
7)	1,3-Dinitrobenze	6.03	6.03	13299383	9523833	2503.722	2449.776
8)	3,5-Dinitroanili	6.44	6.44	10098857	16988386	2469.703	2145.175
9)	Nitrobenzene	7.66	7.66	7795779	7652026	2498.846	2395.520
10)	Nitroglycerin	0.00	9.31	0	3184925	N.D.	2605.522 #
11)	Tetryl	9.78	9.78	7634926	12211238	2679.874	2744.223
12)	2,4,6-Trinitroto	10.17	10.17	9536976	11481930	2491.958	2570.845
13)	2-Amino-4,6-Dini	10.62	10.62	8363084	12447073	2555.125	2753.568
14)	4-Amino-2,6-Dini	11.15	11.15	6177905	12338712	2651.169	2467.608
16)	2,4-Dinitrotolue	12.19	12.19	11754651	7789430	2557.551	2755.824
17)	2,6-Dinitrotolue	12.66	12.66	6791712	8978190	2431.305	2531.572
18)	o-Nitrotoluene	15.71	15.71	5573302	7896084	2562.374	2615.410m
19)	p-Nitrotoluene	16.27	16.27	8687749	7103187	2535.560	2719.196
20)	m-Nitrotoluene	17.05	17.05	8131590	9786295	2542.994	2579.089
21)	PETN	0.00	18.69	0	3619896	N.D.	2512.312m#

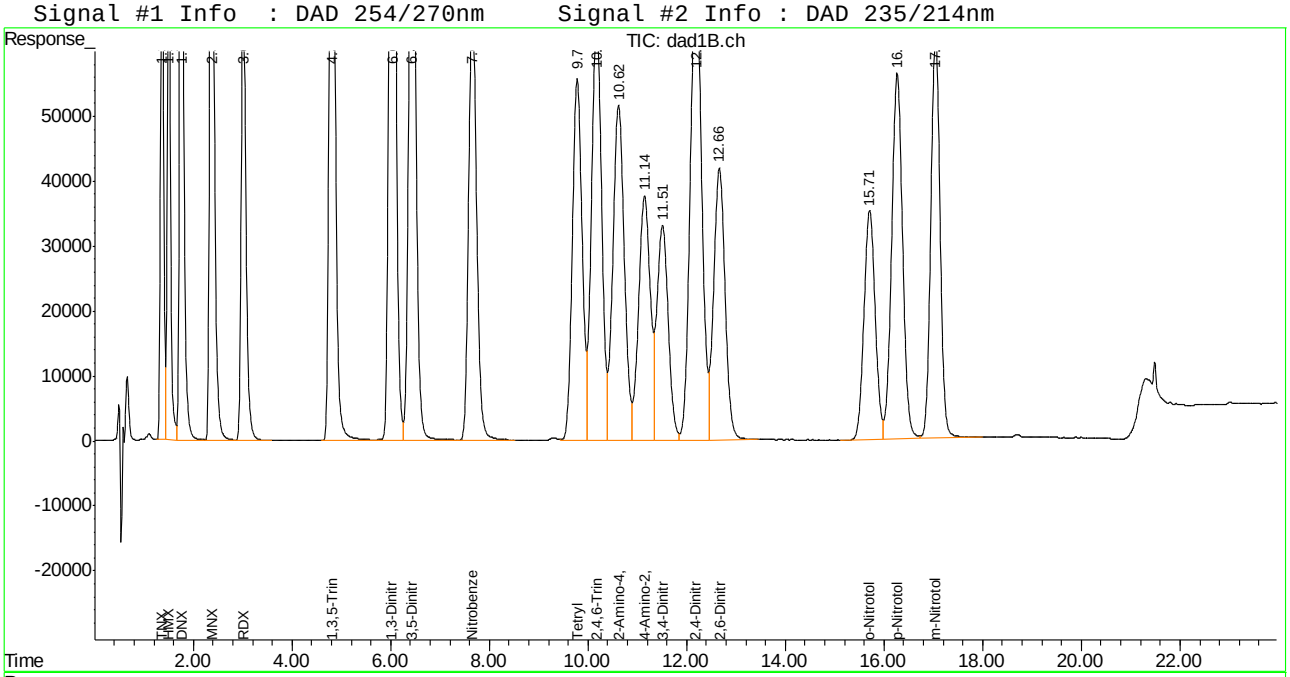
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

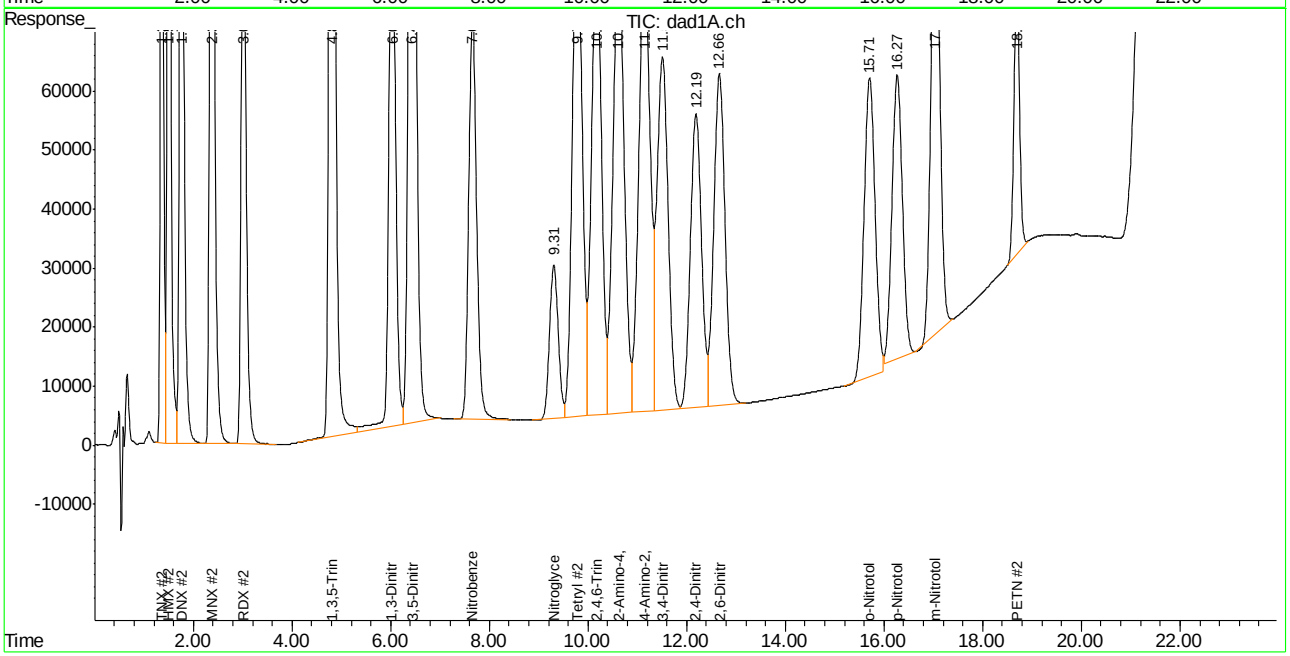
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1A.ch
Acq On : 15-Apr-2022, 12:37:56 Operator: FOUADS
Sample : ic2188-2500 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:11 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

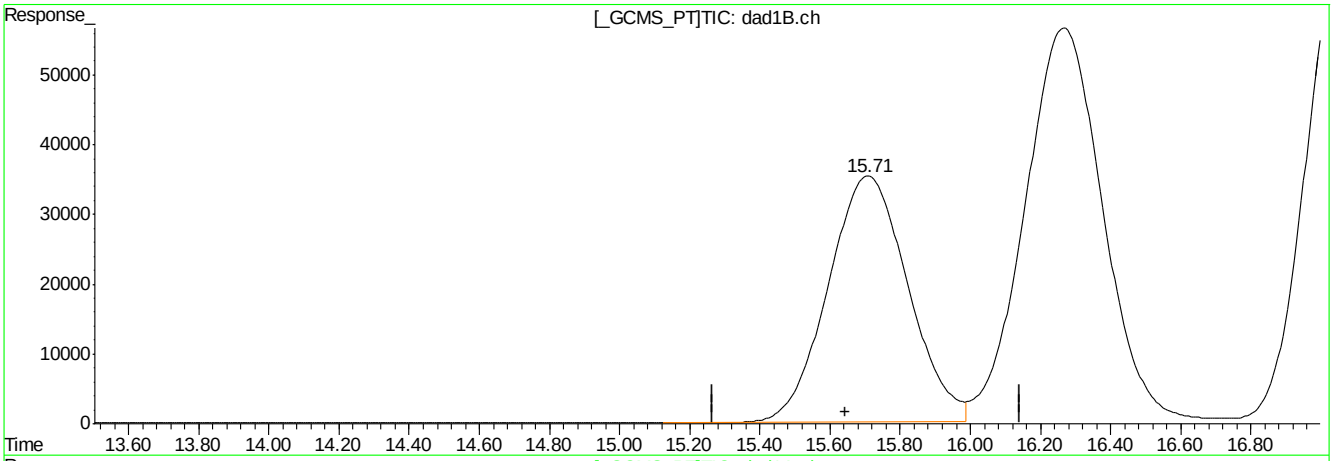
Sample Number: GBB2188-IC2188
Lab FileID: BB072469.D
Injection Time: 04/15/22 12:37
Method: SW846 8330A
Analyst approved: 04/18/22 11:39 Fouad Sekkar
Supervisor approved: 04/18/22 15:15 Naresh Jiawan

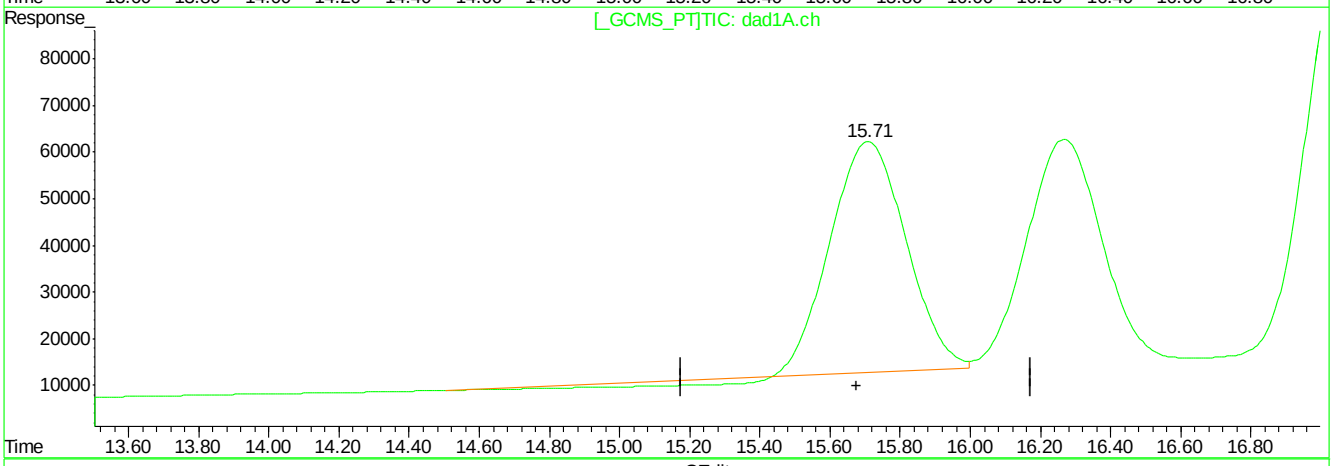
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.71	Poor instrument integration
PETN	78-11-5	2	18.69	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1A.ch
Acq On : 15-Apr-2022, 12:37:56 Operator: FOUADS
Sample : ic2188-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:10 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.71min 2562.374ppb

response 5573302

(18) o-Nitrotoluene #2

15.71min 2348.346ppb

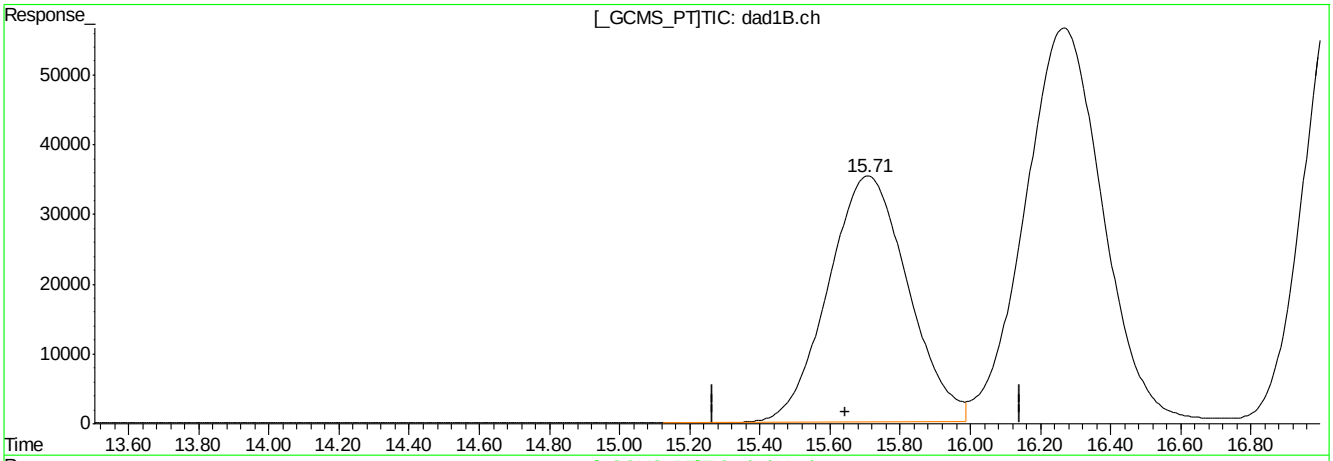
response 7089801

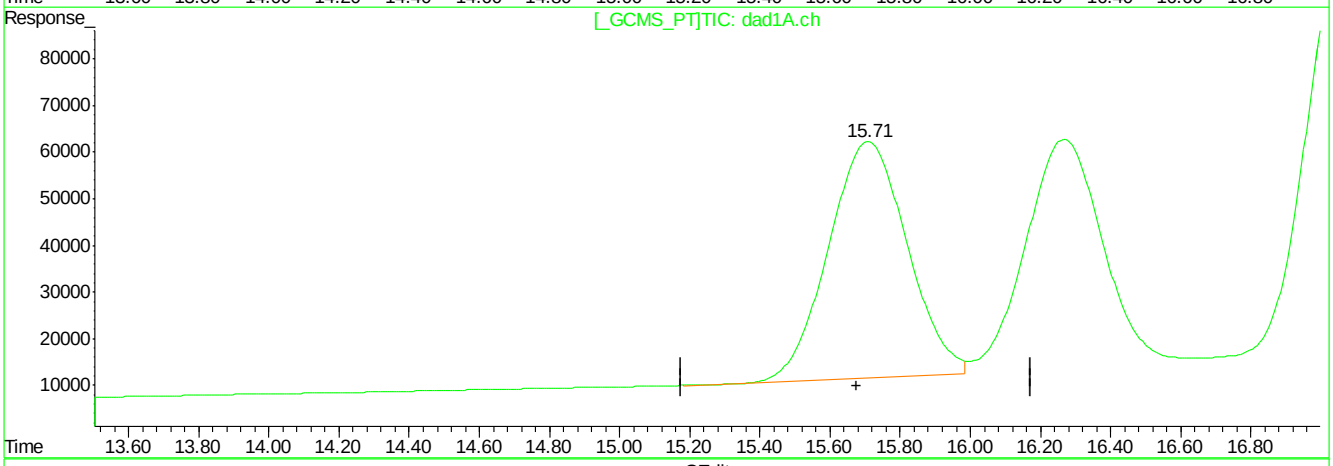
(+) = Expected Retention Time
BB072469.D BBB2167_041522.M Fri Apr 15 13:11:18 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1A.ch
Acq On : 15-Apr-2022, 12:37:56 Operator: FOUADS
Sample : ic2188-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:10 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.71min 2562.374ppb

response 5573302

(18) o-Nitrotoluene #2

15.71min 2615.410ppb m

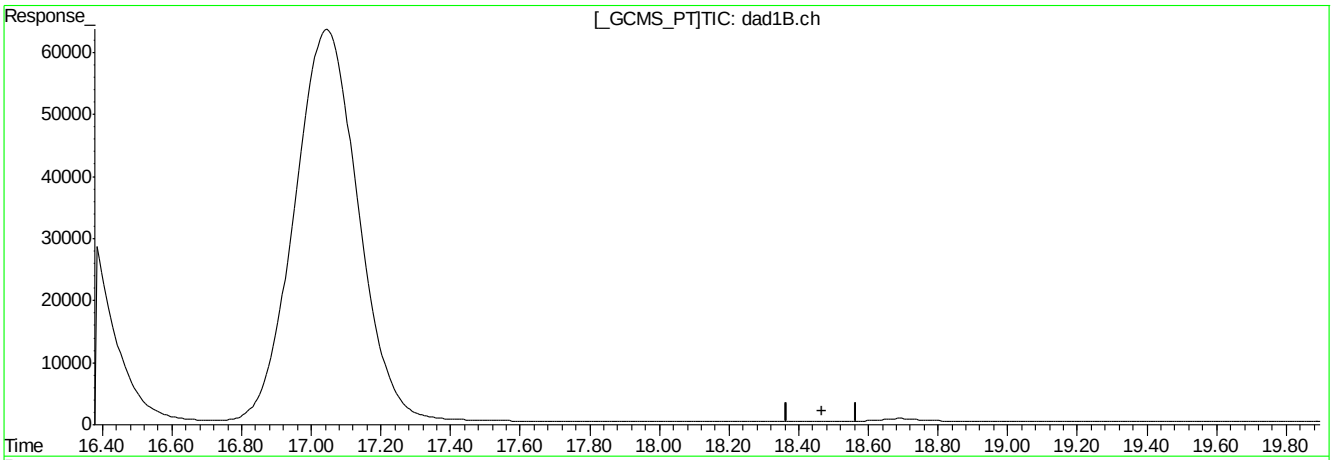
response 7896084

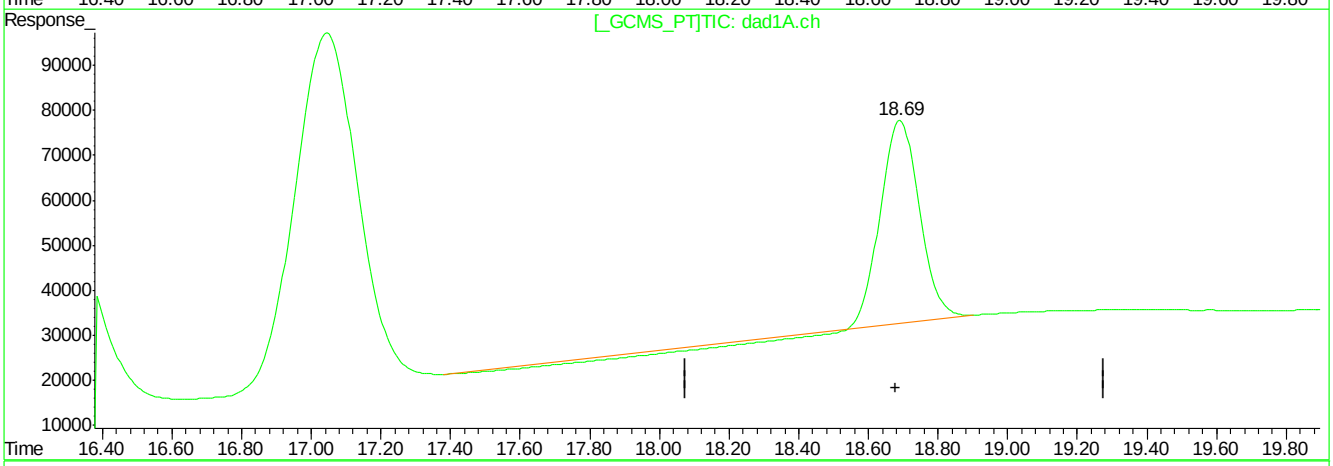
(+) = Expected Retention Time
BB072469.D BBB2167_041522.M Fri Apr 15 13:11:34 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1A.ch
Acq On : 15-Apr-2022, 12:37:56 Operator: FOUADS
Sample : ic2188-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:10 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.69min 2110.840ppb

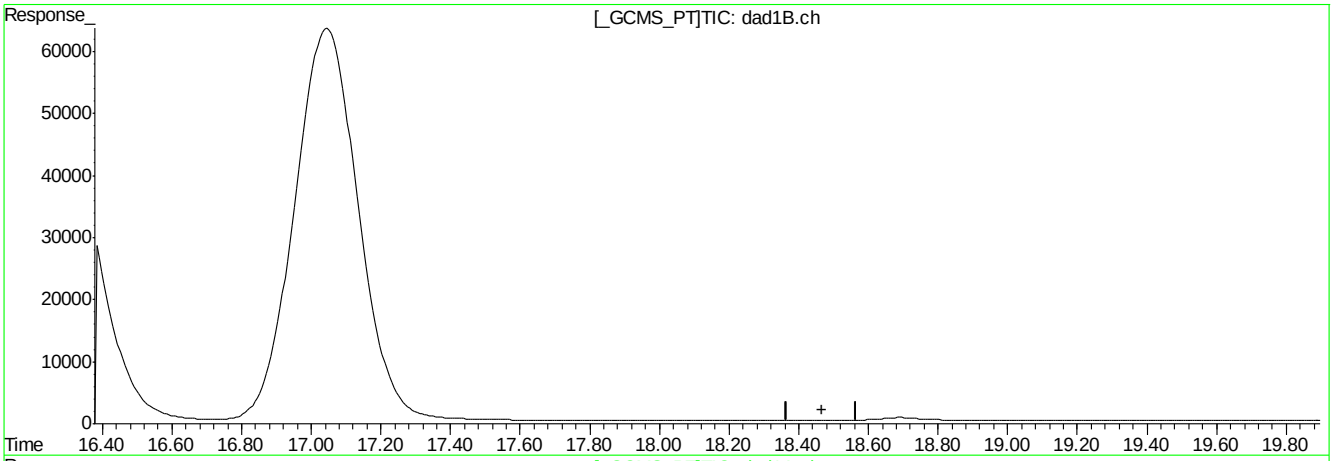
response 3041431

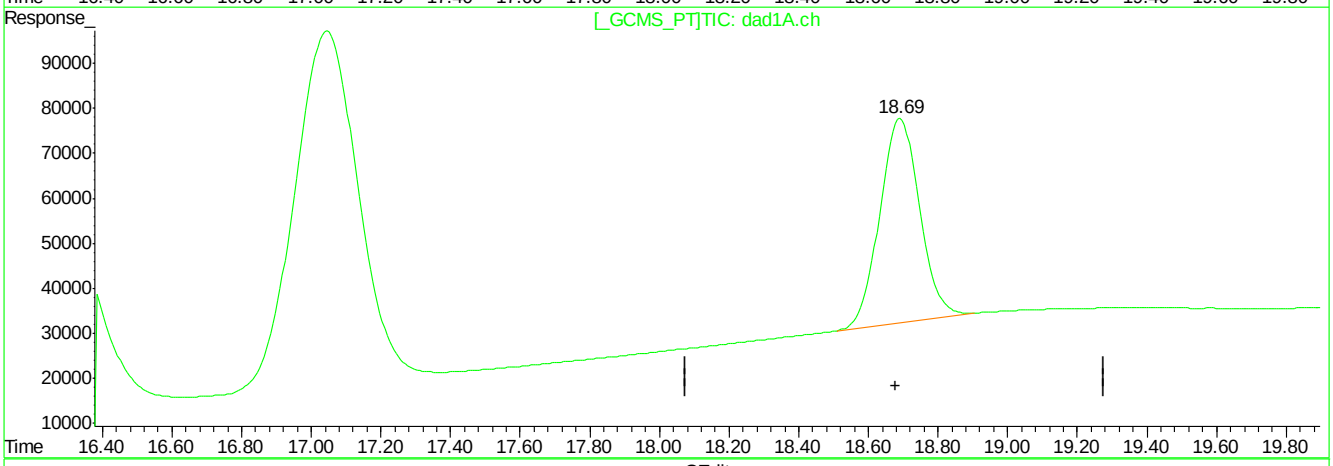
(+) = Expected Retention Time
BB072469.D BBB2167_041522.M Fri Apr 15 13:11:44 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072469.D\dad1A.ch
Acq On : 15-Apr-2022, 12:37:56 Operator: FOUADS
Sample : ic2188-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 13:10 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.69min 2512.312ppb m

response 3619896

(+) = Expected Retention Time
BB072469.D BBB2167_041522.M Fri Apr 15 13:11:54 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/18/22 15:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072470.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072470.D\dad1A.ch
Acq On : 15-Apr-2022, 13:09:00 Operator: FOUADS
Sample : ic2188-5000 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 14:20:22 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.51	11121523	20010466	5007.853	4740.508
	Spiked Amount 500.000	Range 70 - 136		Recovery =		1001.57%#	948.10%#
	Target Compounds						
1)	TNX	1.36	1.36	8127317	12376544	2524.255	2464.130
2)	HMX	1.51	1.51	8111878	22262566	4667.129	5047.823
3)	DNX	1.76	1.76	14766751	23178745	5048.500	5161.547
4)	MNX	2.38	2.38	15891362	24363866	5985.141	5979.159
5)	RDX	3.02	3.02	9806376	15527479	5083.006	5114.133
6)	1,3,5-Trinitrobe	4.82	4.82	21231150	33614007	5317.240	5354.356
7)	1,3-Dinitrobenze	6.03	6.03	27622754	19178286	5200.219	4933.152
8)	3,5-Dinitroanili	6.44	6.44	20955095	35078223	5124.626	4429.434
9)	Nitrobenzene	7.66	7.66	16264200	15879252	5213.300	4971.110
10)	Nitroglycerin	0.00	9.31	0	6750367	N.D.	5522.338 #
11)	Tetryl	9.79	9.79	15901052	25660648	5581.302	5766.699
12)	2,4,6-Trinitroto	10.18	10.18	19864766	24149569	5190.551	5407.175
13)	2-Amino-4,6-Dini	10.61	10.61	17426180	26342881	5324.120	5827.628
14)	4-Amino-2,6-Dini	11.14	11.14	12914216	26150623	5541.970	5229.840
16)	2,4-Dinitrotolue	12.18	12.18	24511145	16558663	5333.080	5858.294
17)	2,6-Dinitrotolue	12.66	12.66	14202460	18823231	5084.212	5307.570
18)	o-Nitrotoluene	15.70	15.70	11661363	15793891	5361.414	5231.391
19)	p-Nitrotoluene	16.26	16.26	18163376	15302835	5301.067	5858.133
20)	m-Nitrotoluene	17.04	17.04	17117082	20568134	5353.030	5420.544
21)	PETN	0.00	18.70	0	7536080	N.D.	5230.256m#

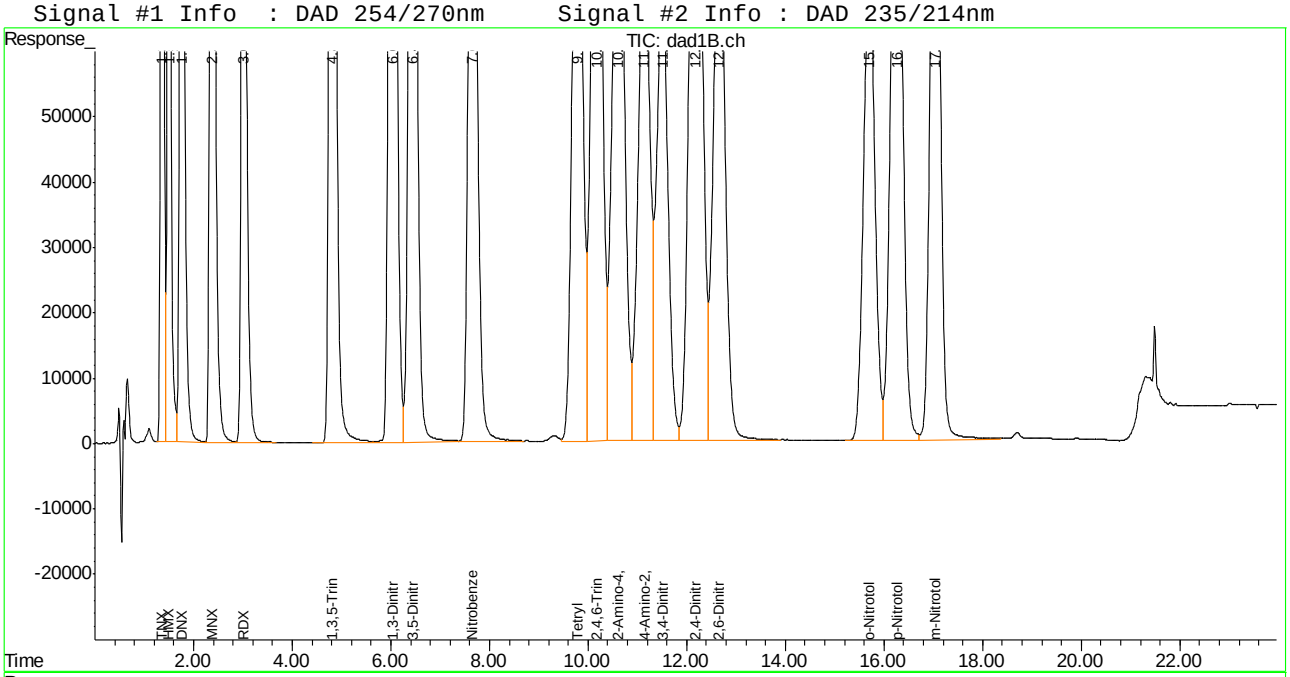
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072470.D BBB2167_041522.M Mon Apr 18 11:19:55 2022 Page 1

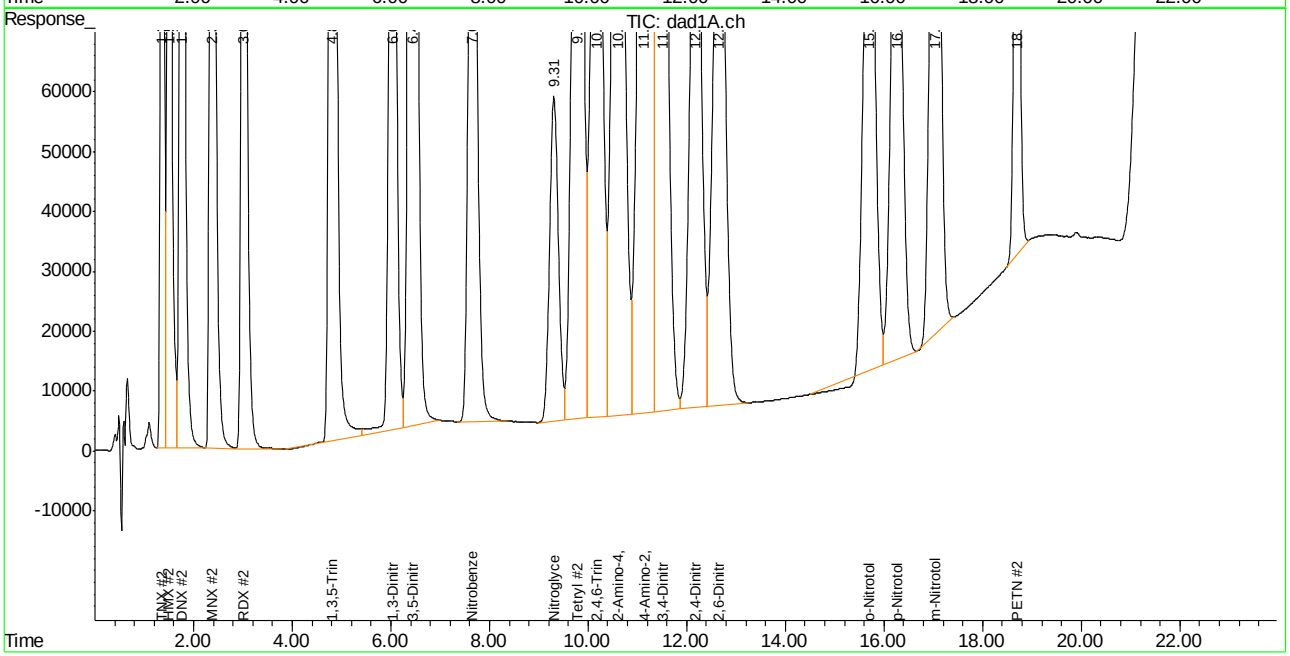
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072470.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072470.D\dad1A.ch
Acq On : 15-Apr-2022, 13:09:00 Operator: FOUADS
Sample : ic2188-5000 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 14:21 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

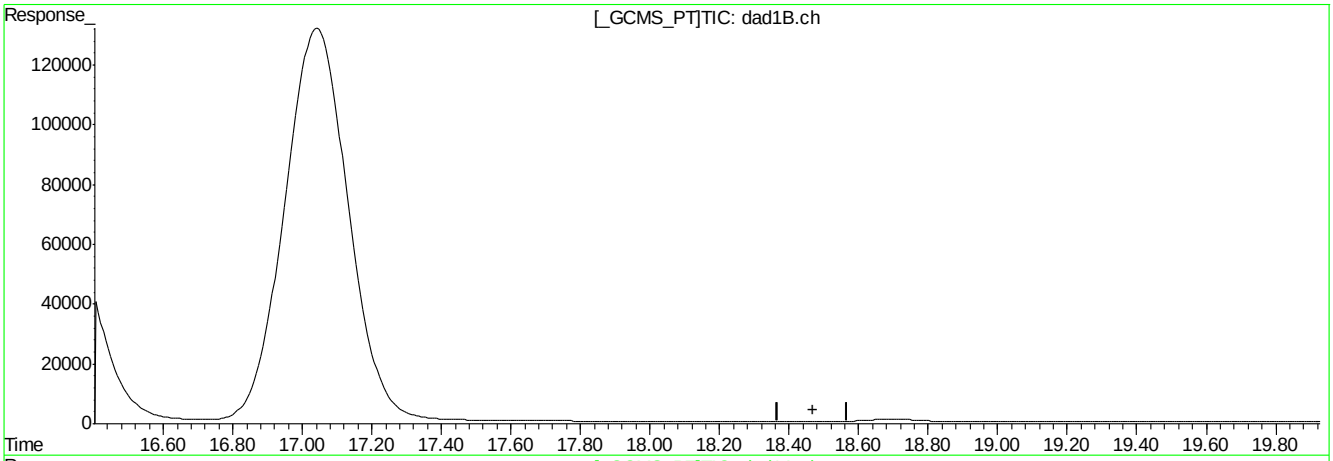
Sample Number: GBB2188-IC2188
Lab FileID: BB072470.D
Injection Time: 04/15/22 13:09
Method: SW846 8330A
Analyst approved: 04/18/22 11:39 Fouad Sekkar
Supervisor approved: 04/18/22 15:15 Naresh Jiawan

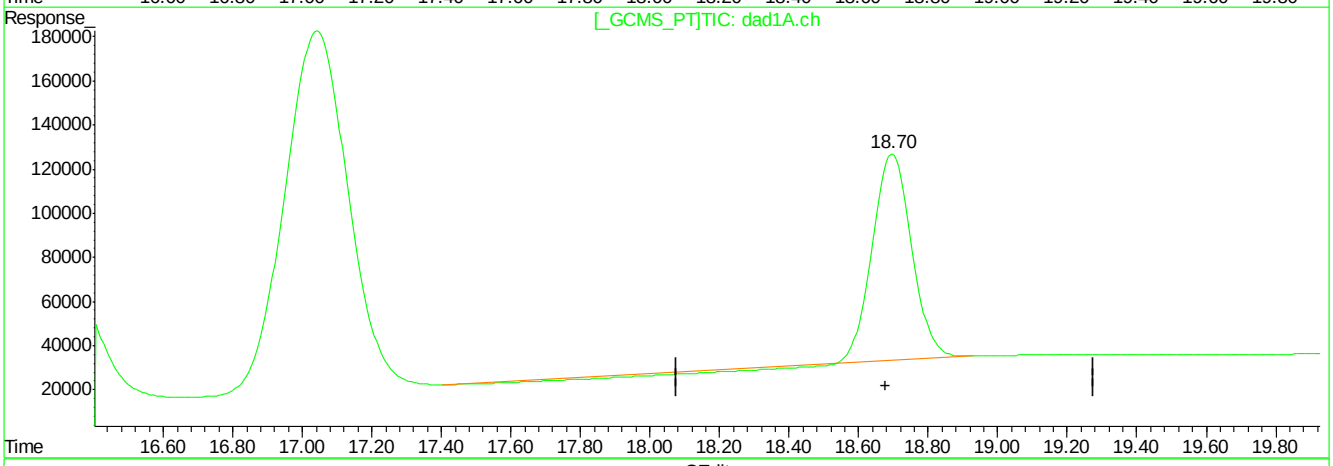
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.70	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072470.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072470.D\dad1A.ch
Acq On : 15-Apr-2022, 13:09:00 Operator: FOUADS
Sample : ic2188-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 14:20 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.70min 4736.796ppb

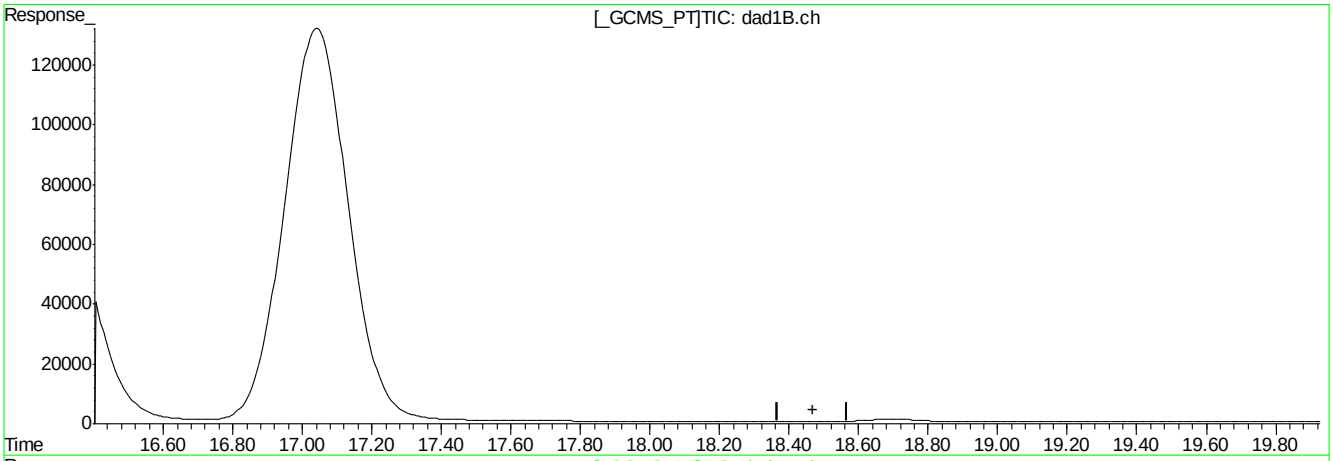
response 6825071

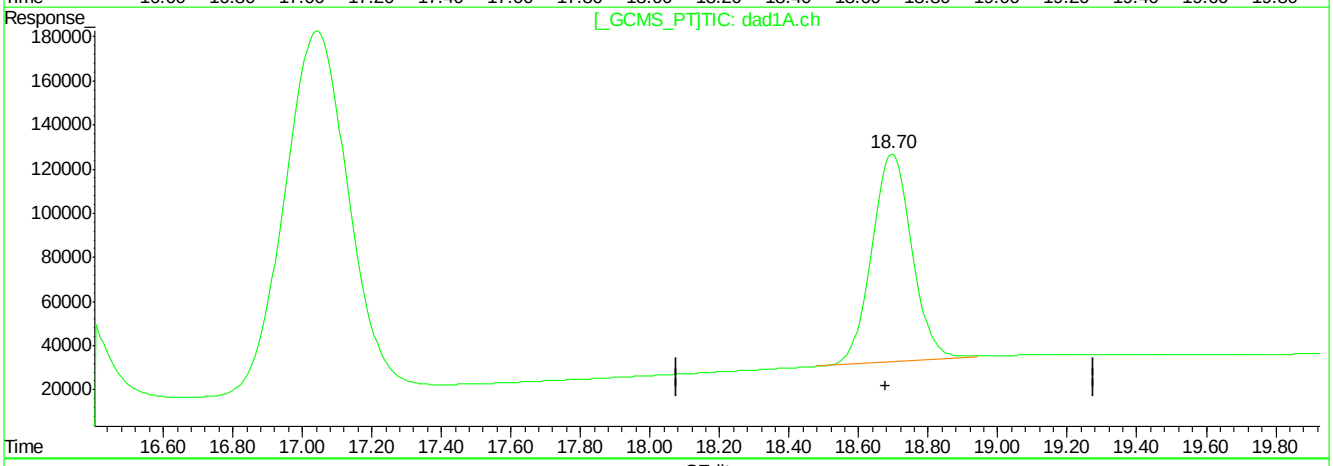
(+) = Expected Retention Time
BB072470.D BBB2167_041522.M Fri Apr 15 14:21:01 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072470.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072470.D\dad1A.ch
Acq On : 15-Apr-2022, 13:09:00 Operator: FOUADS
Sample : ic2188-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 14:20 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 11:13:00 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.70min 5230.256ppb m

response 7536080

(+) = Expected Retention Time
BB072470.D BBB2167_041522.M Fri Apr 15 14:21:12 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/18/22 15:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1A.ch
Acq On : 15-Apr-2022, 15:29:23 Operator: FOUADS
Sample : icv2188-1000 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 15:54:43 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 14:37:09 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.36	1.36	1705677	2595963	498.840	498.498
2)	HMX	1.51	1.51	1739558	4804775	1079.011	1085.746
3)	DNX	1.76	1.76	3075091	4865633	1047.967	1044.646
4)	MNX	2.38	2.38	3310629	5091584	1222.964	1227.332
5)	RDX	3.03	3.03	2103421	3331030	1080.144	1080.649
6)	1,3,5-Trinitrobe	4.82	4.82	4492898	7051573	1065.414	1055.826
7)	1,3-Dinitrobenze	6.04	6.04	5898901	4387835	1075.543	1144.427
8)	3,5-Dinitroanili	6.45	6.45	4633386	7948189	1113.448	1138.330
9)	Nitrobenzene	7.66	7.66	3399252	3341411	1053.829	1059.454
10)	Nitroglycerin	0.00	9.31	0	1133318	N.D.	850.109m#
11)	Tetryl	9.78	9.78	3286983	5270588	1041.601	1037.767
12)	2,4,6-Trinitroto	10.17	10.17	4166207	5023565	1056.830	1059.657
13)	2-Amino-4,6-Dini	10.62	10.62	3717122	5542711	1075.008	1065.688
14)	4-Amino-2,6-Dini	11.14	11.14	2789165	5545743	1089.151	1074.492
16)	2,4-Dinitrotolue	12.18	12.18	5186262	3483314	1066.589	1065.759
17)	2,6-Dinitrotolue	12.65	12.66	3021358	4016805	1072.771	1077.333
18)	o-Nitrotoluene	15.70	15.70	2448296	2810983	1059.326	888.103
19)	p-Nitrotoluene	16.26	16.27	3806864	2952516	1057.344	982.174
20)	m-Nitrotoluene	17.04	17.05	3581666	4199656	1057.161	1032.182
21)	PETN	0.00	18.70	0	1567033	N.D.	1048.242m#

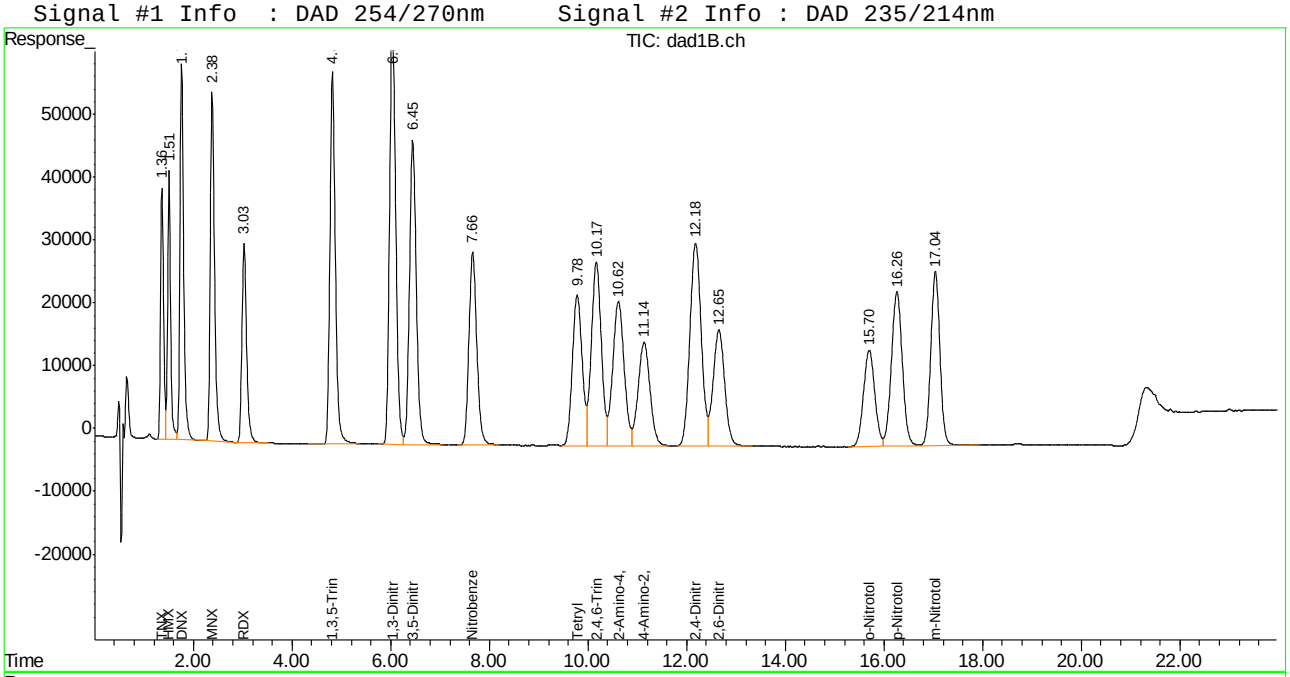
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072471.D BBB2167_041522.M Mon Apr 18 11:19:56 2022 Page 1

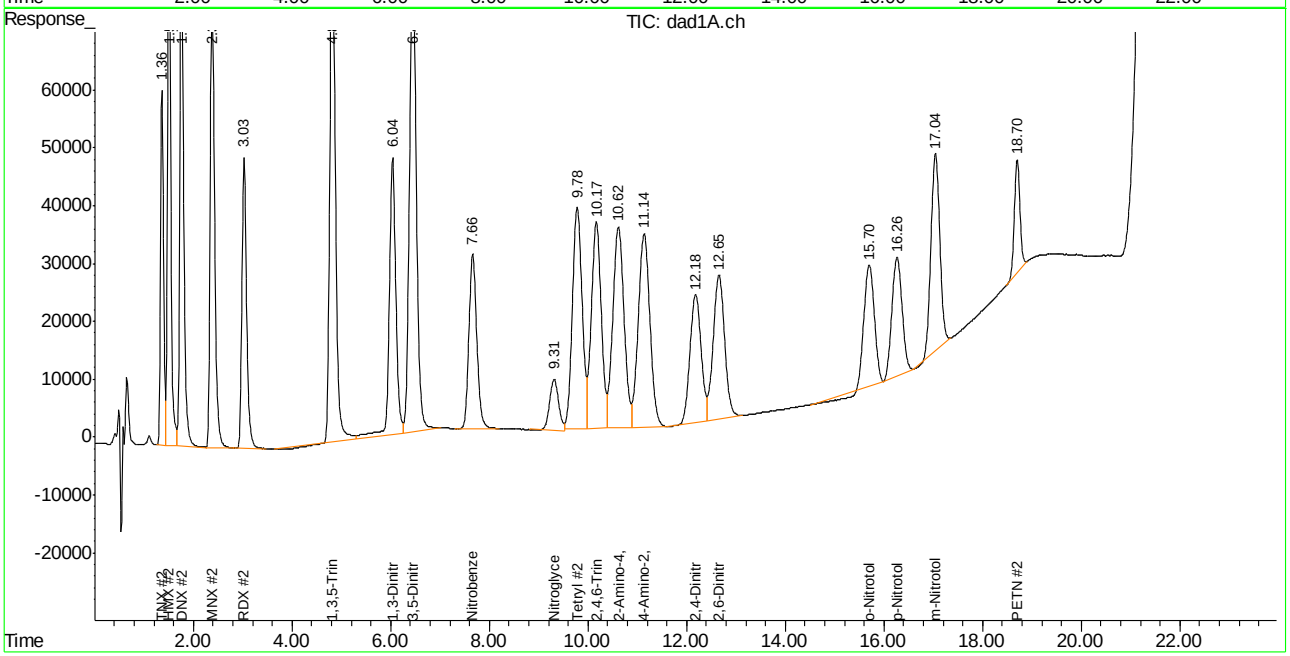
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1A.ch
Acq On : 15-Apr-2022, 15:29:23 Operator: FOUADS
Sample : icv2188-1000 Inst : G1315B
Misc : op90759,GBB2188,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 15:56 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 14:37:09 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

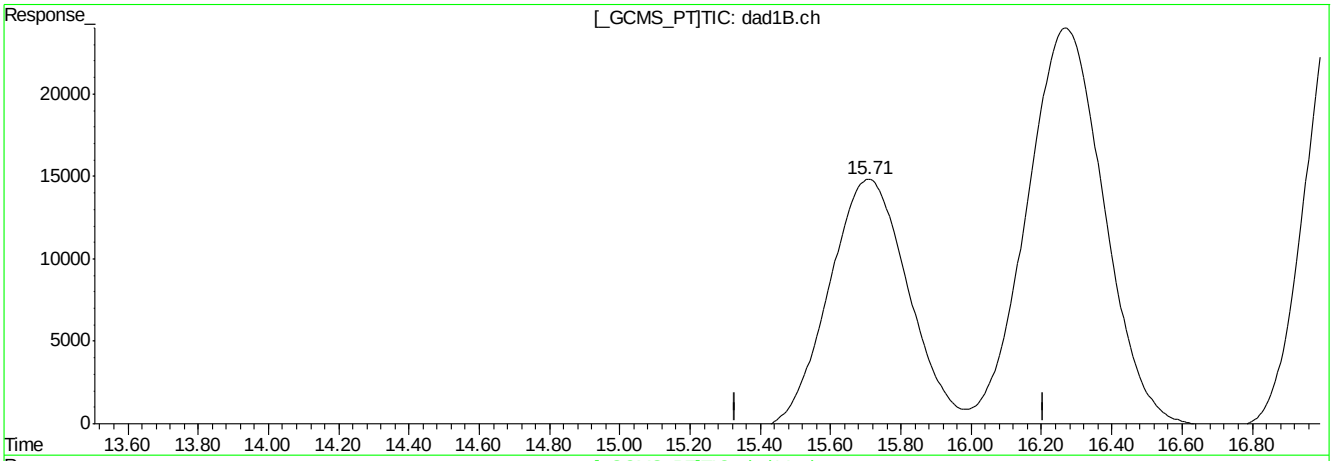
Sample Number: GBB2188-ICV2188 **Method:** SW846 8330A
Lab FileID: BB072471.D **Analyst approved:** 04/18/22 11:39 Fouad Sekkar
Injection Time: 04/15/22 15:29 **Supervisor approved:** 04/18/22 15:15 Naresh Jiawan

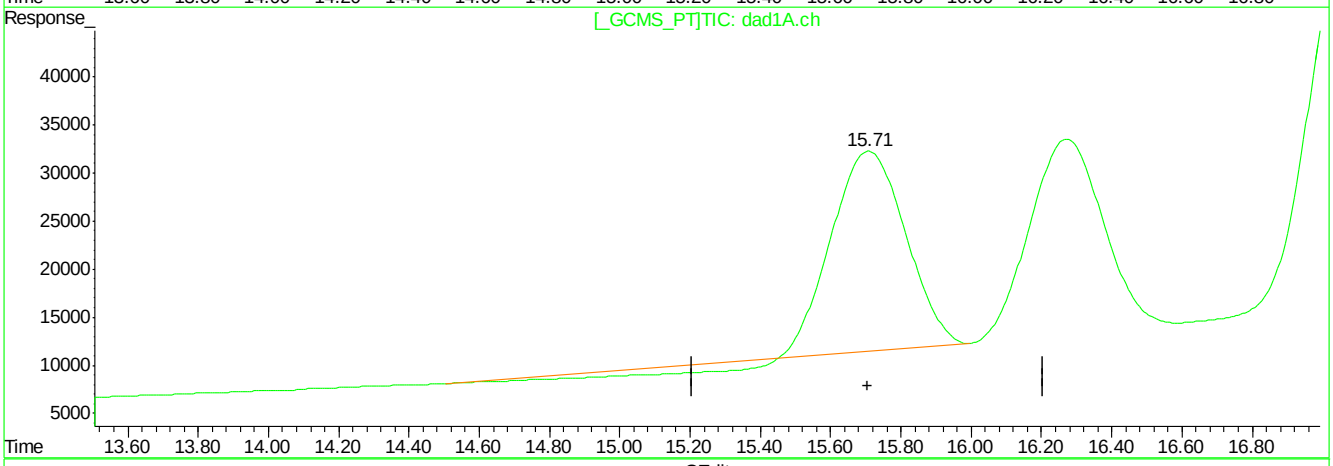
Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitroglycerine	55-63-0	2	9.31	Poor instrument integration
PETN	78-11-5	2	18.70	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1A.ch
Acq On : 15-Apr-2022, 14:42:50 Operator: FOUADS
Sample : icv2188-10000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 15:11 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 14:37:09 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.71min 1053.539ppb

response 2434920

(18) o-Nitrotoluene #2

15.71min 876.060ppb

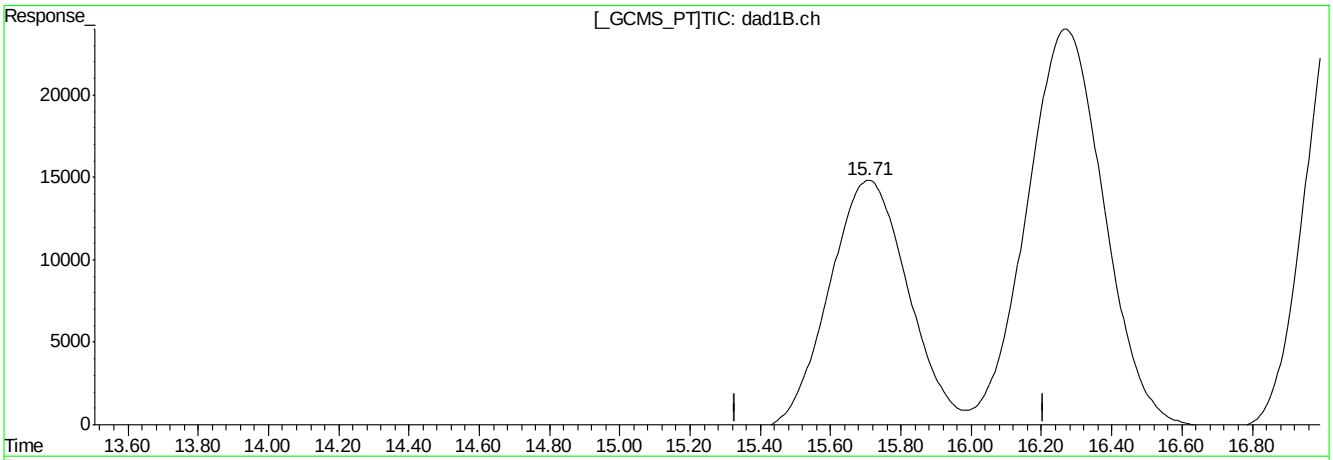
response 2772866

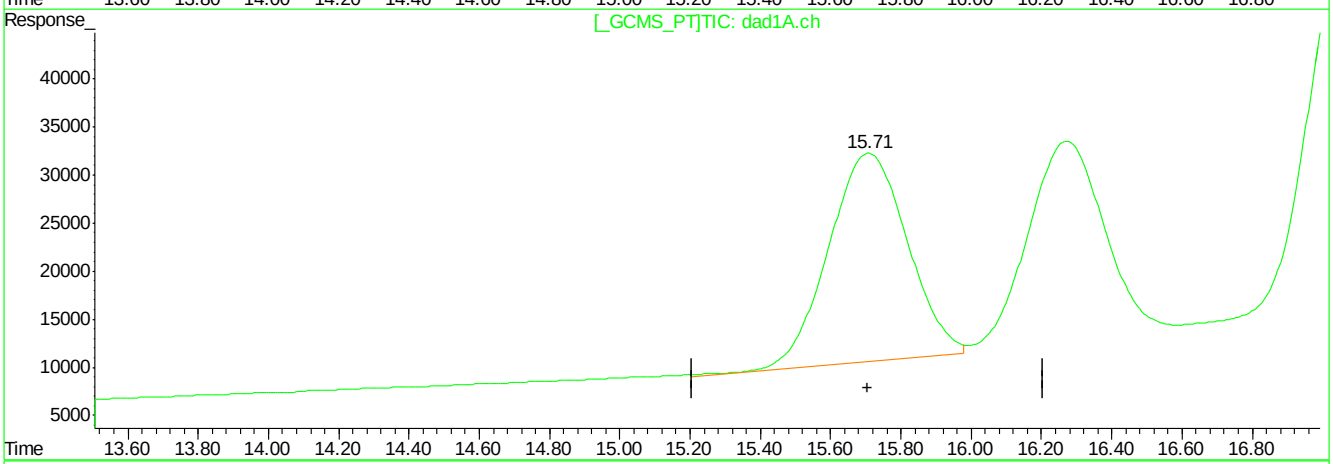
(+) = Expected Retention Time
BB072471.D BBB2167_041522.M Fri Apr 15 15:11:48 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1A.ch
Acq On : 15-Apr-2022, 14:42:50 Operator: FOUADS
Sample : icv2188-10000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 15:11 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 14:37:09 2022
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.71min 1053.539ppb

response 2434920

(18) o-Nitrotoluene #2

15.71min 1074.518ppb m

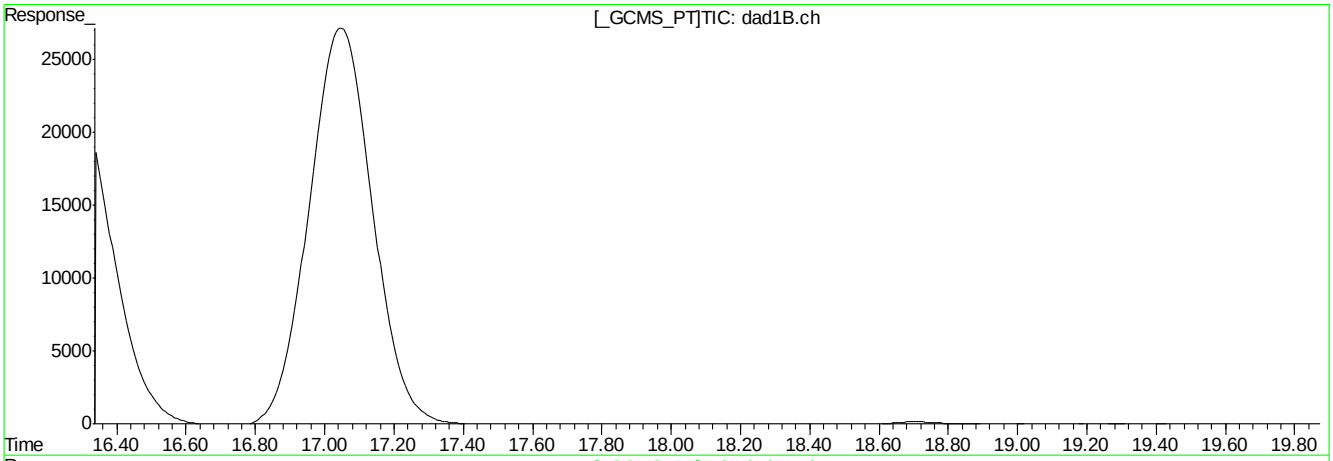
response 3401016

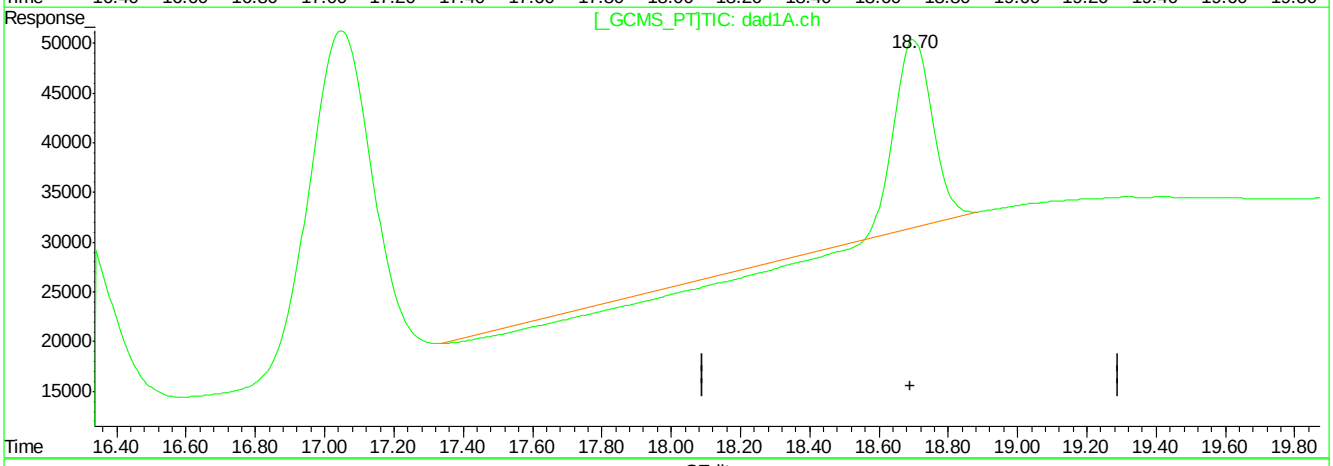
(+) = Expected Retention Time
BB072471.D BBB2167_041522.M Fri Apr 15 15:11:55 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1A.ch
Acq On : 15-Apr-2022, 14:42:50 Operator: FOUADS
Sample : icv2188-10000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 15:11 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 14:37:09 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.70min 644.971ppb

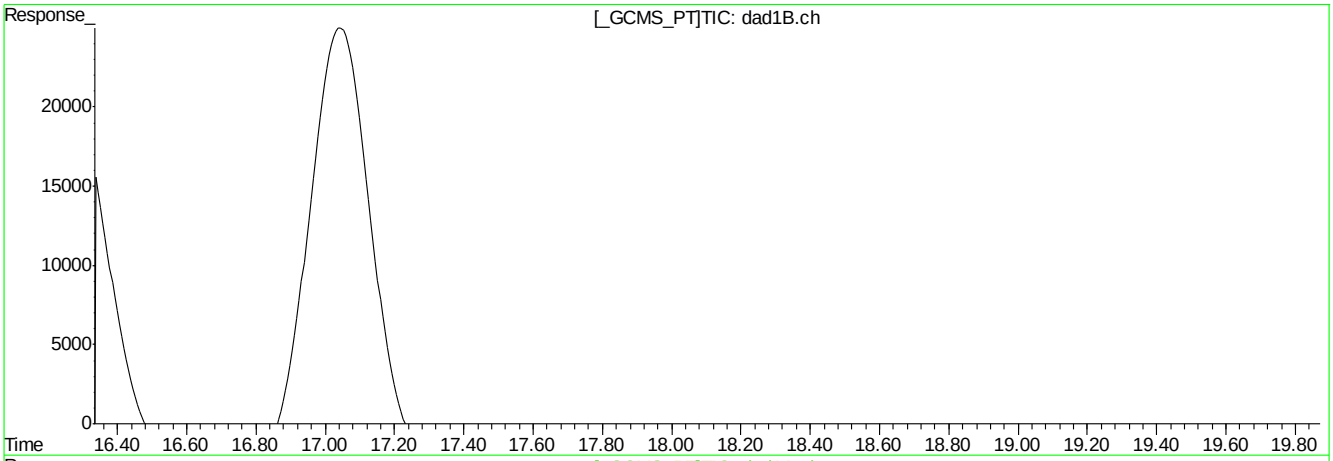
response 964177

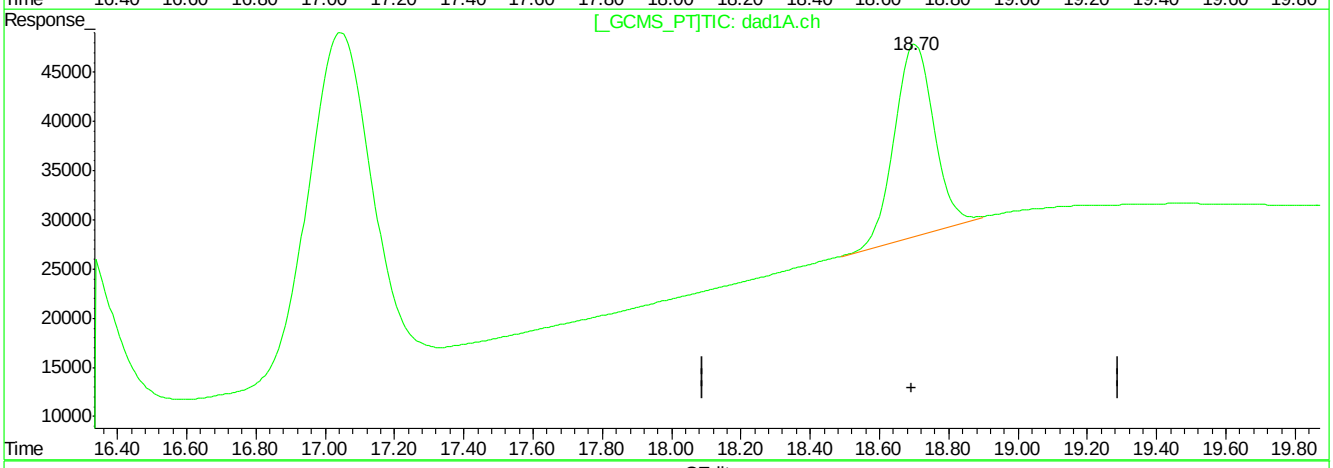
(+) = Expected Retention Time
BB072471.D BBB2167_041522.M Fri Apr 15 15:12:03 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2188\BB072471.D\dad1A.ch
Acq On : 15-Apr-2022, 15:29:23 Operator: FOUADS
Sample : icv2188-10000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 15 15:55 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 15 14:37:09 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.70min 1048.242ppb m

response 1567033

(+) = Expected Retention Time
BB072471.D BBB2167_041522.M Fri Apr 15 15:56:47 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/04/22 15:16

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1A.ch
Acq On : 03-May-2022, 17:03:33 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : op90781,GBB2196,10,,,50,1,soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 04 08:26:47 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.07	11.07	2160703	3862401	979.251	978.250
	Spiked Amount 500.000	Range 69 - 134		Recovery =		195.85%#	195.65%#
	Target Compounds						
1)	TNX	1.34	1.34	1509826	2297397	441.562	441.165
2)	HMX	1.47	1.47	1591693	4351019	987.293	983.210
3)	DNX	1.72	1.72	2784640	4406301	948.984	946.028
4)	MNX	2.31	2.31	2982098	4582164	1101.603	1104.536
5)	RDX	2.93	2.93	1893864	3004345	972.532	974.667
6)	1,3,5-Trinitrobe	4.70	4.70	4065464	6504421	964.056	973.901
7)	1,3-Dinitrobenze	5.88	5.88	5317443	4104383	969.526	1070.497
8)	3,5-Dinitroanili	6.23	6.23	4066003	7127744	977.100	1020.827
9)	Nitrobenzene	7.45	7.45	3108568	3071169	963.711	973.769
10)	Nitroglycerin	0.00	9.10	0	1255679	N.D.	941.892 #
11)	Tetryl	9.42	9.42	3053400	4953078	967.582	975.250
12)	2,4,6-Trinitroto	9.86	9.86	3716478	4457848	942.749	940.327
13)	2-Amino-4,6-Dini	10.15	10.15	3402757	5132854	984.092	986.886
14)	4-Amino-2,6-Dini	10.64	10.64	2509064	5022870	979.774	973.185
16)	2,4-Dinitrotolue	11.77	11.77	4687269	3146573	963.968	962.729
17)	2,6-Dinitrotolue	12.23	12.23	2689176	3570314	954.825	957.581
18)	o-Nitrotoluene	15.27	15.27	2222822	3024599	961.768	955.593
19)	p-Nitrotoluene	15.84	15.84	3425981	2788435	951.555	927.591
20)	m-Nitrotoluene	16.69	16.70	3189241	3699379	941.333	909.225
21)	PETN	0.00	18.56	0	1425383	N.D. d	953.488m

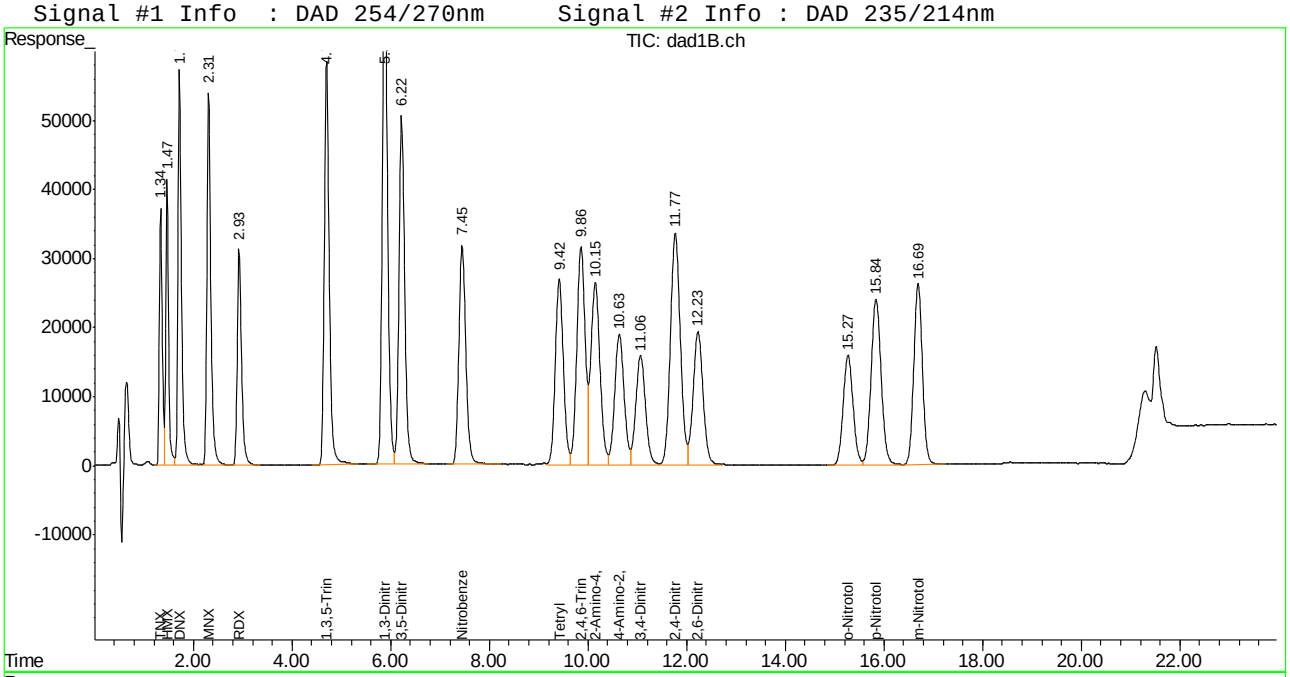
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072800.D BBB2167_041522.M Wed May 04 14:00:47 2022 Page 1

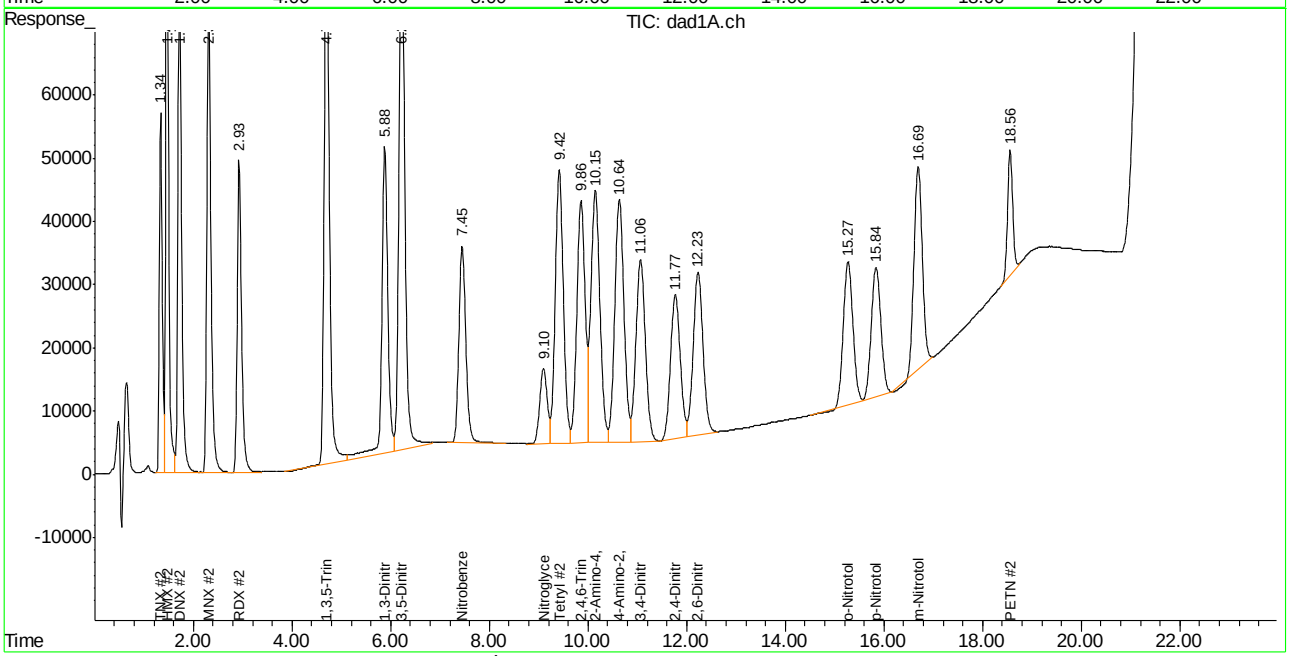
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1A.ch
Acq On : 03-May-2022, 17:03:33 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : op90781,GBB2196,10,,,50,1,soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 8:27 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

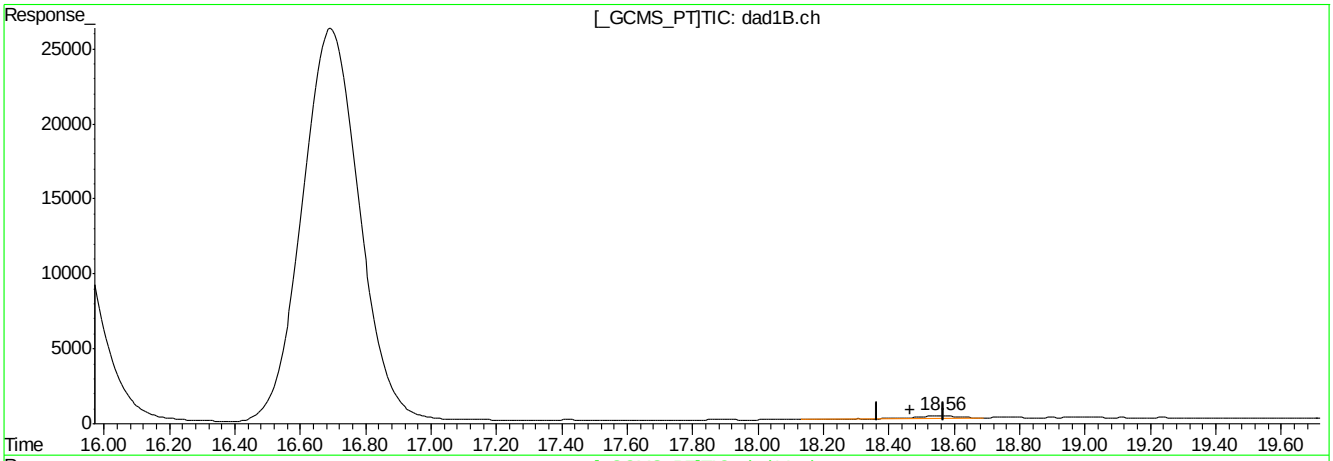
Sample Number:	GBB2196-CC2188	**Method:**	SW846 8330B
Lab FileID:	BB072800.D	**Analyst approved:**	05/04/22 14:25 Fouad Sekkar
Injection Time:	05/03/22 17:03	**Supervisor approved:**	05/04/22 15:16 Naresh Jiawan

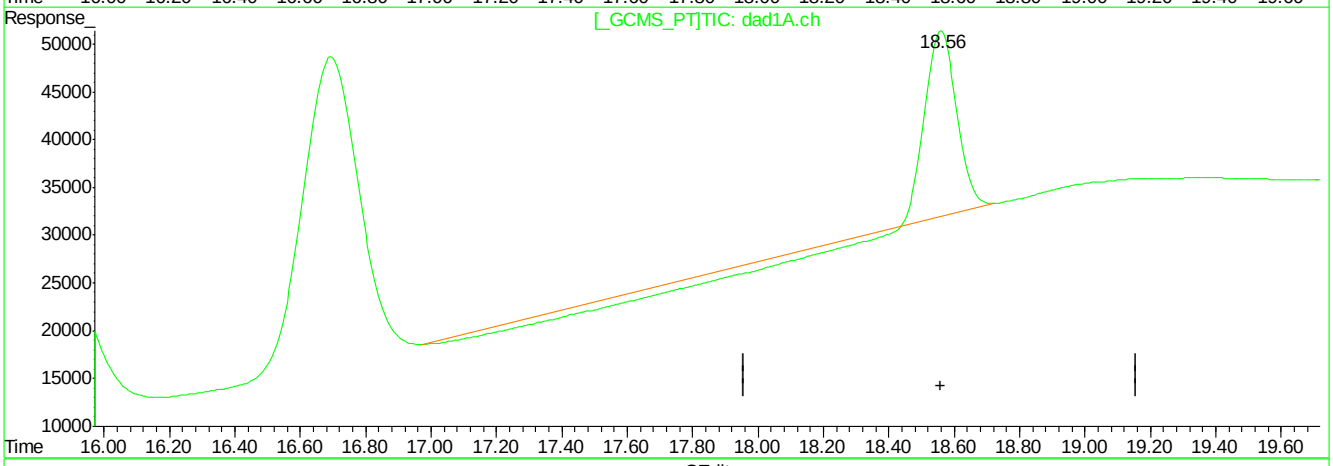
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.56	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1A.ch
Acq On : 03-May-2022, 17:03:33 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 8:26 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.56min 0.000ppb

response 15880

(21) PETN #2

18.56min 459.821ppb

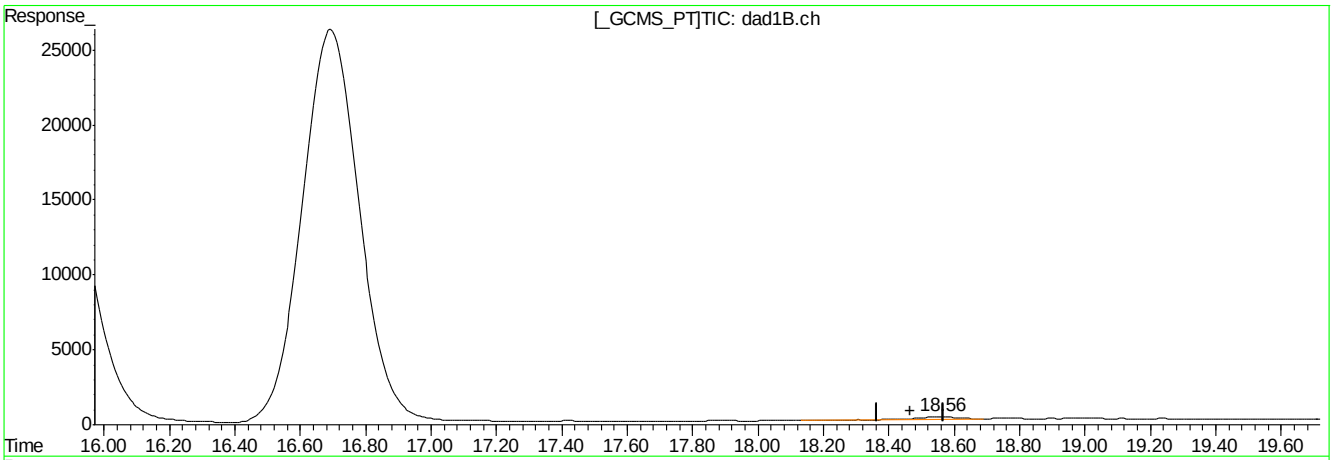
response 687392

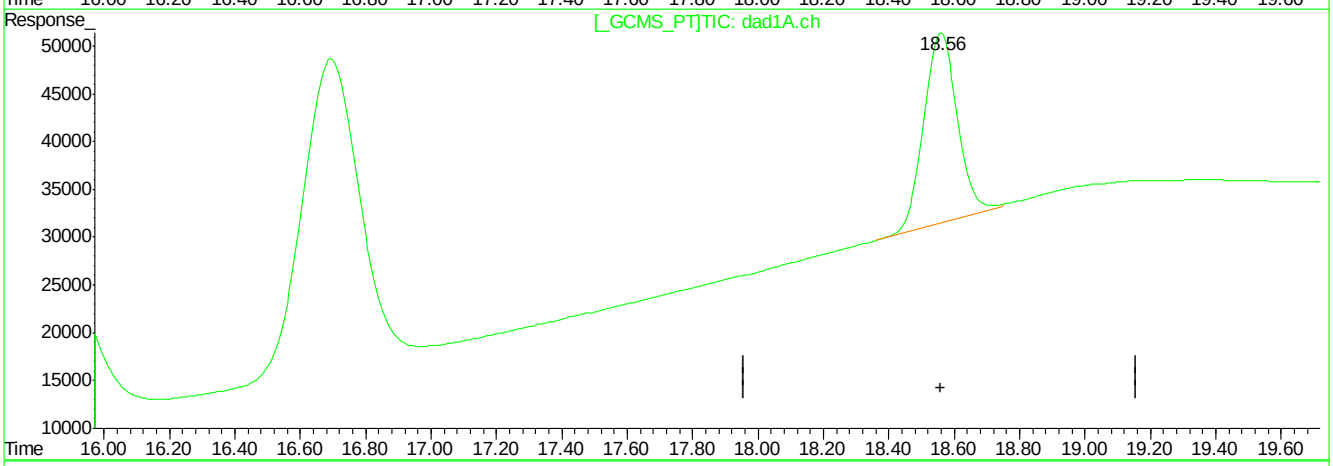
(+) = Expected Retention Time
BB072800.D BBB2167_041522.M Wed May 04 08:27:00 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072800.D\dad1A.ch
Acq On : 03-May-2022, 17:03:33 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 8:26 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.56min 0.000ppb

response 15880

(21) PETN #2

18.56min 953.488ppb m

response 1425383

(+) = Expected Retention Time
BB072800.D BBB2167_041522.M Wed May 04 08:27:06 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/04/22 15:16

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1A.ch
Acq On : 03-May-2022, 22:46:10 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : op90781,GBB2196,10,,,50,1,soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 04 08:50:06 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.04	11.04	2155619	3847157	976.947	974.389
Spiked Amount	500.000	Range	69 - 134	Recovery	=	195.39%#	194.88%#
	Target Compounds						
1)	TNX	1.34	1.34	1507305	2287912	440.825	439.344
2)	HMX	1.47	1.47	1616312	4447435	1002.564	1004.997
3)	DNX	1.72	1.72	2789800	4440747	950.742	953.424
4)	MNX	2.31	2.31	2991499	4570971	1105.075	1101.838
5)	RDX	2.92	2.92	1902722	3001869	977.081	973.864
6)	1,3,5-Trinitrobe	4.70	4.70	3955444	6564112	937.966	982.839
7)	1,3-Dinitrobenze	5.87	5.87	5303119	4054008	966.914	1057.359
8)	3,5-Dinitroanili	6.21	6.21	4068309	7068883	977.654	1012.397
9)	Nitrobenzene	7.44	7.44	3092508	2991105	958.732	948.383
10)	Nitroglycerin	0.00	9.08	0	1241789	N.D.	931.474 #
11)	Tetryl	9.40	9.40	3063083	4920973	970.650	968.928
12)	2,4,6-Trinitroto	9.84	9.84	3708947	4449355	940.839	938.535
13)	2-Amino-4,6-Dini	10.12	10.13	3403745	5133550	984.378	987.020
14)	4-Amino-2,6-Dini	10.61	10.61	2523973	5030766	985.595	974.715
16)	2,4-Dinitrotolue	11.74	11.74	4690613	3148483	964.656	963.313
17)	2,6-Dinitrotolue	12.20	12.21	2697899	3575656	957.922	959.014
18)	o-Nitrotoluene	15.24	15.24	2210762	3035753	956.550	959.117
19)	p-Nitrotoluene	15.81	15.81	3413488	2806629	948.085	933.644
20)	m-Nitrotoluene	16.67	16.67	3175292	3690061	937.216	906.935
21)	PETN	0.00	18.54	0	1401397	N.D. d	937.443m

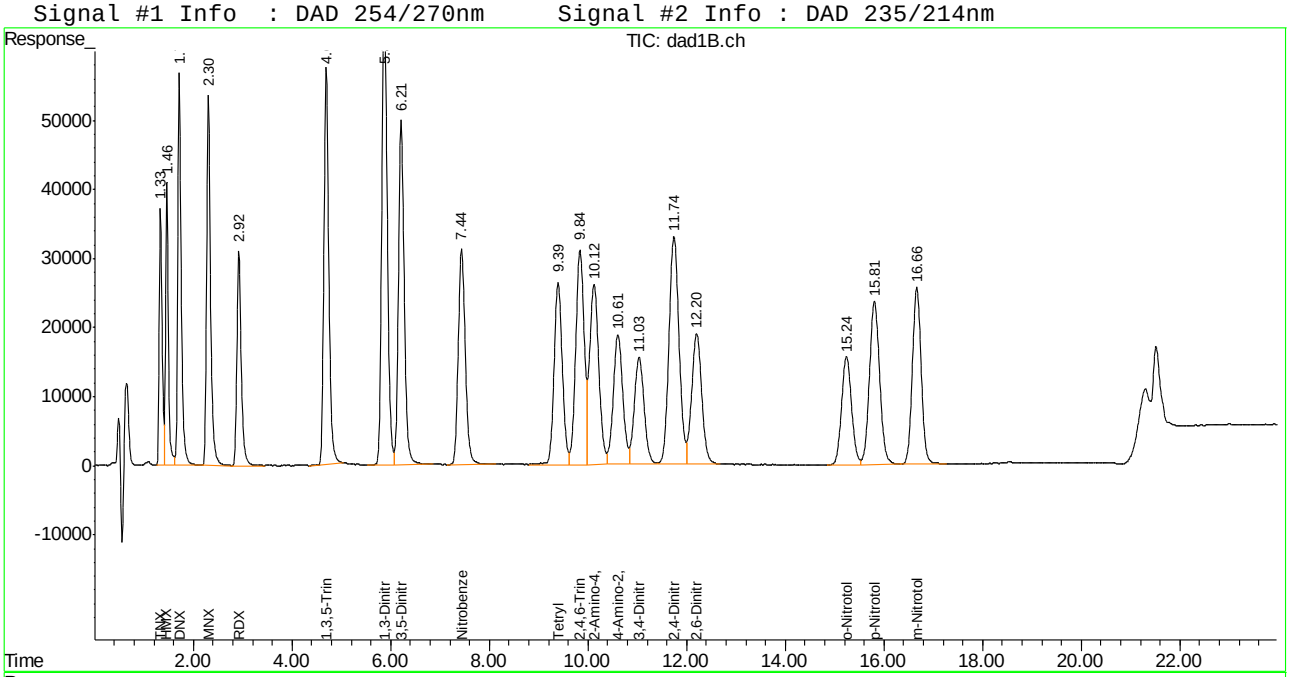
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072811.D BBB2167_041522.M Wed May 04 14:28:05 2022 Page 1

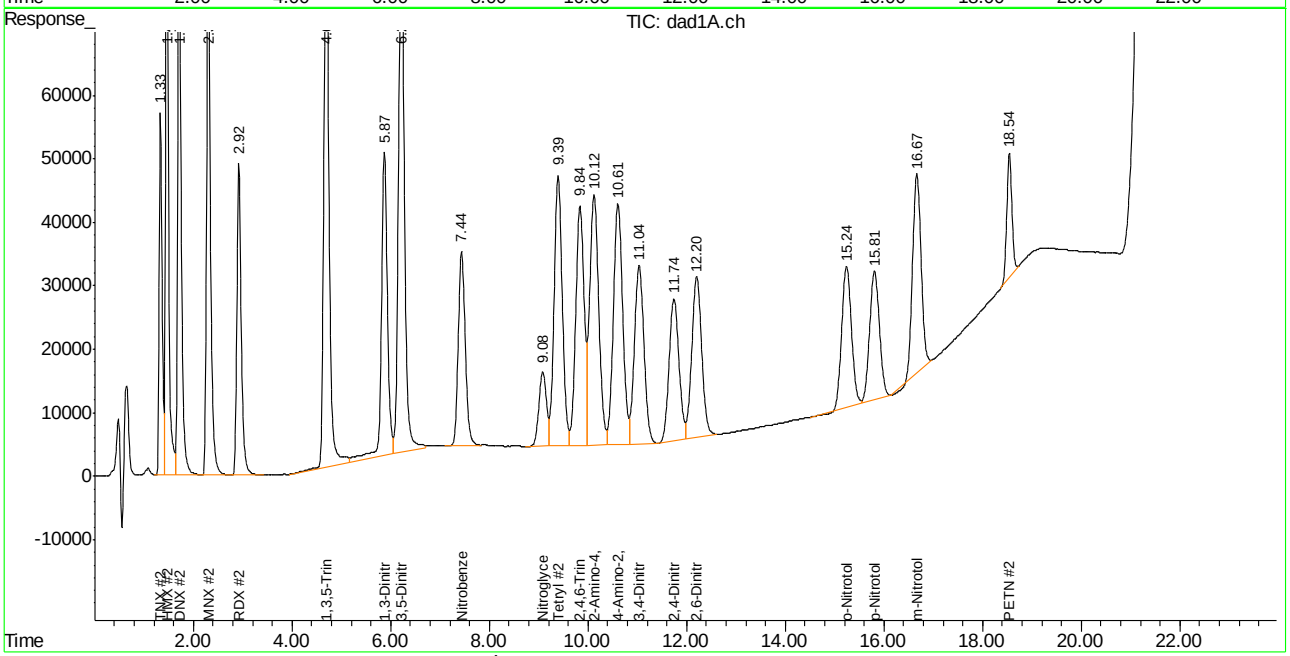
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1A.ch
Acq On : 03-May-2022, 22:46:10 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : op90781,GBB2196,10,,,50,1,soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 14:27 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

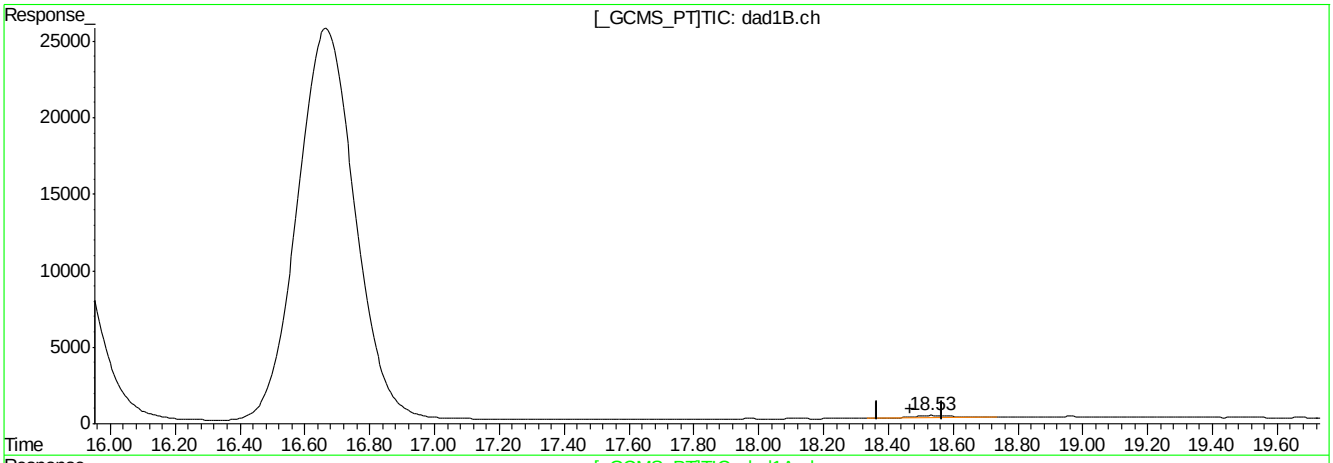
Sample Number: GBB2196-CC2188
Lab FileID: BB072811.D
Injection Time: 05/03/22 22:46
Method: SW846 8330B
Analyst approved: 05/04/22 14:29 Fouad Sekkar
Supervisor approved: 05/04/22 15:16 Naresh Jiawan

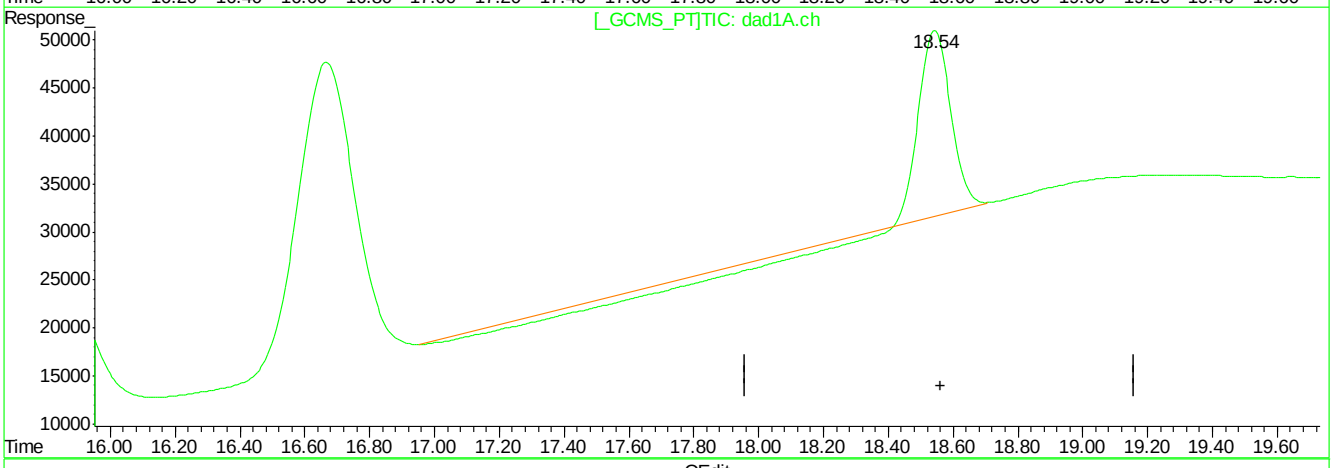
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.54	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1A.ch
Acq On : 03-May-2022, 22:46:10 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 8:50 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.54min 0.000ppb

response 15930

(21) PETN #2

18.55min 494.287ppb

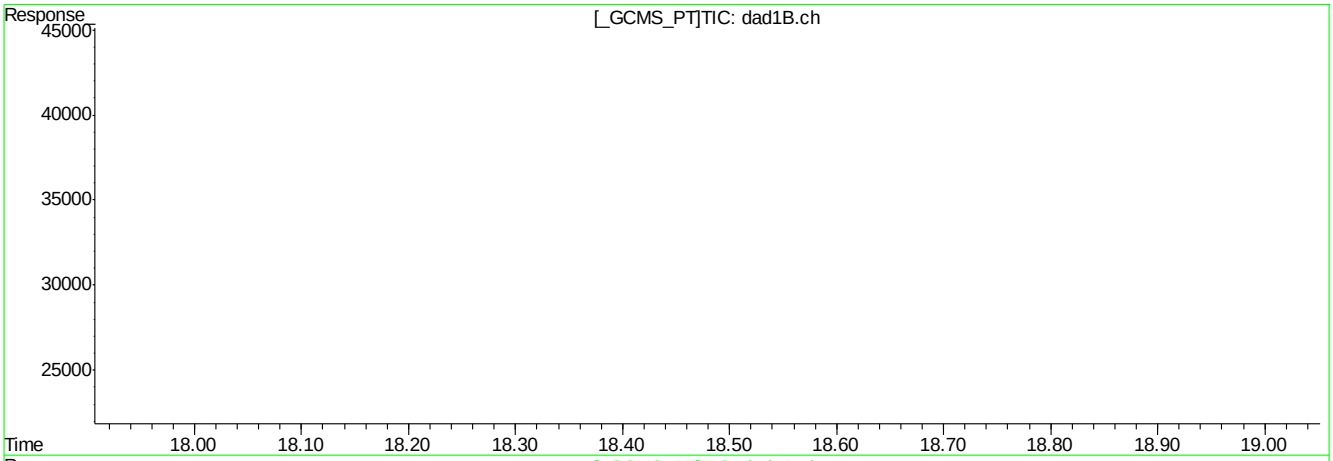
response 738917

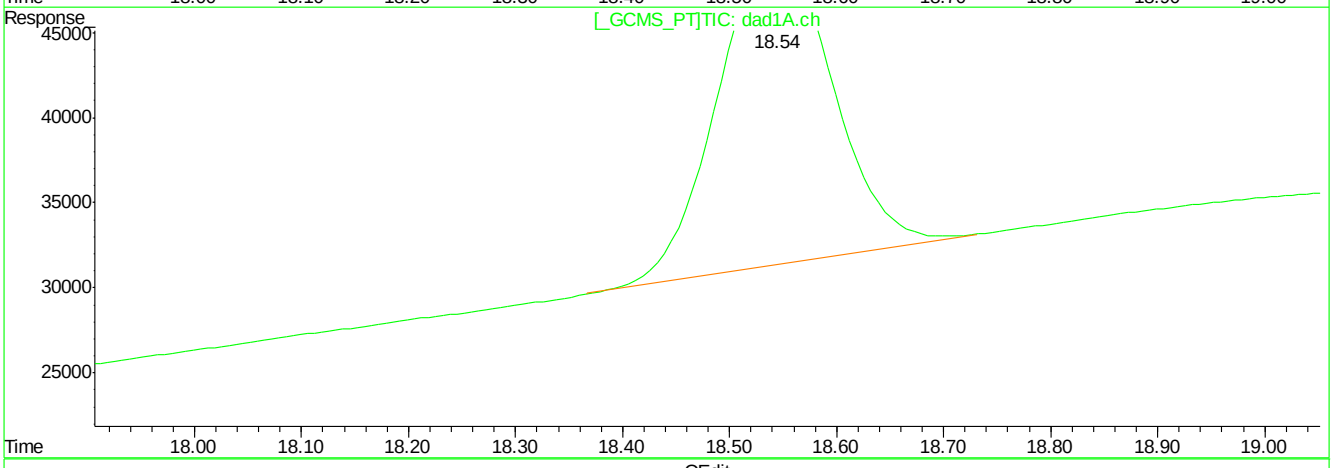
(+) = Expected Retention Time
BB072811.D BBB2167_041522.M Wed May 04 08:50:15 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072811.D\dad1A.ch
Acq On : 03-May-2022, 22:46:10 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 8:50 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.54min 0.000ppb

response 15930

(21) PETN #2

18.54min 937.443ppb m

response 1401397

(+) = Expected Retention Time
BB072811.D BBB2167_041522.M Wed May 04 08:50:23 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/06/22 10:44

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1A.ch
Acq On : 04-May-2022, 03:59:38 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : op90781,GBB2196,10,,,50,1,soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 04 08:28:28 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.06	11.06	2146418	3818056	972.777	967.018
	Spiked Amount 500.000	Range 69 - 134		Recovery =		194.56%#	193.40%#
	Target Compounds						
1)	TNX	1.34	1.34	1500032	2278235	438.697	437.486
2)	HMX	1.46	1.46	1619188	4445560	1004.348	1004.574
3)	DNX	1.71	1.71	2792089	4438671	951.522	952.978
4)	MNX	2.30	2.30	2978184	4555273	1100.157	1098.054
5)	RDX	2.92	2.92	1888620	2988683	969.840	969.586
6)	1,3,5-Trinitrobe	4.69	4.69	4029321	6429019	955.485	962.611
7)	1,3-Dinitrobenze	5.87	5.87	5305011	4043635	967.259	1054.653
8)	3,5-Dinitroanili	6.21	6.21	4054036	7072649	974.224	1012.936
9)	Nitrobenzene	7.44	7.44	3050588	2973284	945.736	942.732
10)	Nitroglycerin	0.00	9.09	0	1247684	N.D.	935.895 #
11)	Tetryl	9.41	9.41	3042323	4910261	964.072	966.819
12)	2,4,6-Trinitroto	9.85	9.85	3707728	4445844	940.529	937.795
13)	2-Amino-4,6-Dini	10.14	10.14	3387503	5114434	979.680	983.344
14)	4-Amino-2,6-Dini	10.63	10.63	2515453	5012461	982.268	971.169
16)	2,4-Dinitrotolue	11.76	11.77	4680368	3127232	962.549	956.812
17)	2,6-Dinitrotolue	12.23	12.23	2693072	3587555	956.209	962.206
18)	o-Nitrotoluene	15.26	15.26	2200401	2991058	952.068	944.996
19)	p-Nitrotoluene	15.83	15.83	3406795	2766037	946.226	920.141
20)	m-Nitrotoluene	16.68	16.68	3177518	3658609	937.873	899.205
21)	PETN	0.00	18.55	0	1407814	N.D. d	941.736m

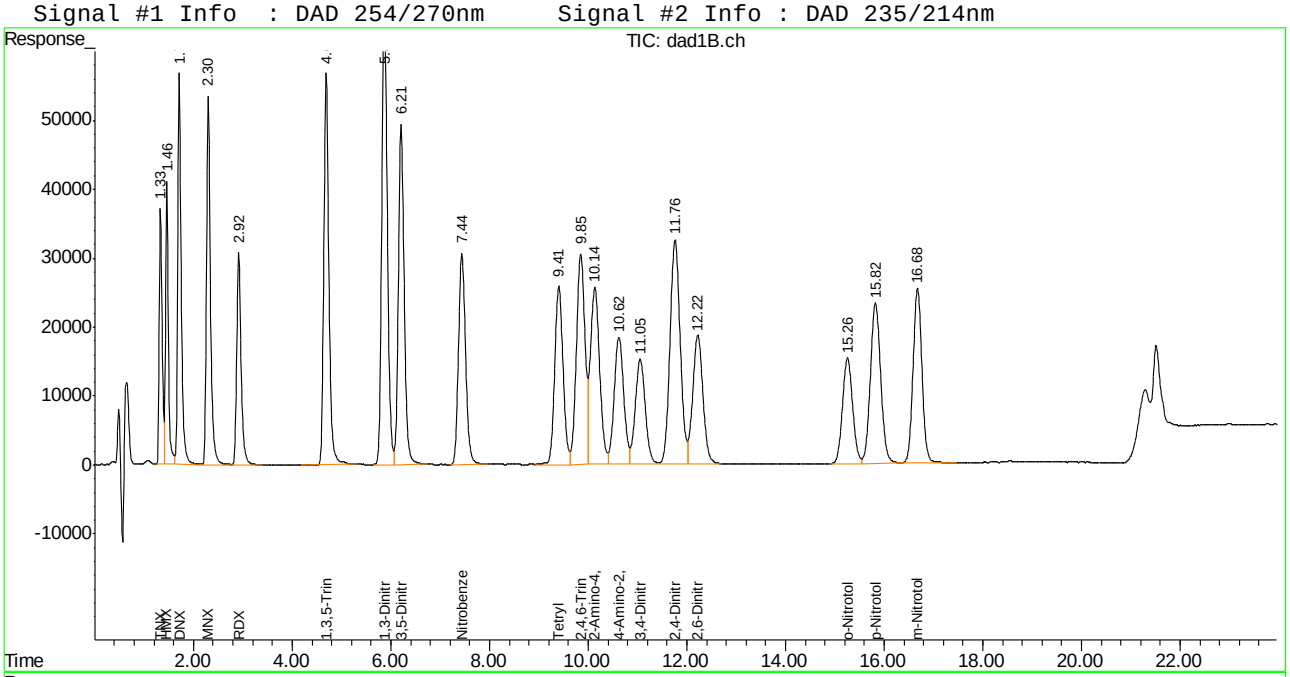
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB072821.D BBB2167_041522.M Fri May 06 08:12:23 2022 Page 1

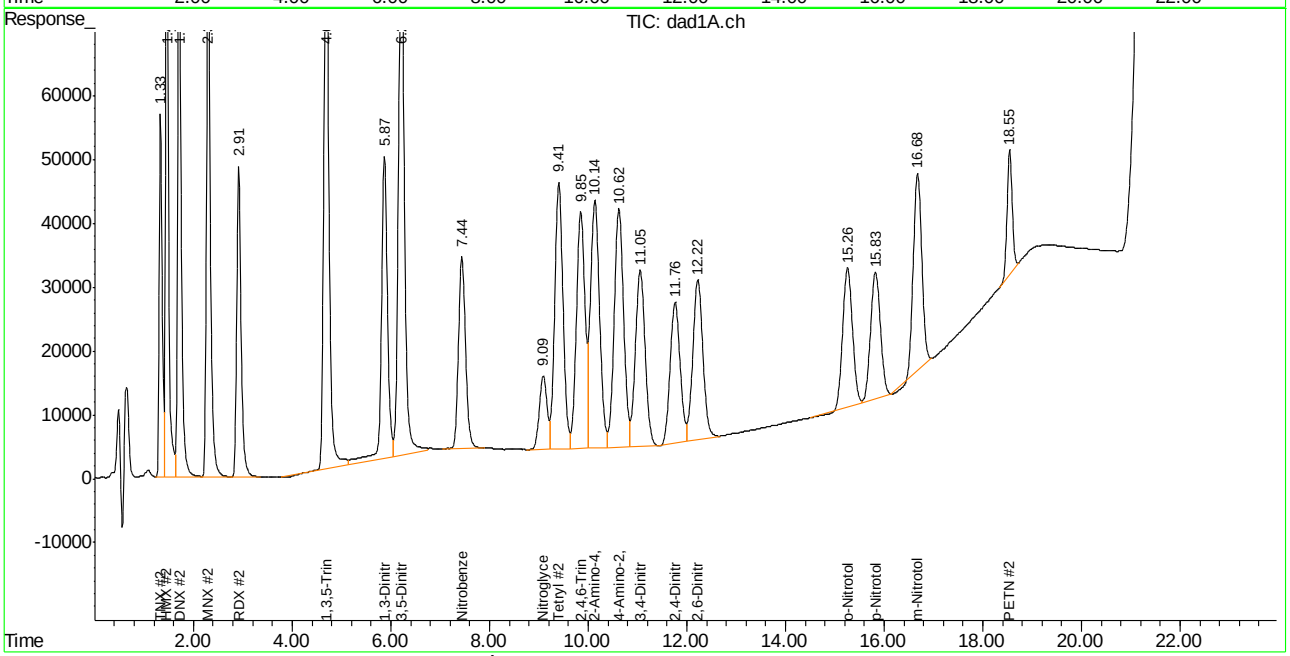
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1A.ch
Acq On : 04-May-2022, 03:59:38 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : op90781,GBB2196,10,,,50,1,soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 8:28 2022 Quant Results File: BBB2167_041522.RES

Quant Method : C:\MSDCHEM\2...\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

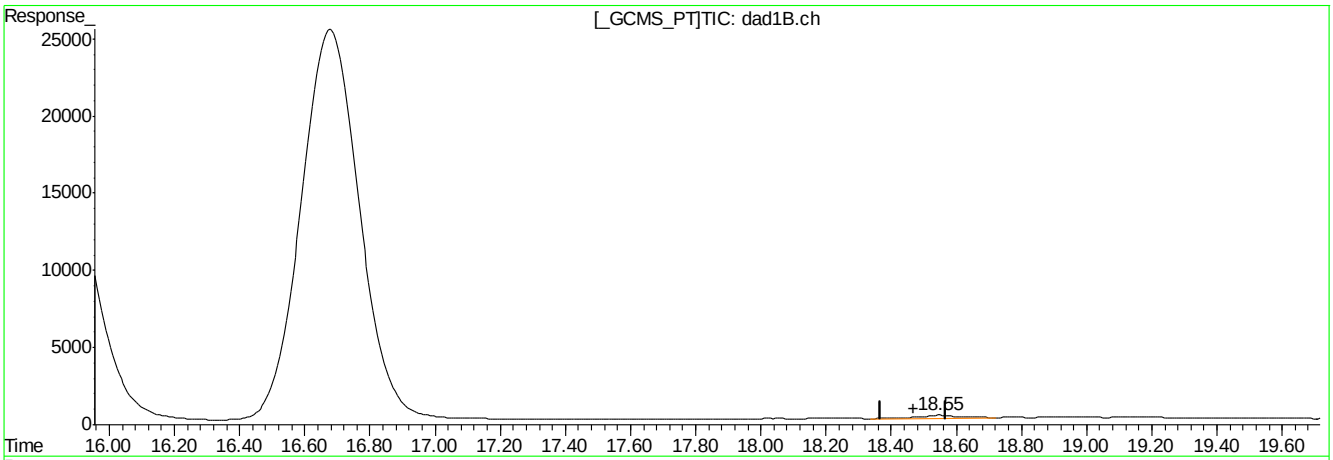
Sample Number: GBB2196-CC2188
Lab FileID: BB072821.D
Injection Time: 05/04/22 03:59
Method: SW846 8330B
Analyst approved: 05/05/22 09:14 Fouad Sekkar
Supervisor approved: 05/06/22 10:44 Naresh Jiawan

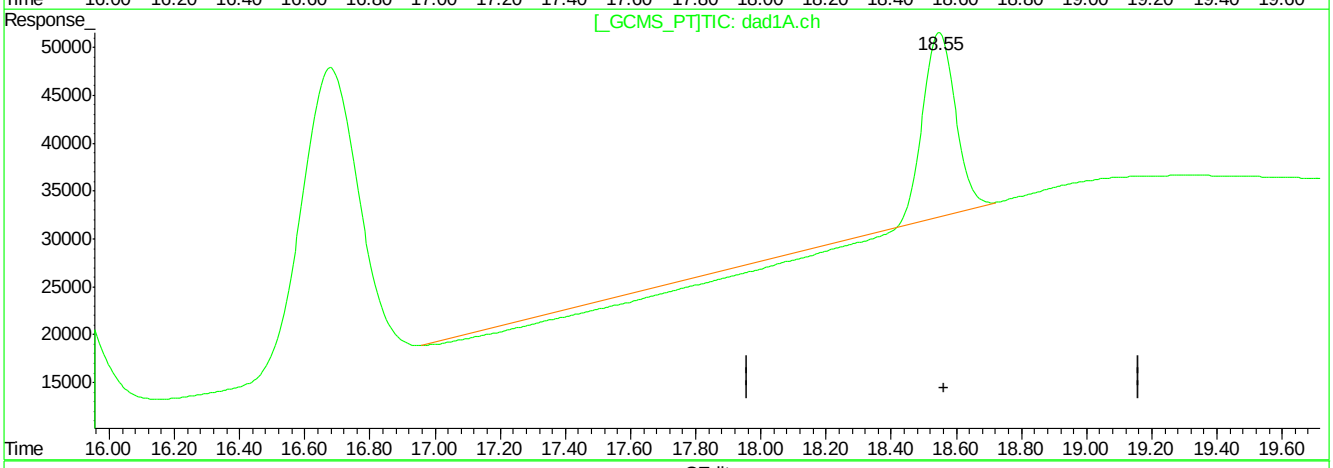
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.55	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1A.ch
Acq On : 04-May-2022, 03:59:38 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 8:28 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.55min 0.000ppb

response 18110

(21) PETN #2

18.55min 475.682ppb

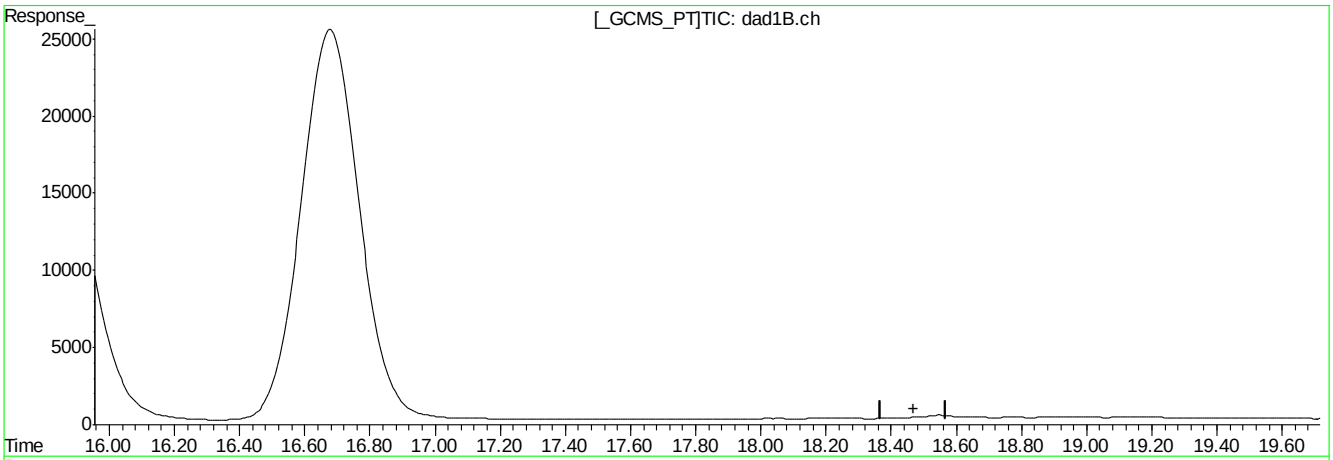
response 711103

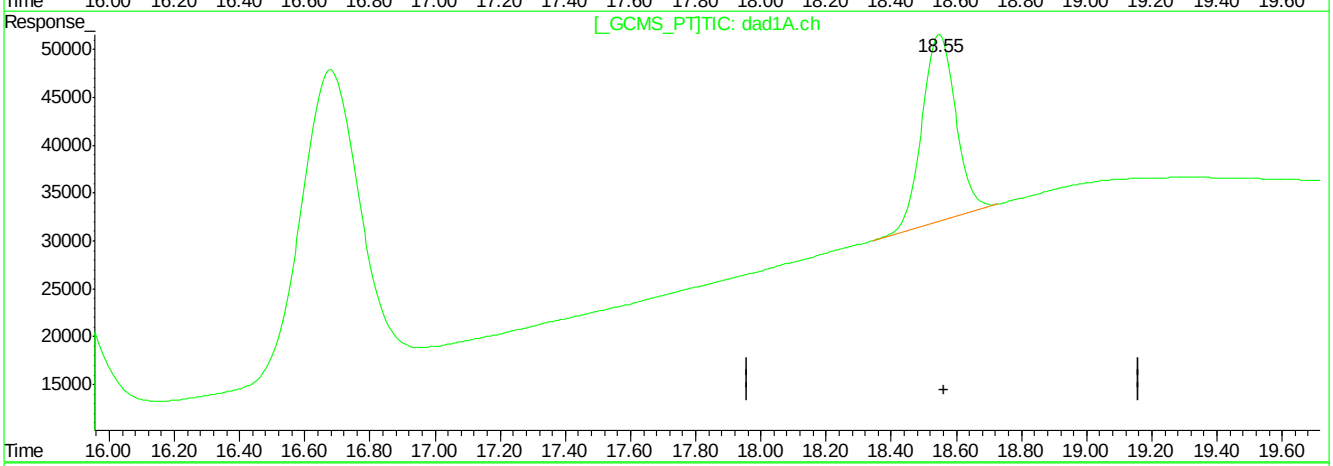
(+) = Expected Retention Time
BB072821.D BBB2167_041522.M Wed May 04 08:28:35 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2196\BB072821.D\dad1A.ch
Acq On : 04-May-2022, 03:59:38 Operator: FOUADS
Sample : cc2188-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: May 4 8:28 2022 Quant Results File: BBB2167_041522.RES

Method : C:\MSDCHEM\2\METHODS\BBB2167_041522.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 10:49:06 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.55min 941.736ppb m

response 1407814

(+) = Expected Retention Time
BB072821.D BBB2167_041522.M Wed May 04 08:28:46 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/27/22 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29:32 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.50	14.49	99550	301285	18.716m	27.744m#
	Spiked Amount 500.000	Range 70 - 136		Recovery =		3.74%#	5.55%#
	Target Compounds						
1)	TNX	4.85	4.85	72019	72019	8.685	8.659
2)	HMX	5.34	5.34	77711	77711	23.538	23.538
3)	DNX	5.51	5.51	122285	121939	18.285m	18.227m
4)	MNX	6.72	6.72	136291	136291	23.320	23.320
5)	1,3,5-Trinitrobe	7.63	7.63	179837	179837	20.416	20.416
6)	RDX	8.05	8.05	88598	88598	19.785	19.781
7)	1,3-Dinitrobenze	9.98	9.98	251780	253141	20.474	26.885m
8)	Nitrobenzene	10.96	10.97	142134	148559	18.099	17.623
9)	2,4,6-Trinitroto	11.87	11.86	181541	242214	20.960	19.384m
10)	Nitroglycerin	0.00	12.68	0	54341	N.D.	15.494m#
11)	Tetryl	13.35	13.37	149269	335961	21.124	26.152m
13)	2,6-Dinitrotolue	14.72	14.61	129657	205066	21.270m	21.215m
14)	2,4-Dinitrotolue	15.37	15.32	235141	270631	21.068	33.118 #
15)	3,5-Dinitroanili	16.24	16.24	194111	423010	20.390	26.244
16)	o-Nitrotoluene	17.00	16.90	90069	233356	18.720	29.836 #
17)	p-Nitrotoluene	18.10	18.14	226755	391461	44.052	38.884m
18)	4-Amino-2,6-Dini	18.10	18.14	226755	379566	44.052	37.702m
19)	m-Nitrotoluene	19.24	19.26	107265	196971	19.902	21.415m
20)	2-Amino-4,6-Dini	19.98	20.05f	183554	462723	21.276	36.142m#
21)	PETN	0.00	22.06f	0	254116	N.D.	71.089m#

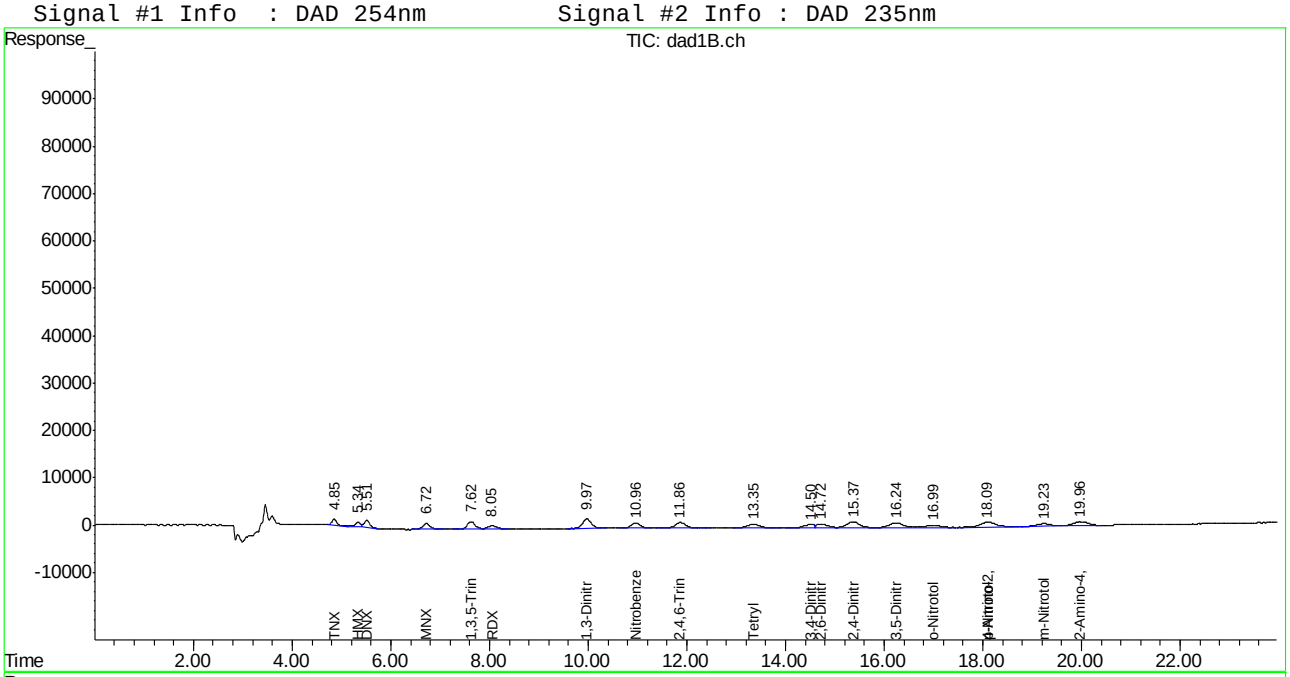
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG623369.D GGG3094_012422.M Thu Jan 27 12:53:39 2022 Page 1

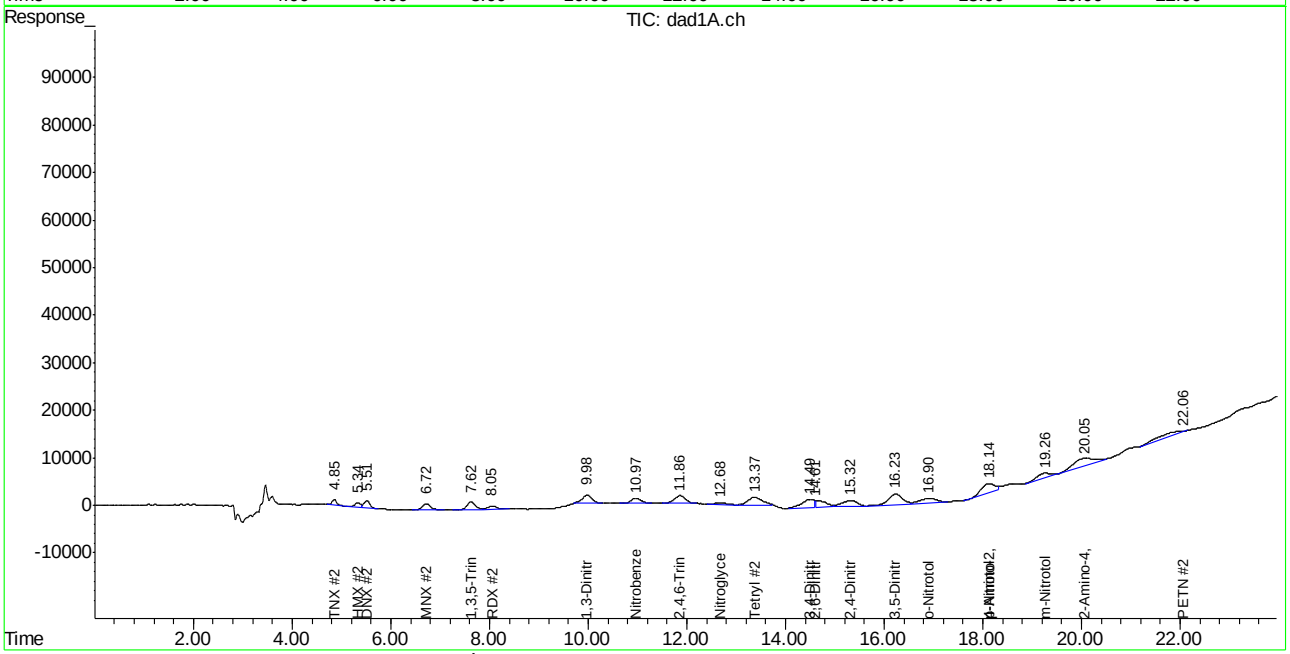
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:45 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

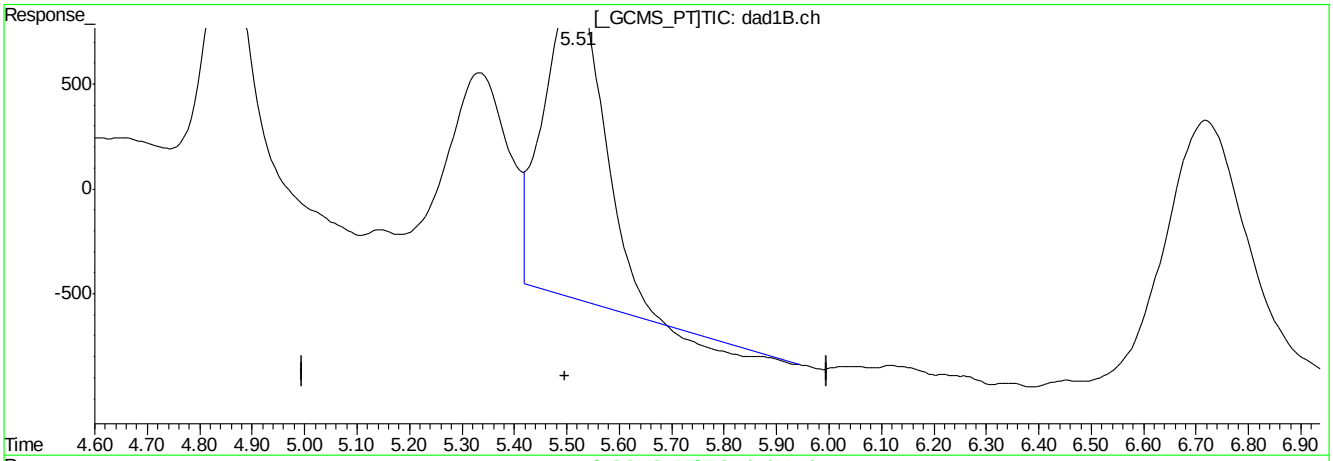
Sample Number: GGG3094-IC3094
Lab FileID: GG623369.D
Injection Time: 01/24/22 12:52
Method: SW846 8330A
Analyst approved: 01/27/22 12:56 James Boone
Supervisor approved: 01/27/22 13:01 Naresh Jiawan

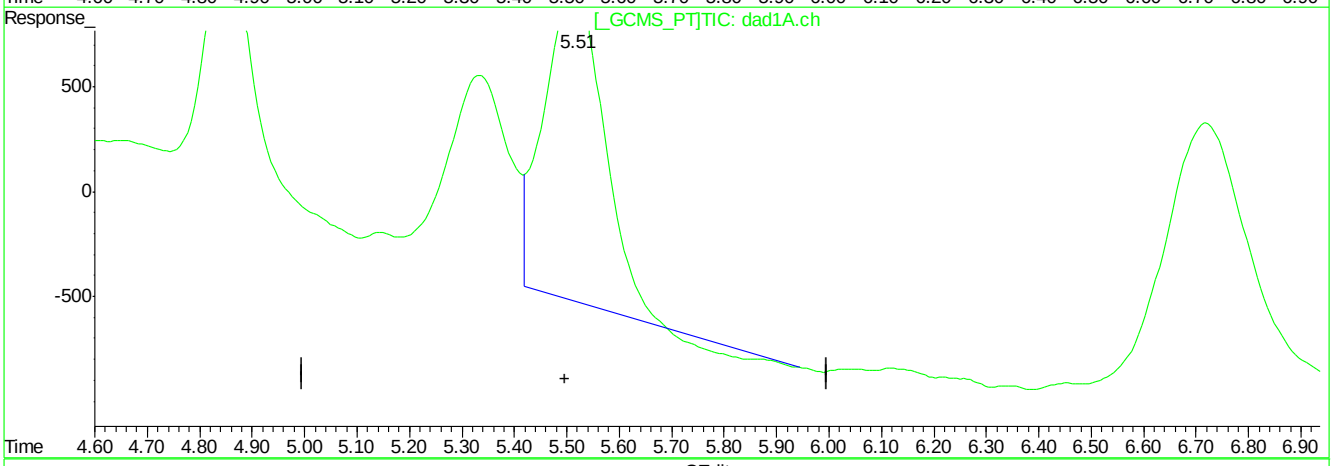
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.51	Poor instrument integration
DNX		2	5.51	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.98	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.86	Poor instrument integration
Nitroglycerine	55-63-0	2	12.68	Poor instrument integration
Tetryl	479-45-8	2	13.37	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	14.49	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	14.50	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	14.61	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	14.72	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	18.14	Poor instrument integration
p-Nitrotoluene	99-99-0	2	18.14	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.26	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	20.05	Poor instrument integration
PETN	78-11-5	2	22.06	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.52min 17.520ppb

response 117170

(3) DNX #2

5.52min 17.514ppb

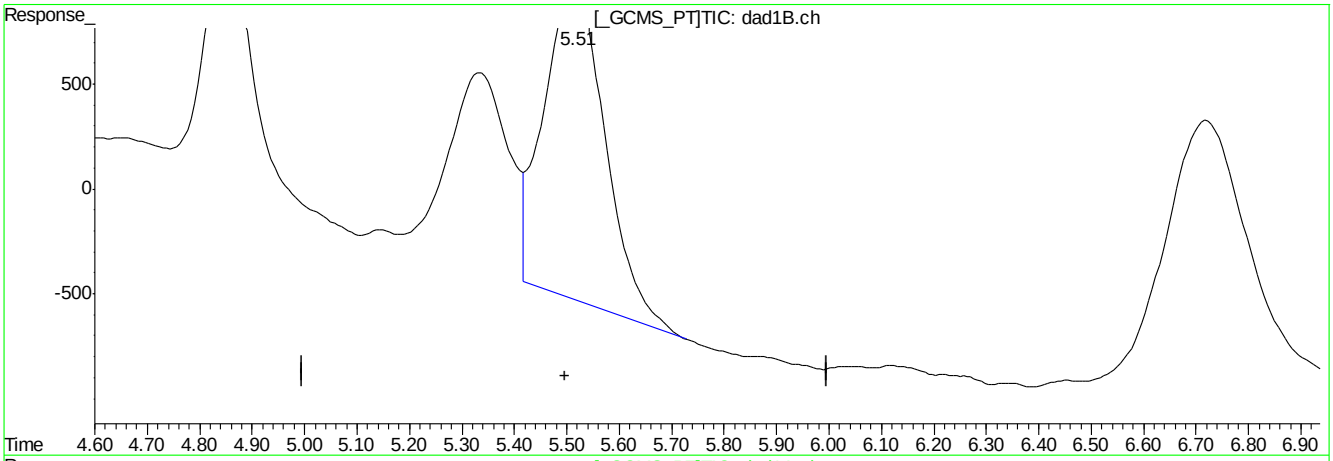
response 117170

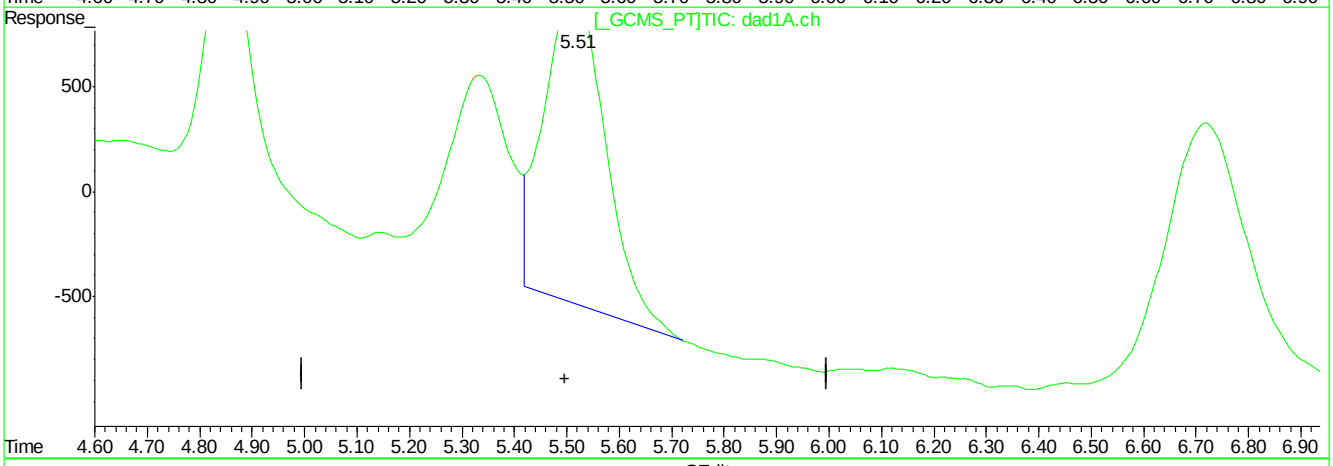
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:43:02 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.51min 18.285ppb m

response 122285

(3) DNX #2

5.51min 18.227ppb m

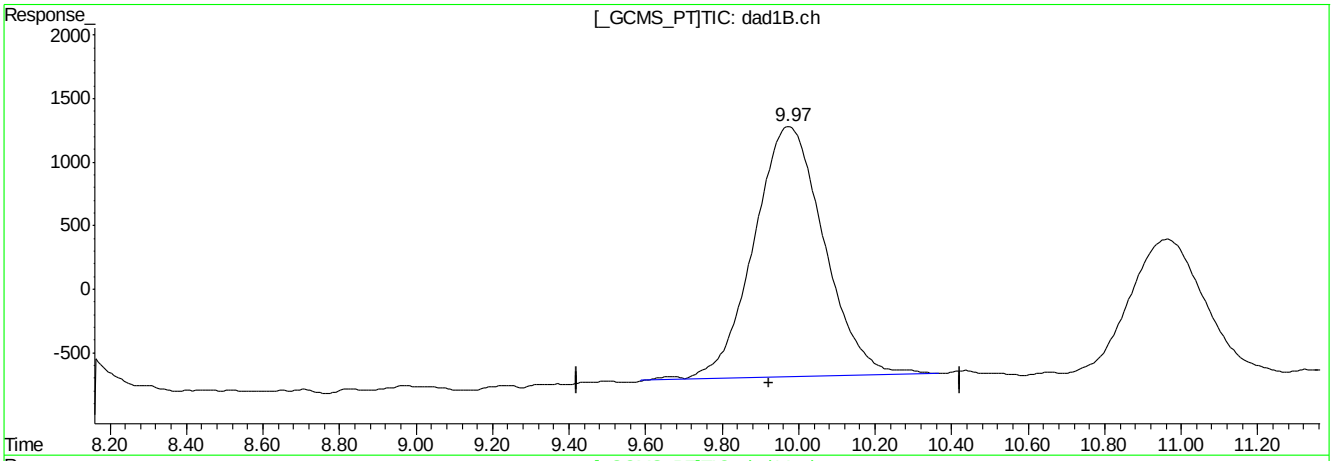
response 121939

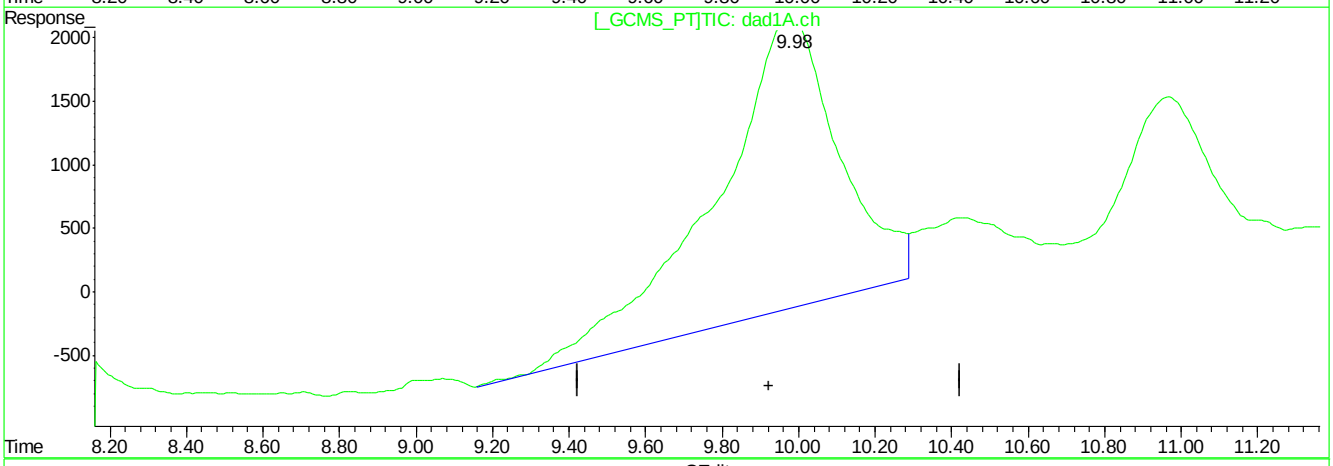
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:43:08 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.98min 20.474ppb

response 251780

(7) 1,3-Dinitrobenzene #2

9.98min 54.062ppb

response 509025

(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:43:24 2022

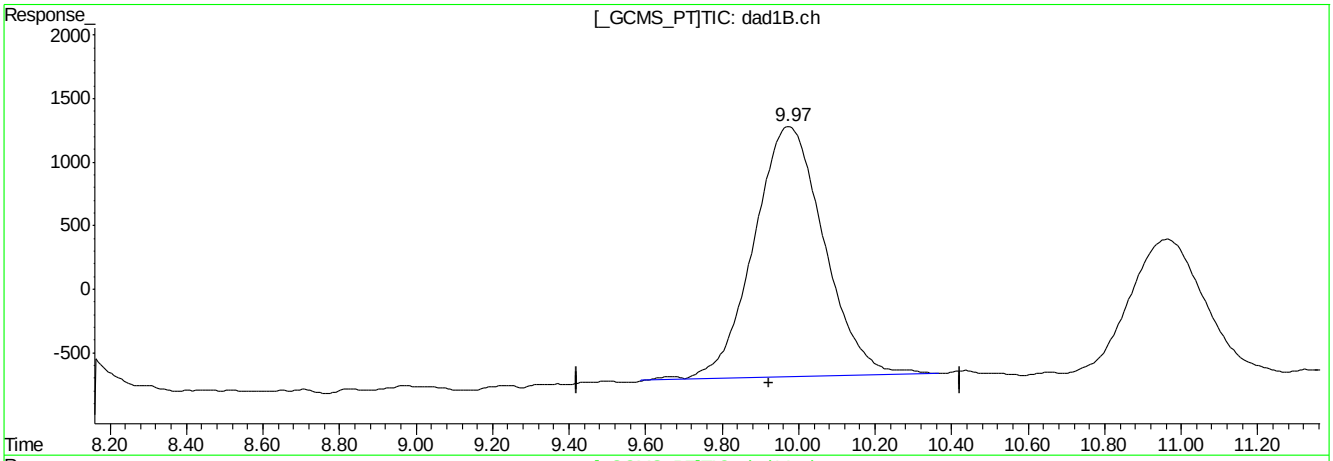
GG623369.D edits: 1,3-Dinitrobenzene

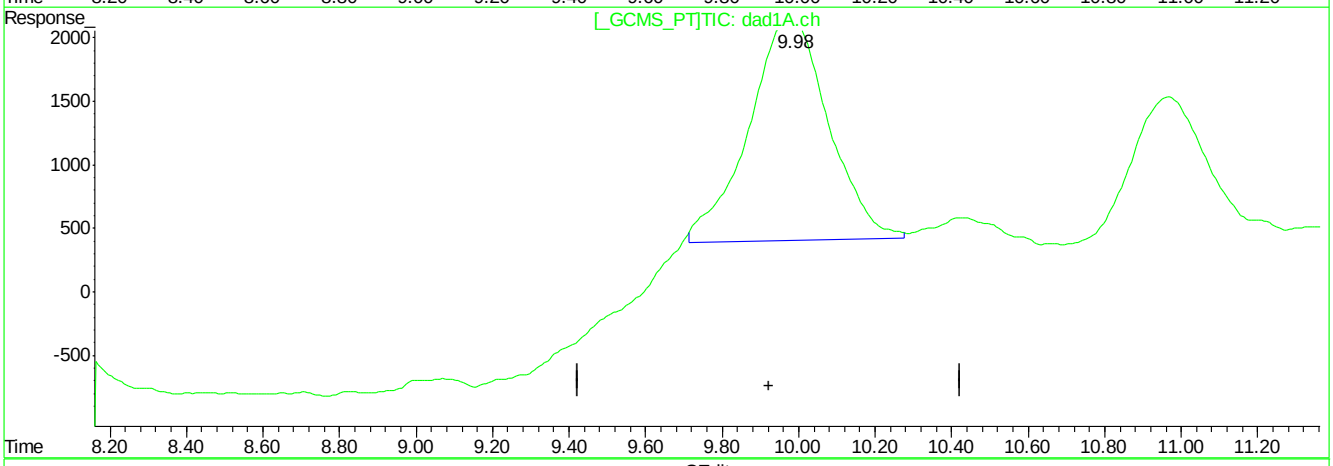
FA95241

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.98min 20.474ppb

response 251780

(7) 1,3-Dinitrobenzene #2

9.98min 26.885ppb m

response 253141

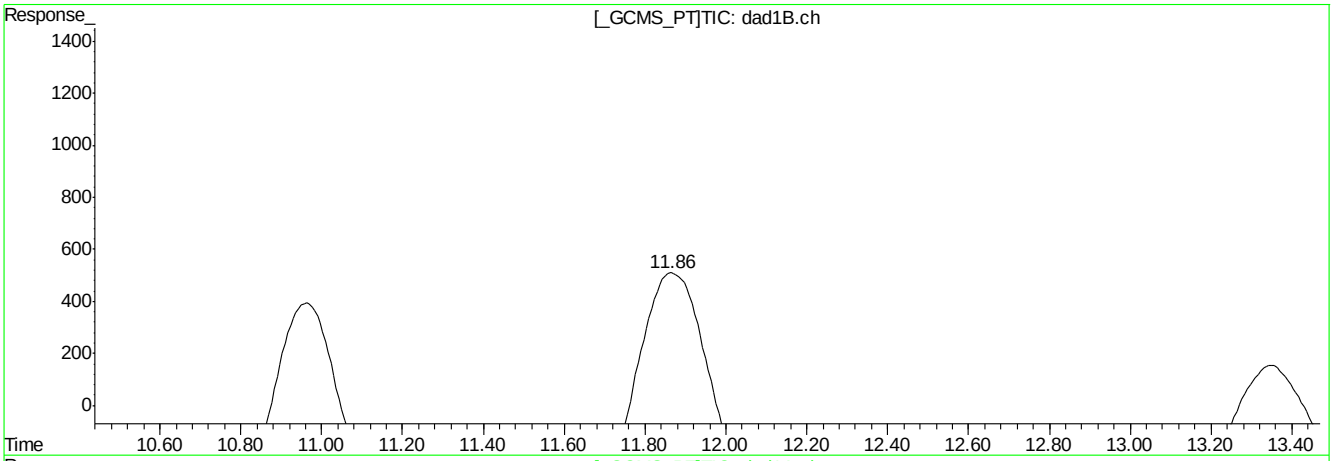
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:43:30 2022

GG623369.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(9) 2,4,6-Trinitrotoluene

11.87min 20.960ppb

response 181541

(9) 2,4,6-Trinitrotoluene #2

11.86min 19.384ppb m

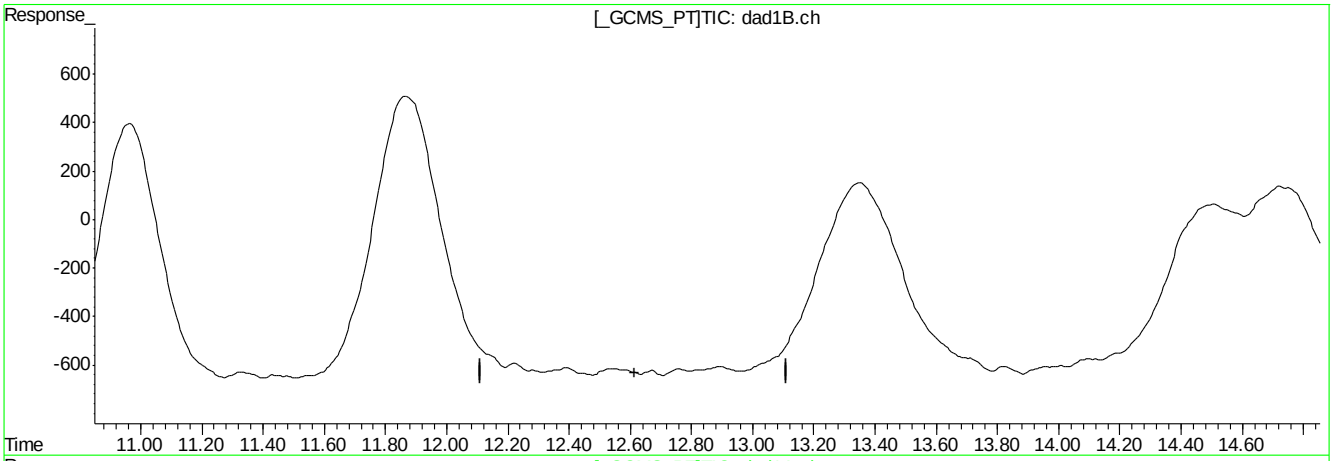
response 242214

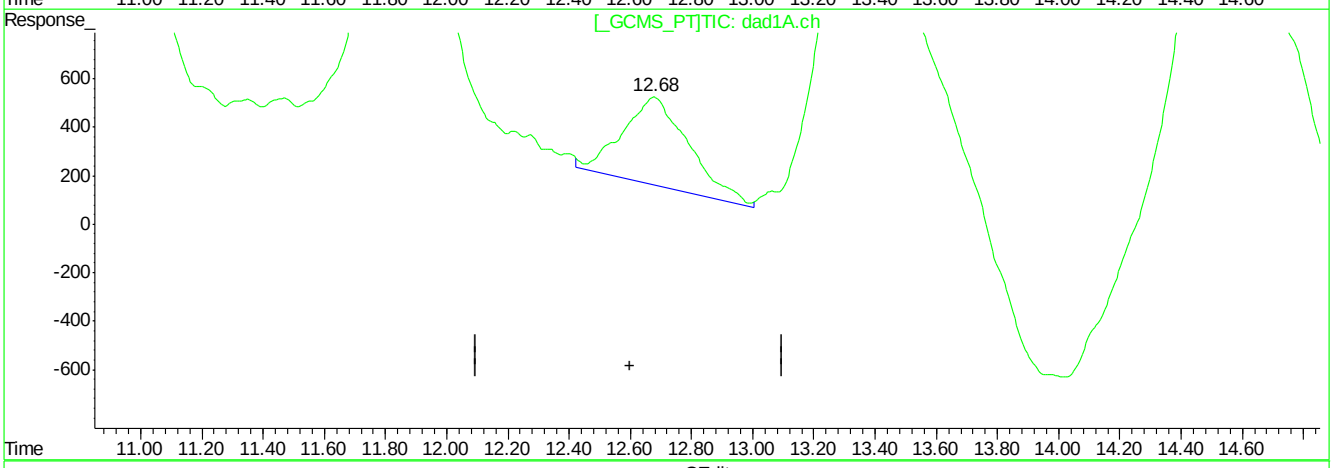
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:43:39 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.68min 15.494ppb m

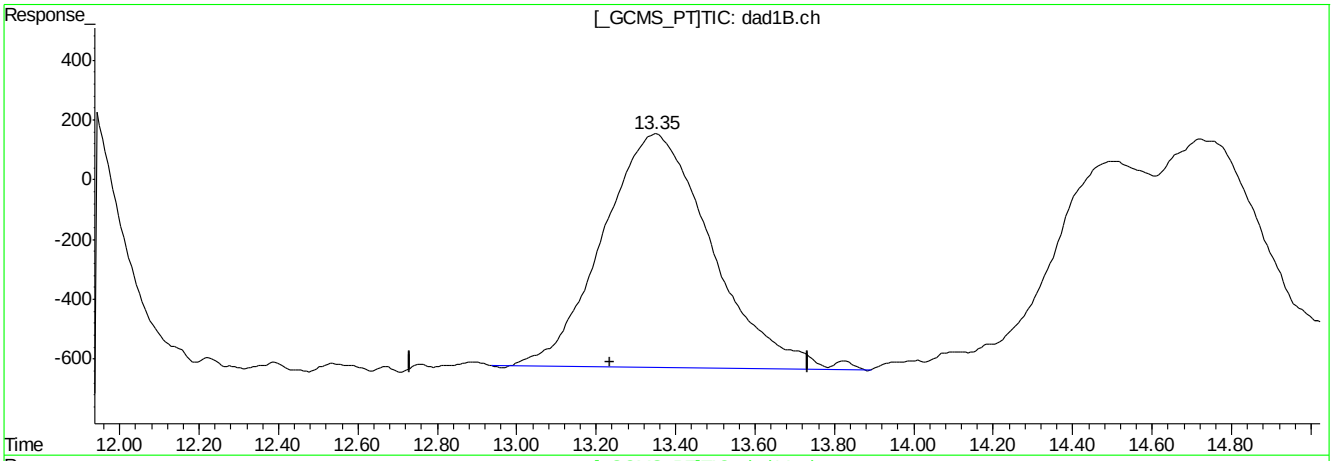
response 54341

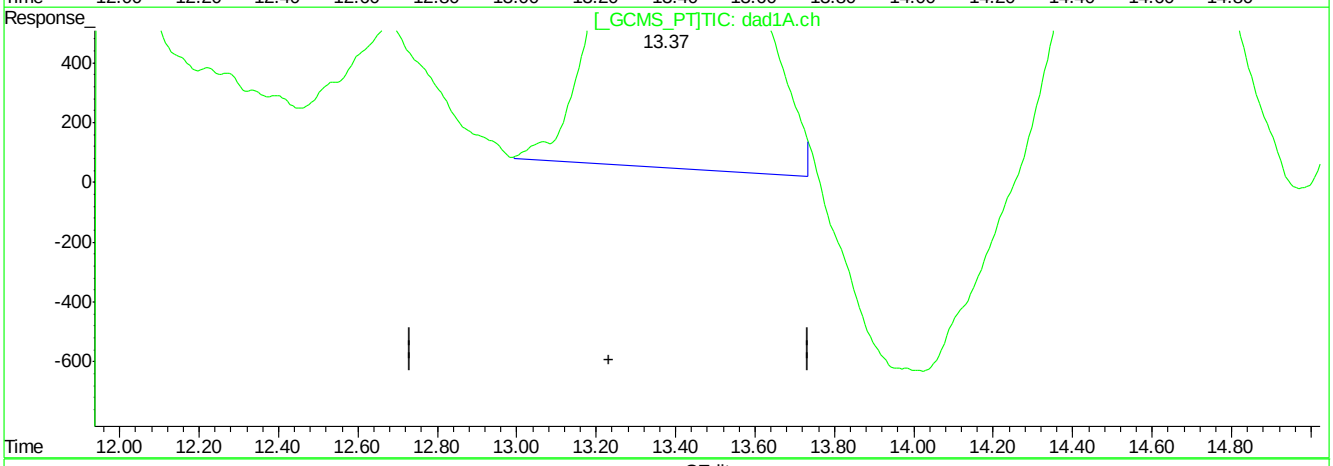
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:43:47 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

13.35min 21.124ppb

response 149269

(11) Tetryl #2

13.37min 26.152ppb m

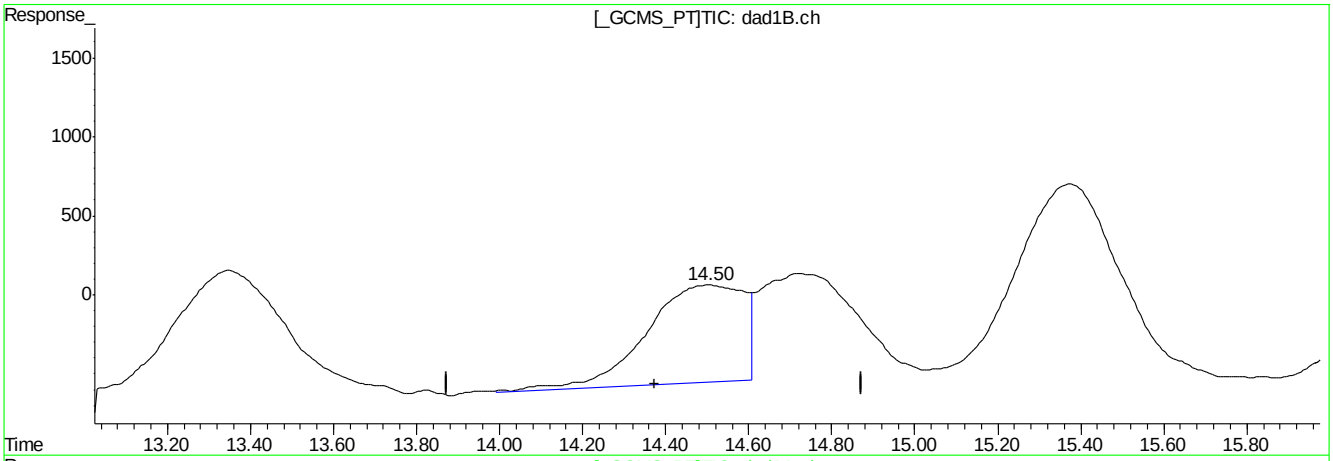
response 335961

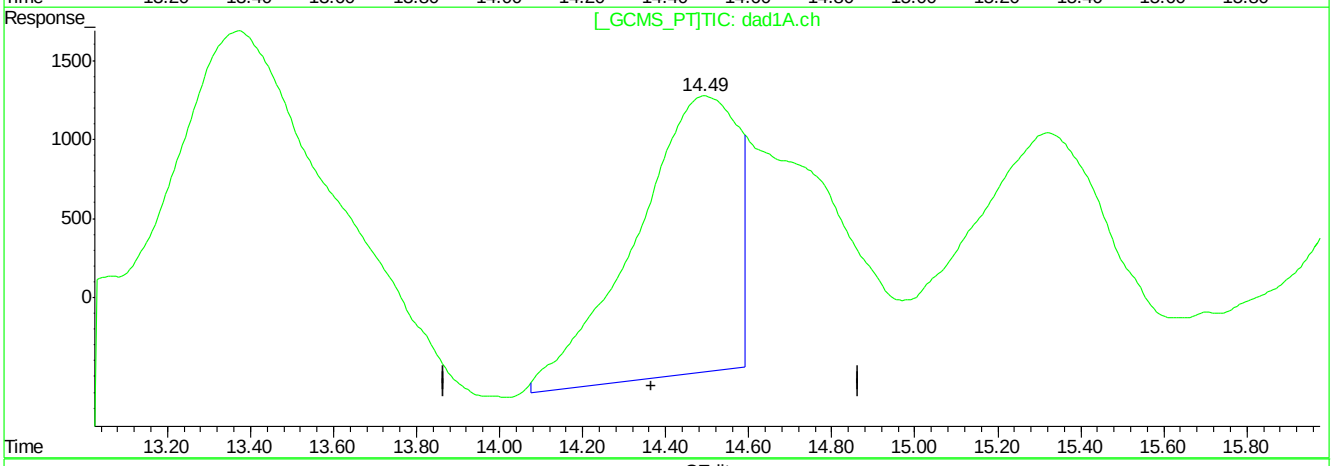
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:43:54 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

14.50min 18.716ppb m

response 99550

(12) 3,4-Dinitrotoluene #2 (S)

14.49min 27.744ppb m

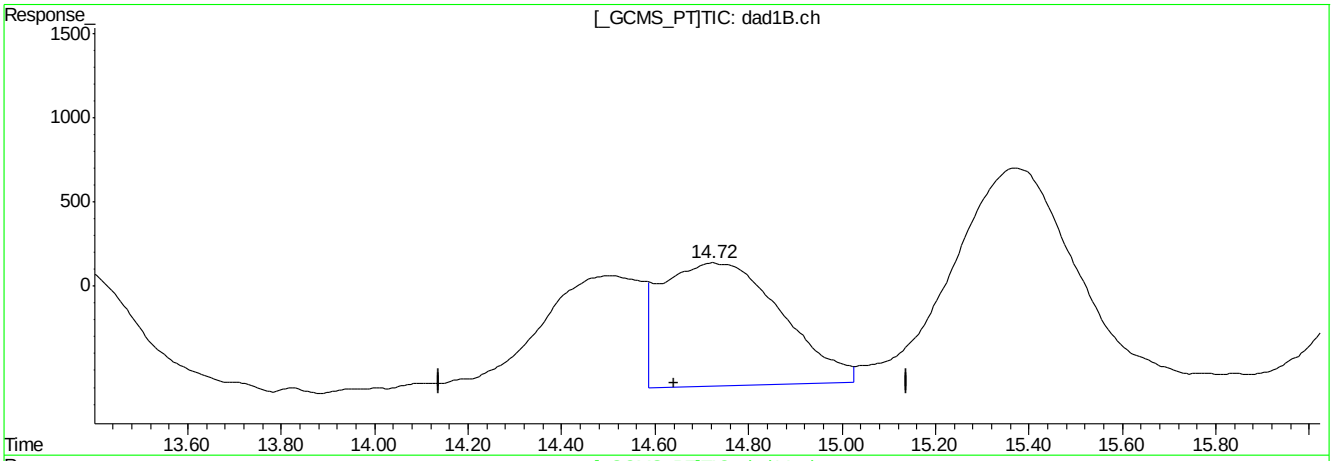
response 301285

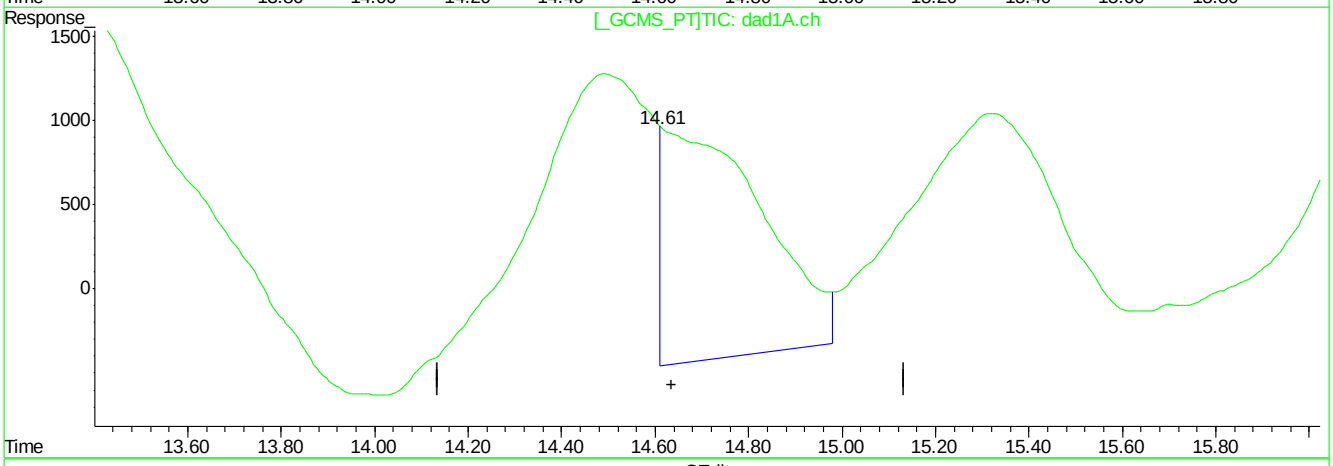
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:44:10 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(13) 2,6-Dinitrotoluene

14.72min 21.270ppb m

response 129657

(13) 2,6-Dinitrotoluene #2

14.61min 21.215ppb m

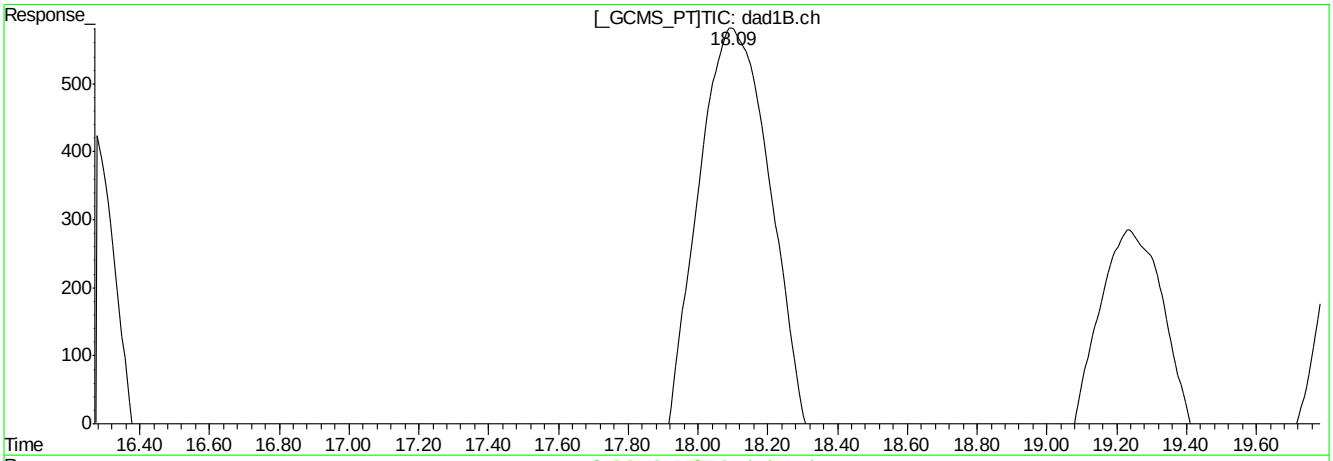
response 205066

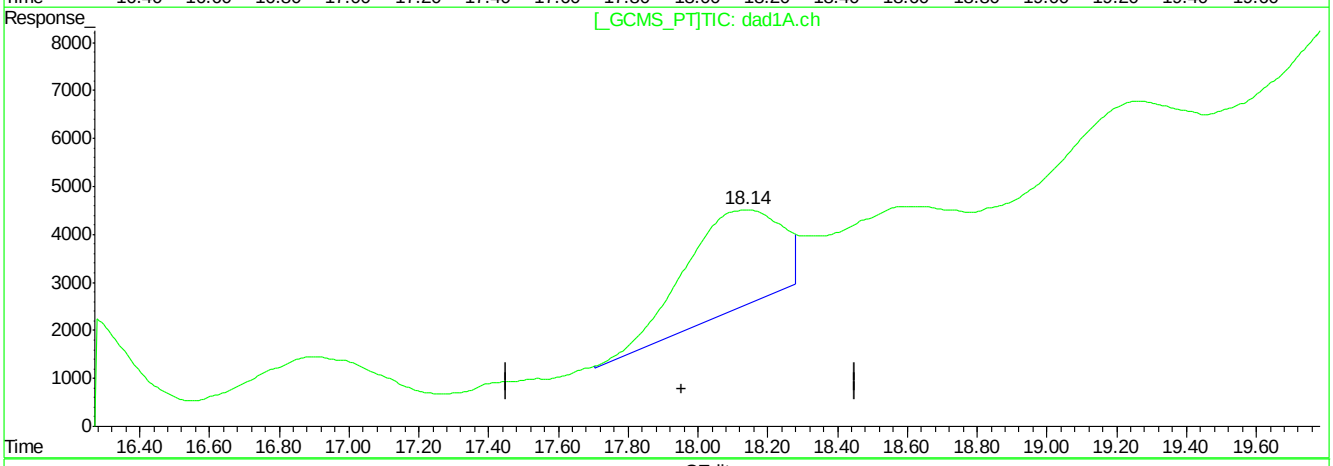
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:44:21 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

18.10min 44.052ppb

response 226755

(17) p-Nitrotoluene #2

18.14min 38.884ppb m

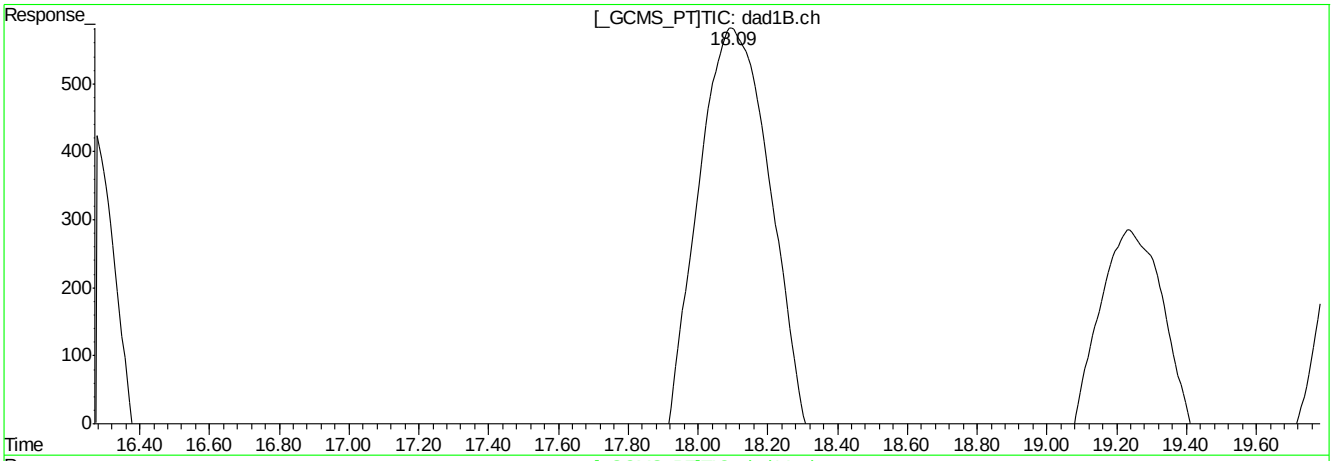
response 391461

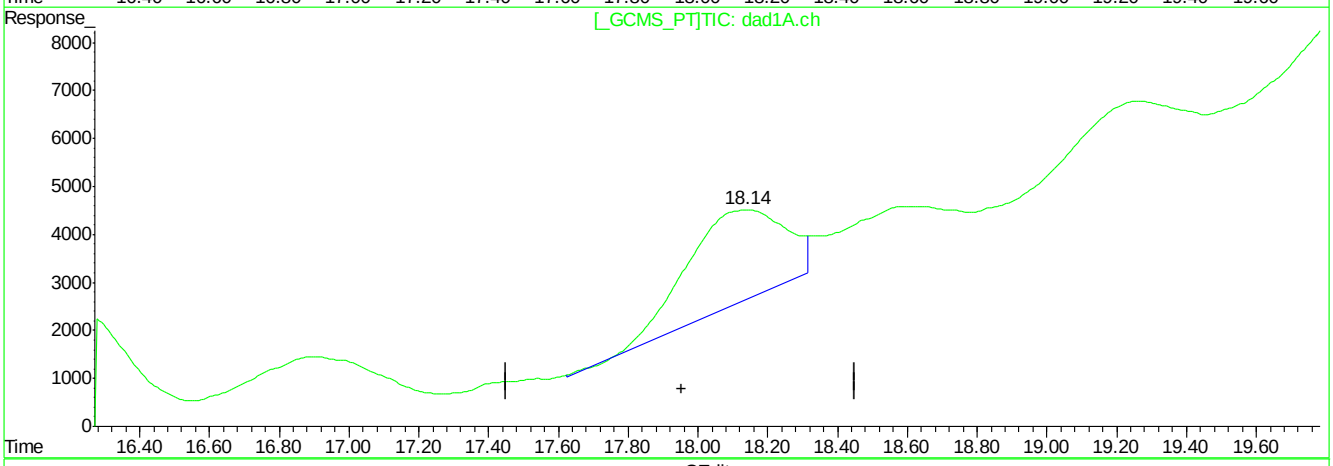
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:44:49 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

18.10min 44.052ppb

response 226755

(18) 4-Amino-2,6-Dinitrotoluene #2

18.14min 37.702ppb m

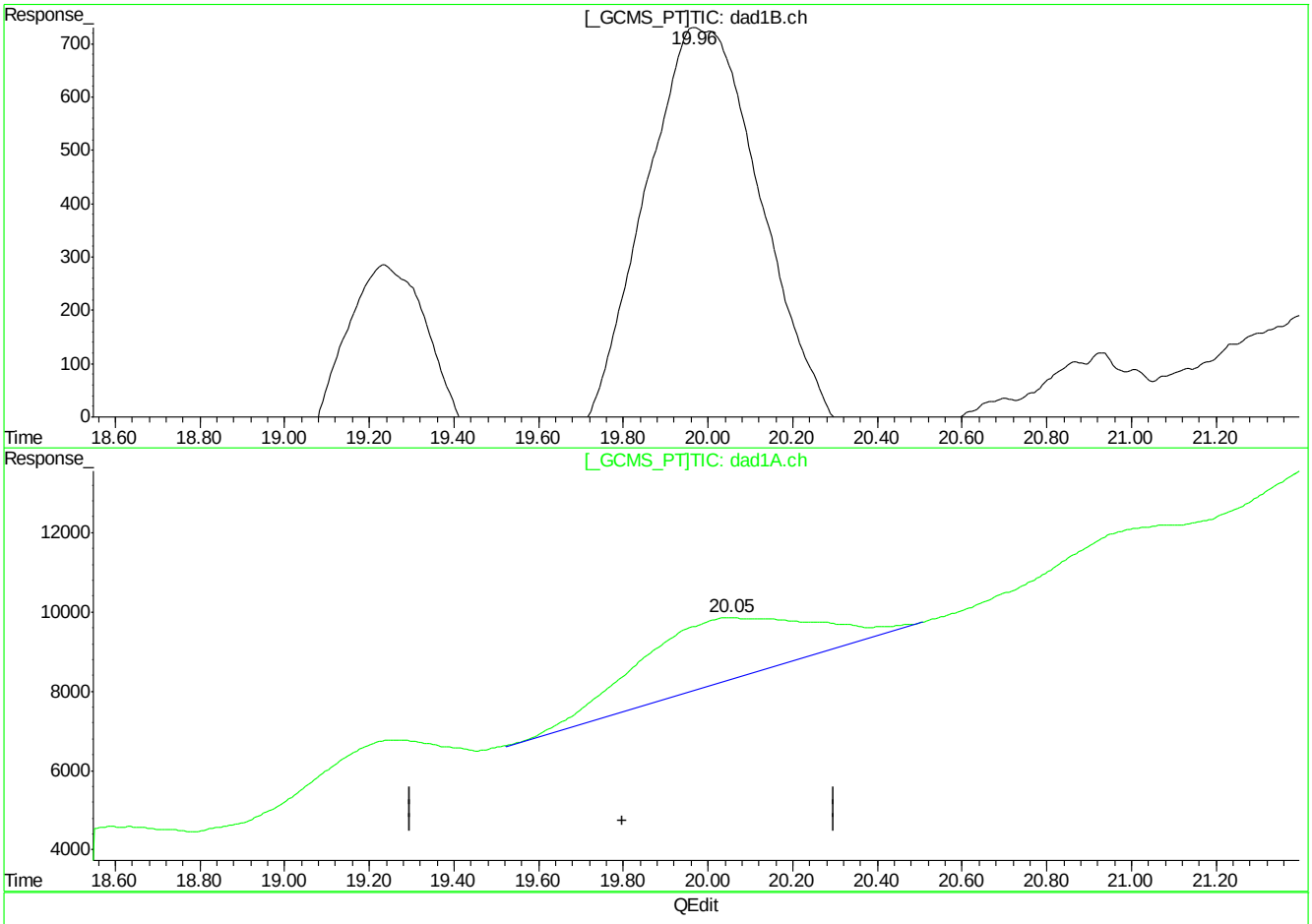
response 379566

(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:45:04 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(20) 2-Amino-4,6-Dinitrotoluene

19.98min 21.276ppb

response 183554

(20) 2-Amino-4,6-Dinitrotoluene #2

20.05min 36.142ppb m

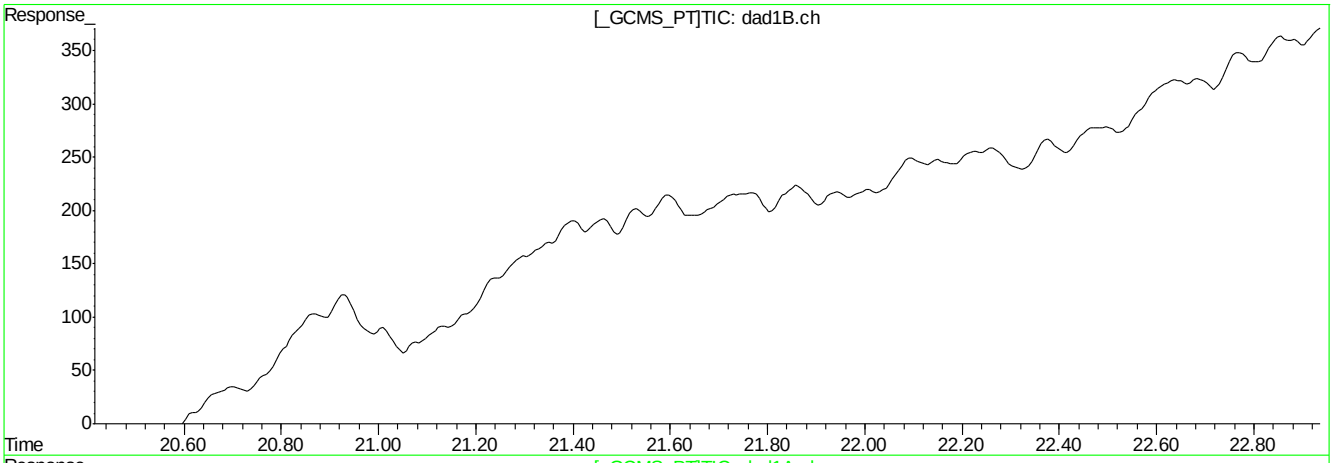
response 462723

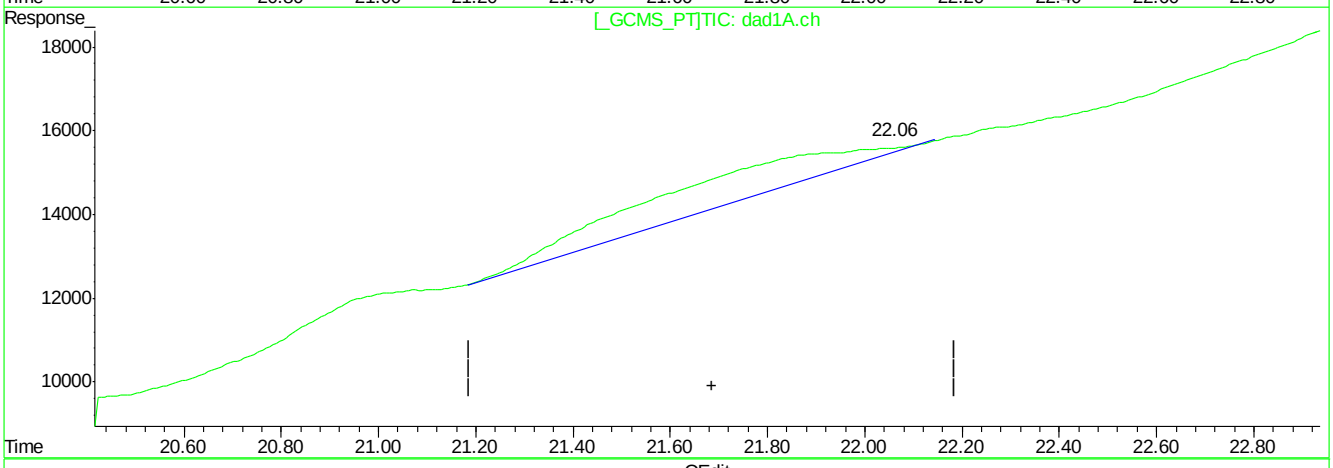
(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:45:15 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623369.D\dad1A.ch
Acq On : 24-Jan-2022, 12:52:12 Operator: jamesb
Sample : ic3094-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.06min 71.089ppb m

response 254116

(+) = Expected Retention Time
GG623369.D GGG3094_012422.M Thu Jan 27 11:45:24 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/27/22 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29:33 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.50	14.49	260508	613674	49.023	56.564m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	9.80%#	11.31%#
	Target Compounds						
1)	TNX	4.86	4.86	185036	185036	22.314	22.248
2)	HMX	5.35	5.35	166408	166408	50.404	50.404
3)	DNX	5.52	5.52	319414	319387	47.762m	47.741m
4)	MNX	6.72	6.72	337241	337241	57.704	57.704
5)	1,3,5-Trinitrobe	7.63	7.63	471236	471236	53.498	53.497
6)	RDX	8.05	8.05	219390	219390	48.993	48.981
7)	1,3-Dinitrobenze	9.98	9.98	642837	515962	52.274	54.798m
8)	Nitrobenzene	10.97	10.97	395873	595506	50.411	70.810m#
9)	2,4,6-Trinitroto	11.88	11.88	454472	622419	52.470	49.812m
10)	Nitroglycerin	0.00	12.71	0	195517	N.D.	55.845m#
11)	Tetryl	13.35	13.33	343722	696233	48.643	54.196m
13)	2,6-Dinitrotolue	14.74	14.73	325495	578758	53.397	59.962
14)	2,4-Dinitrotolue	15.38	15.38	566278	284677	50.736	34.836
15)	3,5-Dinitroanili	16.23	16.22	484757	861255	50.920	53.434
16)	o-Nitrotoluene	16.99	17.00	255034	337510	53.005	43.152
17)	p-Nitrotoluene	18.10	18.13	537416	1002432	104.405	99.663
18)	4-Amino-2,6-Dini	18.10	18.13	537416	1002432	104.405	99.663
19)	m-Nitrotoluene	19.25	19.27	272193	466420	50.503	50.709m
20)	2-Amino-4,6-Dini	19.97	19.99	432107	546271	50.087	42.675
21)	PETN	0.00	21.84	0	272731	N.D.	76.310m#

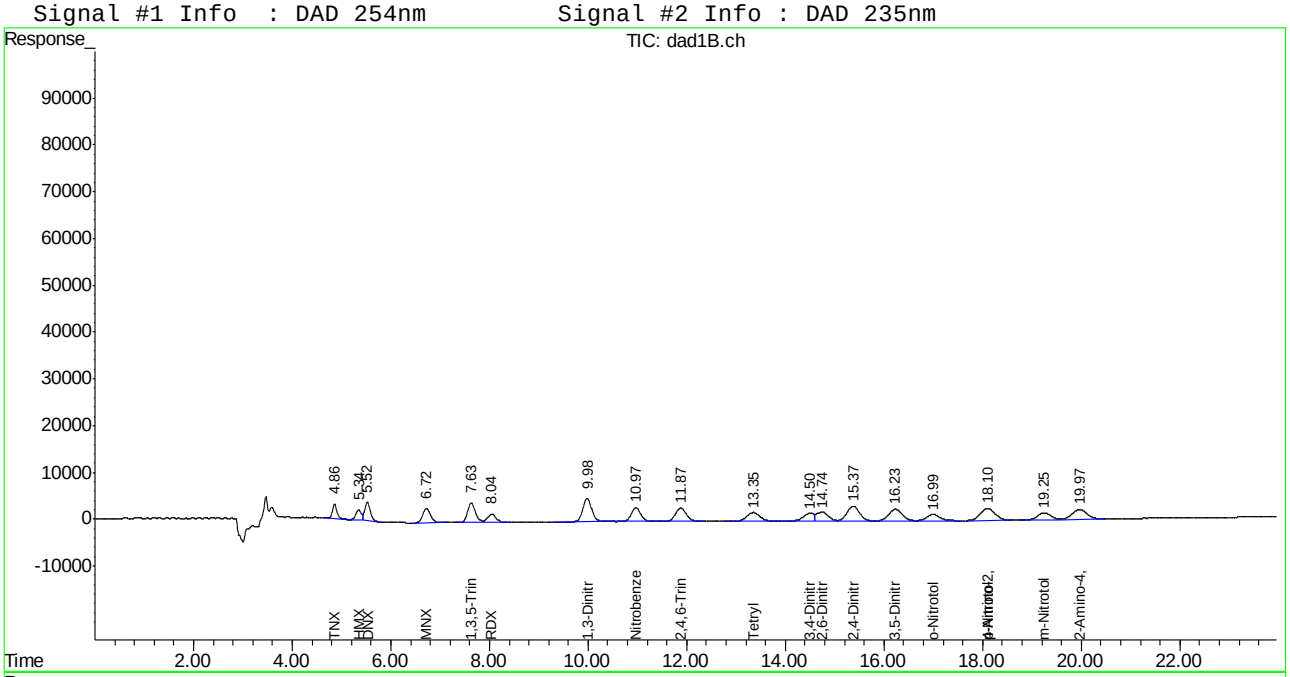
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG623370.D GGG3094_012422.M Thu Jan 27 12:53:40 2022 Page 1

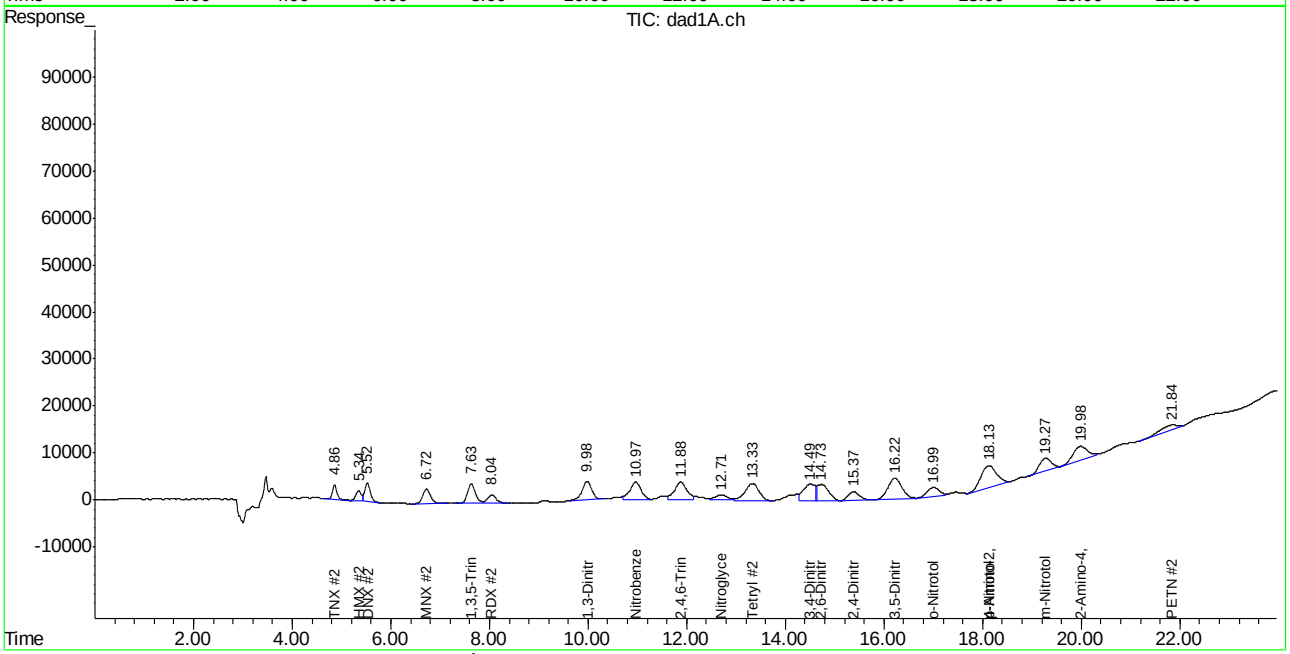
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:41 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

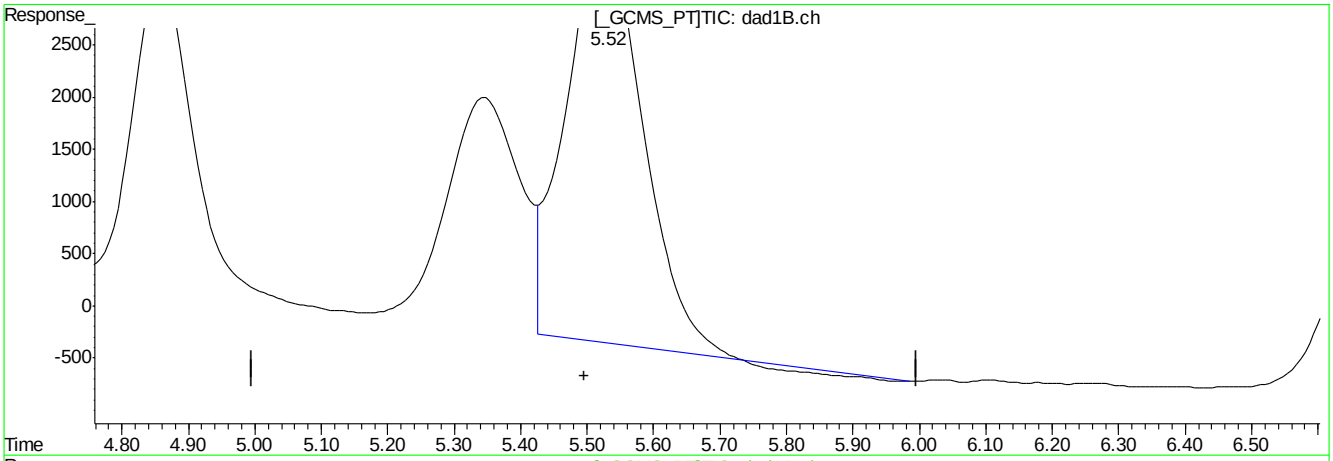
Sample Number: GGG3094-IC3094
Lab FileID: GG623370.D
Injection Time: 01/24/22 13:23
Method: SW846 8330A
Analyst approved: 01/27/22 12:56 James Boone
Supervisor approved: 01/27/22 13:01 Naresh Jiawan

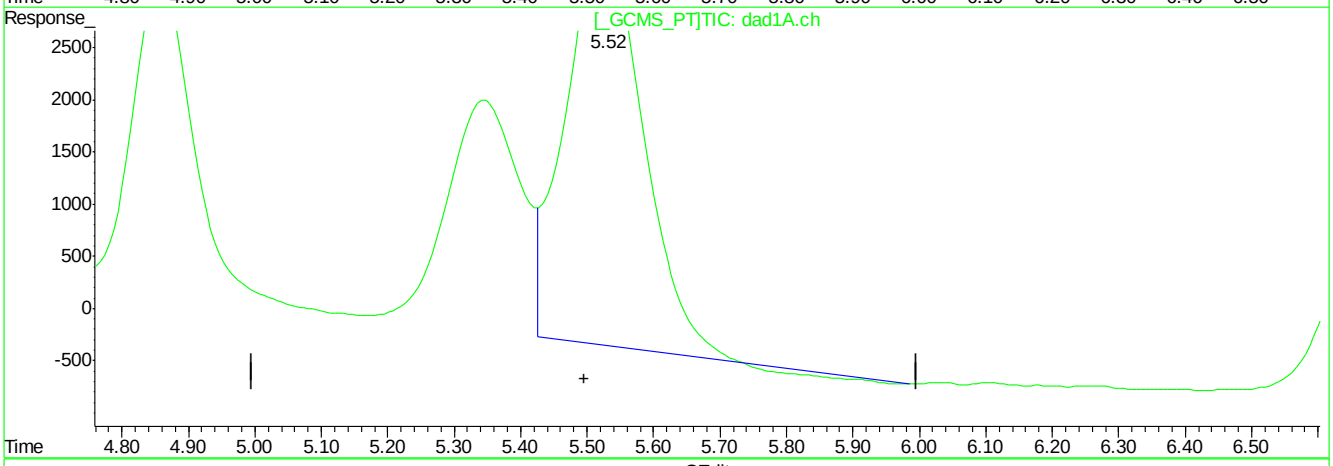
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.52	Poor instrument integration
DNX		2	5.52	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.98	Poor instrument integration
Nitrobenzene	98-95-3	2	10.97	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.88	Poor instrument integration
Nitroglycerine	55-63-0	2	12.71	Poor instrument integration
Tetryl	479-45-8	2	13.33	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	14.49	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.27	Poor instrument integration
PETN	78-11-5	2	21.84	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.53min 46.889ppb

response 313581

(3) DNX #2

5.53min 46.873ppb

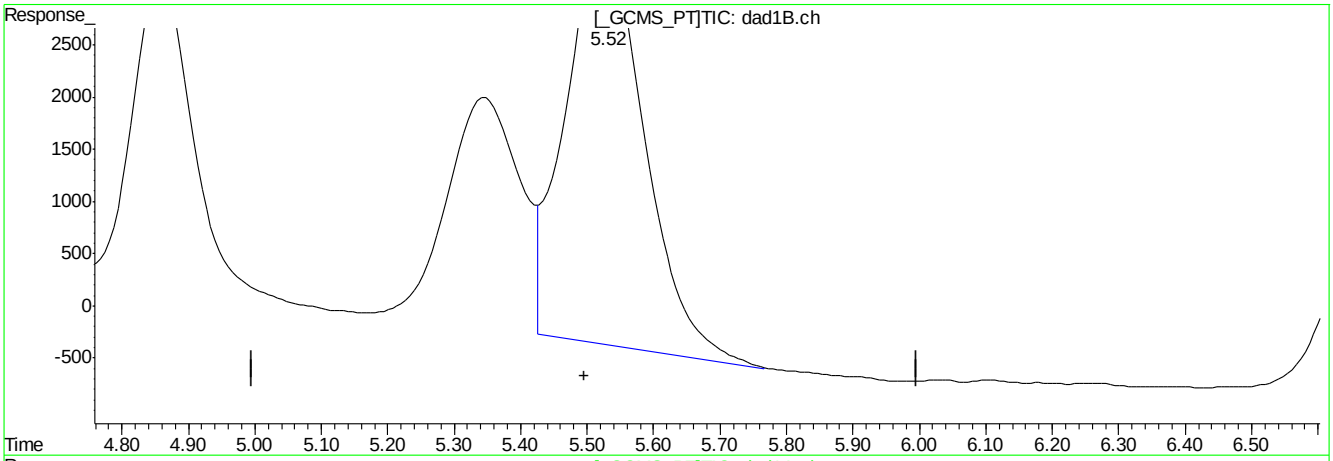
response 313581

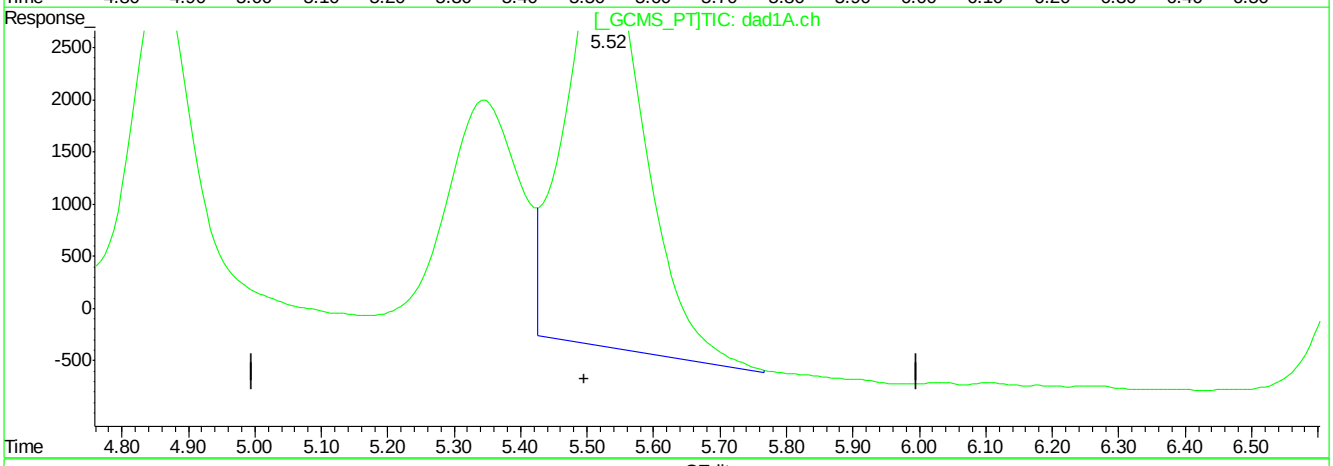
(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:39:10 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.52min 47.762ppb m

response 319414

(3) DNX #2

5.52min 47.741ppb m

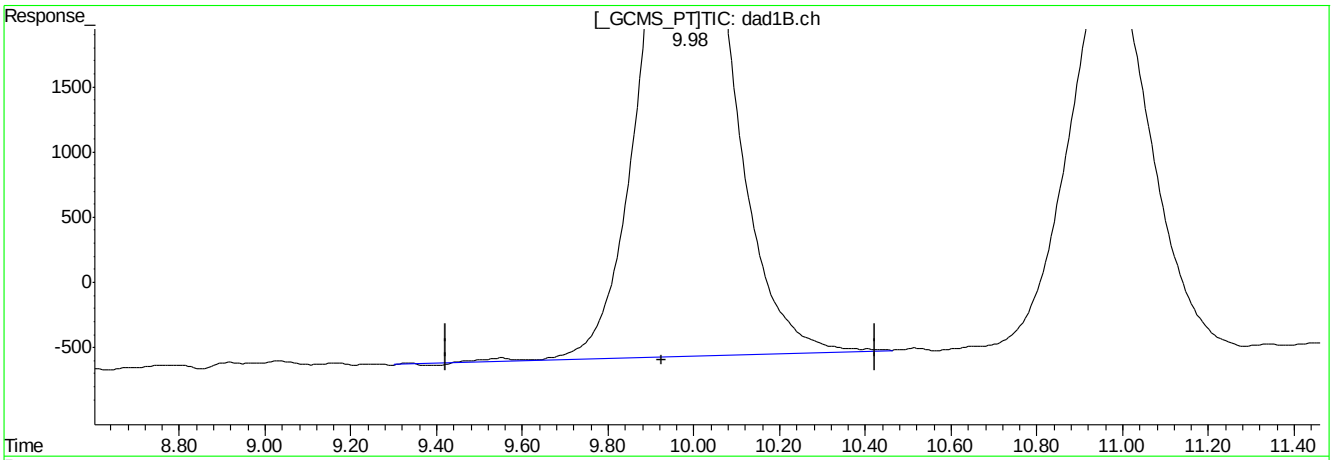
response 319387

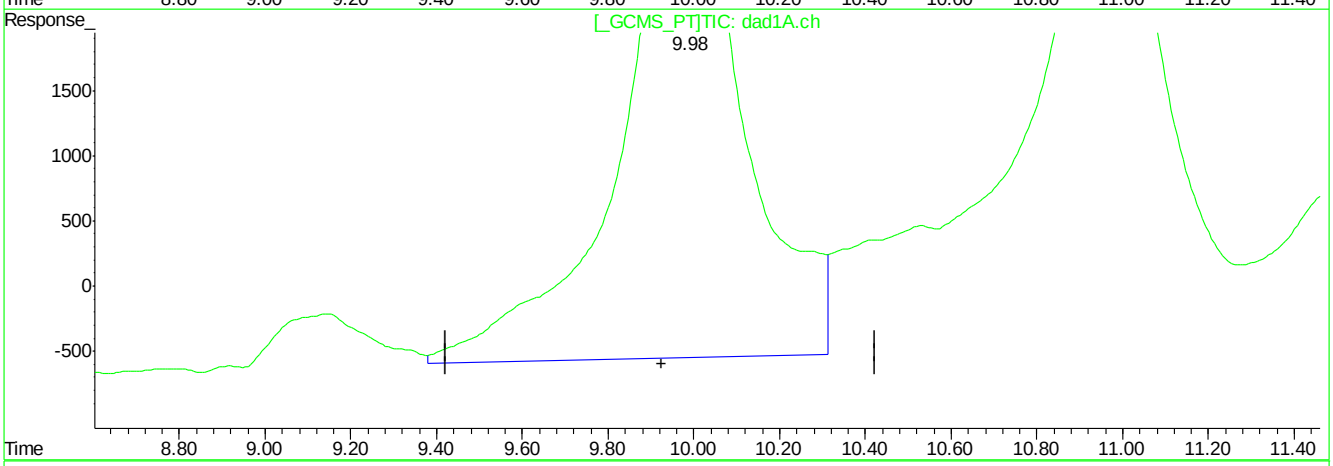
(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:39:20 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.98min 52.274ppb

response 642837

(7) 1,3-Dinitrobenzene #2

9.98min 86.075ppb

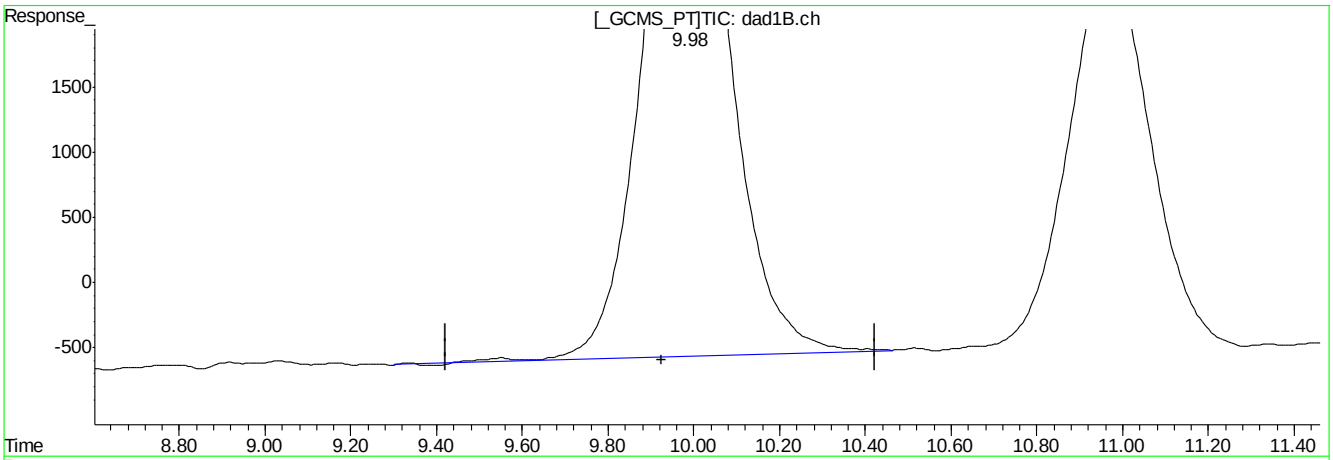
response 810456

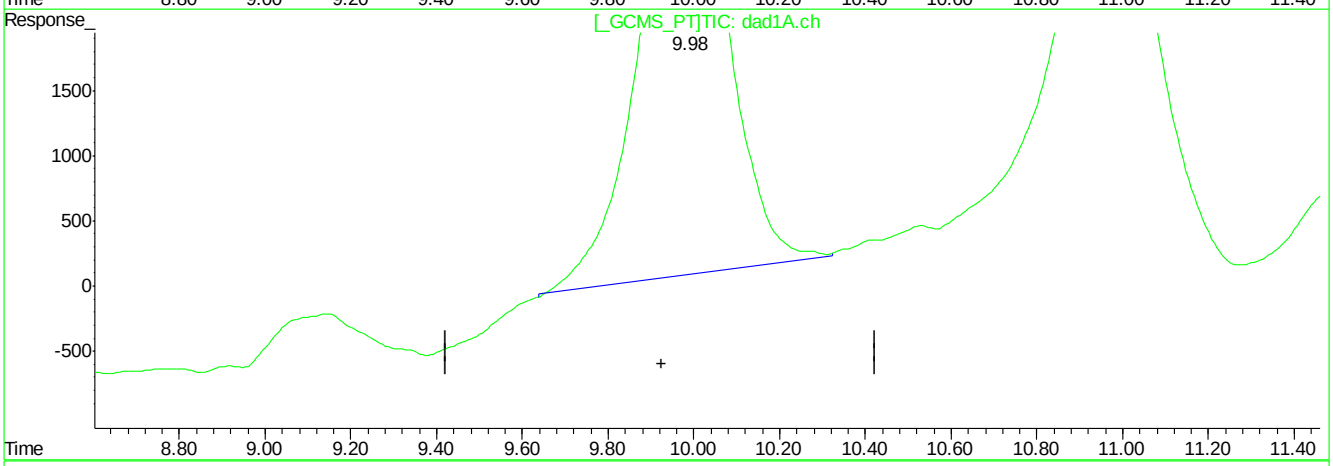
(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:39:40 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.98min 52.274ppb

response 642837

(7) 1,3-Dinitrobenzene #2

9.98min 54.798ppb m

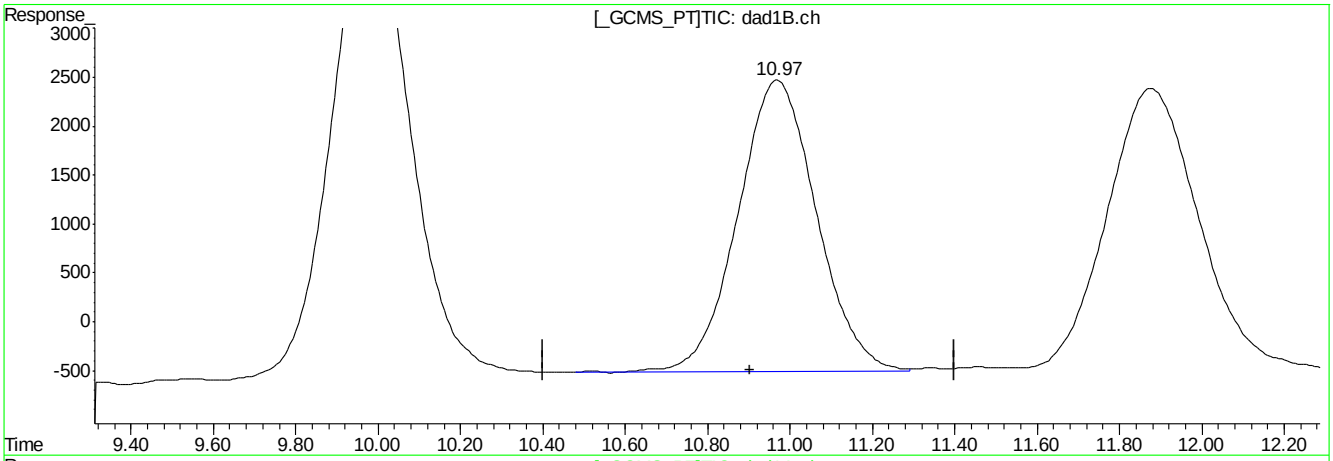
response 515962

(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:39:47 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(8) Nitrobenzene

10.97min 50.411ppb

response 395873

(8) Nitrobenzene #2

10.97min 120.758ppb

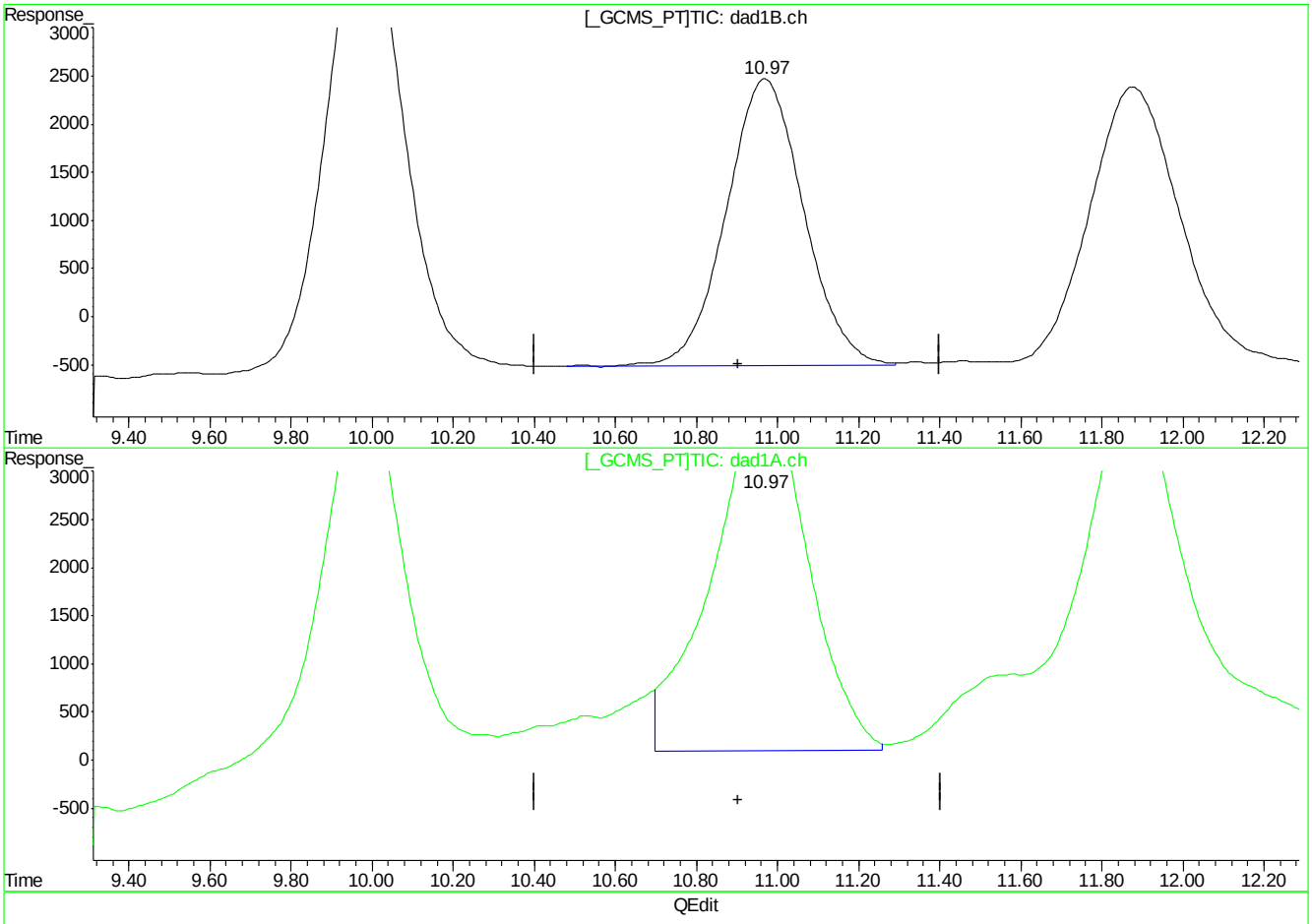
response 1013308

(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:39:53 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(8) Nitrobenzene

10.97min 50.411ppb

response 395873

(8) Nitrobenzene #2

10.97min 70.810ppb m

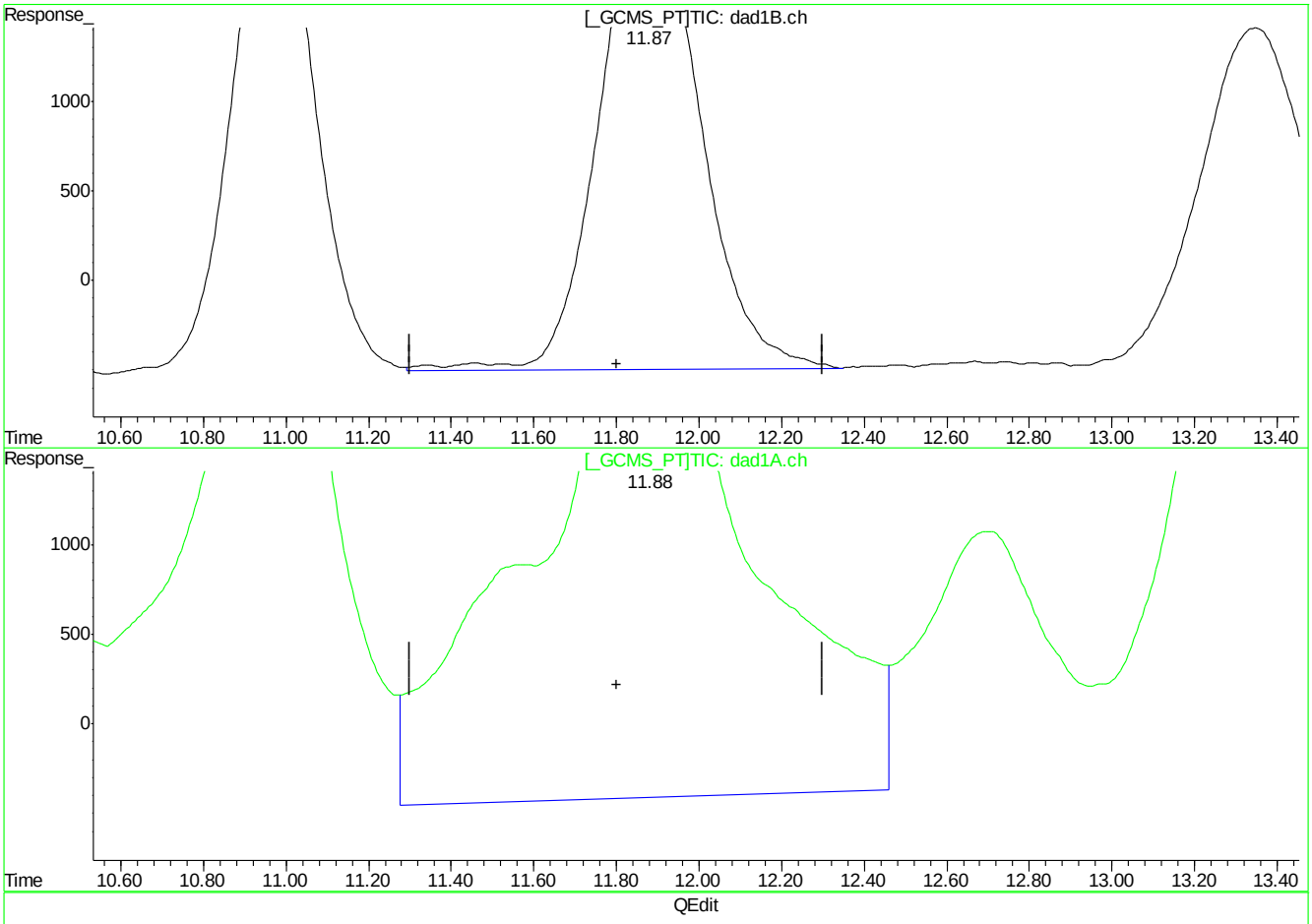
response 595506

(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:40:01 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(9) 2,4,6-Trinitrotoluene

11.88min 52.470ppb

response 454472

(9) 2,4,6-Trinitrotoluene #2

11.88min 95.019ppb

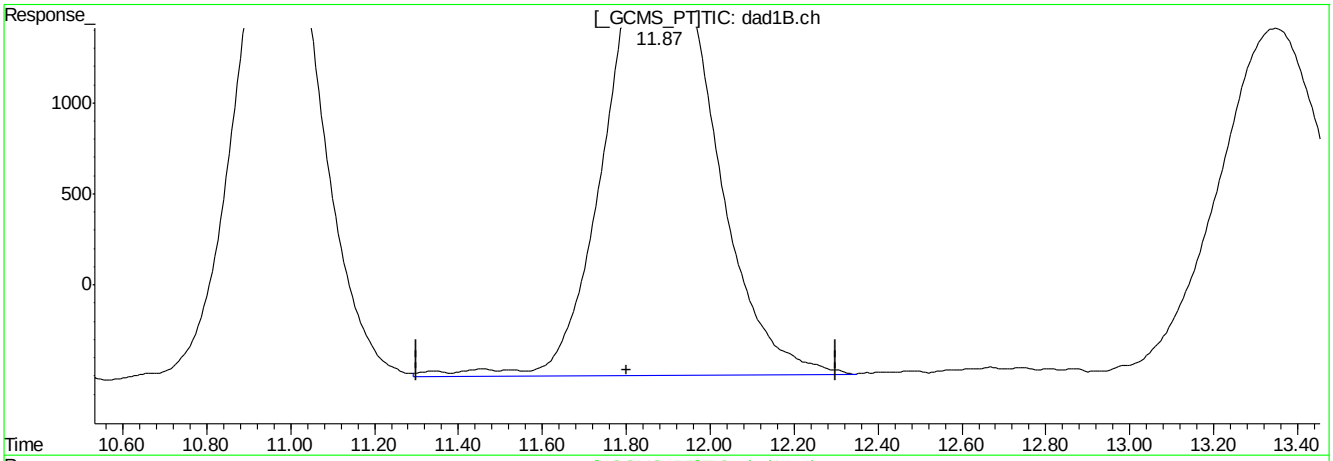
response 1187305

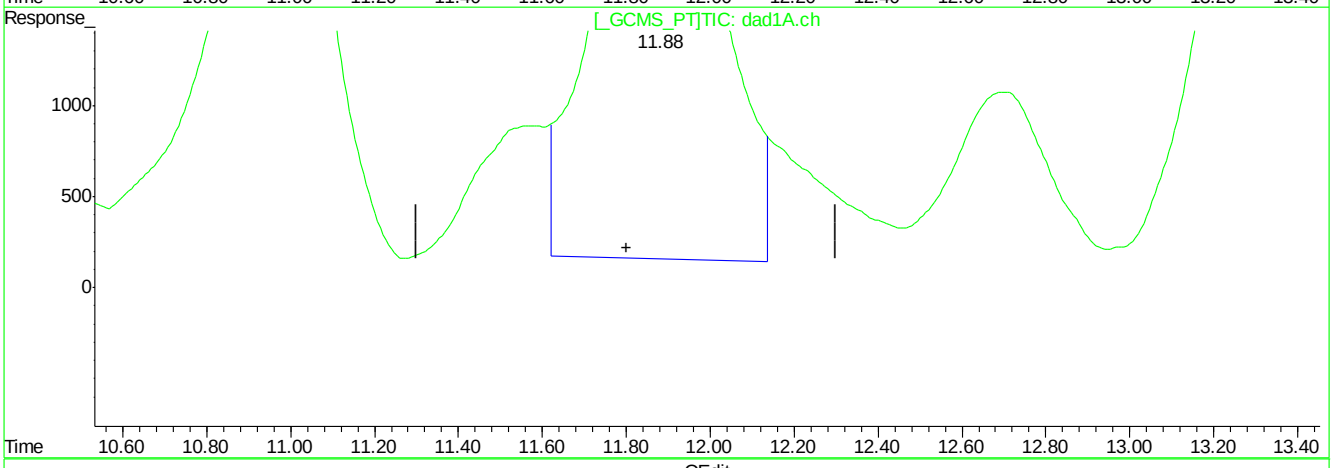
(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:40:07 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.88min 52.470ppb

response 454472

(9) 2,4,6-Trinitrotoluene #2

11.88min 49.812ppb m

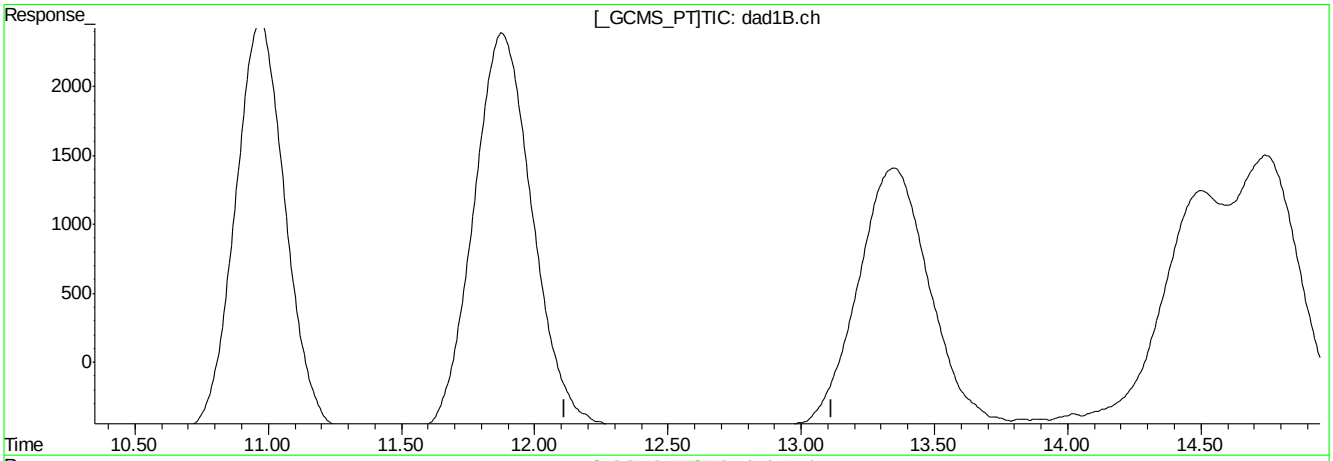
response 622419

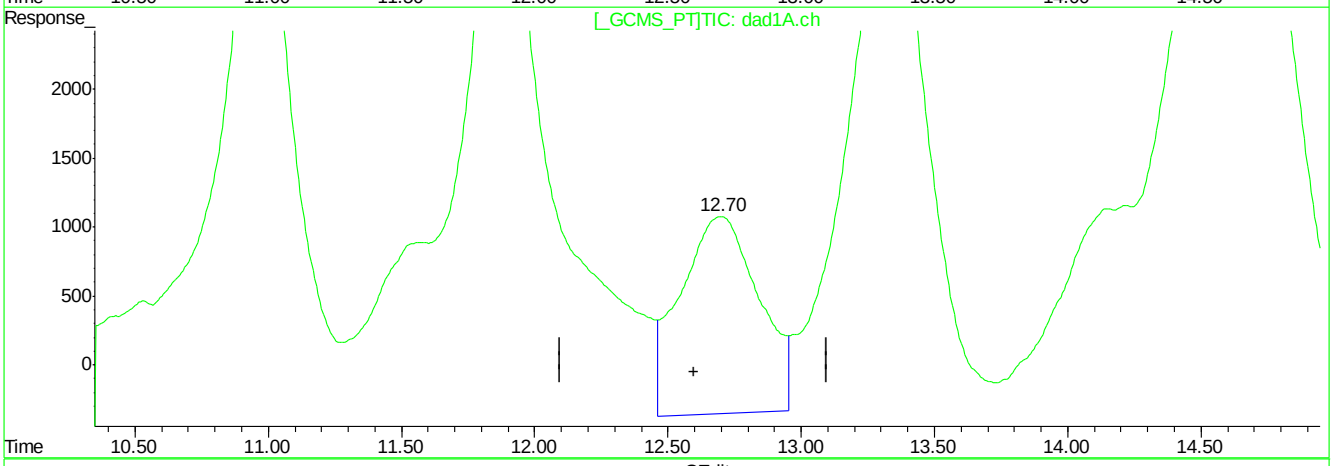
(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:40:15 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.70min 84.257ppb

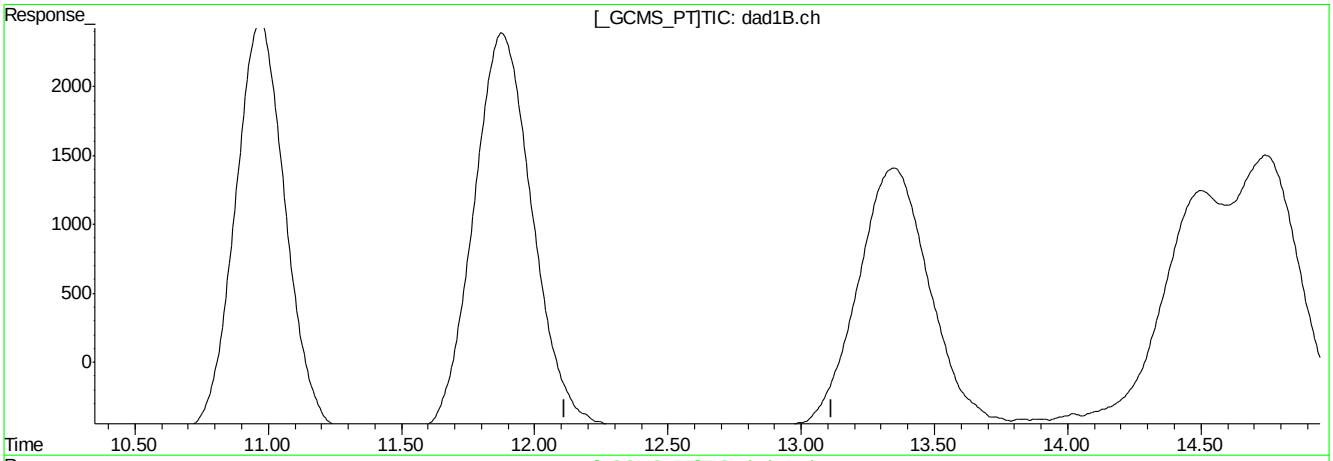
response 294624

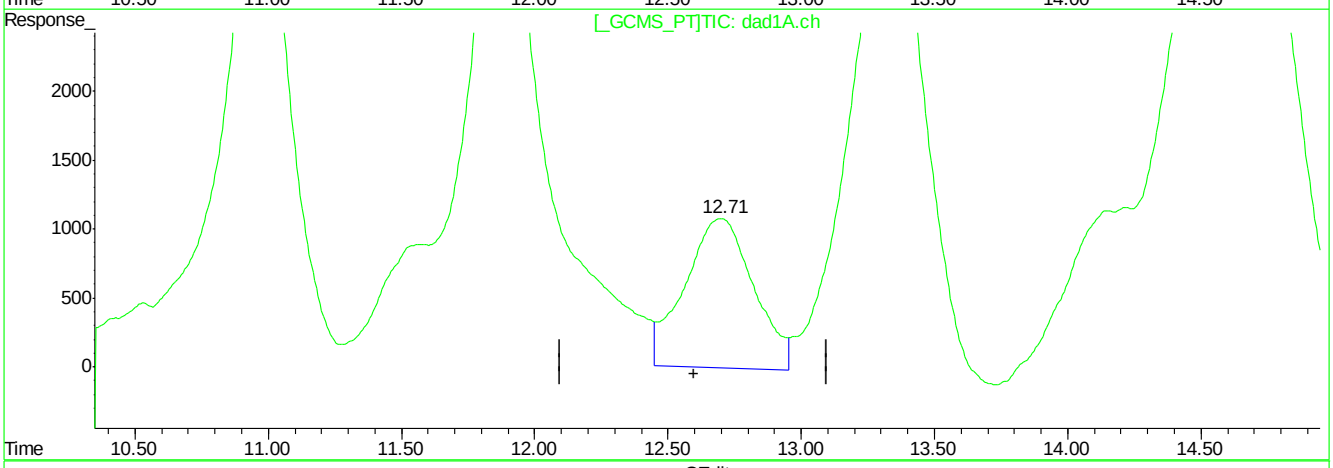
(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:40:22 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.71min 55.845ppb m

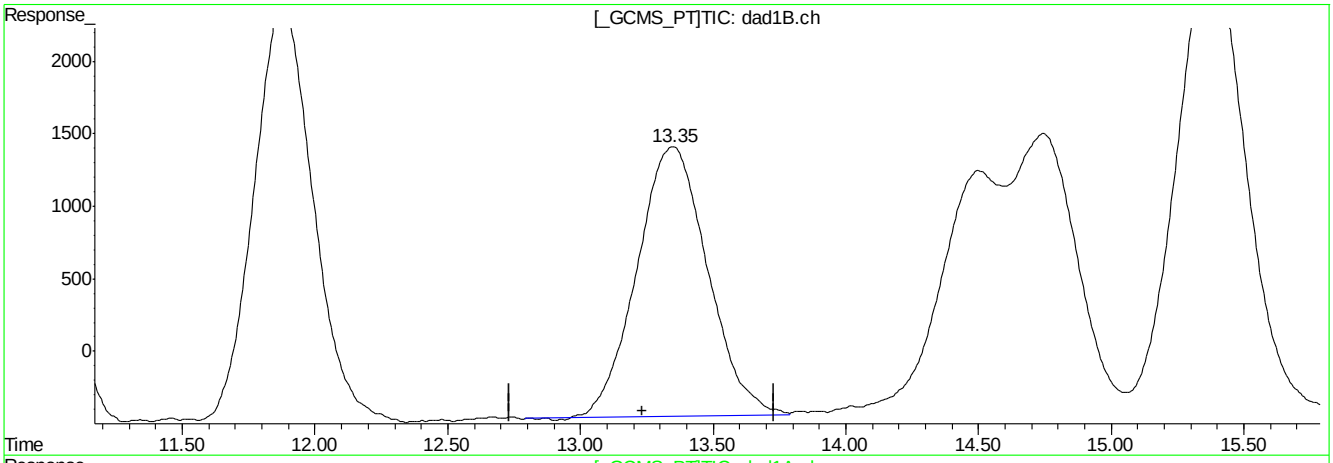
response 195517

(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:40:28 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(11) Tetryl

13.35min 48.643ppb

response 343722

(11) Tetryl #2

13.33min 54.196ppb m

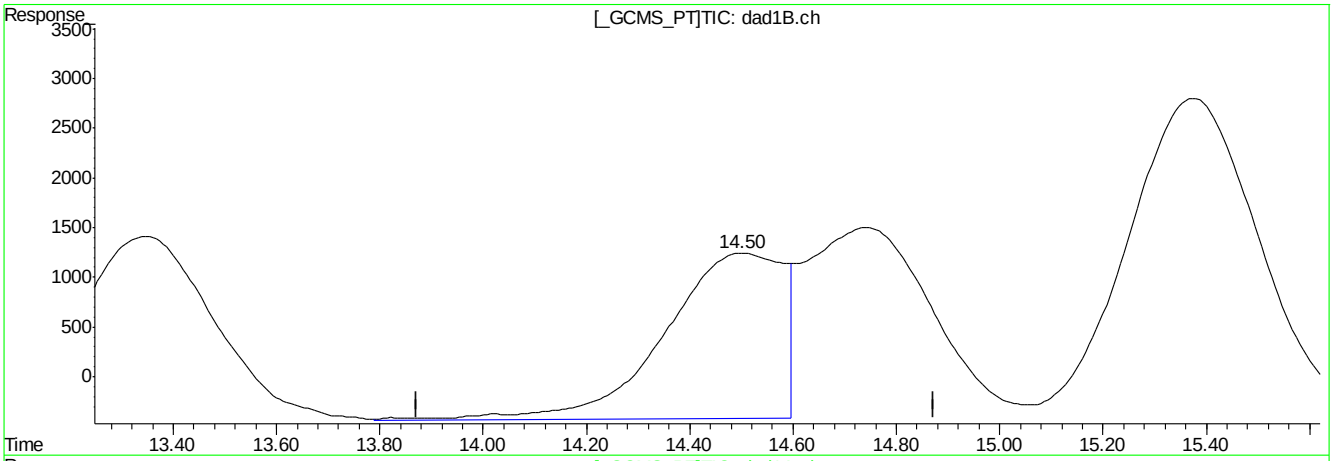
response 696233

(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:40:41 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(12) 3,4-Dinitrotoluene (S)

14.50min 49.023ppb

response 260508

(12) 3,4-Dinitrotoluene #2 (S)

14.49min 56.564ppb m

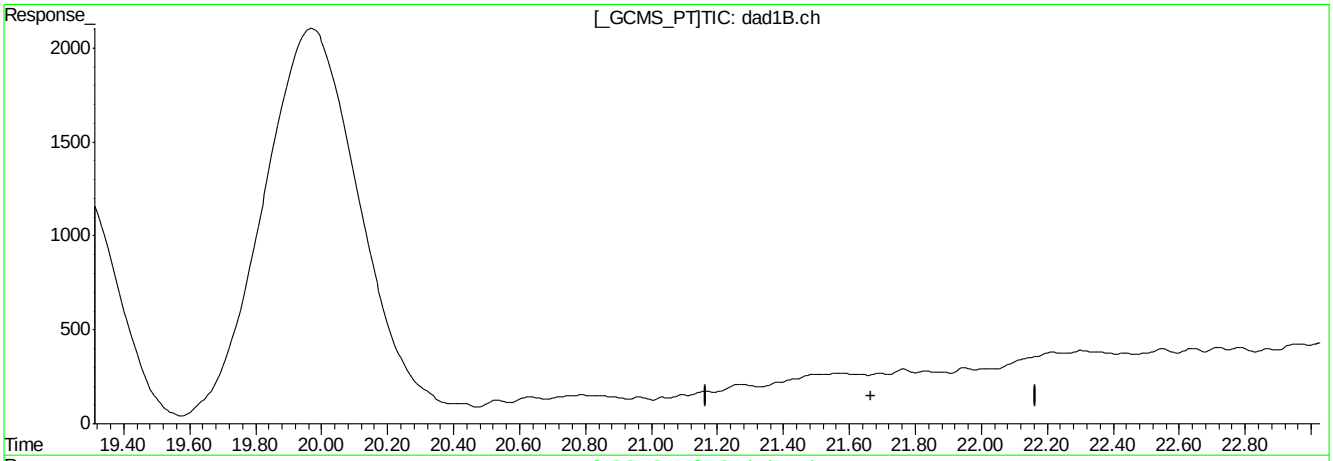
response 613674

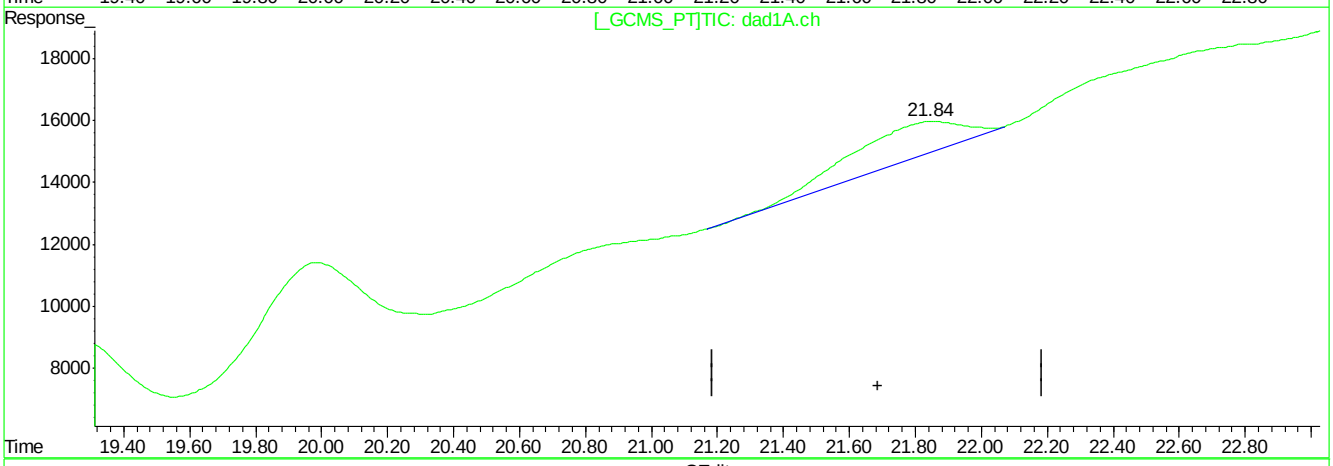
(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:41:05 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623370.D\dad1A.ch
Acq On : 24-Jan-2022, 13:23:35 Operator: jamesb
Sample : ic3094-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.84min 76.310ppb m

response 272731

(+) = Expected Retention Time
GG623370.D GGG3094_012422.M Thu Jan 27 11:41:35 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/27/22 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29:34 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.38	14.37	517691	1060456	97.562	97.878m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	19.51%#	19.58%#
	Target Compounds						
1)	TNX	4.84	4.84	378635	378635	45.660	45.525
2)	HMX	5.31	5.31	328596	328596	99.529	99.529
3)	DNX	5.49	5.49	672374	664704	100.539m	99.358m
4)	MNX	6.67	6.67	694923	694923	118.905	118.905
5)	1,3,5-Trinitrobe	7.59	7.59	969021	969021	110.011	110.009
6)	RDX	7.98	7.98	482568	482568	107.765	107.739
7)	1,3-Dinitrobenze	9.92	9.91	1365175	1329136	111.013	141.162m
8)	Nitrobenzene	10.90	10.90	866467	859339	110.336	102.325m
9)	2,4,6-Trinitroto	11.80	11.79	932164	1389409	107.622	111.193m
10)	Nitroglycerin	0.00	12.61	0	390970	N.D.	111.945m#
11)	Tetryl	13.24	13.24	745308	1269081	105.476	98.787m
13)	2,6-Dinitrotolue	14.63	14.62	676005	1032707	110.897	107.180
14)	2,4-Dinitrotolue	15.26	15.27	1220491	1002762	109.350	122.710
15)	3,5-Dinitroanili	16.08	16.09	1026670	1704214	107.843	105.733
16)	o-Nitrotoluene	16.87	16.88	548592	980146	114.016	125.317
17)	p-Nitrotoluene	17.94	17.95	1129762	2013931	219.481	200.533
18)	4-Amino-2,6-Dini	17.94	17.95	1129762	2013931	219.481	200.533
19)	m-Nitrotoluene	19.11	19.12	601899	1057078	111.677	114.925m
20)	2-Amino-4,6-Dini	19.79	19.80	920792	1152110	106.733	90.128
21)	PETN	0.00	21.69	0	354056	N.D.	99.142m#

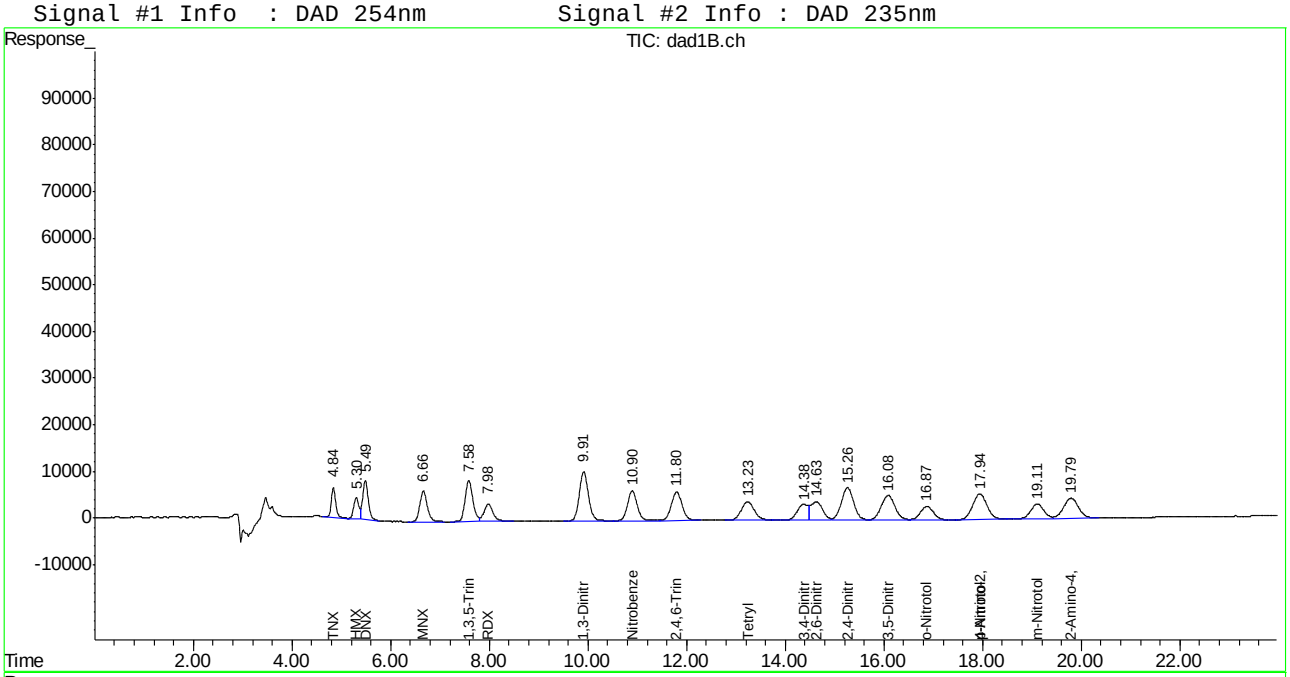
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG623371.D GGG3094_012422.M Thu Jan 27 12:53:41 2022 Page 1

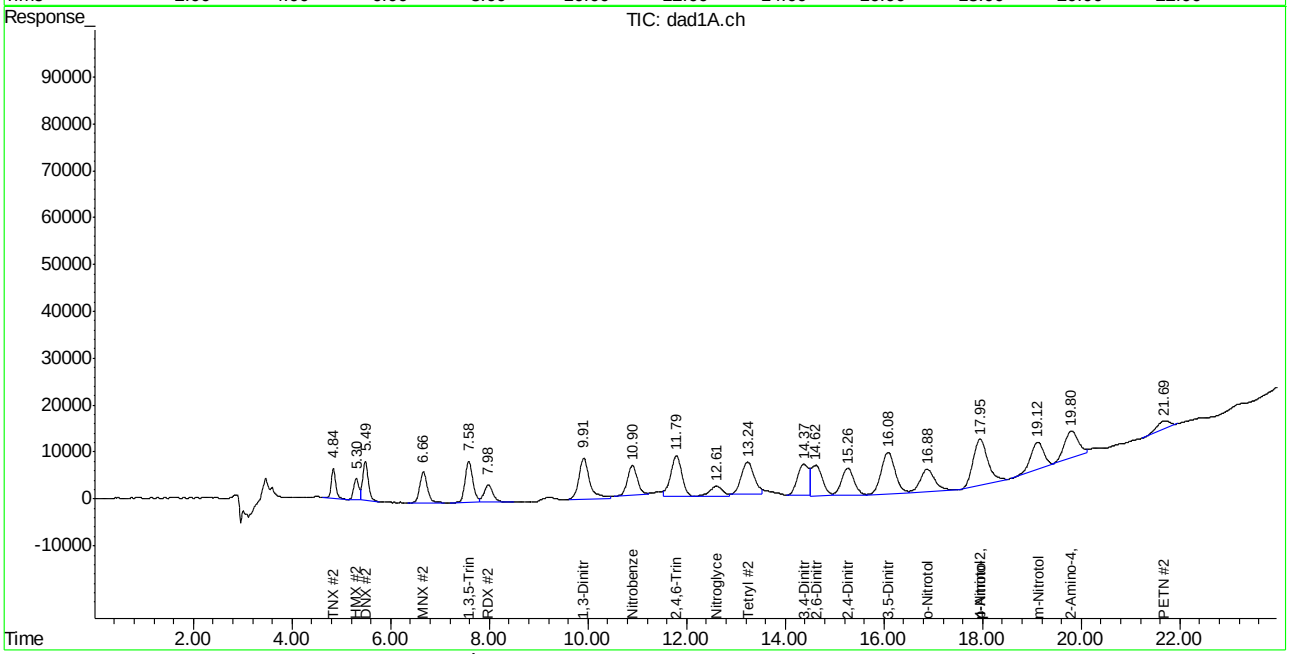
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:38 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

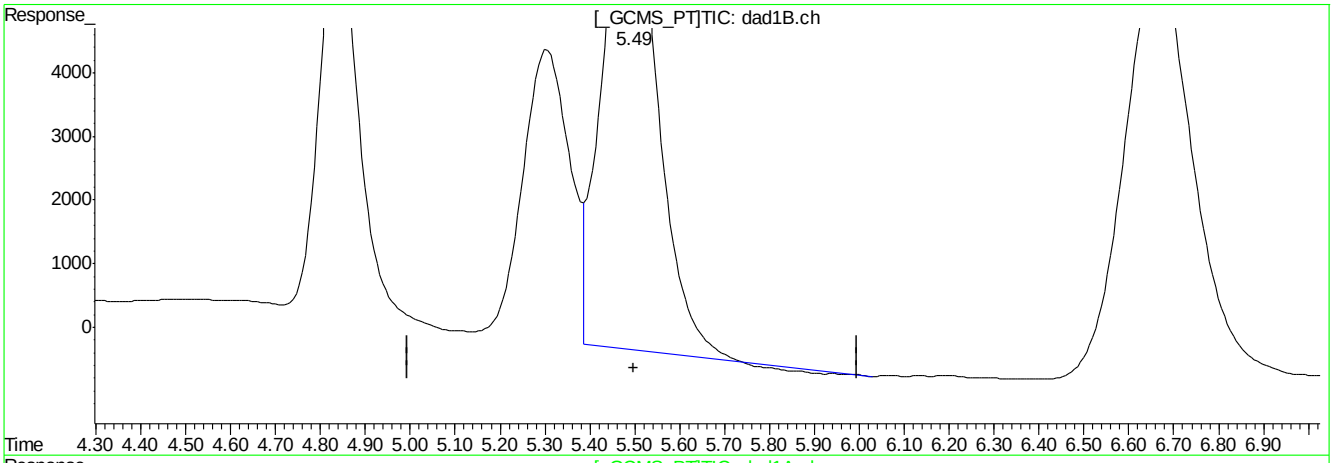
Sample Number: GGG3094-IC3094 **Method:** SW846 8330A
Lab FileID: GG623371.D **Analyst approved:** 01/27/22 12:56 James Boone
Injection Time: 01/24/22 13:55 **Supervisor approved:** 01/27/22 13:01 Naresh Jiawan

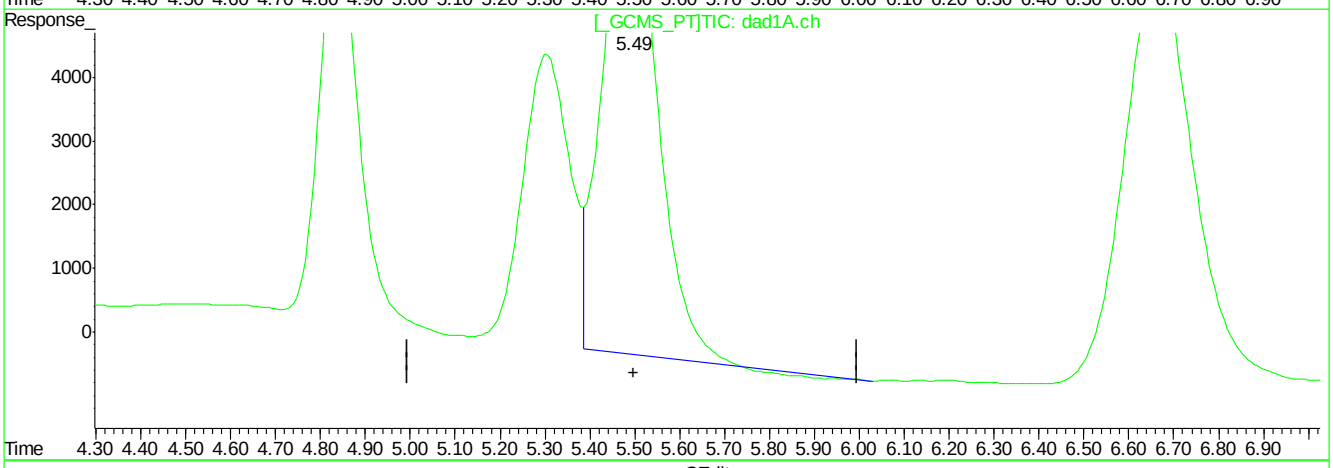
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.49	Poor instrument integration
DNX		2	5.49	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.91	Poor instrument integration
Nitrobenzene	98-95-3	2	10.90	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.79	Poor instrument integration
Nitroglycerine	55-63-0	2	12.61	Poor instrument integration
Tetryl	479-45-8	2	13.24	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	14.37	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.12	Poor instrument integration
PETN	78-11-5	2	21.69	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.49min 98.931ppb

response 661622

(3) DNX #2

5.49min 98.898ppb

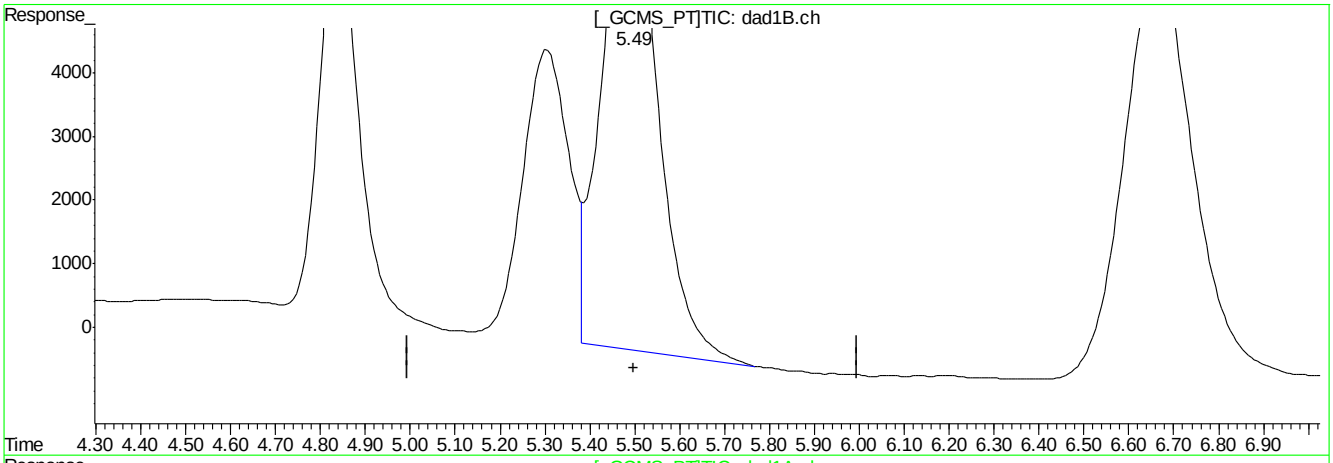
response 661622

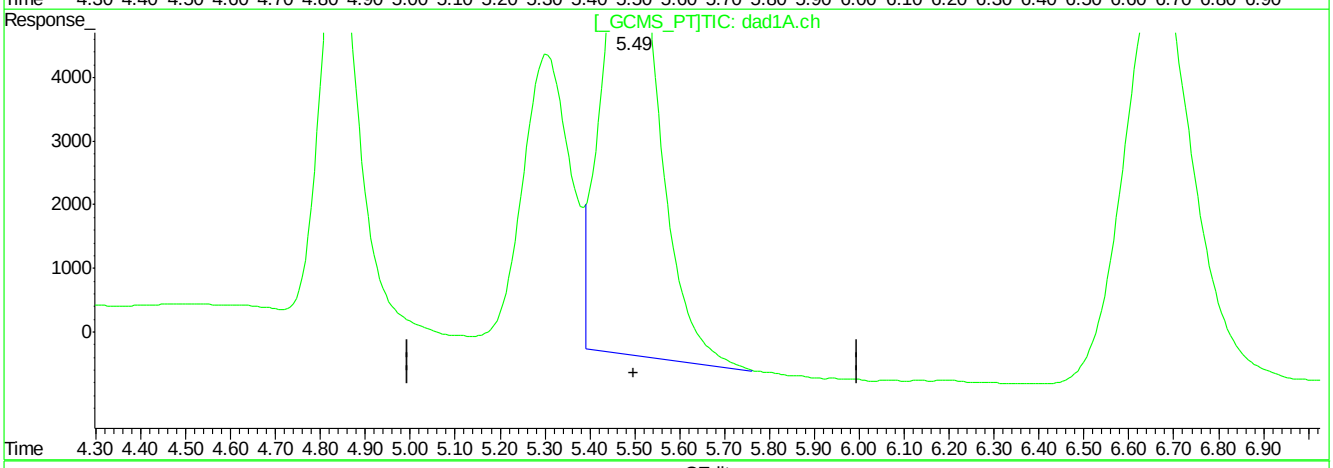
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:36:37 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.49min 100.539ppb m

response 672374

(3) DNX #2

5.49min 99.358ppb m

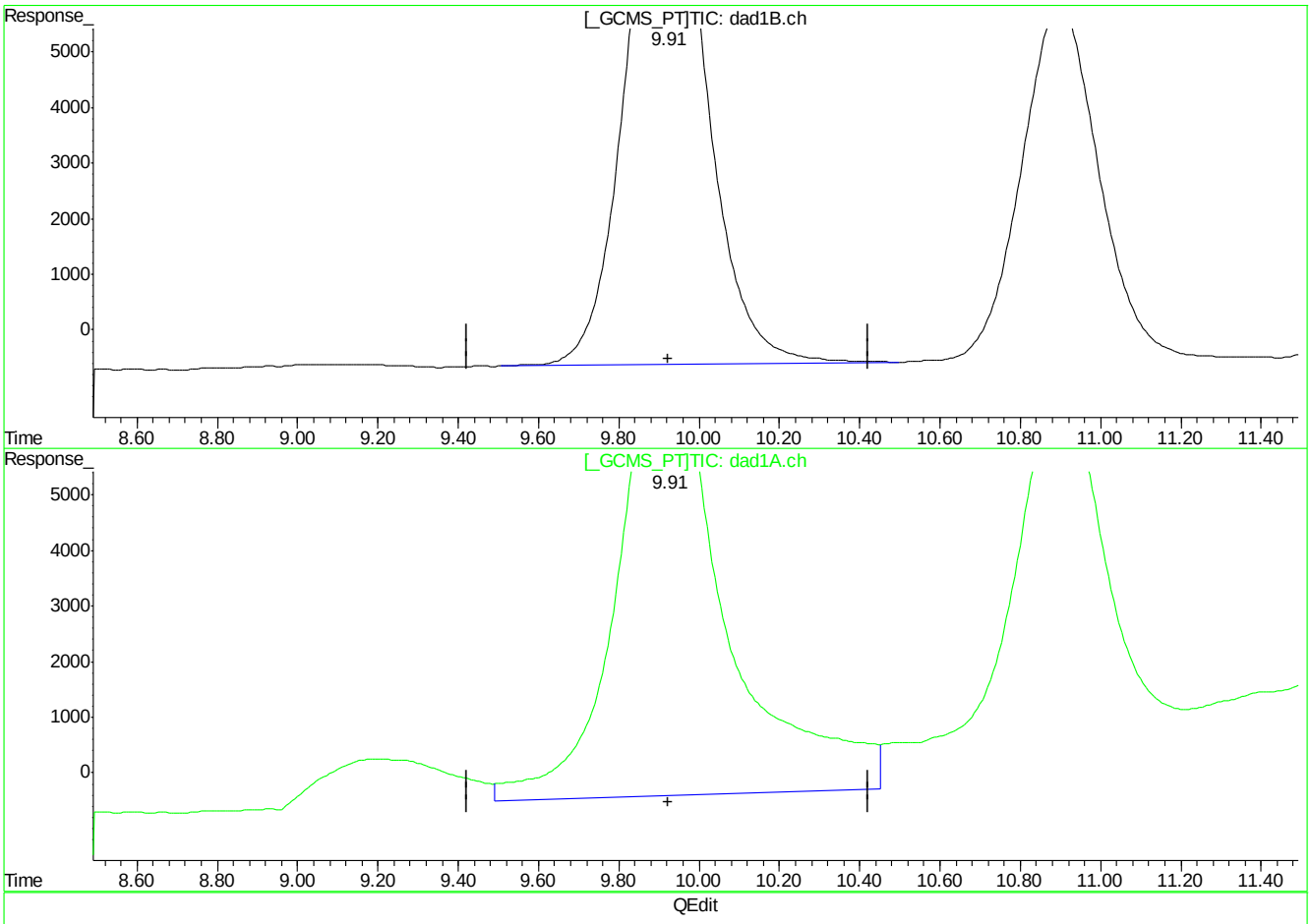
response 664704

(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:36:45 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.92min 111.013ppb

response 1365175

(7) 1,3-Dinitrobenzene #2

9.92min 164.784ppb

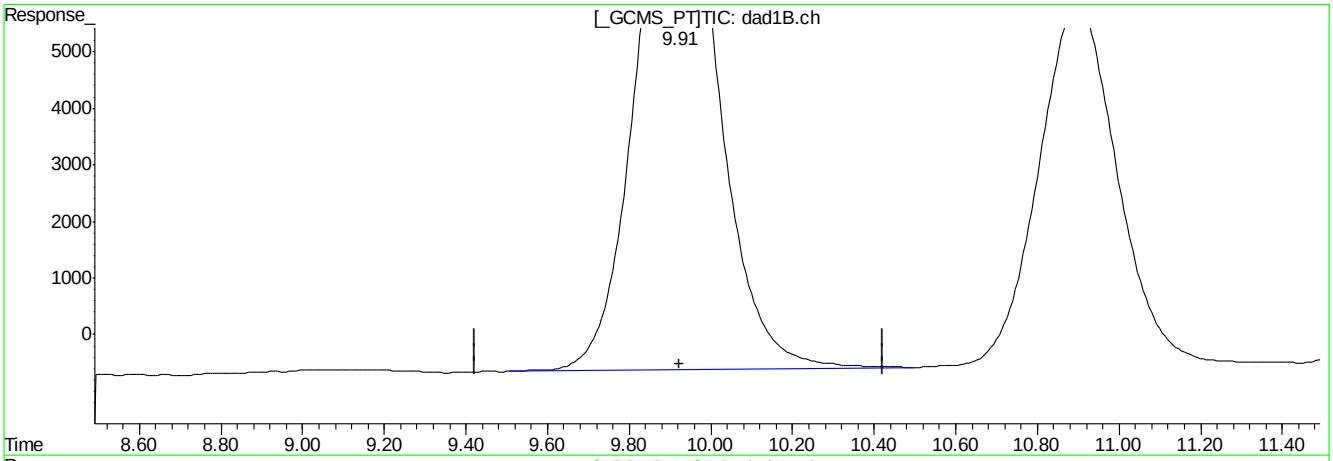
response 1551547

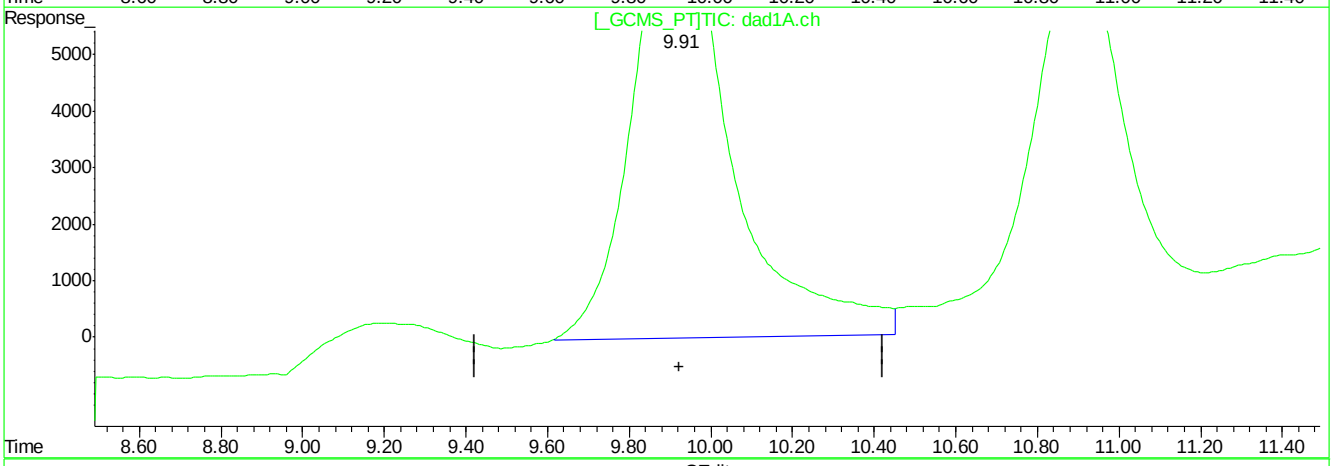
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:36:54 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.92min 111.013ppb

response 1365175

(7) 1,3-Dinitrobenzene #2

9.91min 141.162ppb m

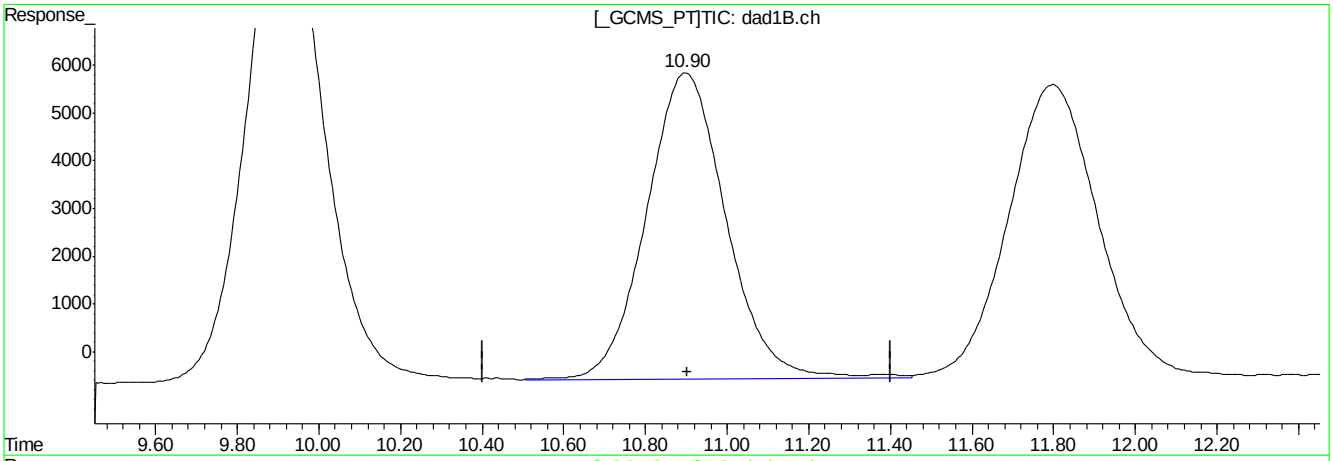
response 1329136

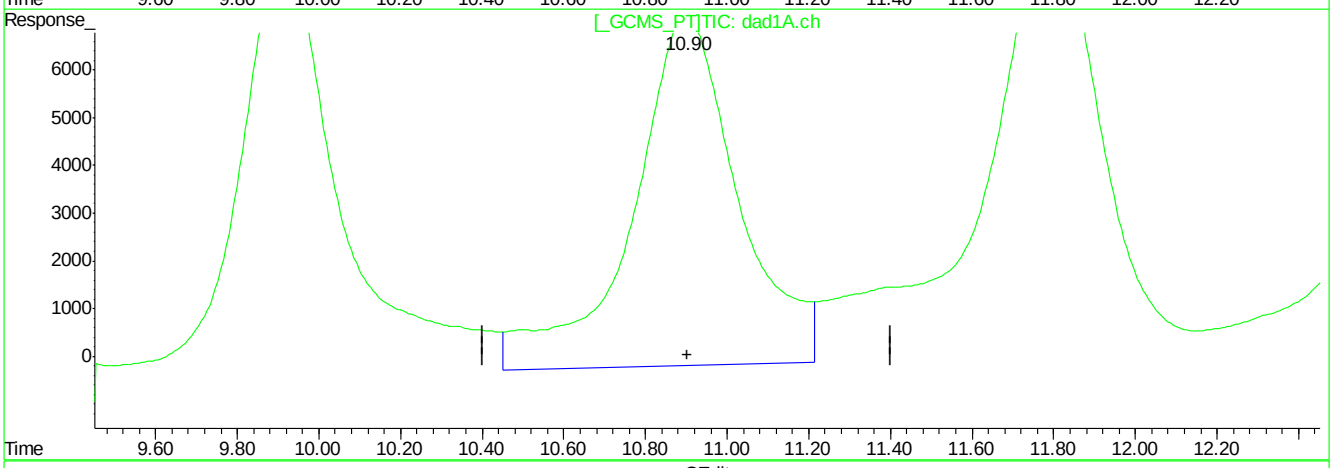
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:37:01 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.90min 110.336ppb

response 866467

(8) Nitrobenzene #2

10.90min 156.908ppb

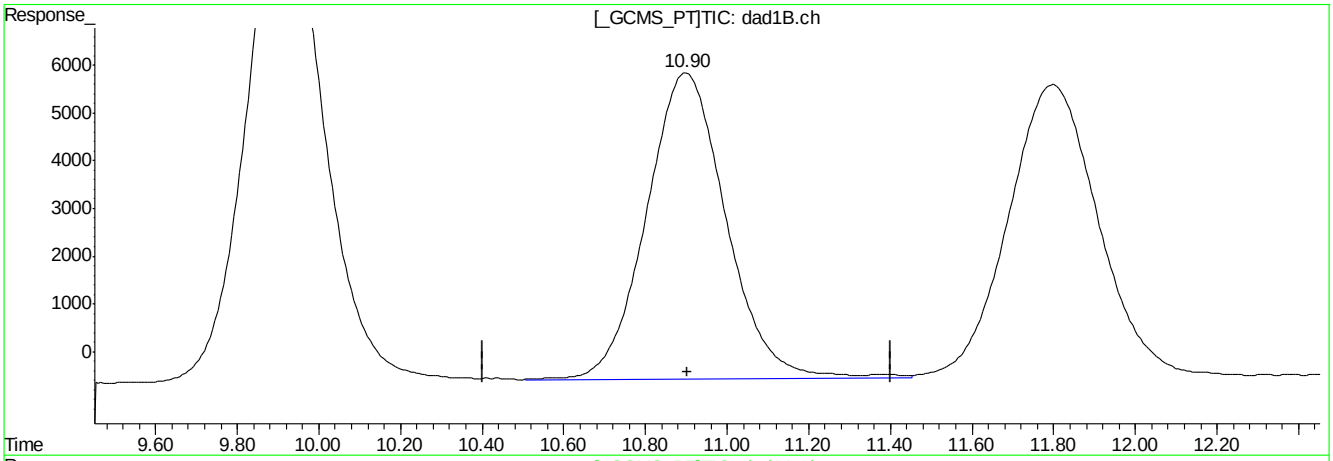
response 1314527

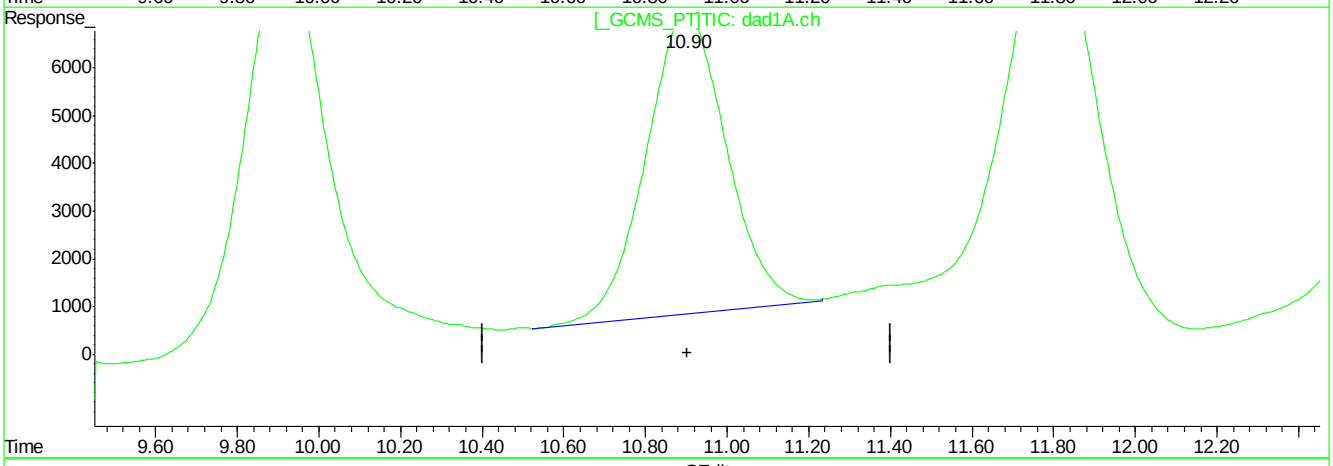
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:37:05 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.90min 110.336ppb

response 866467

(8) Nitrobenzene #2

10.90min 102.325ppb m

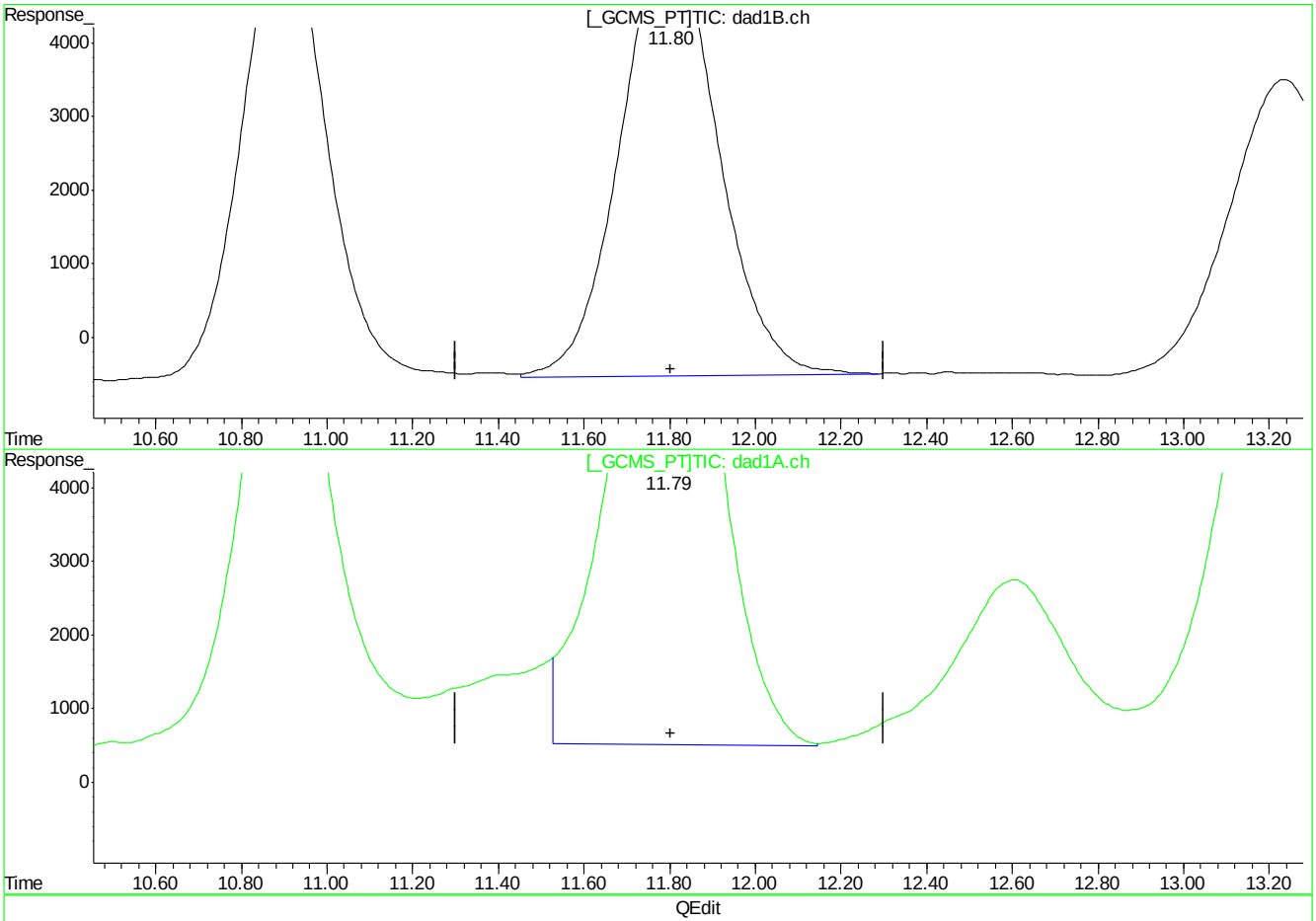
response 859339

(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:37:10 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(9) 2,4,6-Trinitrotoluene

11.80min 107.622ppb

response 932164

(9) 2,4,6-Trinitrotoluene #2

11.79min 111.193ppb m

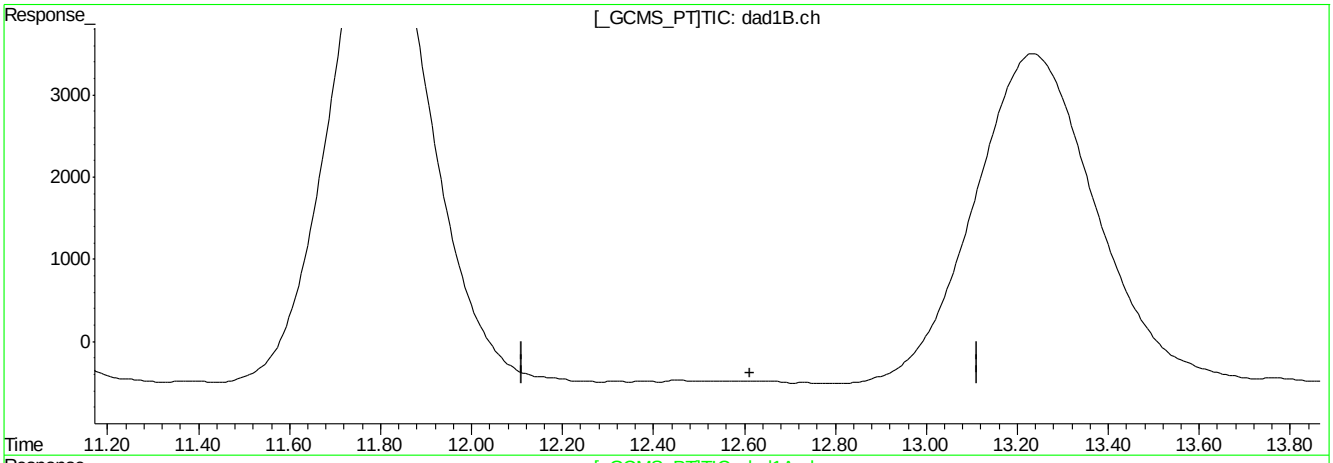
response 1389409

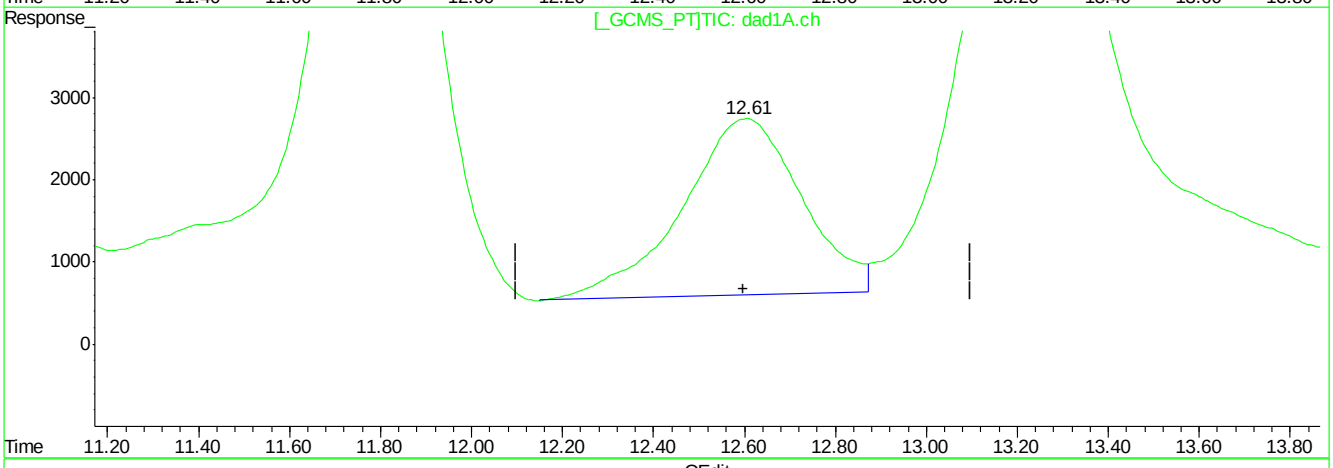
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:37:18 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.61min 111.945ppb m

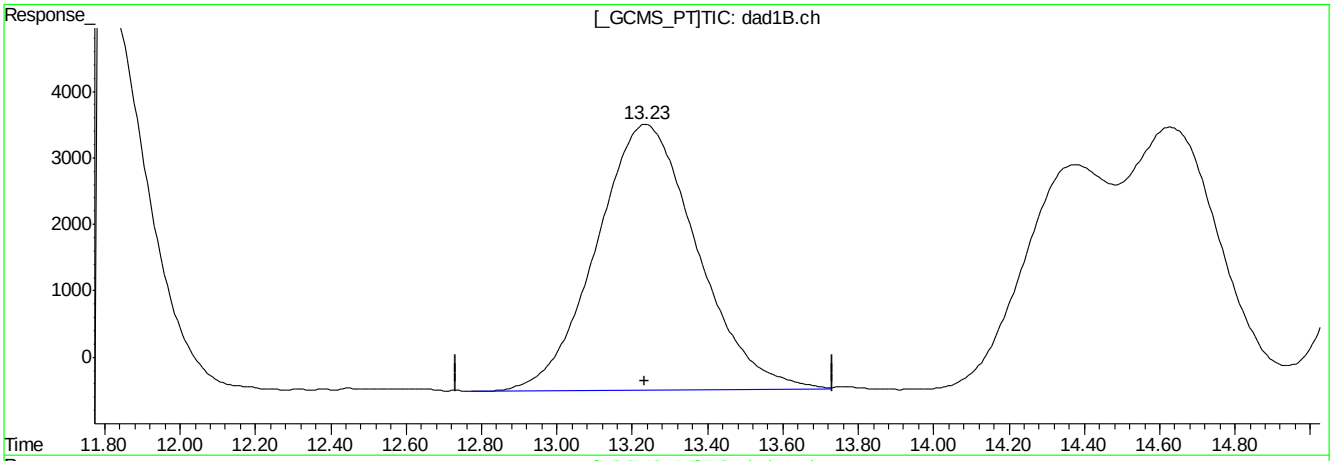
response 390970

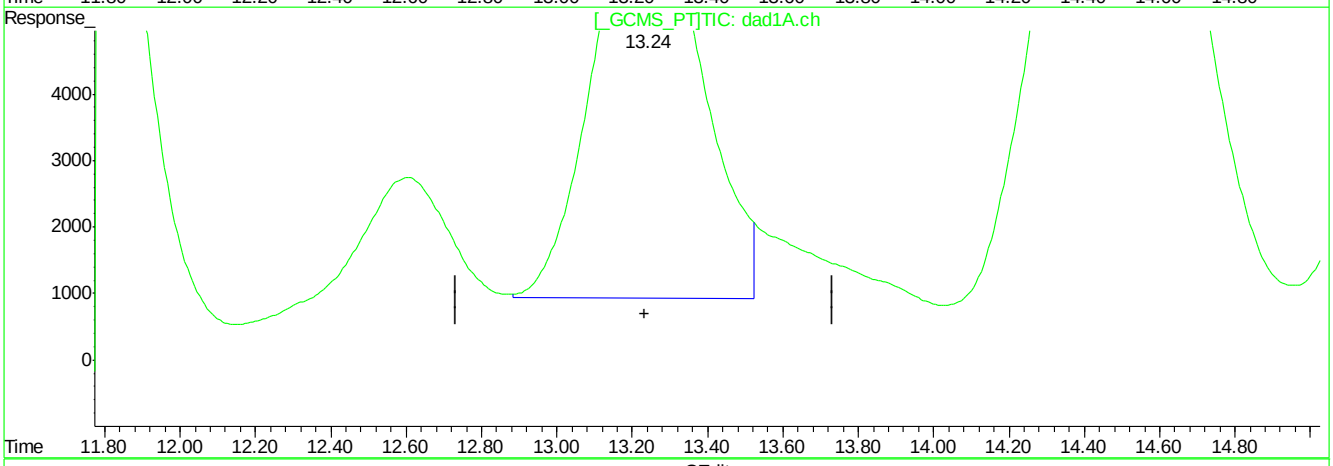
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:37:25 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

13.24min 105.476ppb

response 745308

(11) Tetryl #2

13.24min 98.787ppb m

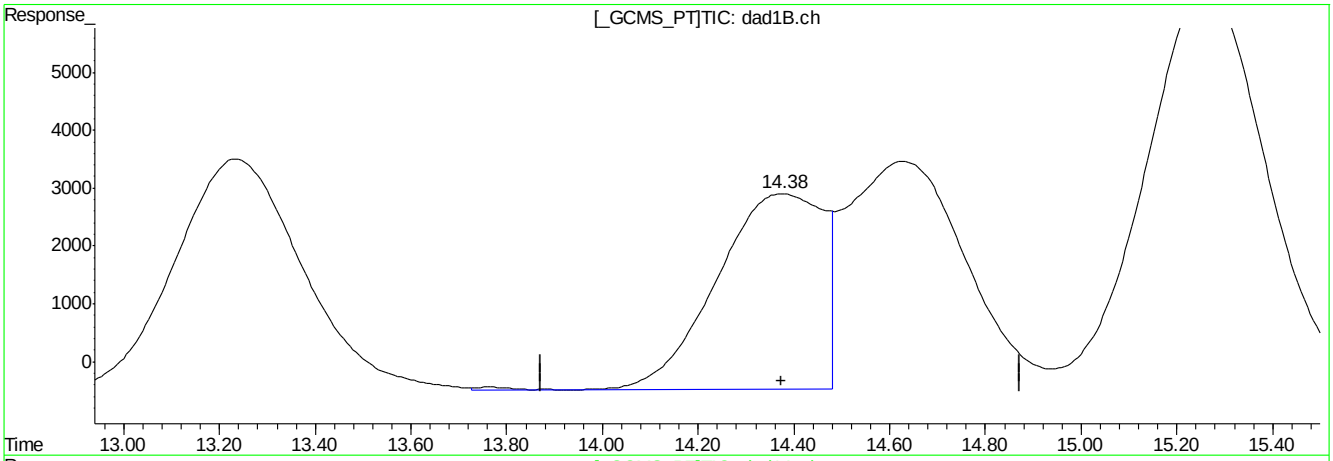
response 1269081

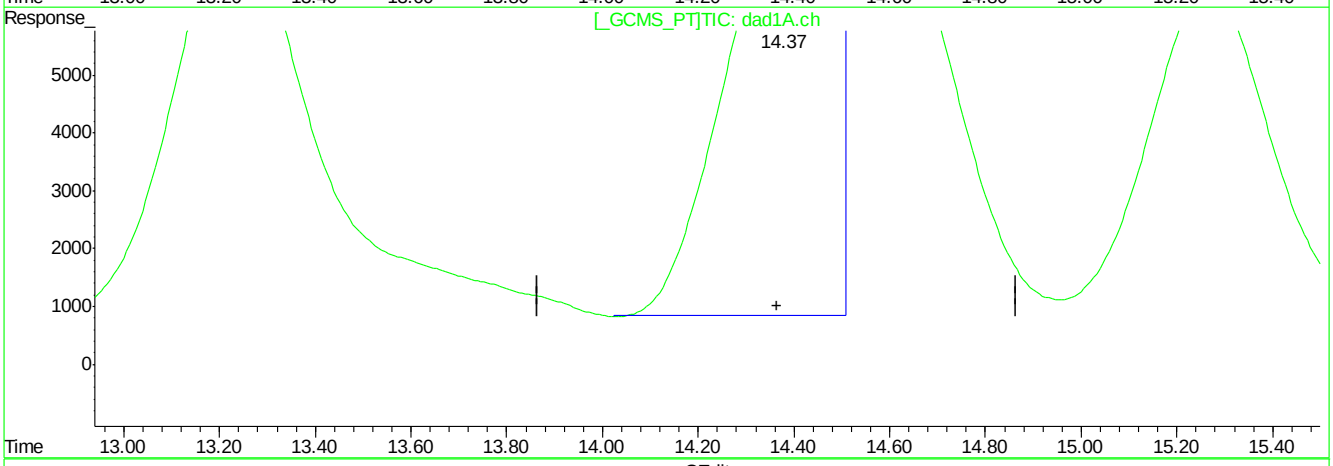
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:37:37 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

14.38min 97.562ppb

response 517691

(12) 3,4-Dinitrotoluene #2 (S)

14.37min 97.878ppb m

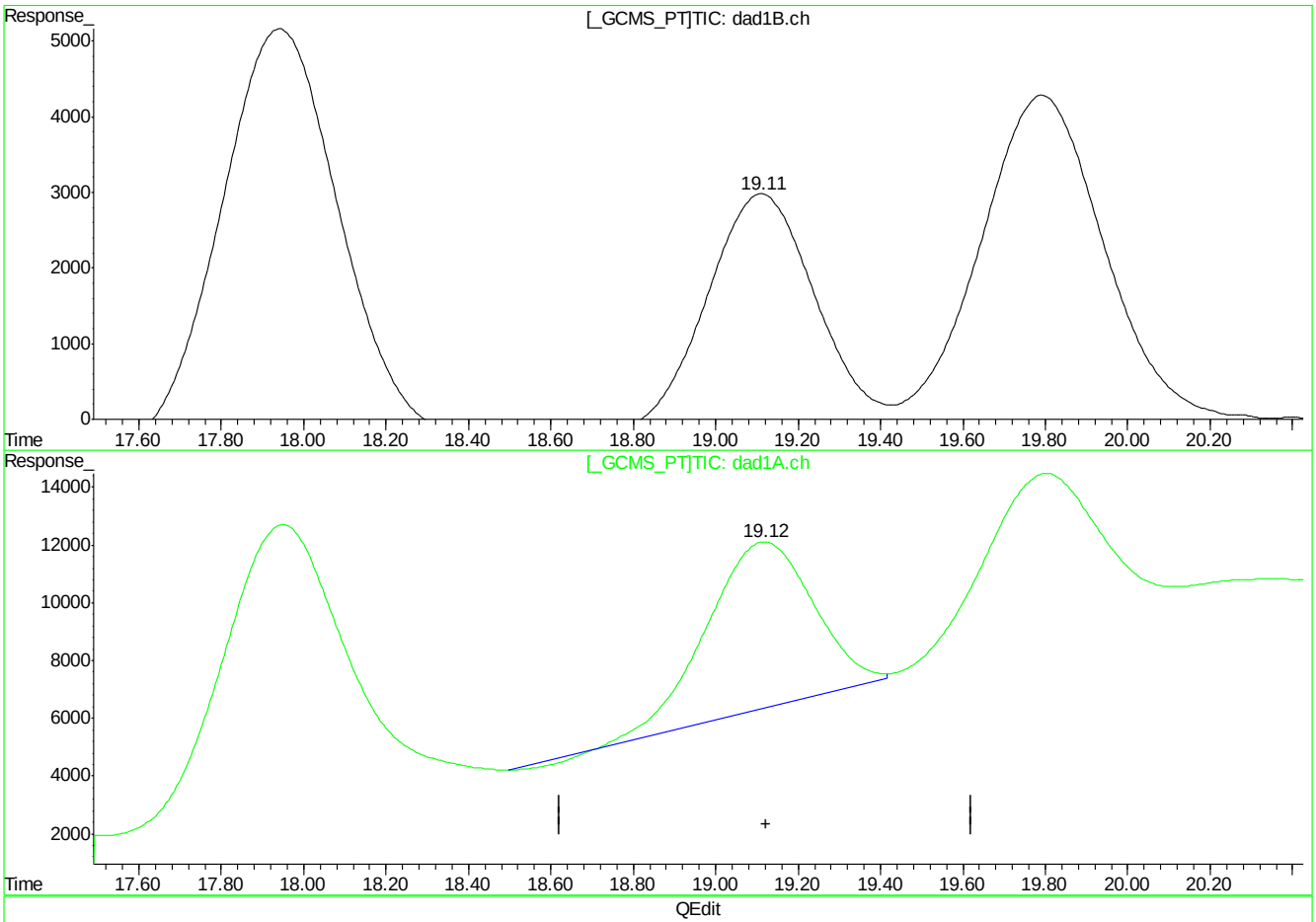
response 1060456

(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:37:44 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(19) m-Nitrotoluene

19.11min 111.677ppb

response 601899

(19) m-Nitrotoluene #2

19.12min 111.811ppb

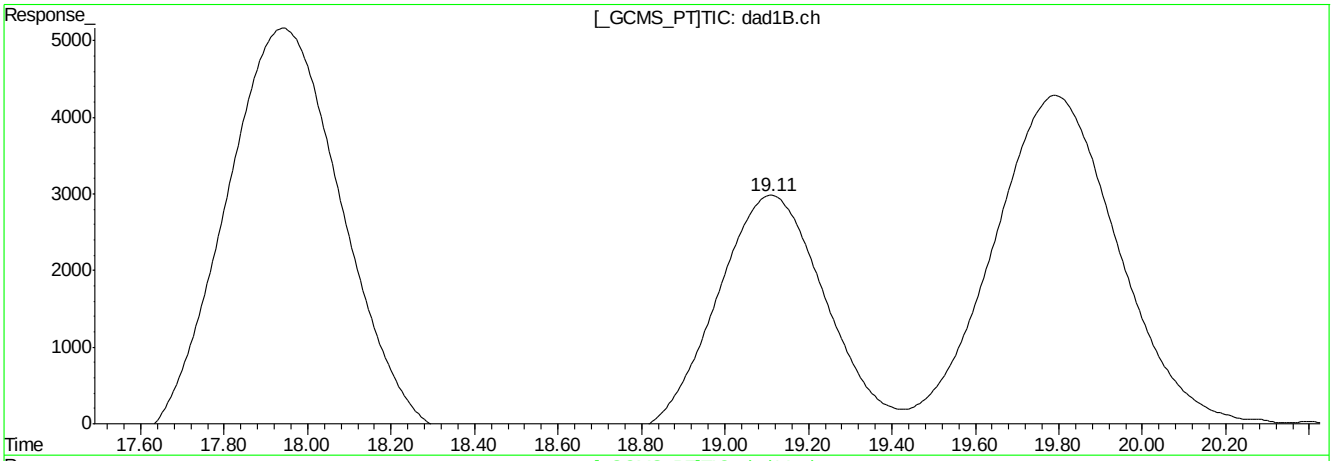
response 1028435

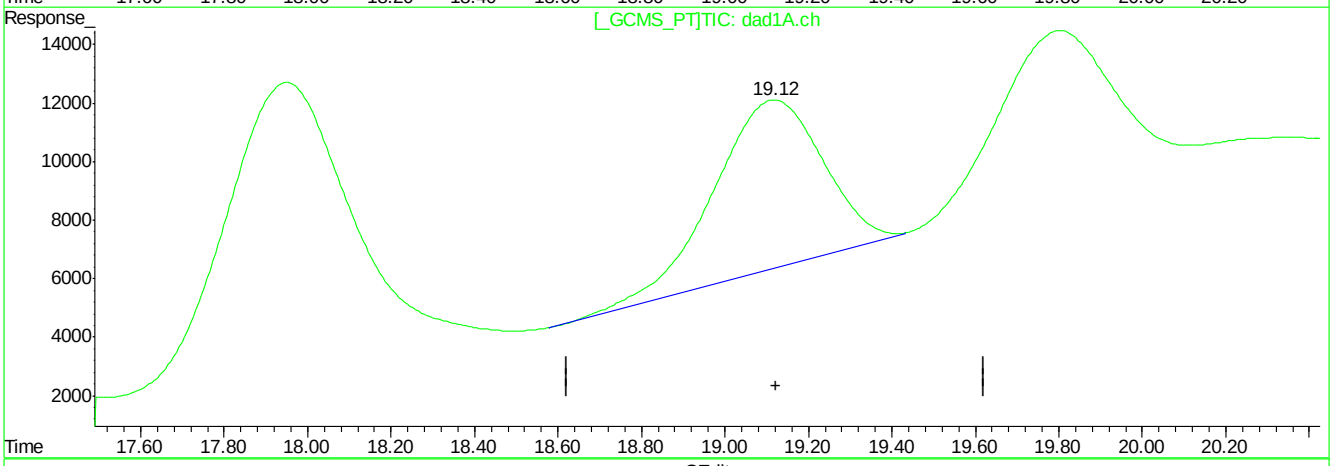
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:37:57 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.11min 111.677ppb

response 601899

(19) m-Nitrotoluene #2

19.12min 114.925ppb m

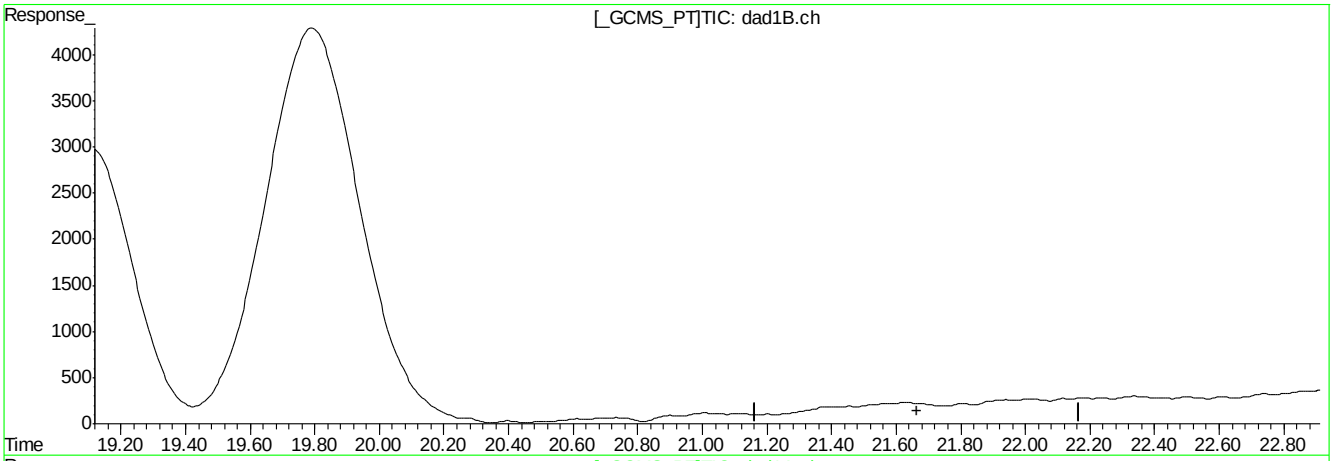
response 1057078

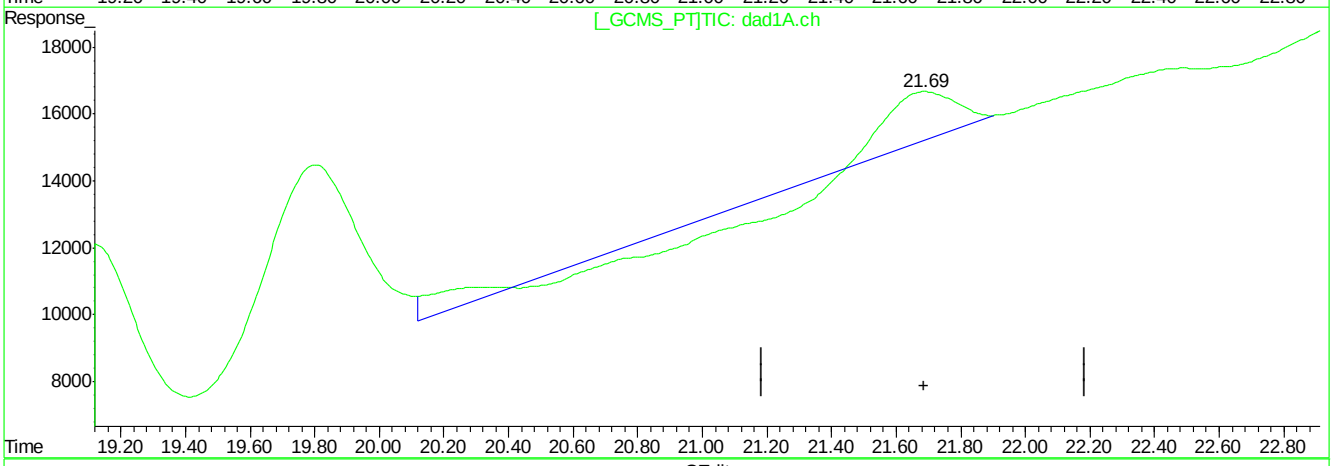
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:38:06 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.69min 3.598ppb

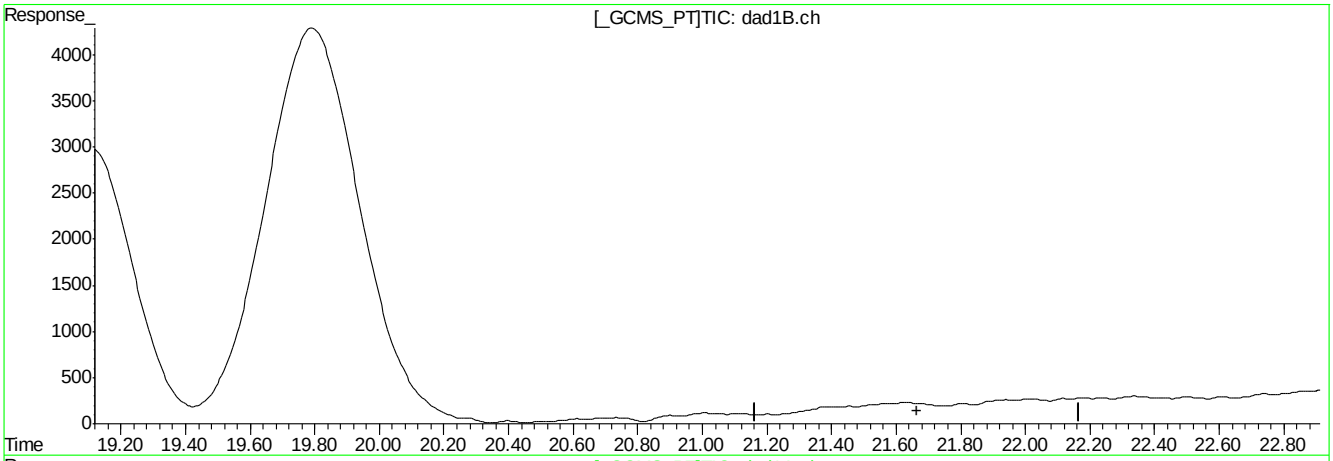
response 12889

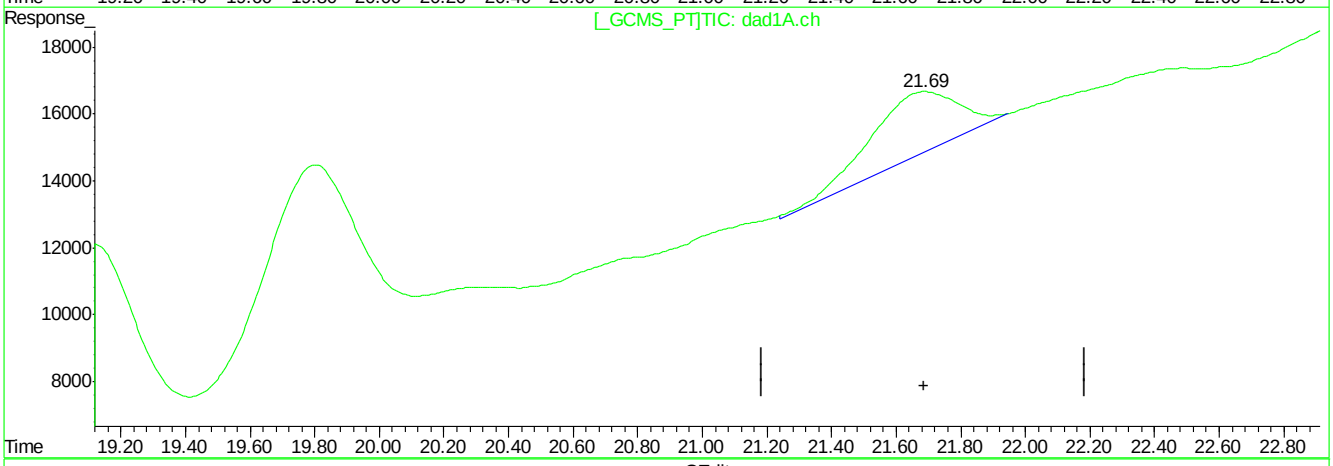
(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:38:12 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623371.D\dad1A.ch
Acq On : 24-Jan-2022, 13:55:00 Operator: jamesb
Sample : ic3094-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.69min 99.142ppb m

response 354056

(+) = Expected Retention Time
GG623371.D GGG3094_012422.M Thu Jan 27 11:38:17 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 01/27/22 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29:35 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.34	14.34	1047361	2303343	197.977	213.400m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	39.60%#	42.68%#
	Target Compounds						
1)	TNX	4.85	4.85	740627	740627	89.314	89.048
2)	HMX	5.32	5.32	641087	641087	194.181	194.181
3)	DNX	5.50	5.50	1348501	1327215	201.640m	198.389m
4)	MNX	6.68	6.68	1352701	1352701	231.455	231.455
5)	1,3,5-Trinitrobe	7.59	7.59	1893122	1893122	214.922	214.918
6)	RDX	7.99	7.99	909255	909255	203.051	203.002
7)	1,3-Dinitrobenze	9.92	9.91	2633996	2014532	214.190	213.956m
8)	Nitrobenzene	10.89	10.89	1637392	1556293	208.506	186.009m
9)	2,4,6-Trinitroto	11.79	11.79	1826116	2476309	210.832	198.177m
10)	Nitroglycerin	0.00	12.58	0	668649	N.D.	192.125m#
11)	Tetryl	13.21	13.21	1452814	2517533	205.602	195.968m
13)	2,6-Dinitrotolue	14.62	14.61	1314088	1937771	215.573	201.819m
14)	2,4-Dinitrotolue	15.24	15.23	2365763	1800956	211.961	220.386m
15)	3,5-Dinitroanili	16.08	16.08	2002907	3618145	210.389	224.477
16)	o-Nitrotoluene	16.83	16.83	1010635	1669270	210.045	213.425
17)	p-Nitrotoluene	17.92	17.93	2177534	3924369	423.033	391.892
18)	4-Amino-2,6-Dini	17.92	17.93	2177534	3924369	423.033	391.892
19)	m-Nitrotoluene	19.09	19.09	1129048	1768735	209.484	192.296m
20)	2-Amino-4,6-Dini	19.79	19.78	1789043	2508572	207.375	196.849
21)	PETN	0.00	21.68	0	618016	N.D.	173.493m#

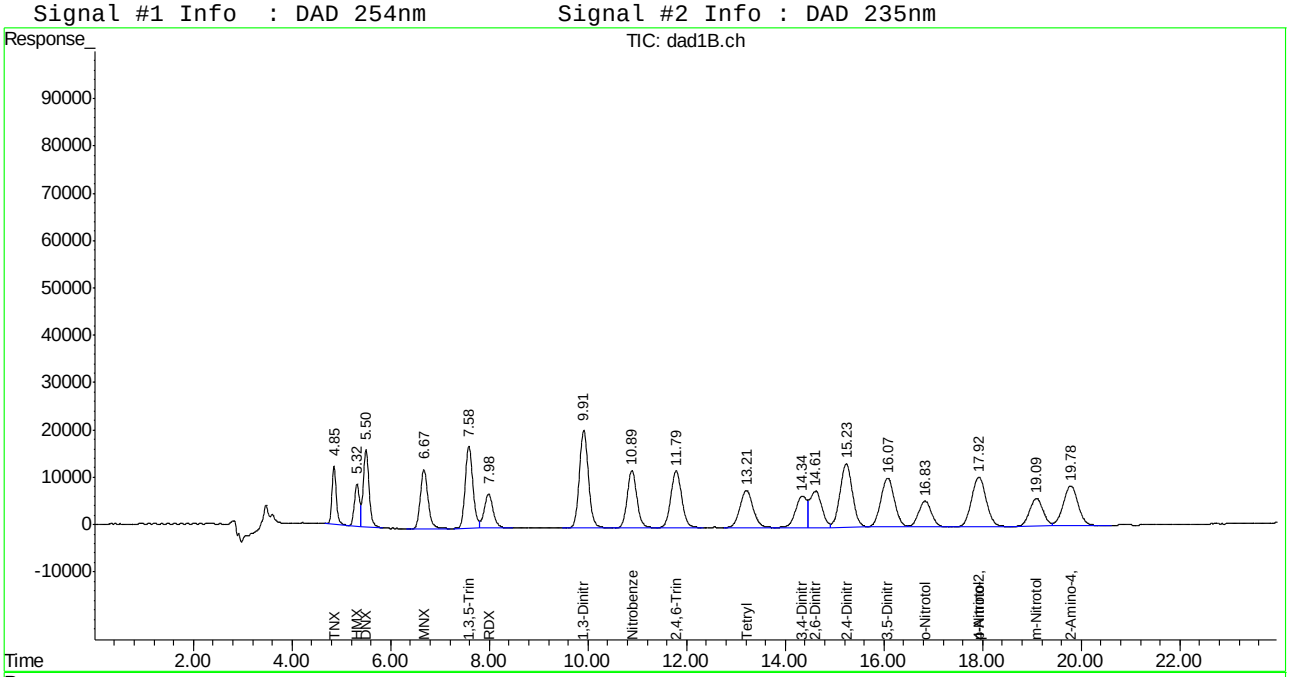
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

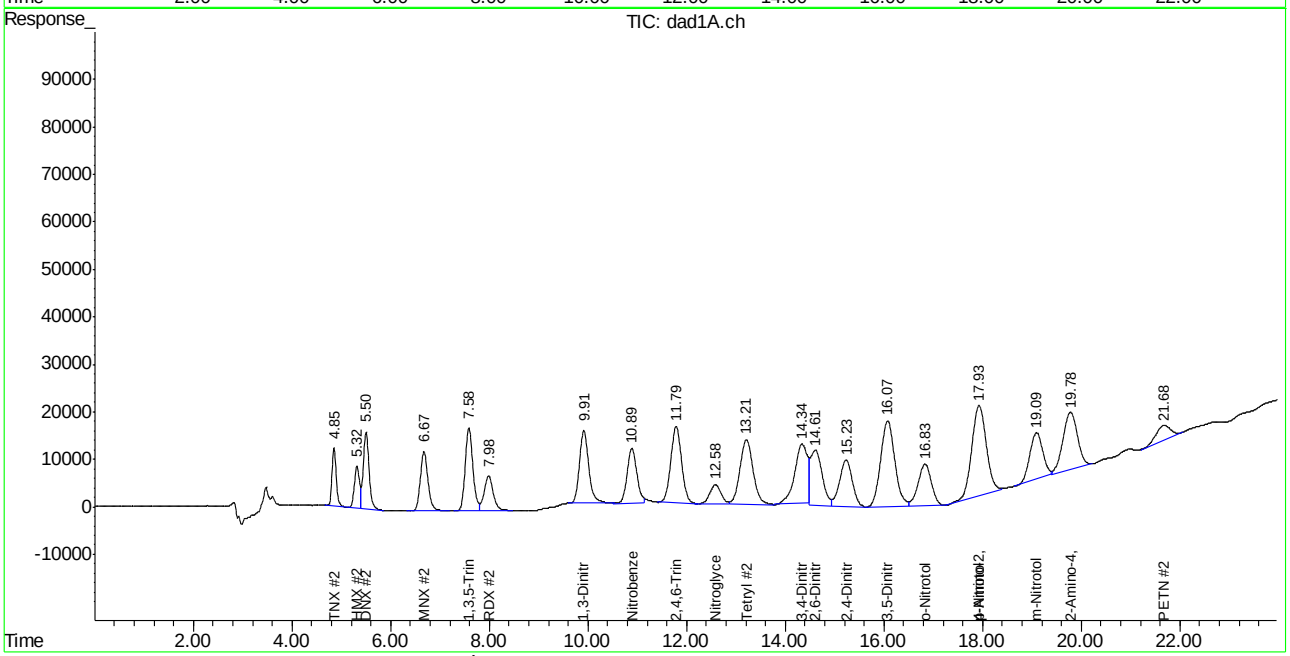
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:36 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

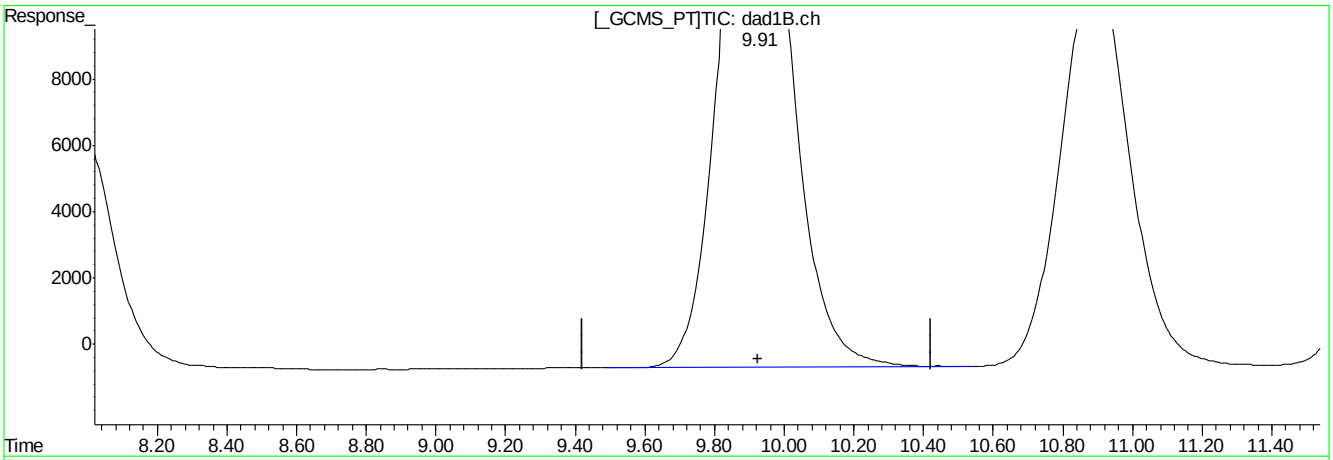
Sample Number: GGG3094-IC3094
Lab FileID: GG623372.D
Injection Time: 01/24/22 14:26
Method: SW846 8330A
Analyst approved: 01/27/22 12:56 James Boone
Supervisor approved: 01/27/22 13:01 Naresh Jiawan

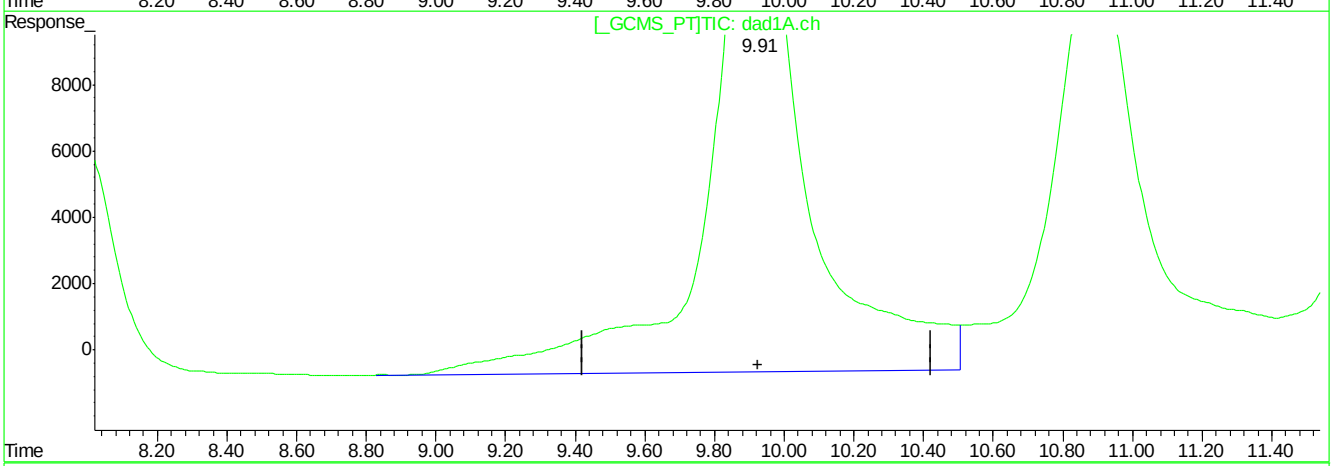
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.50	Poor instrument integration
DNX		2	5.50	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.91	Poor instrument integration
Nitrobenzene	98-95-3	2	10.89	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.79	Poor instrument integration
Nitroglycerine	55-63-0	2	12.58	Poor instrument integration
Tetryl	479-45-8	2	13.21	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	14.34	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	14.61	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	15.23	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.09	Poor instrument integration
PETN	78-11-5	2	21.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.92min 214.190ppb

response 2633996

(7) 1,3-Dinitrobenzene #2

9.92min 323.784ppb

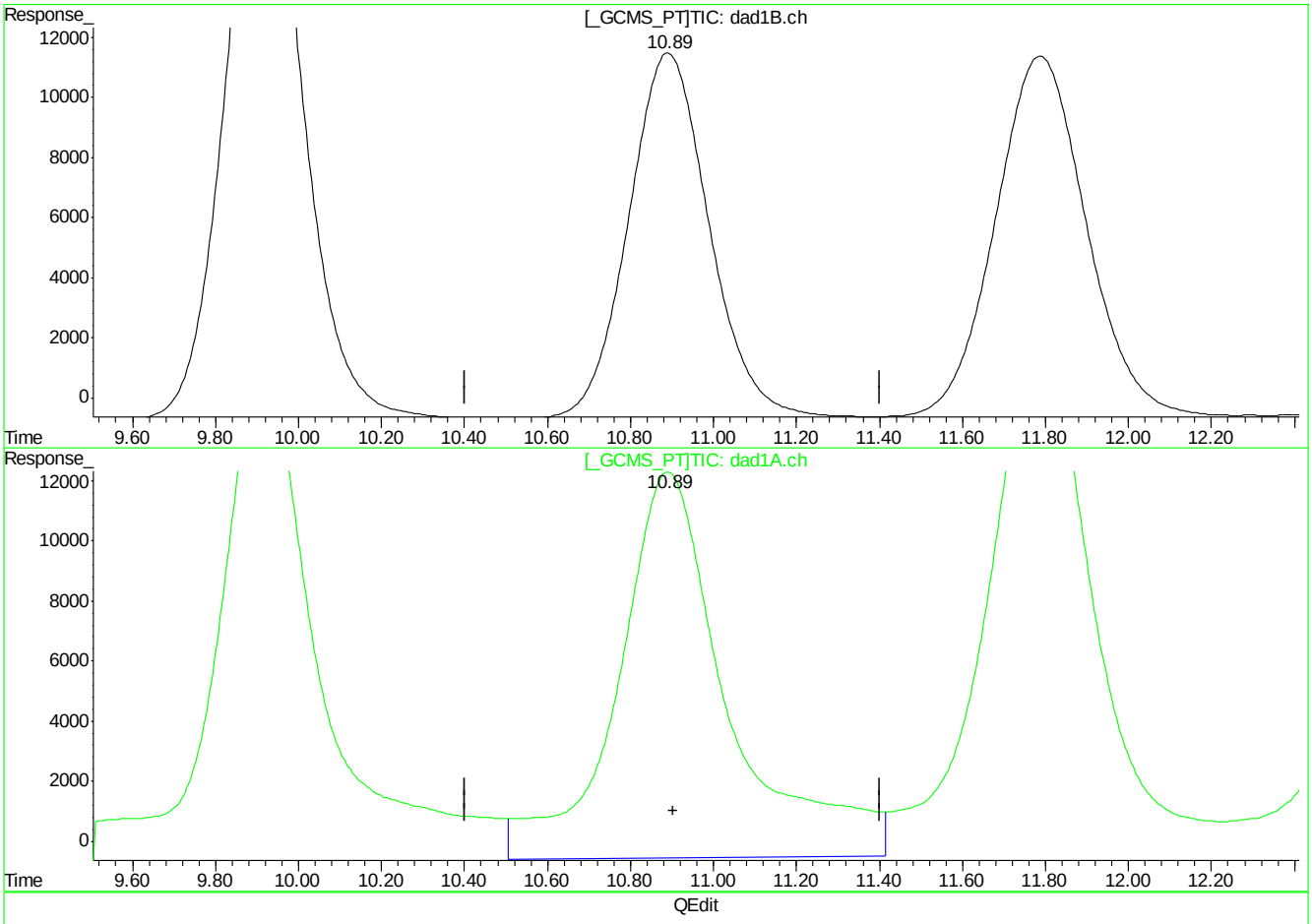
response 3048637

(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:34:38 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(8) Nitrobenzene

10.89min 208.506ppb

response 1637392

(8) Nitrobenzene #2

10.89min 284.857ppb

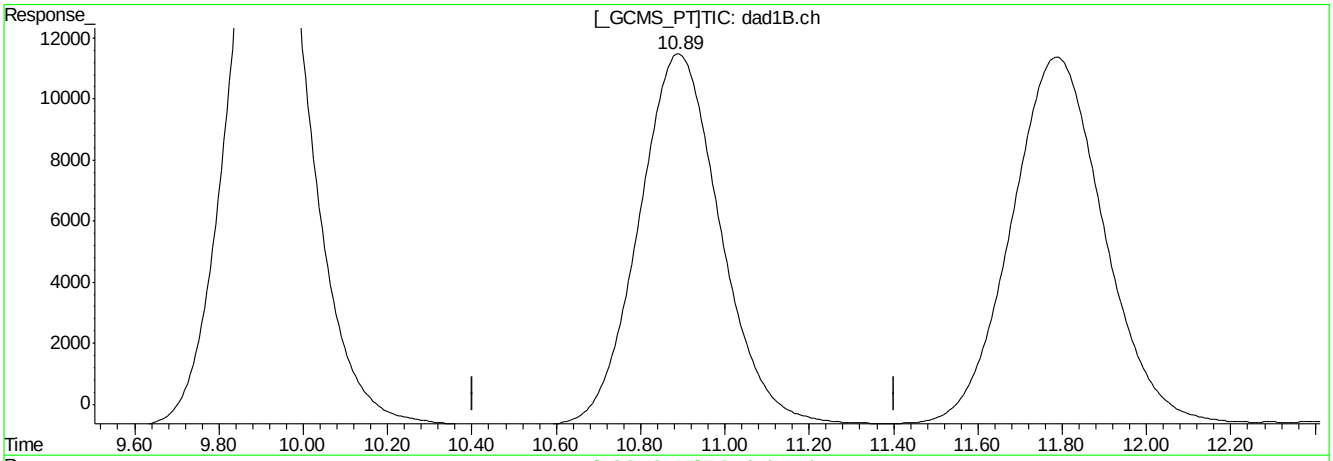
response 2372784

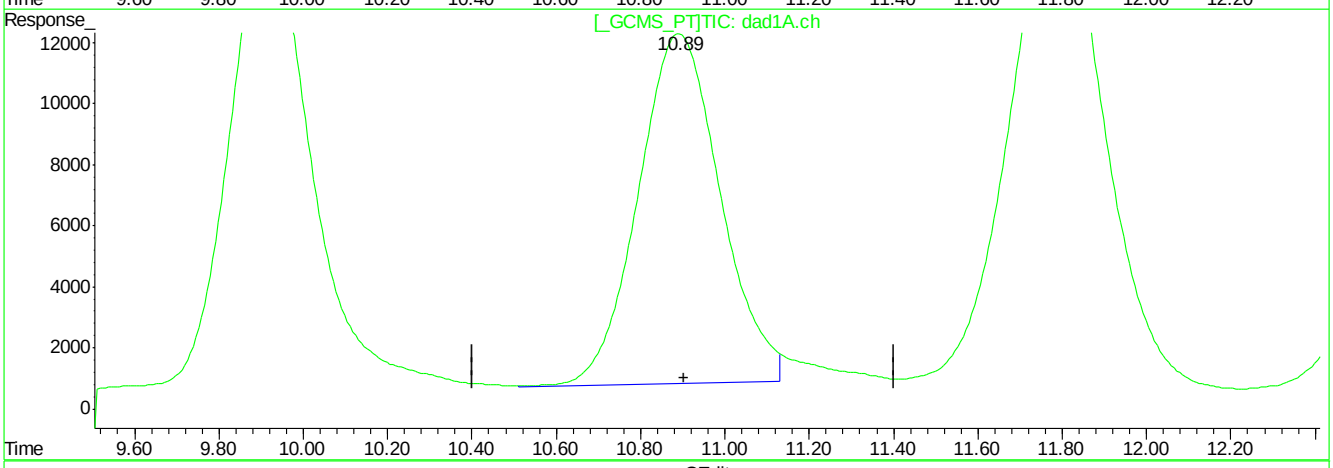
(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:34:44 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.89min 208.506ppb

response 1637392

(8) Nitrobenzene #2

10.89min 186.009ppb m

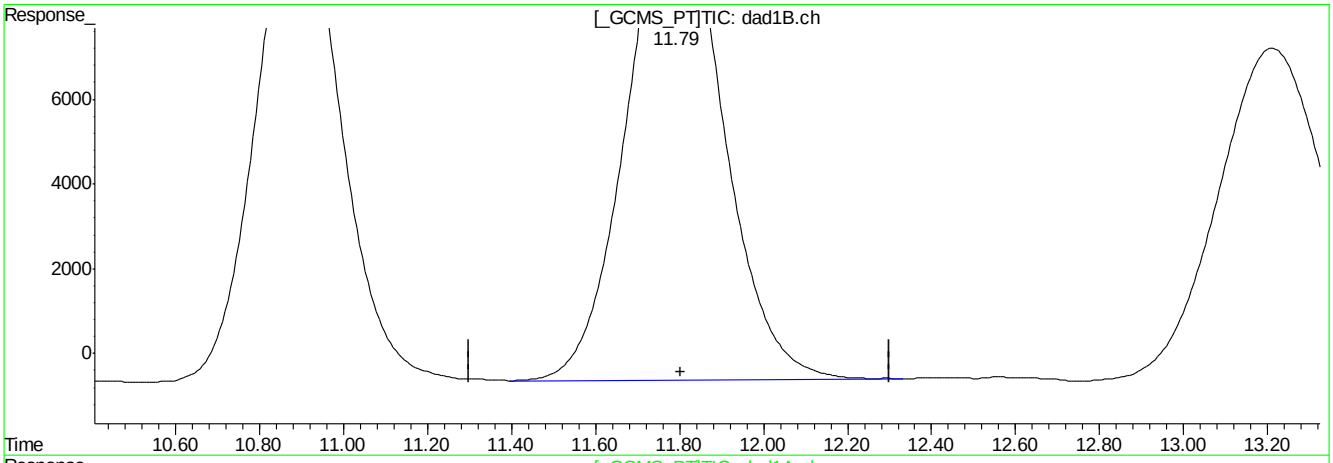
response 1556293

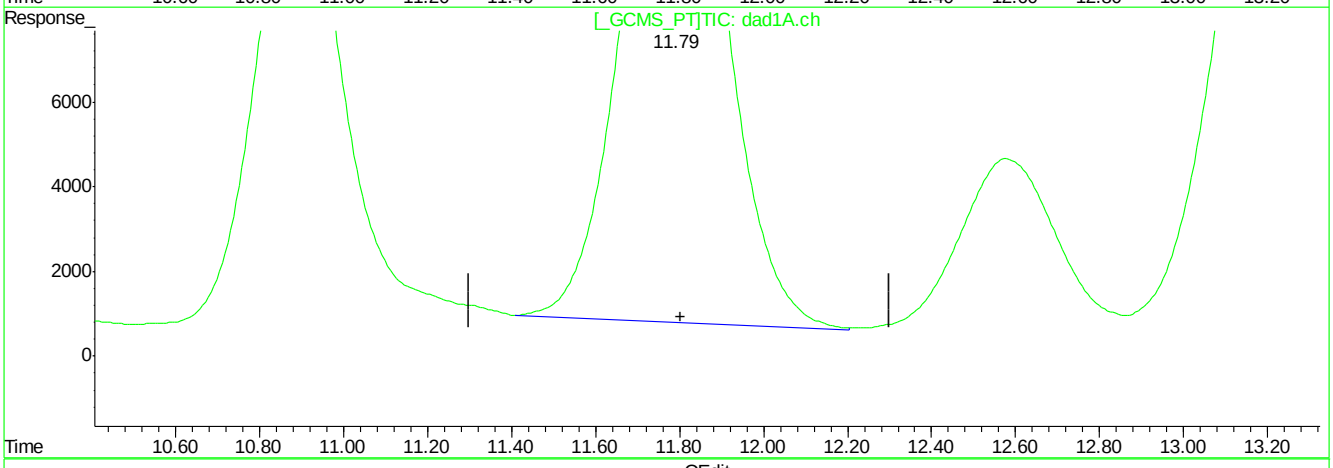
(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:34:50 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.79min 210.832ppb

response 1826116

(9) 2,4,6-Trinitrotoluene #2

11.79min 198.177ppb m

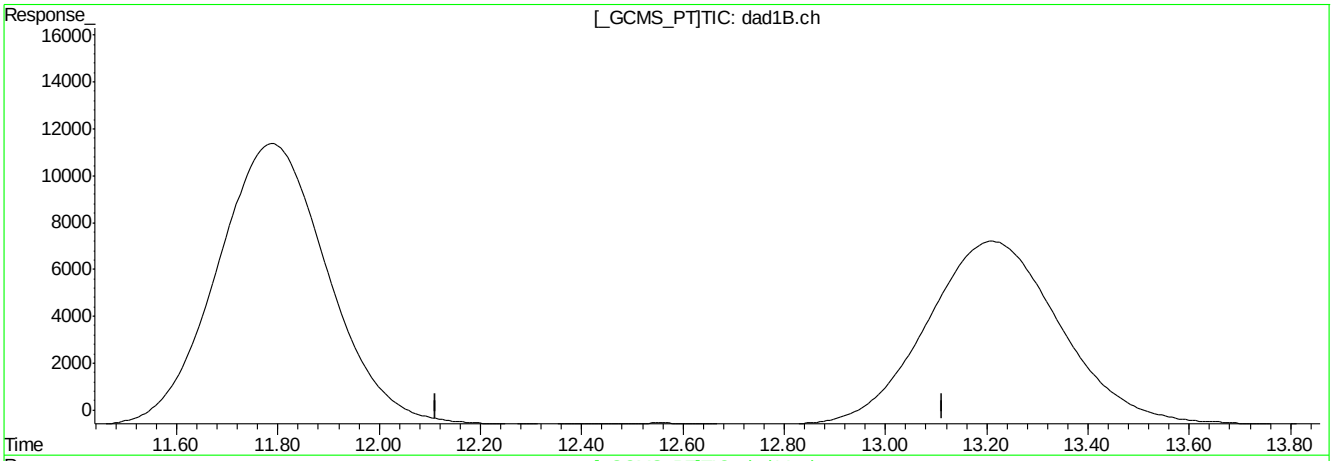
response 2476309

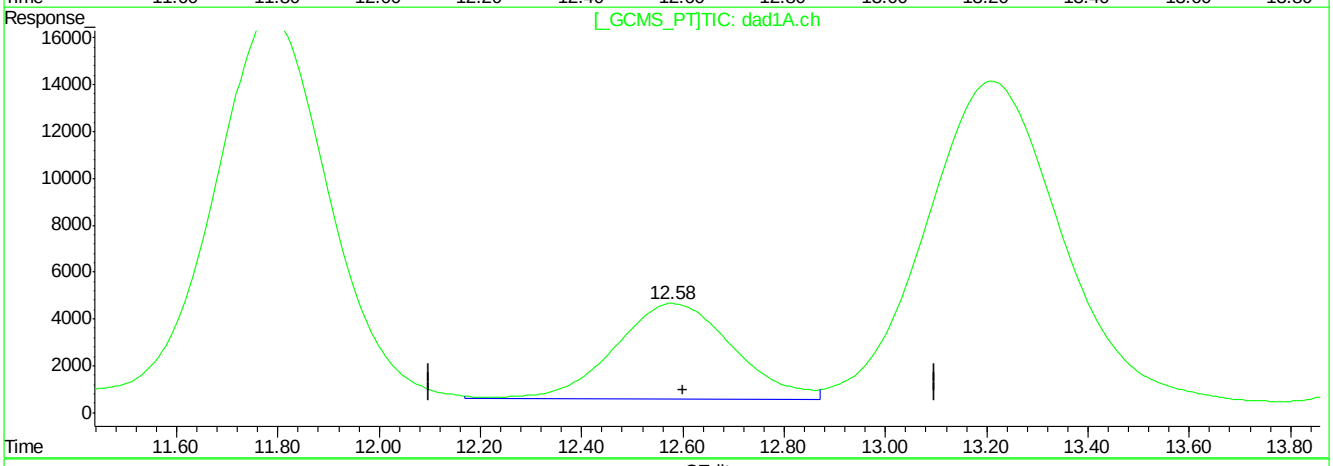
(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:34:56 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.58min 192.125ppb m

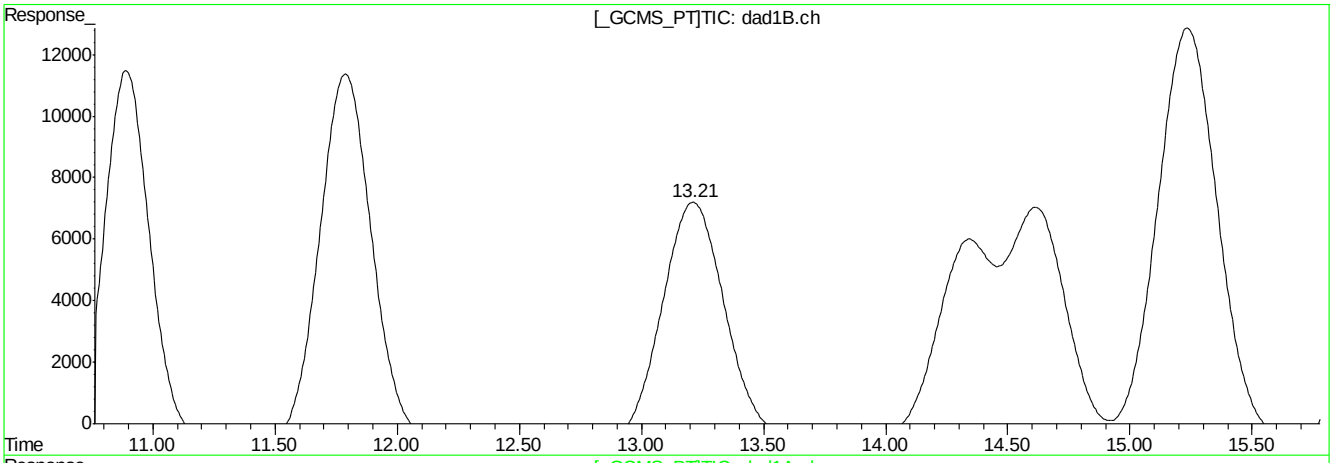
response 668649

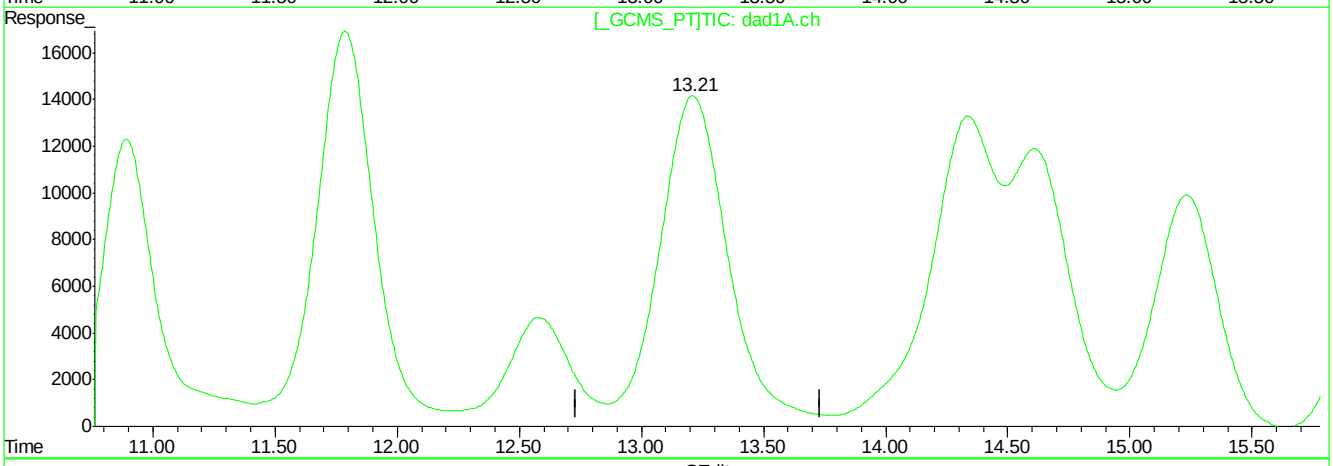
(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:35:04 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

13.21min 205.602ppb

response 1452814

(11) Tetryl #2

13.21min 231.765ppb

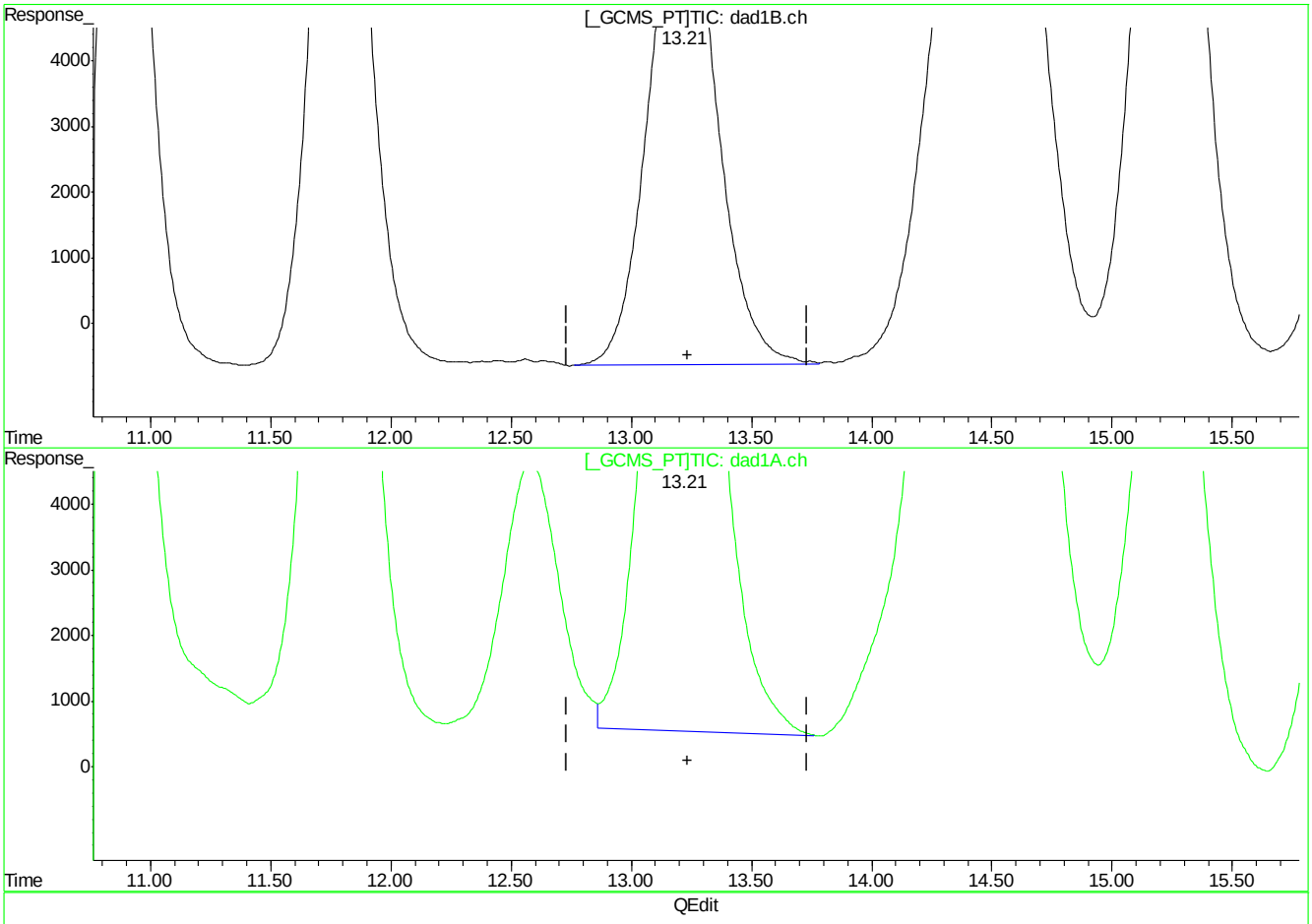
response 2977403

(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:35:10 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



QEdit

(11) Tetryl

13.21min 205.602ppb

response 1452814

(11) Tetryl #2

13.21min 195.968ppb m

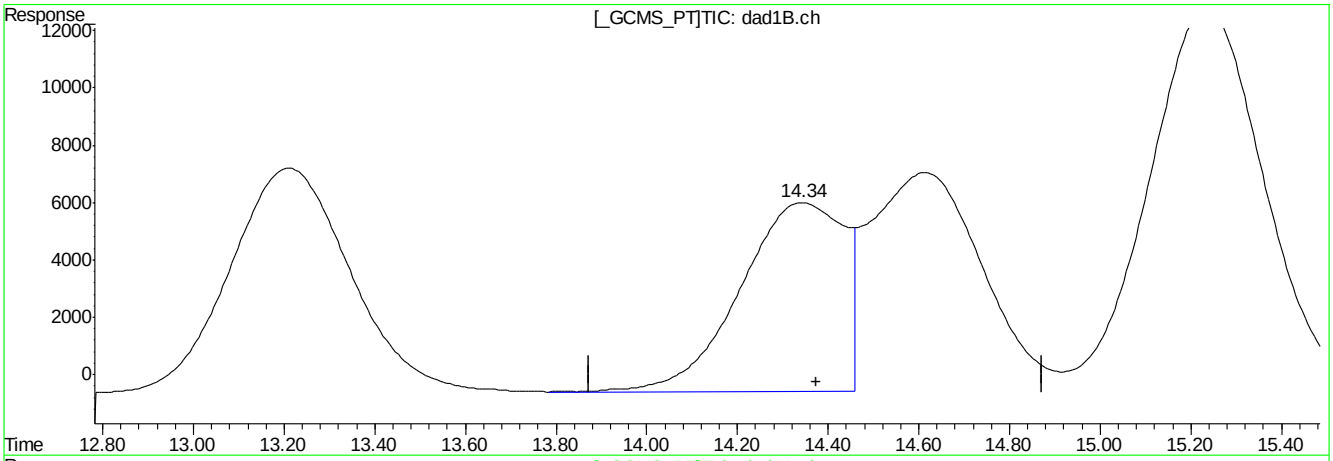
response 2517533

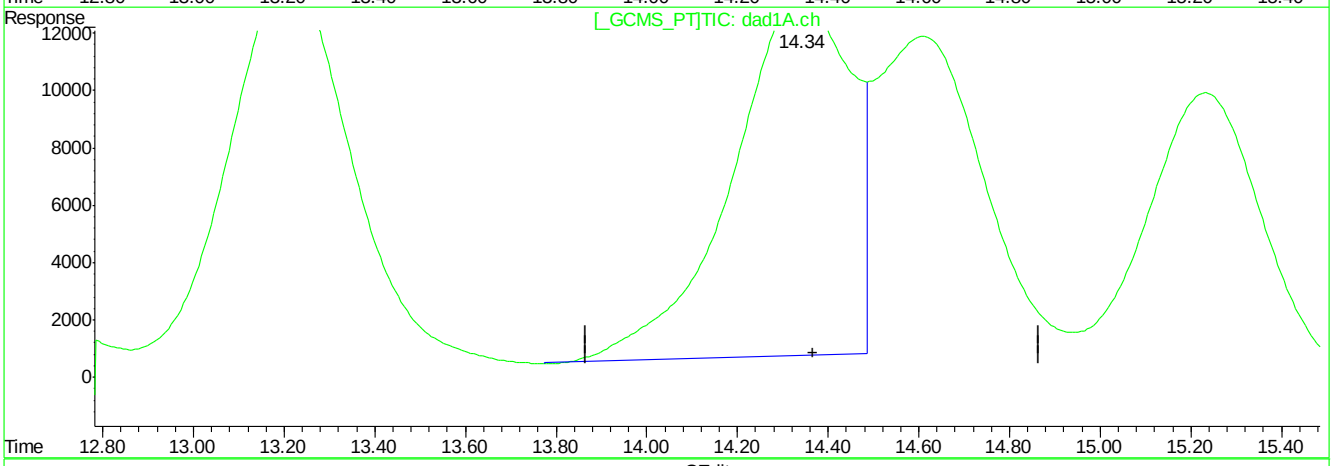
(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:35:17 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

14.34min 197.977ppb

response 1047361

(12) 3,4-Dinitrotoluene #2 (S)

14.34min 213.400ppb m

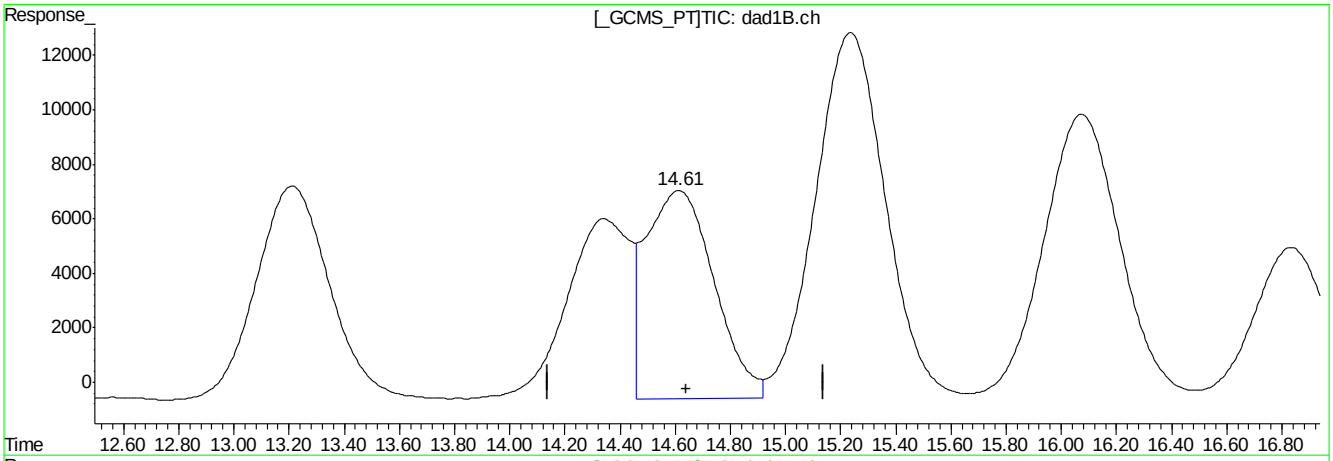
response 2303343

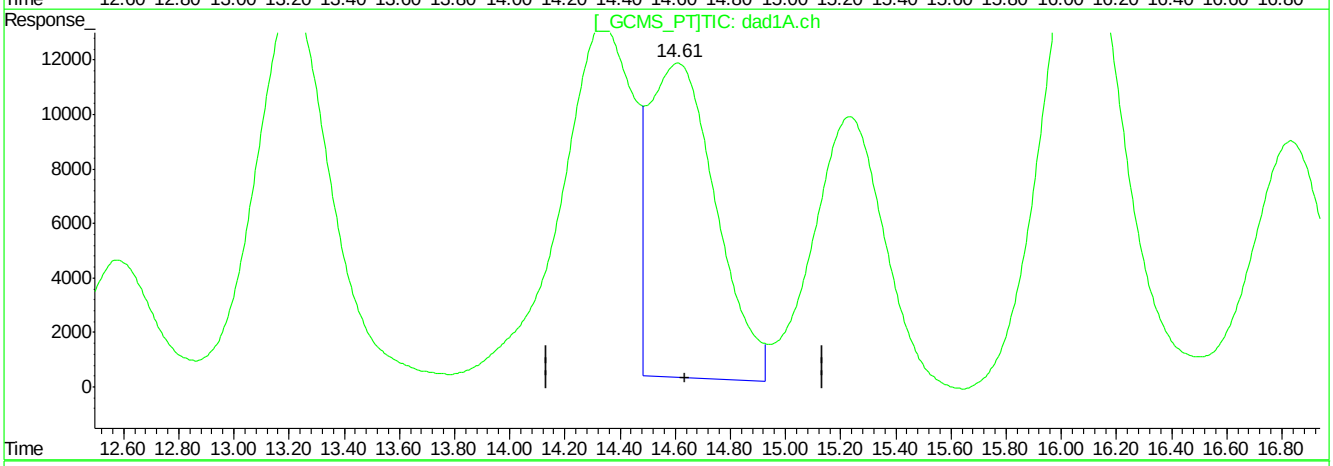
(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:35:26 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(13) 2,6-Dinitrotoluene

14.62min 215.573ppb

response 1314088

(13) 2,6-Dinitrotoluene #2

14.61min 201.819ppb m

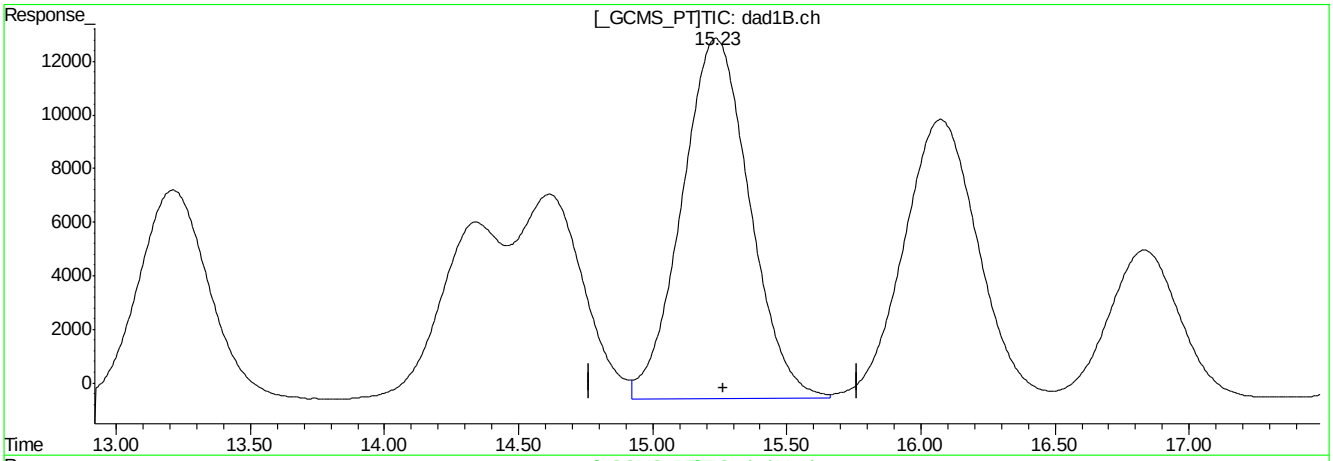
response 1937771

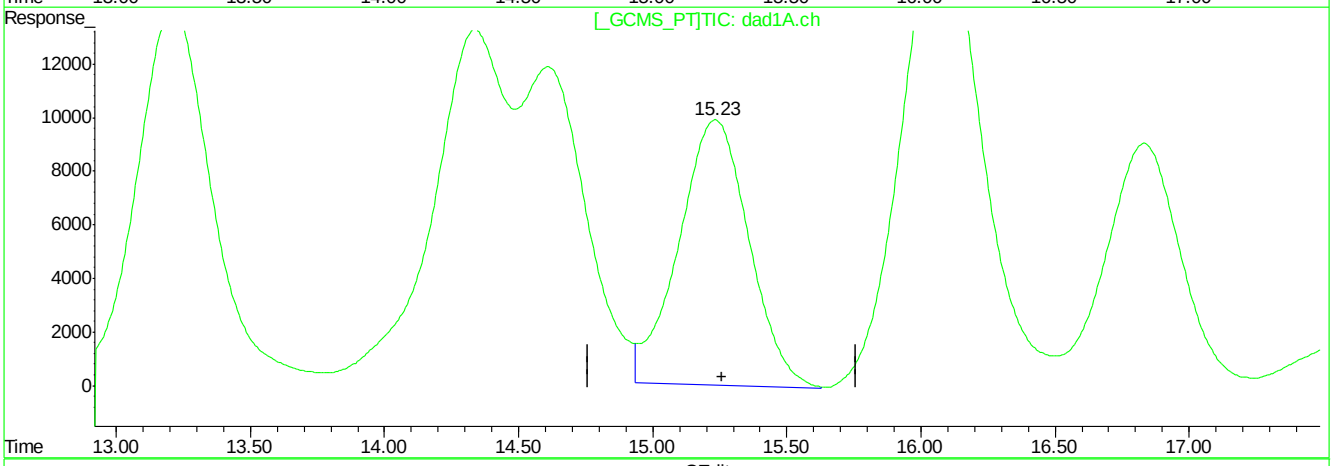
(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:35:36 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(14) 2,4-Dinitrotoluene

15.24min 211.961ppb

response 2365763

(14) 2,4-Dinitrotoluene #2

15.23min 220.386ppb m

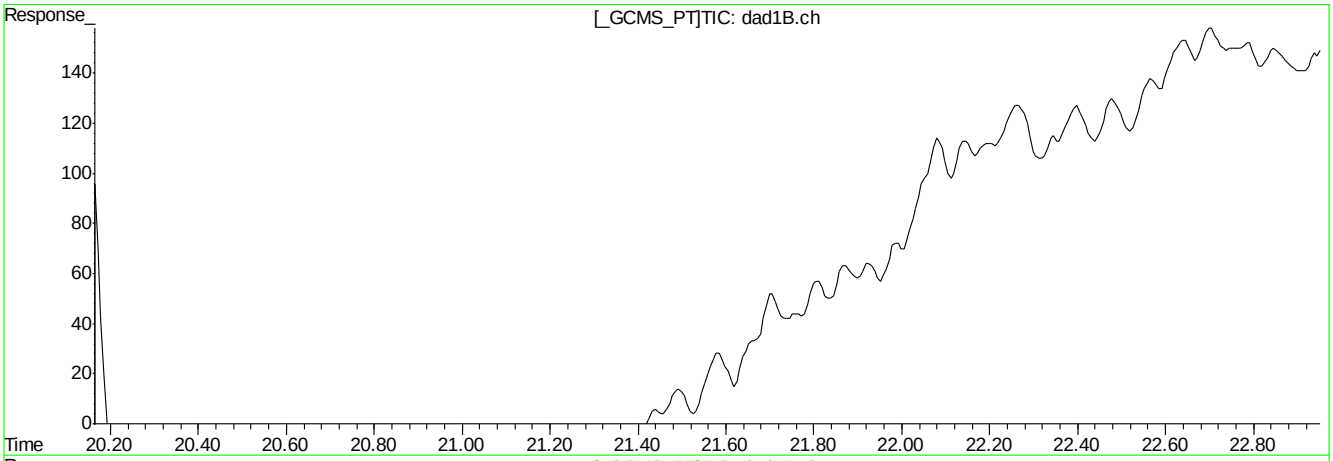
response 1800956

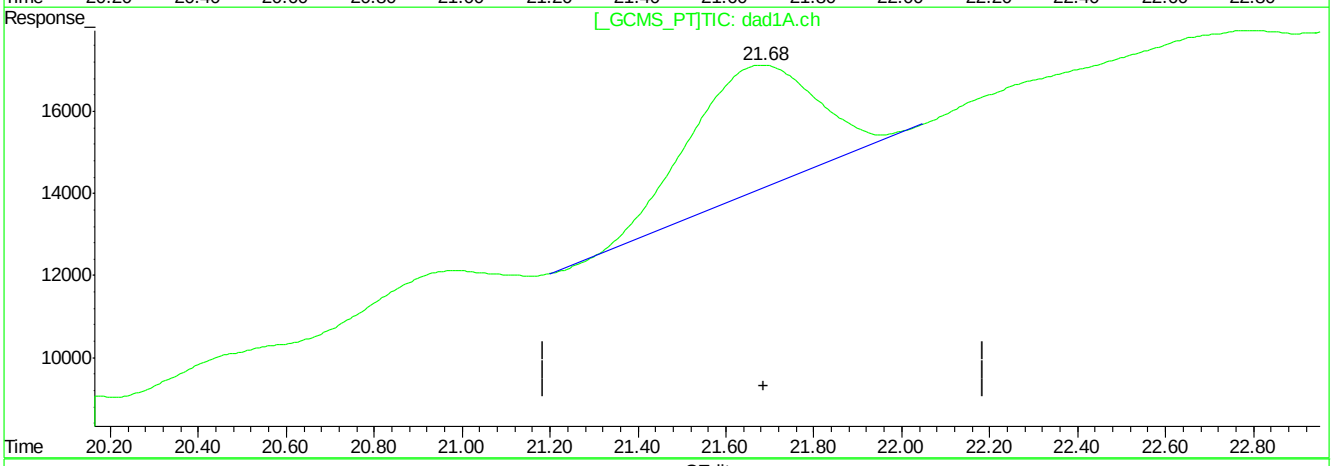
(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:35:49 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623372.D\dad1A.ch
Acq On : 24-Jan-2022, 14:26:28 Operator: jamesb
Sample : ic3094-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.68min 173.493ppb m

response 618016

(+) = Expected Retention Time
GG623372.D GGG3094_012422.M Thu Jan 27 11:36:15 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 01/27/22 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1A.ch
Acq On : 24-Jan-2022, 14:57:53 Operator: jamesb
Sample : ic3094-500 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29:36 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.39	14.38	2462859	5087185	469.372	475.404
	Spiked Amount 500.000	Range 70 - 136		Recovery =		93.87%	95.08%
	Target Compounds						
1)	TNX	4.85	4.85	1793177	1787611	216.243m	214.931m
2)	HMX	5.32	5.32	1572476	1572476	476.291	476.291
3)	DNX	5.51	5.51	3233726	3233726	483.534	483.370
4)	MNX	6.69	6.69	3312436	3312436	566.777	566.777
5)	1,3,5-Trinitrobe	7.59	7.59	4648323	4648323	527.714	527.704
6)	RDX	8.00	8.00	2265472	2265472	505.916	505.794
7)	1,3-Dinitrobenze	9.93	9.93	6406948	4904660	520.997	520.905m
8)	Nitrobenzene	10.91	10.91	4051128	3923850	515.872	475.133m
9)	2,4,6-Trinitroto	11.81	11.81	4506572	6133138	520.300	490.831m
10)	Nitroglycerin	0.00	12.61	0	1496779	N.D.	434.691m#
11)	Tetryl	13.25	13.24	3560303	6294515	503.853	489.974
13)	2,6-Dinitrotolue	14.65	14.64	3231684	4529936	530.151	476.653
14)	2,4-Dinitrotolue	15.28	15.28	5816400	4144962	521.122	507.227
15)	3,5-Dinitroanili	16.11	16.11	4911844	8285859	515.949	514.071
16)	o-Nitrotoluene	16.89	16.89	2546360	3834679	529.221	490.283
17)	p-Nitrotoluene	17.97	17.97	5355786	9840661	1040.476	991.700
18)	4-Amino-2,6-Dini	17.97	17.97	5355786	9840661	1040.476	991.700
19)	m-Nitrotoluene	19.13	19.13	2756408	4755827	511.425	517.051m
20)	2-Amino-4,6-Dini	19.82	19.82	4309983	6177766	499.587	488.911
21)	PETN	0.00	21.69	0	1905217	N.D.	541.625m#

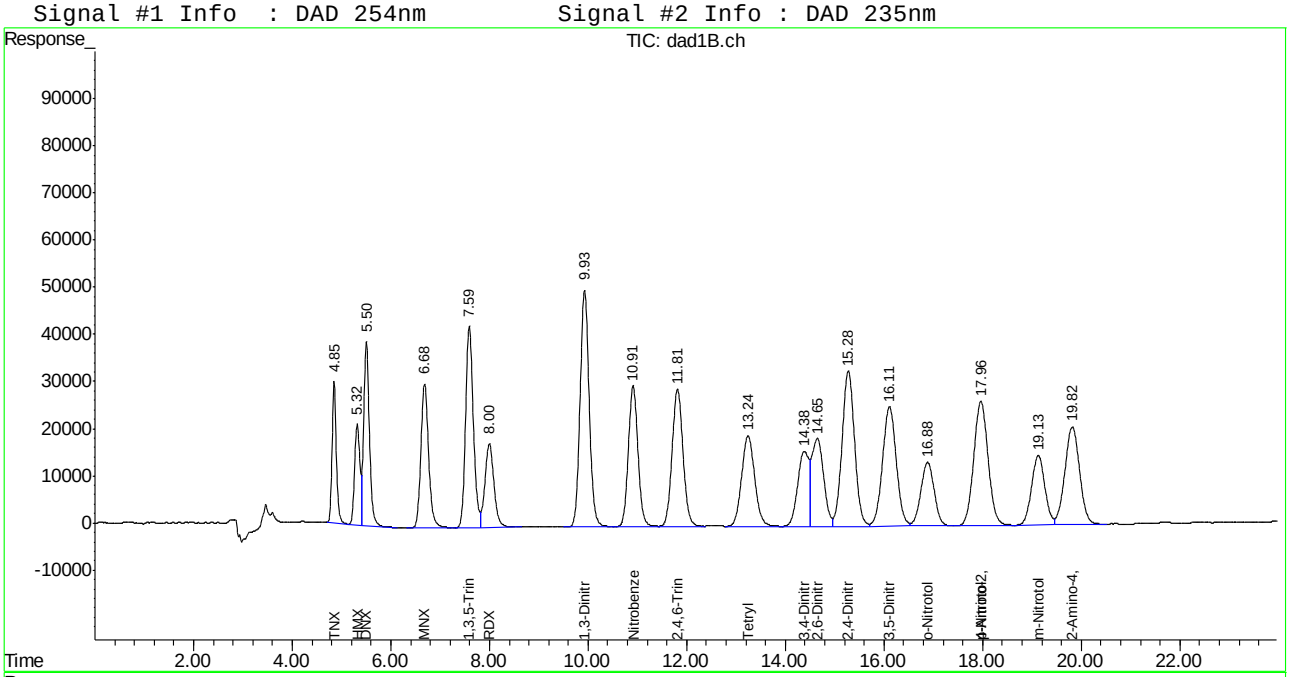
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG623373.D GGG3094_012422.M Thu Jan 27 12:53:43 2022 Page 1

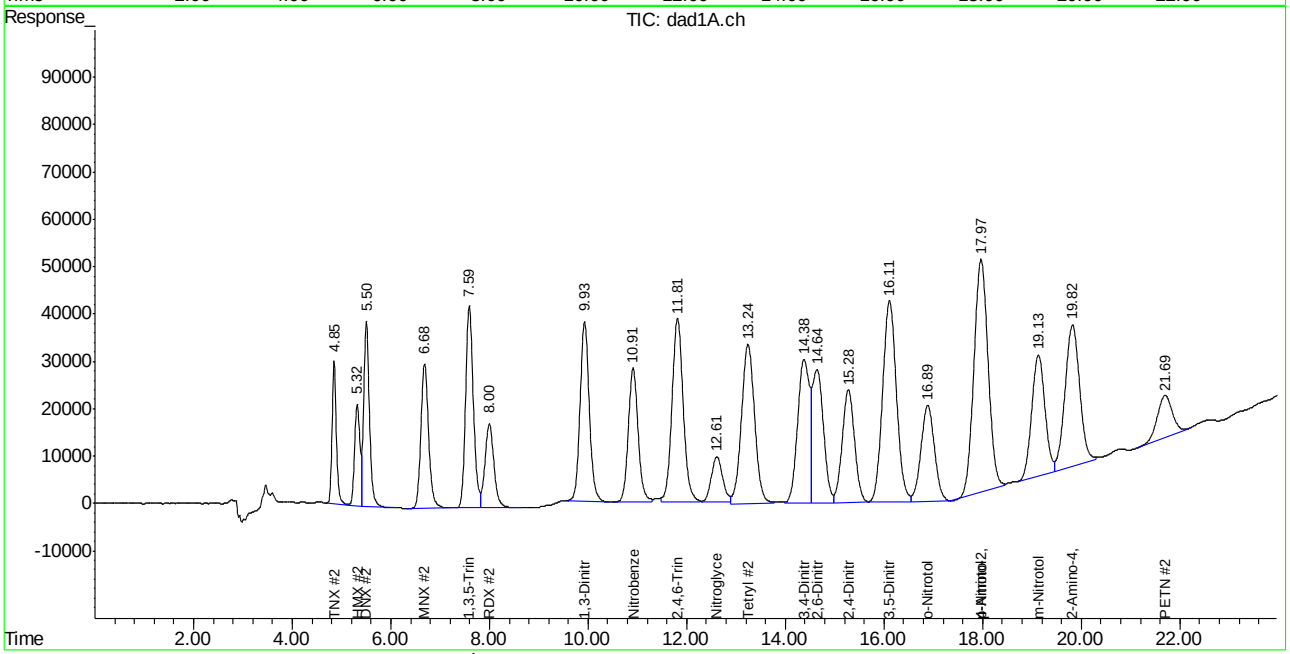
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1A.ch
Acq On : 24-Jan-2022, 14:57:53 Operator: jamesb
Sample : ic3094-500 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:34 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

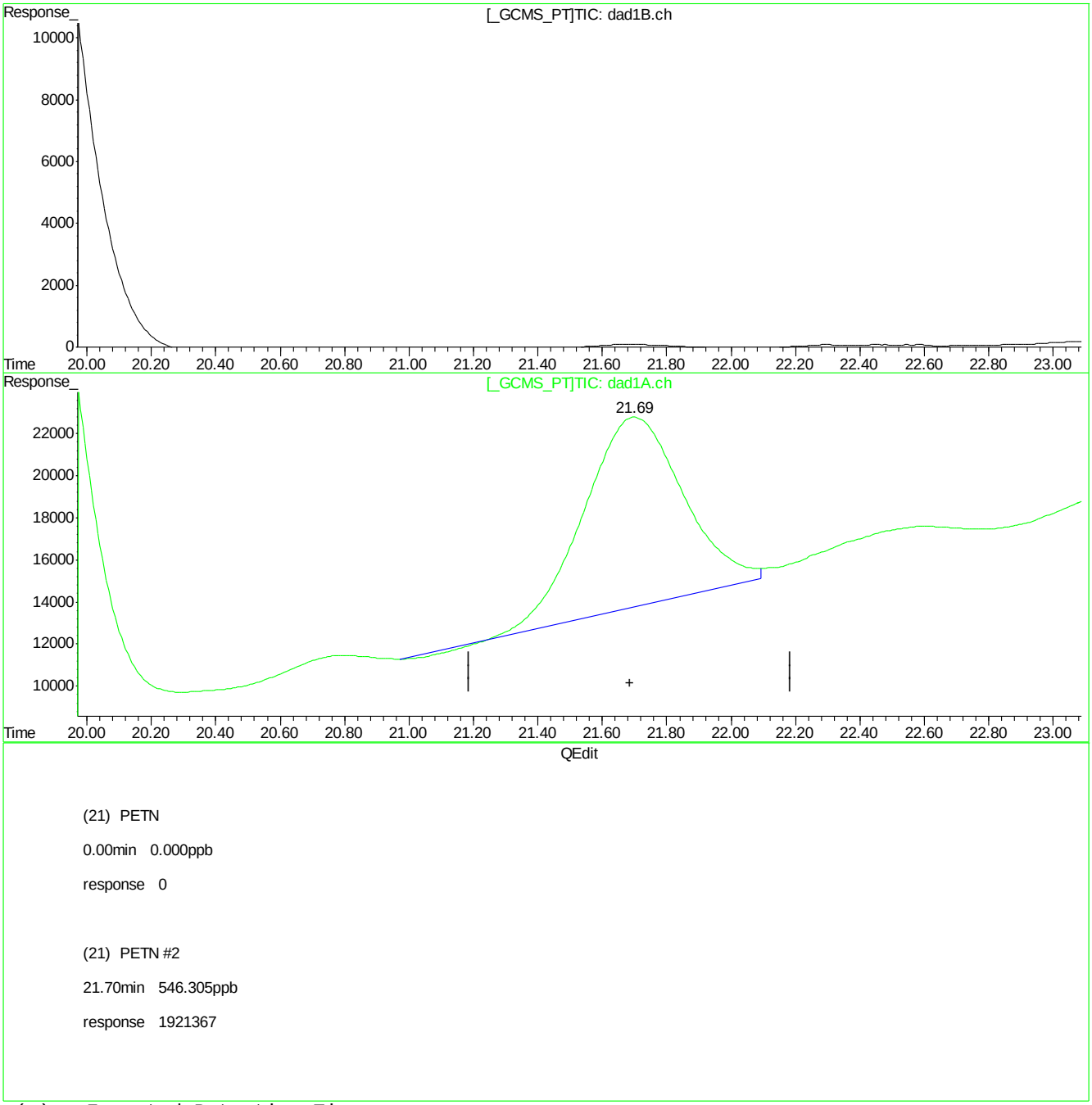
Sample Number: GGG3094-IC3094
Lab FileID: GG623373.D
Injection Time: 01/24/22 14:57
Method: SW846 8330A
Analyst approved: 01/27/22 12:56 James Boone
Supervisor approved: 01/27/22 13:01 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	4.85	Poor instrument integration
TNX		2	4.85	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.93	Poor instrument integration
Nitrobenzene	98-95-3	2	10.91	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.81	Poor instrument integration
Nitroglycerine	55-63-0	2	12.61	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.13	Poor instrument integration
PETN	78-11-5	2	21.69	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1A.ch
Acq On : 24-Jan-2022, 14:57:53 Operator: jamesb
Sample : ic3094-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration

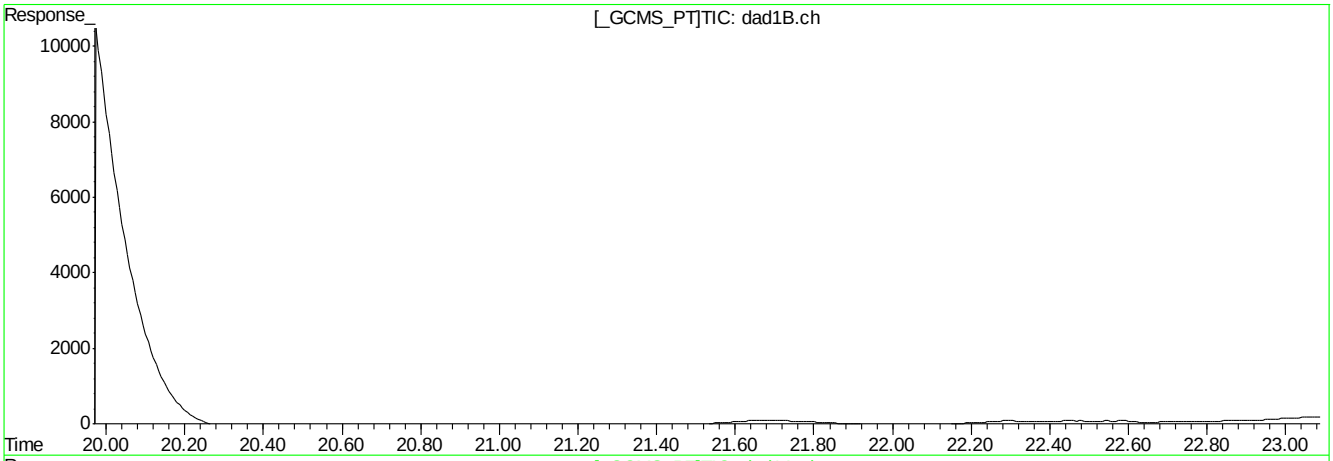


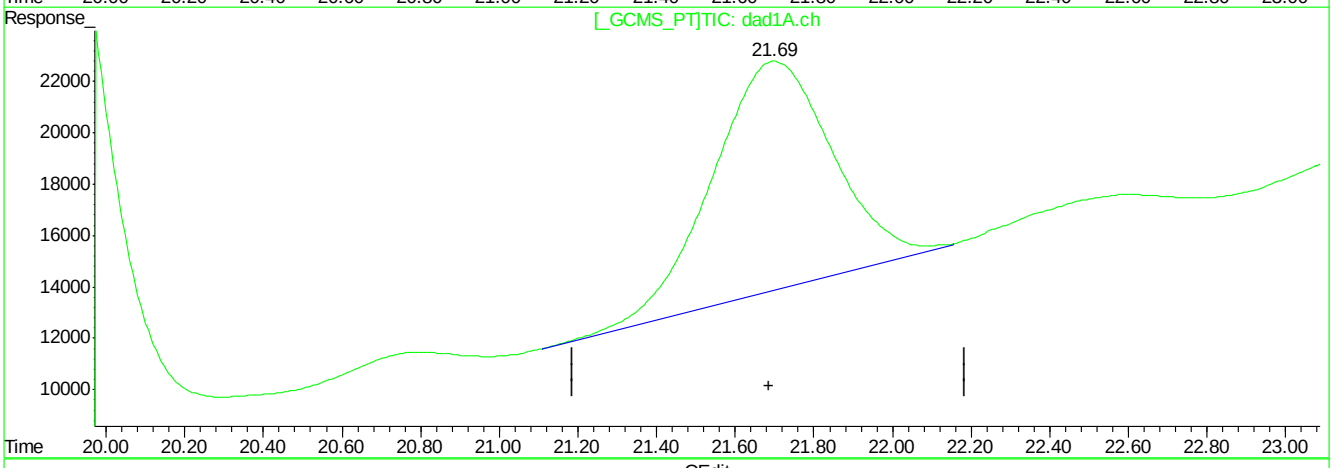
(+) = Expected Retention Time
GG623373.D GGG3094_012422.M Thu Jan 27 11:32:39 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1A.ch
Acq On : 24-Jan-2022, 14:57:53 Operator: jamesb
Sample : ic3094-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.69min 541.625ppb m

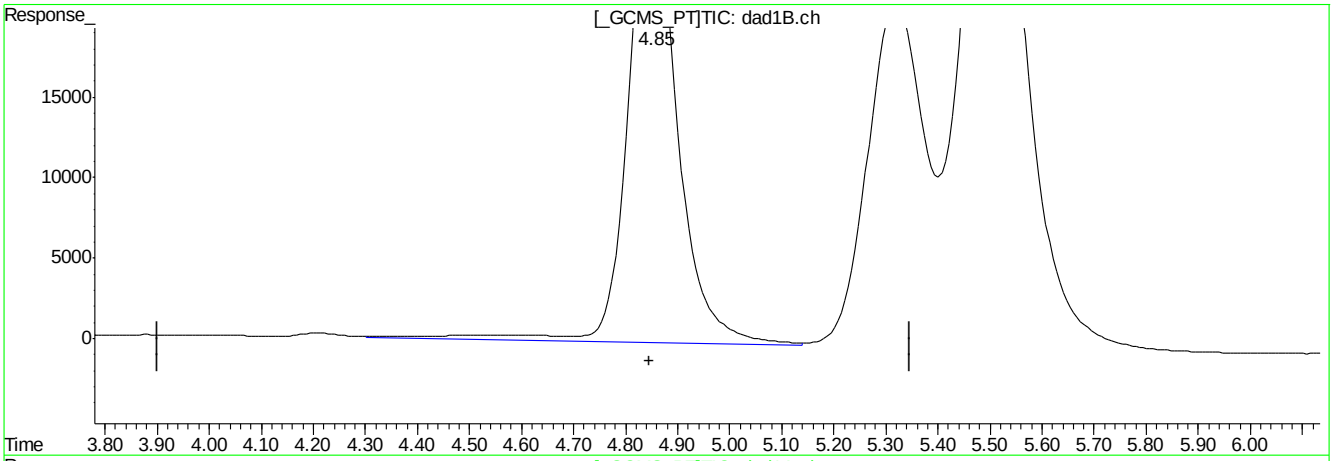
response 1905217

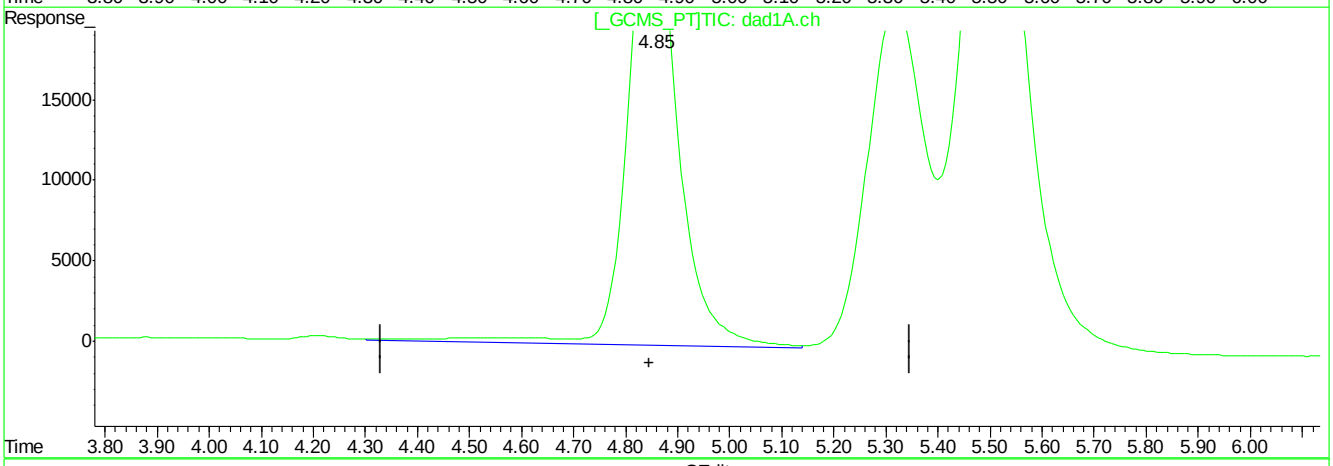
(+) = Expected Retention Time
GG623373.D GGG3094_012422.M Thu Jan 27 11:32:44 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1A.ch
Acq On : 24-Jan-2022, 14:57:53 Operator: jamesb
Sample : ic3094-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.85min 230.372ppb

response 1910339

(1) TNX #2

4.85min 229.687ppb

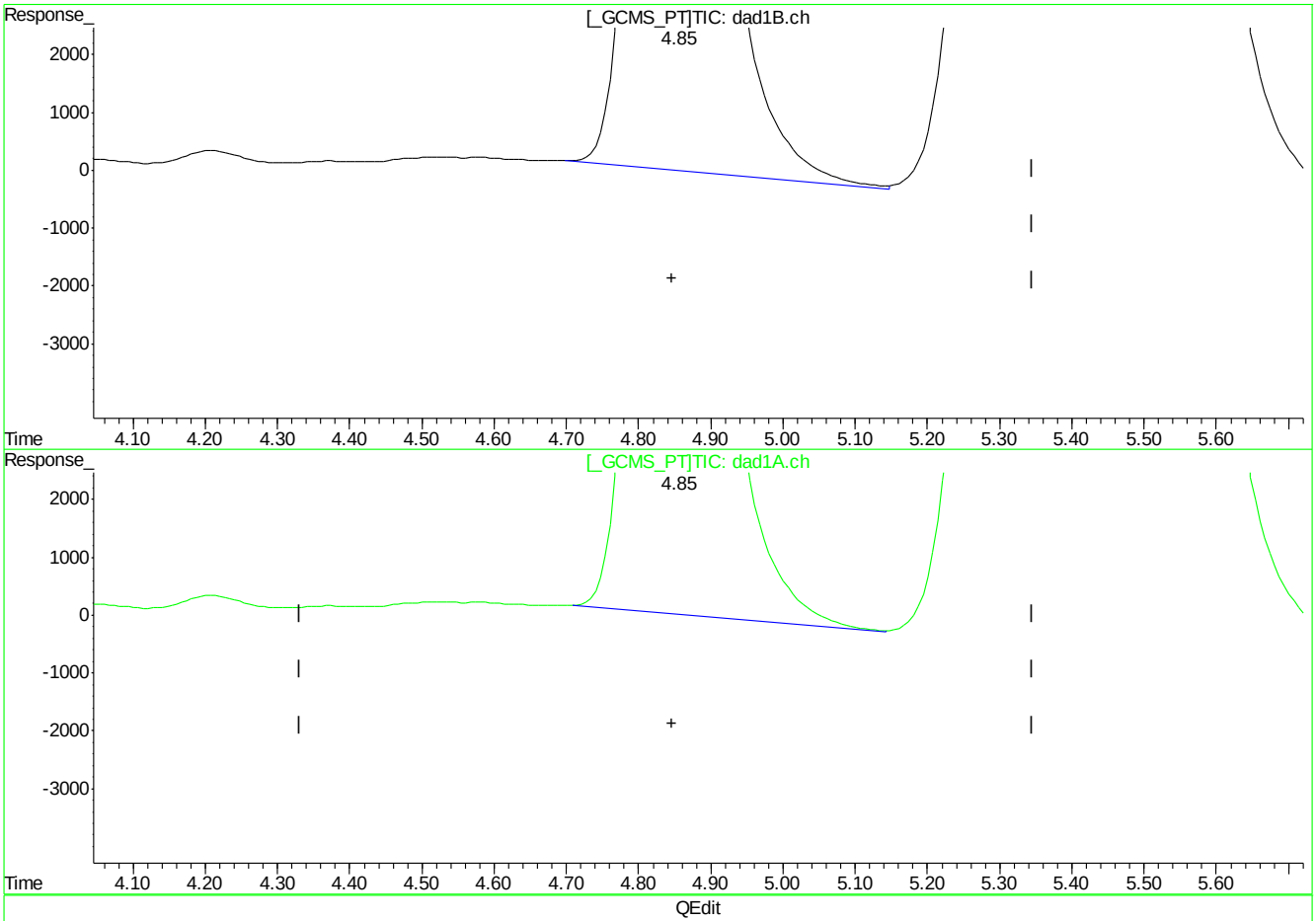
response 1910339

(+) = Expected Retention Time
GG623373.D GGG3094_012422.M Thu Jan 27 11:33:58 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623373.D\dad1A.ch
Acq On : 24-Jan-2022, 14:57:53 Operator: jamesb
Sample : ic3094-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(1) TNX

4.85min 216.243ppb m

response 1793177

(1) TNX #2

4.85min 214.931ppb m

response 1787611

(+) = Expected Retention Time
GG623373.D GGG3094_012422.M Thu Jan 27 11:34:04 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 01/27/22 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623374.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623374.D\dad1A.ch
Acq On : 24-Jan-2022, 15:29:18 Operator: jamesb
Sample : icc3094-1000 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29:37 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.38	14.37	4754694	9860282	918.663	935.711
	Spiked Amount 500.000	Range 70 - 136		Recovery =		183.73%#	187.14%#
	Target Compounds						
1)	TNX	4.85	4.85	3489929	3489929	420.859	419.608
2)	HMX	5.31	5.31	2993487	2993487	906.705	906.705
3)	DNX	5.50	5.50	6172590	6172590	922.979	922.665
4)	MNX	6.68	6.68	6299503	6299503	1077.881	1077.881
5)	1,3,5-Trinitrobe	7.59	7.59	8879580	8879580	1008.079	1008.060
6)	RDX	7.99	7.99	4299984	4299984	960.255	960.024
7)	1,3-Dinitrobenze	9.93	9.92	12284887	9372954	998.977	995.465m
8)	Nitrobenzene	10.91	10.90	7748791	7199508	986.734	888.437m
9)	2,4,6-Trinitroto	11.80	11.80	8634005	11114337	996.827	889.473m
10)	Nitroglycerin	0.00	12.60	0	2837949	N.D.	839.219m#
11)	Tetryl	13.24	13.24	6844443	12003262	968.624	934.352
13)	2,6-Dinitrotolue	14.64	14.64	6182511	8699030	1014.227	931.203
14)	2,4-Dinitrotolue	15.27	15.27	11151797	7946587	999.148	972.439
15)	3,5-Dinitroanili	16.09	16.09	9389588	15611593	986.299	968.574
16)	o-Nitrotoluene	16.87	16.87	4883980	7407786	1015.059	947.123
17)	p-Nitrotoluene	17.95	17.96	10235920	18931903	1988.547	1935.782
18)	4-Amino-2,6-Dini	17.95	17.96	10235920	18931903	1988.547	1935.782
19)	m-Nitrotoluene	19.12	19.12	5268776	9063467	977.571	985.375
20)	2-Amino-4,6-Dini	19.80	19.80	8265728	12168342	958.113	976.948
21)	PETN	0.00	21.69	0	3330821	N.D.	960.776m#

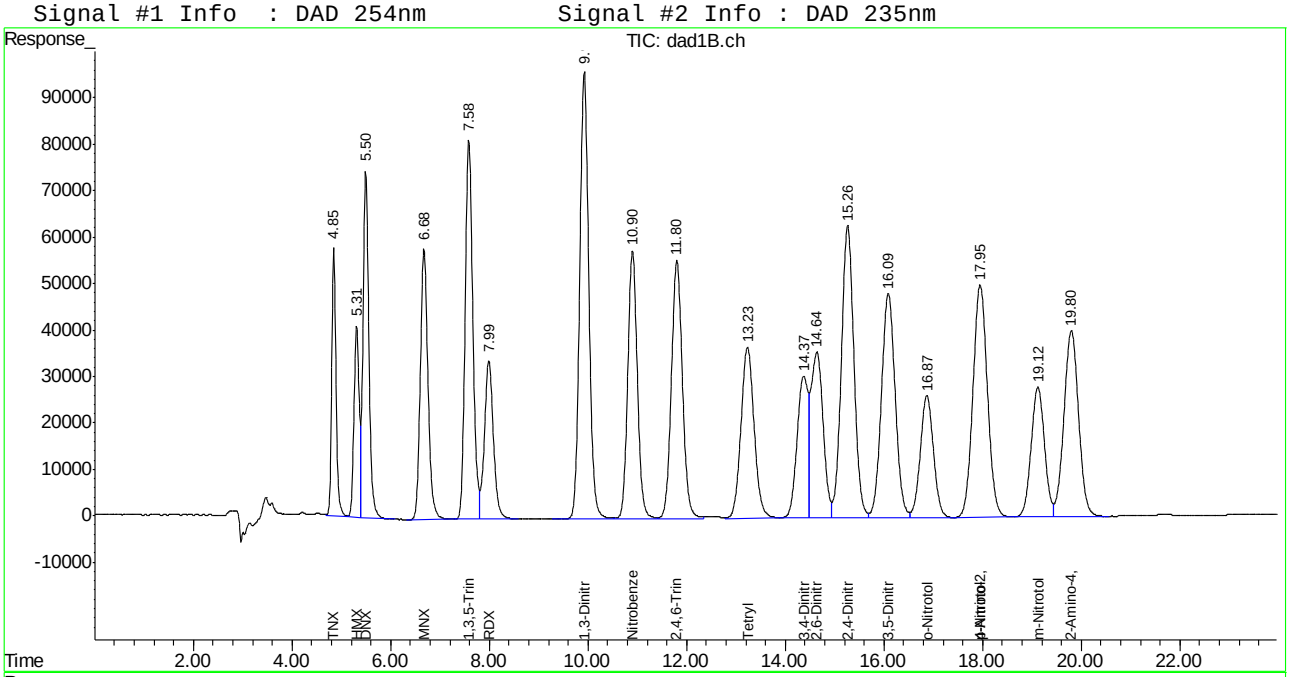
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

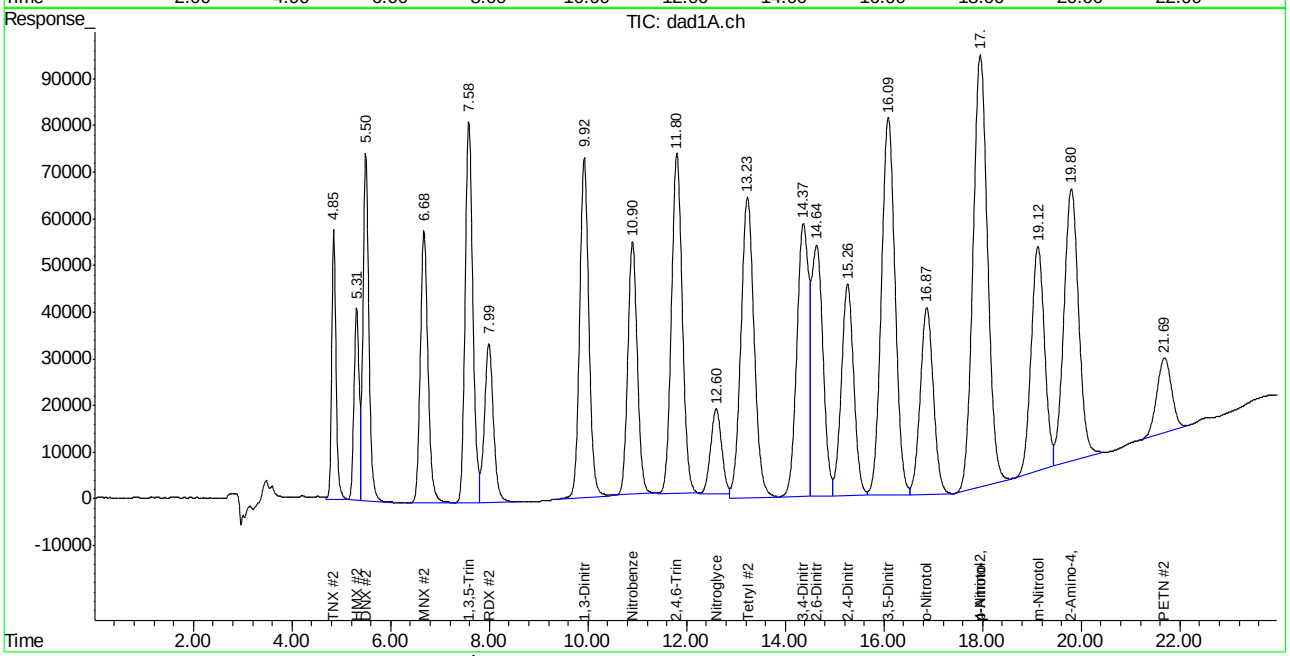
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623374.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623374.D\dad1A.ch
Acq On : 24-Jan-2022, 15:29:18 Operator: jamesb
Sample : icc3094-1000 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:32 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

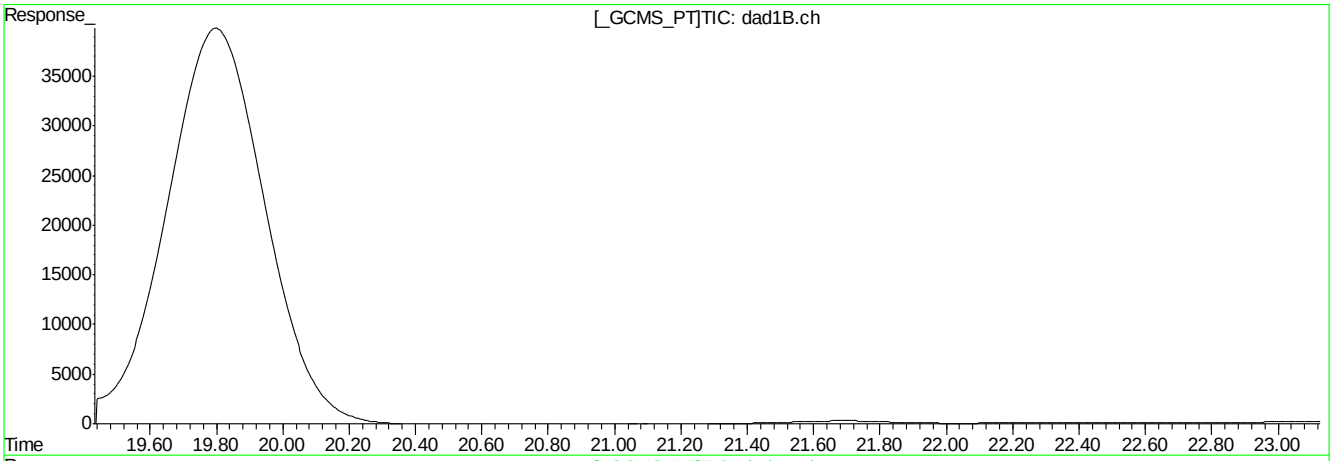
Sample Number: GGG3094-ICC3094 **Method:** SW846 8330A
Lab FileID: GG623374.D **Analyst approved:** 01/27/22 12:56 James Boone
Injection Time: 01/24/22 15:29 **Supervisor approved:** 01/27/22 13:01 Naresh Jiawan

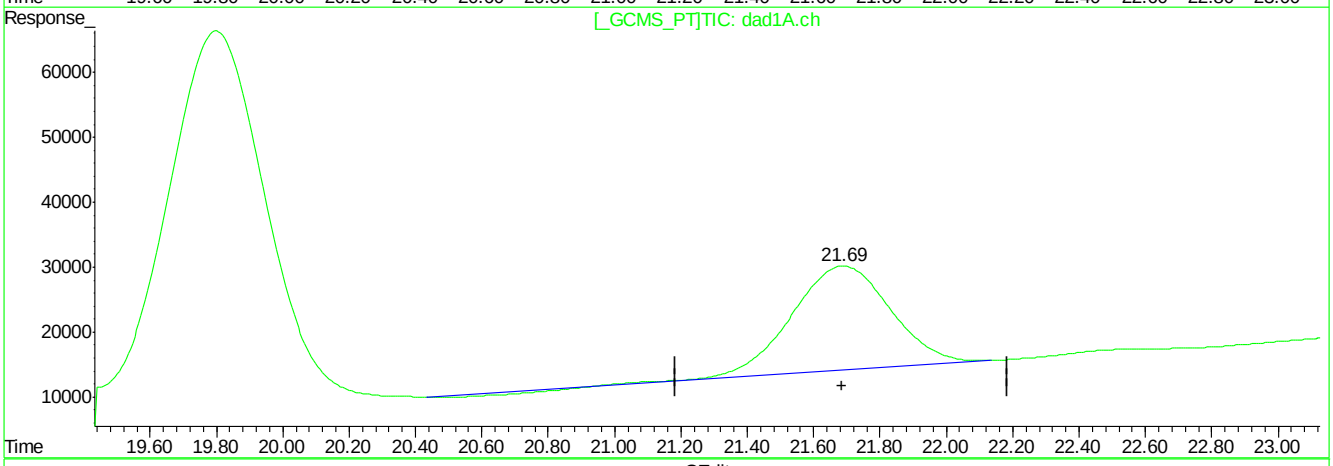
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	9.92	Poor instrument integration
Nitrobenzene	98-95-3	2	10.90	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.80	Poor instrument integration
Nitroglycerine	55-63-0	2	12.60	Poor instrument integration
PETN	78-11-5	2	21.69	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623374.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623374.D\dad1A.ch
Acq On : 24-Jan-2022, 15:29:18 Operator: jamesb
Sample : icc3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.69min 940.563ppb

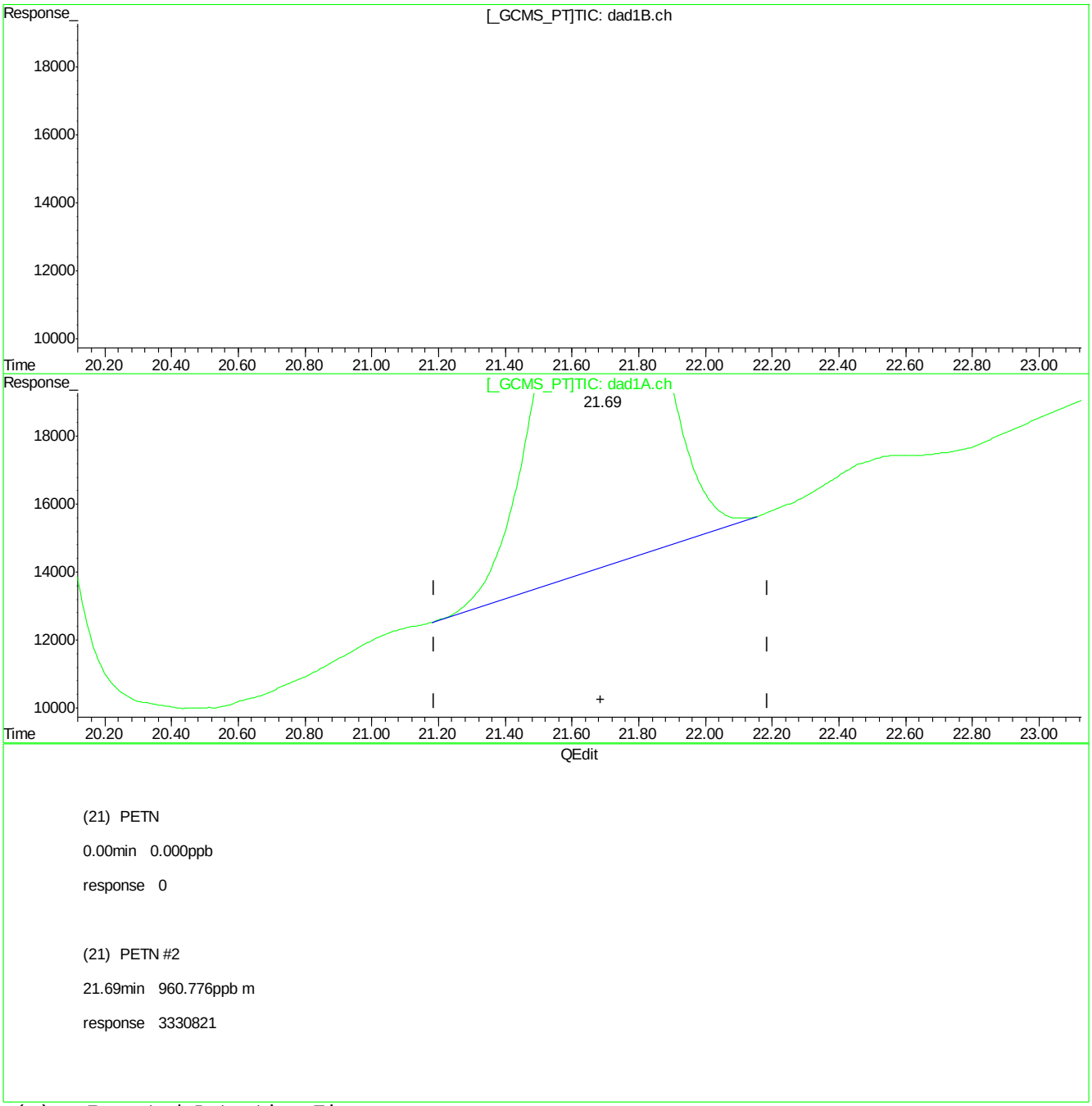
response 3263049

(+) = Expected Retention Time
GG623374.D GGG3094_012422.M Thu Jan 27 11:31:05 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623374.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623374.D\dad1A.ch
Acq On : 24-Jan-2022, 15:29:18 Operator: jamesb
Sample : icc3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration



(+) = Expected Retention Time
GG623374.D GGG3094_012422.M Thu Jan 27 11:31:11 2022

GG623375.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 01/27/22 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623375.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623375.D\dad1A.ch
Acq On : 24-Jan-2022, 16:00:43 Operator: jamesb
Sample : ic3094-2500 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29:38 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.35	14.34	11880105	24290840	2405.279	2426.735
	Spiked Amount 500.000	Range 70 - 136		Recovery =		481.06%#	485.35%#
	Target Compounds						
1)	TNX	4.84	4.84	8648569	8648569	1042.951	1039.851
2)	HMX	5.30	5.30	7494374	7494374	2269.990	2269.990
3)	DNX	5.49	5.49	15464429	15464429	2312.374	2311.587
4)	MNX	6.66	6.66	15787572	15787572	2701.343	2701.343
5)	1,3,5-Trinitrobe	7.58	7.58	22300557	22300557	2531.732	2531.684
6)	RDX	7.98	7.98	10750499	10750499	2400.759	2400.179
7)	1,3-Dinitrobenze	9.91	9.91	30718438	23800952	2497.949	2527.807
8)	Nitrobenzene	10.89	10.89	19540554	18715226	2488.302	2494.812
9)	2,4,6-Trinitroto	11.79	11.79	21657604	29104605	2500.448	2329.221
10)	Nitroglycerin	12.55	12.58	194236	7751012	NoCal	2474.458 #
11)	Tetryl	13.20	13.20	17251972	30046308	2441.495	2338.849
13)	2,6-Dinitrotolue	14.62	14.61	15487736	21886304	2540.729	2491.036
14)	2,4-Dinitrotolue	15.24	15.24	27914615	19821884	2501.017	2425.641
15)	3,5-Dinitroanili	16.05	16.05	23578202	39150298	2476.696	2428.960
16)	o-Nitrotoluene	16.85	16.85	12393466	18344540	2575.789	2345.443
17)	p-Nitrotoluene	17.92	17.93	25763950	47232389	5005.199	5076.507
18)	4-Amino-2,6-Dini	17.92	17.93	25763950	47232389	5005.199	5076.507
19)	m-Nitrotoluene	19.10	19.10	13325321	22636379	2472.386	2461.015
20)	2-Amino-4,6-Dini	19.77	19.77	20687555	29720509	2397.975	2498.947
21)	PETN	0.00	21.66	0	8125560	N.D. d	2474.776m

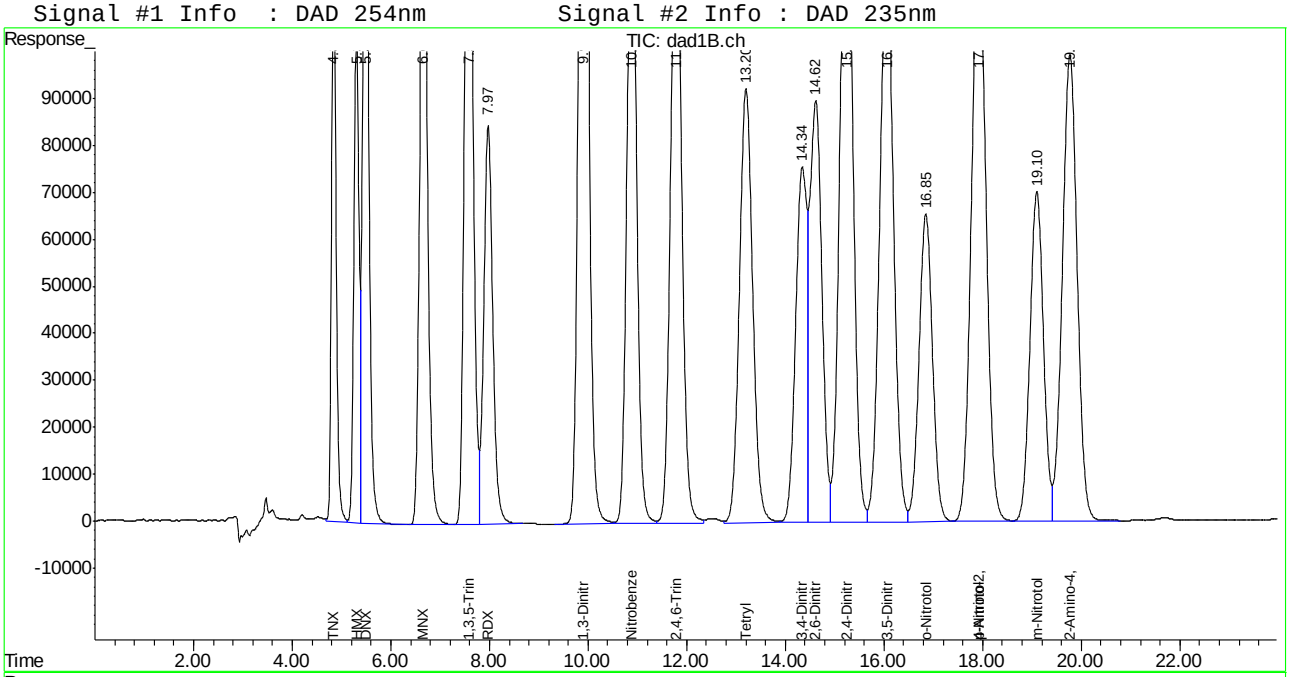
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

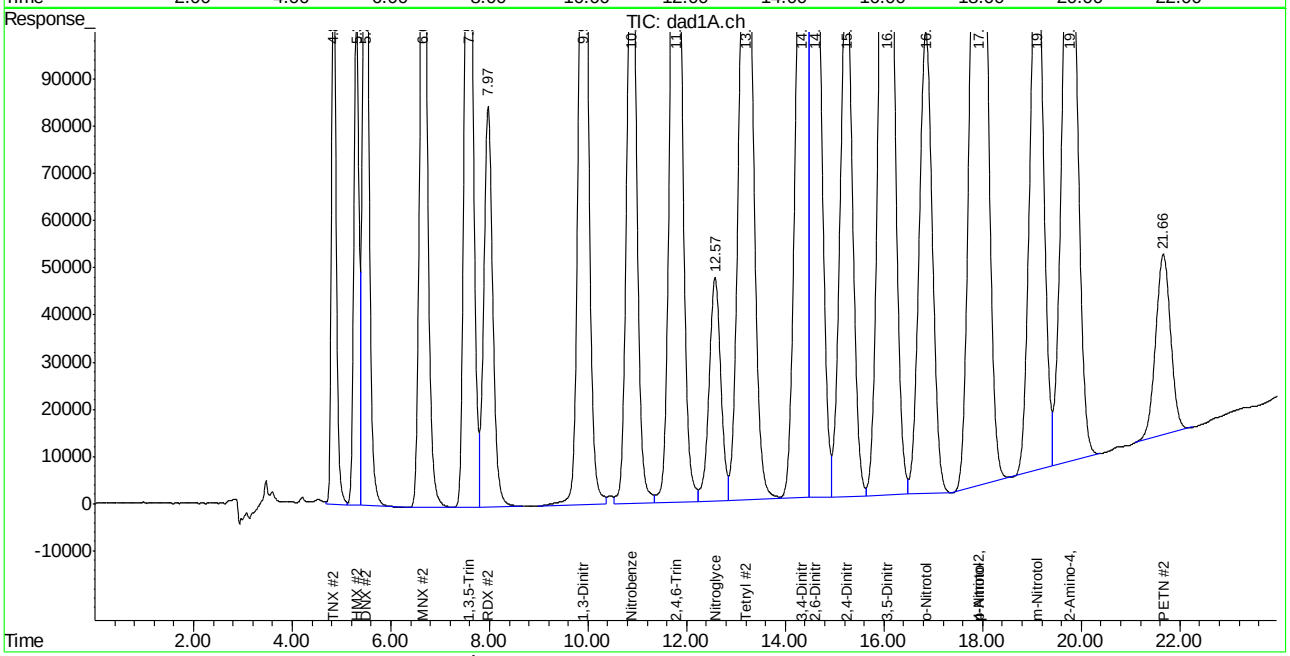
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623375.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623375.D\dad1A.ch
Acq On : 24-Jan-2022, 16:00:43 Operator: jamesb
Sample : ic3094-2500 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:30 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





GG623375.D GGG3094_012422.M Thu Jan 27 12:53:45 2022 Page 2

Manual Integration Approval Summary

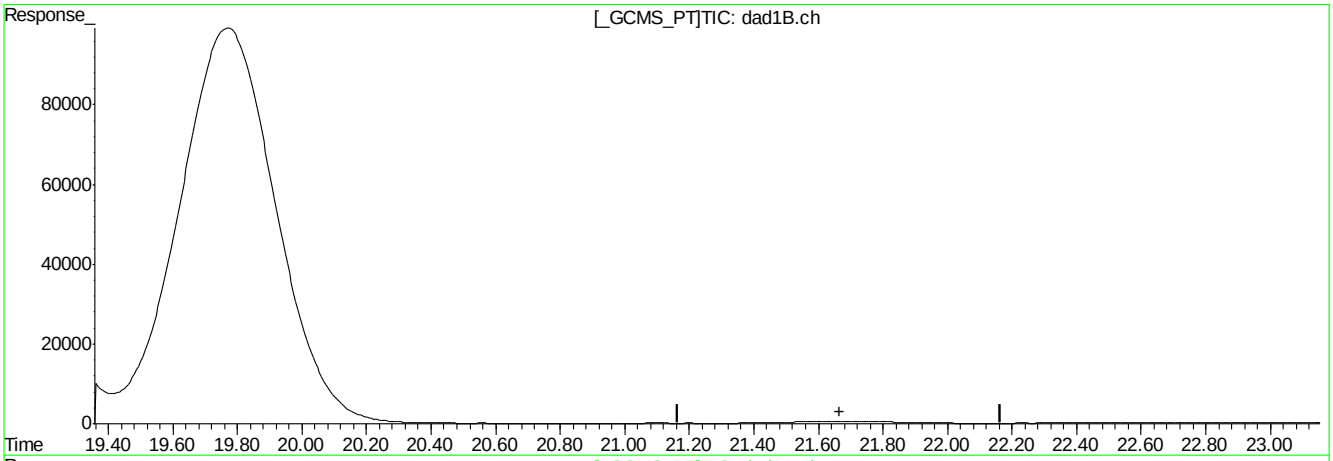
Sample Number: GGG3094-IC3094
Lab FileID: GG623375.D
Injection Time: 01/24/22 16:00
Method: SW846 8330A
Analyst approved: 01/27/22 12:56 James Boone
Supervisor approved: 01/27/22 13:01 Naresh Jiawan

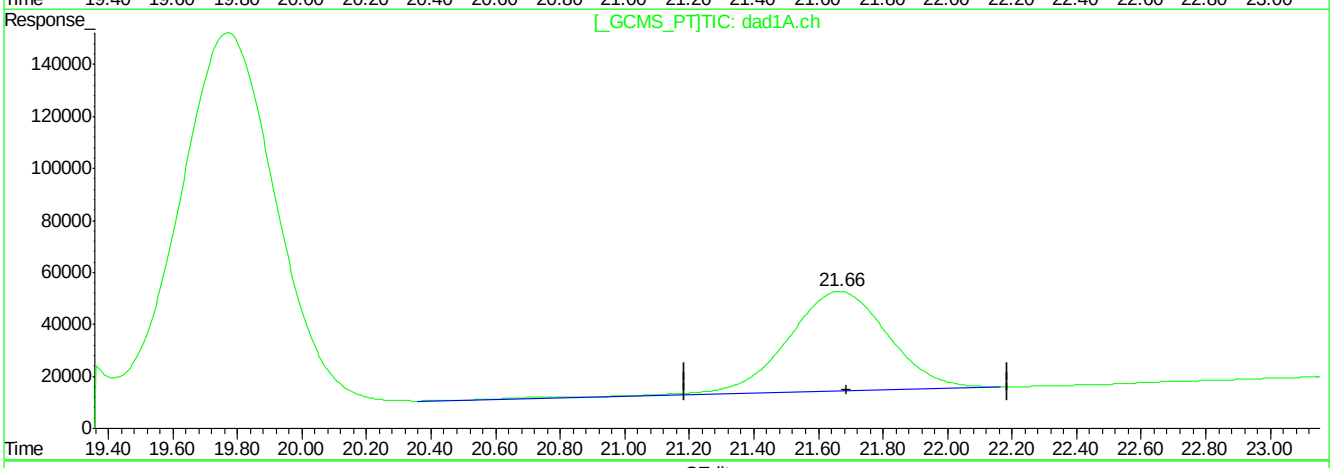
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.66	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623375.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623375.D\dad1A.ch
Acq On : 24-Jan-2022, 16:00:43 Operator: jamesb
Sample : ic3094-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.67min 2482.368ppb

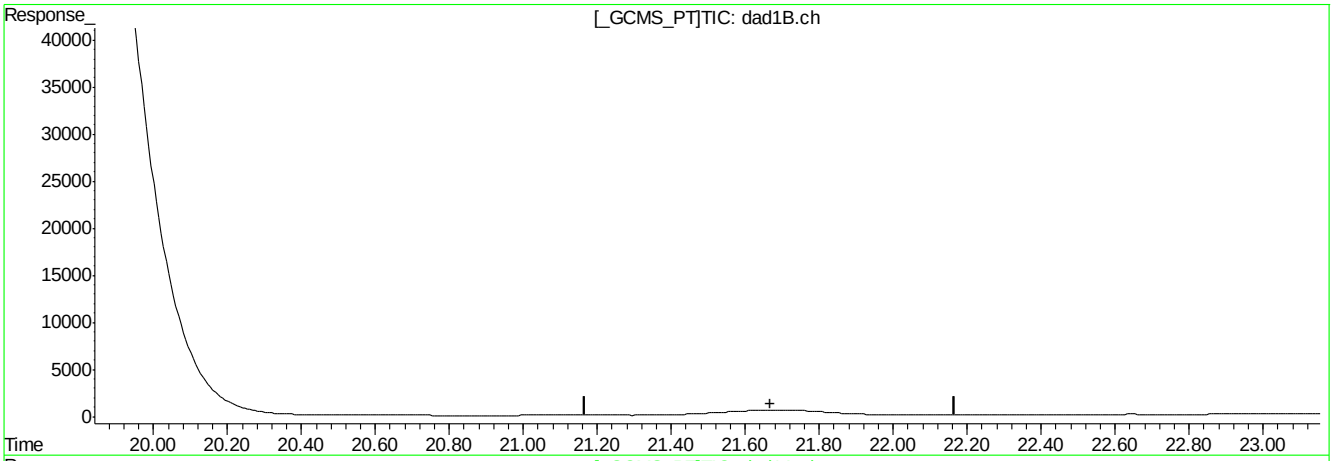
response 8148204

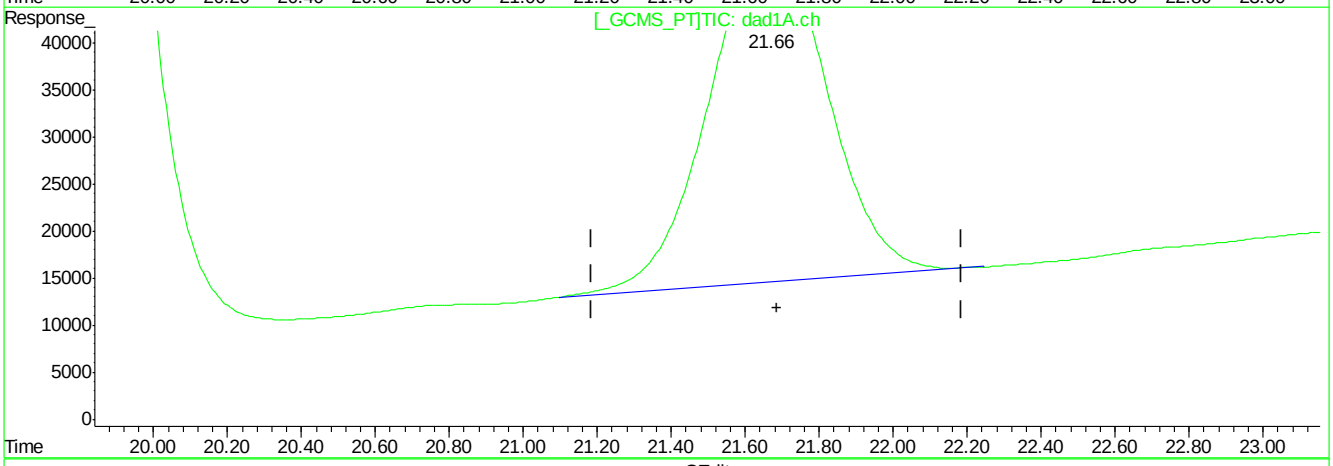
(+) = Expected Retention Time
GG623375.D GGG3094_012422.M Thu Jan 27 11:30:29 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623375.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623375.D\dad1A.ch
Acq On : 24-Jan-2022, 16:00:43 Operator: jamesb
Sample : ic3094-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.66min 2474.776ppb m

response 8125560

(+) = Expected Retention Time
GG623375.D GGG3094_012422.M Thu Jan 27 11:30:36 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 01/27/22 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623376.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623376.D\dad1A.ch
Acq On : 24-Jan-2022, 16:32:08 Operator: jamesb
Sample : ic3094-5000 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29:39 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.37	14.36	24164575	49547177	5418.192	5569.128
	Spiked Amount 500.000	Range 70 - 136		Recovery =		1083.64%#	1113.83%#
	Target Compounds						
1)	TNX	4.84	4.84	17383561	17383561	2096.323	2090.093
2)	HMX	5.31	5.31	15067054	15067054	4563.698	4563.698
3)	DNX	5.49	5.49	31202785	31202785	4665.708	4664.120
4)	MNX	6.67	6.67	31790612	31834005	5439.554	5446.979
5)	1,3,5-Trinitrobe	7.58	7.58	44987456	45048231	5107.324	5114.128
6)	RDX	7.98	7.98	21585174	21735874	4820.315	4852.798
7)	1,3-Dinitrobenze	9.91	9.91	62058639	46907462	5046.458	4981.861
8)	Nitrobenzene	10.89	10.89	39683846	37091440	5053.356	5990.322
9)	2,4,6-Trinitroto	11.80	11.80	43681909	57854606	5043.233	4630.063
10)	Nitroglycerin	12.56	12.59	418393	15365208	NoCal	5879.342 #
11)	Tetryl	13.22	13.22	34918959	60410506	4941.722	4702.442
13)	2,6-Dinitrotolue	14.64	14.63	31175253	43719535	5114.231	5727.726
14)	2,4-Dinitrotolue	15.27	15.27	56432427	40402308	5056.077	4944.106
15)	3,5-Dinitroanili	16.07	16.07	47643167	79469587	5004.523	4930.447
16)	o-Nitrotoluene	16.87	16.87	25260406	37837044	5249.982	4837.659
17)	p-Nitrotoluene	17.94	17.94	52230039	96643692	10146.804	11627.682
18)	4-Amino-2,6-Dini	17.94	17.94	52230039	96643692	10146.804	11627.682
19)	m-Nitrotoluene	19.12	19.12	27071246	46420053	5022.810	5046.762
20)	2-Amino-4,6-Dini	19.78	19.78	41752723	60503573	4839.720	5636.576
21)	PETN	0.00	21.68	0	16299912	N.D. d	5615.178m

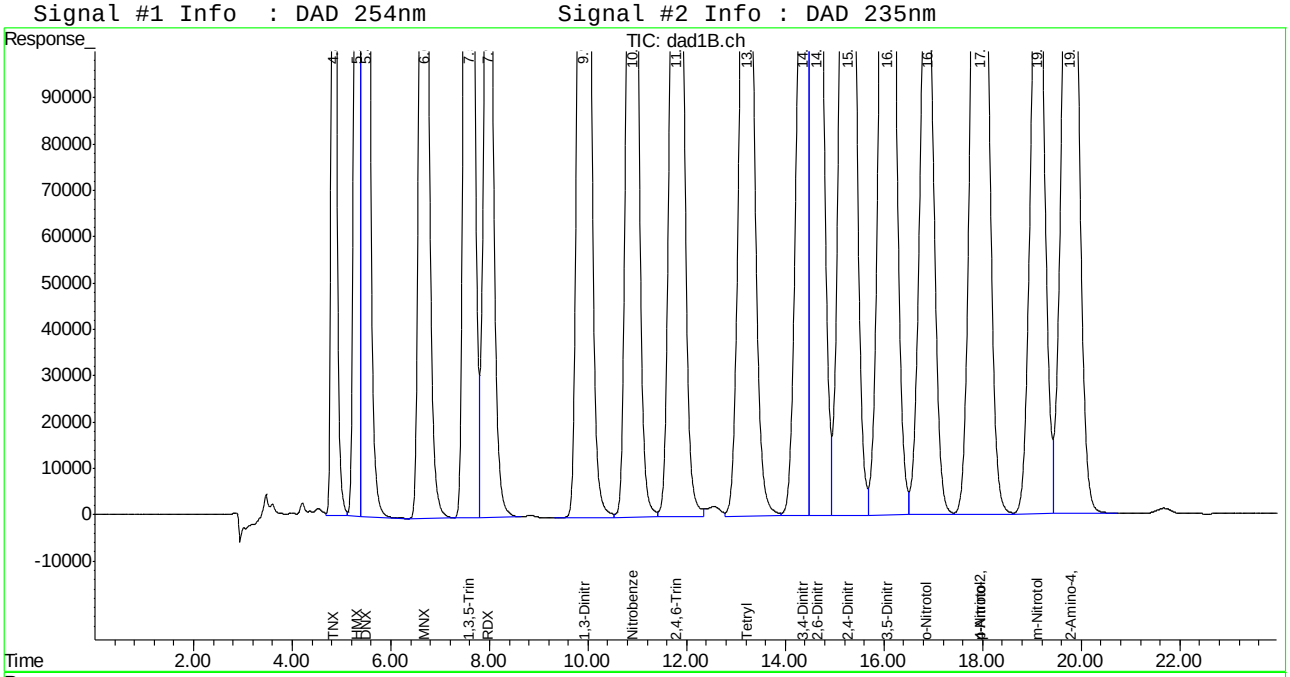
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

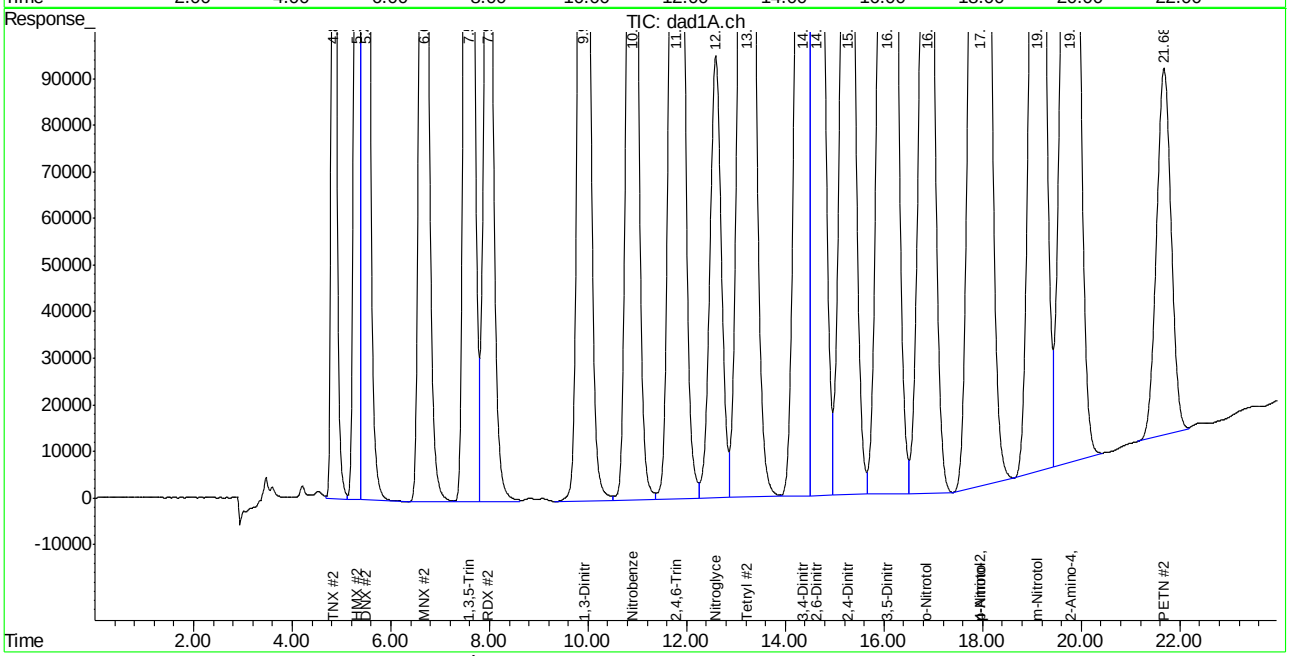
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623376.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623376.D\dad1A.ch
Acq On : 24-Jan-2022, 16:32:08 Operator: jamesb
Sample : ic3094-5000 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

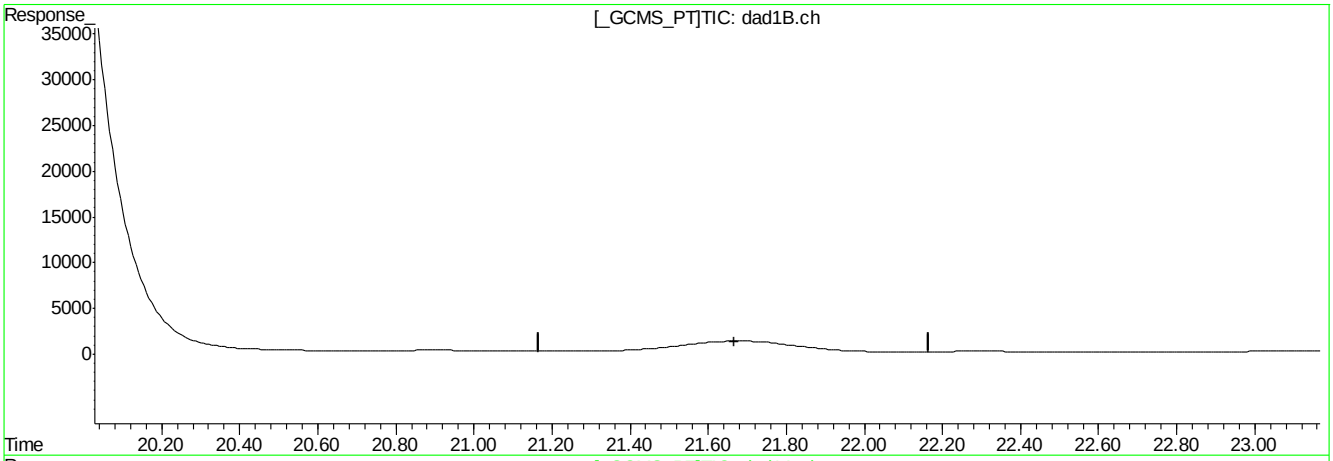
Sample Number: GGG3094-IC3094
Lab FileID: GG623376.D
Injection Time: 01/24/22 16:32
Method: SW846 8330A
Analyst approved: 01/27/22 12:56 James Boone
Supervisor approved: 01/27/22 13:01 Naresh Jiawan

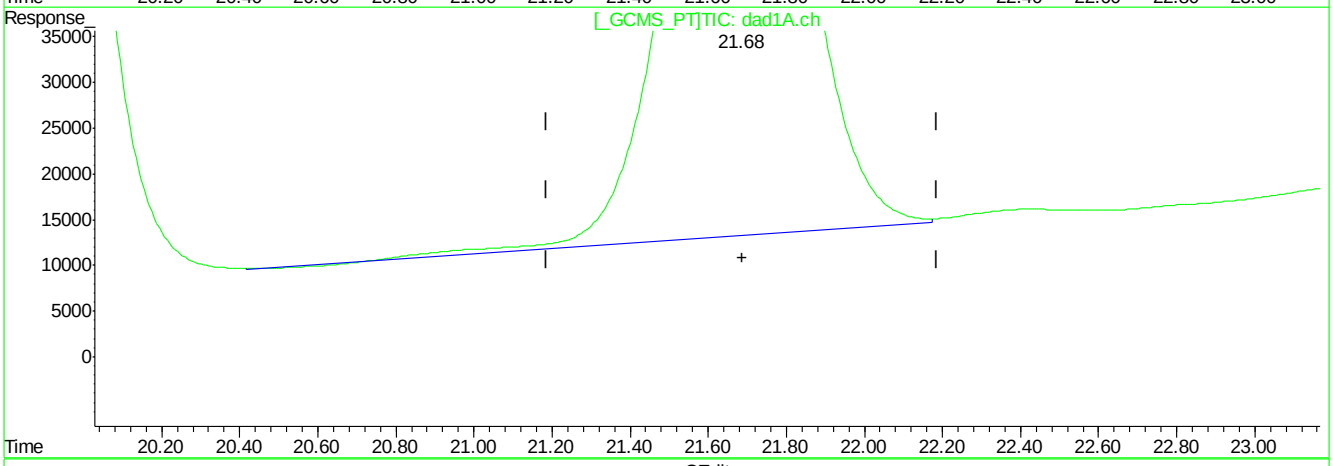
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623376.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623376.D\dad1A.ch
Acq On : 24-Jan-2022, 16:32:08 Operator: jamesb
Sample : ic3094-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.68min 5736.703ppb

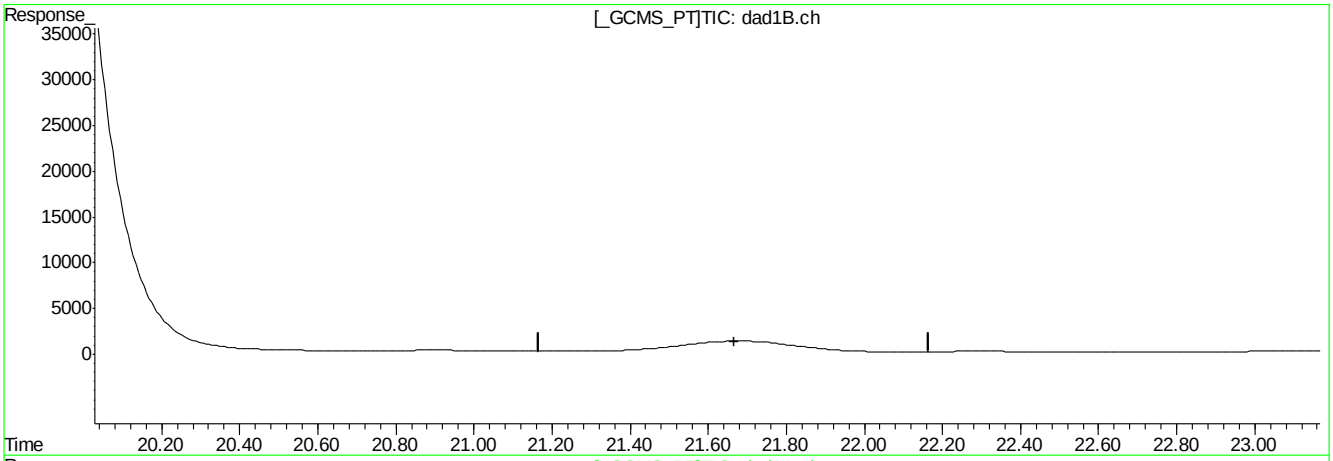
response 16568205

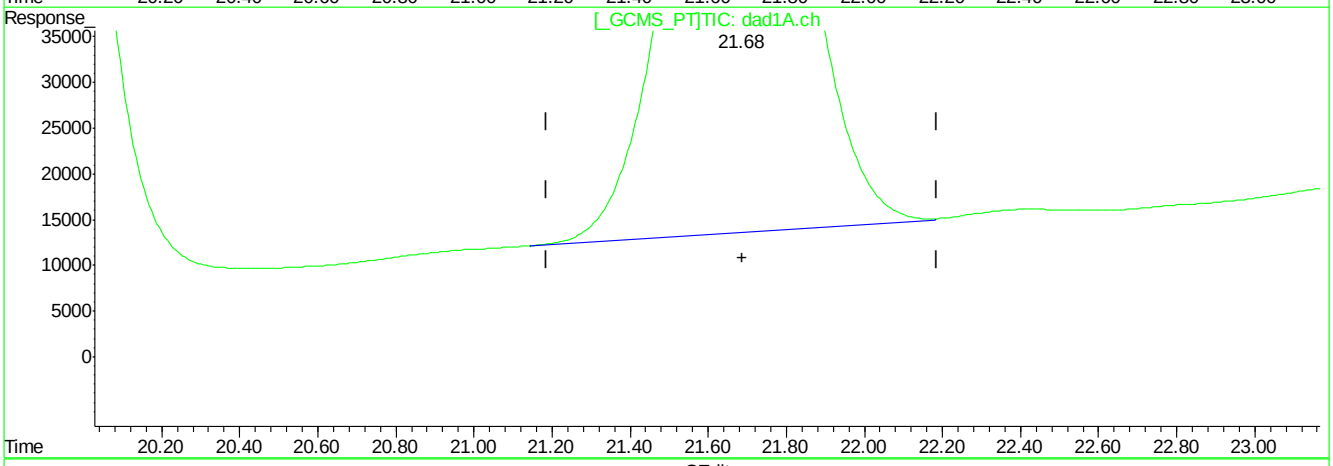
(+) = Expected Retention Time
GG623376.D GGG3094_012422.M Thu Jan 27 11:29:51 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623376.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623376.D\dad1A.ch
Acq On : 24-Jan-2022, 16:32:08 Operator: jamesb
Sample : ic3094-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:29 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:29:19 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.68min 5615.178ppb m

response 16299912

(+) = Expected Retention Time
GG623376.D GGG3094_012422.M Thu Jan 27 11:29:55 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/27/22 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623377.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623377.D\dad1A.ch
Acq On : 24-Jan-2022, 17:03:37 Operator: jamesb
Sample : icv3094-1000 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:47:31 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:47:18 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.	
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#	
	Target Compounds							
1)	TNX	4.85	4.85	3688712	3688712	484.455	484.643	
2)	HMX	5.31	5.31	3074254	3074254	951.240	951.240	
3)	DNX	5.50	5.50	6608145	6608145	1035.858	1039.954	
4)	MNX	6.67	6.67	6797826	6797826	1196.838	1196.642	
5)	1,3,5-Trinitrobe	7.59	7.59	9211644	9211644	1000.364	1000.199	
6)	RDX	7.99	7.99	4498054	4498054	1009.727	1008.873	
7)	1,3-Dinitrobenze	9.92	9.92	12711830	9958071	996.368	943.619	
8)	Nitrobenzene	10.90	10.90	8089670	8073747	1019.495	1086.783	
9)	2,4,6-Trinitroto	11.80	11.80	8737086	11978345	975.321	983.564	
10)	Nitroglycerin	0.00	12.60	0	3181554	N.D.	983.278	#
11)	Tetryl	13.22	13.22	6909952	12203331	971.442	932.494	
13)	2,6-Dinitrotolue	14.65	14.65	6009078	8822400	935.279	915.404	
14)	2,4-Dinitrotolue	15.26	15.26	11464202	8083153	993.074	1004.062	
15)	3,5-Dinitroanili	16.07	16.07	10384188	17200171	1067.027	1002.591	
16)	o-Nitrotoluene	16.87	16.87	5148120	7764698	1026.304	1032.425	
17)	p-Nitrotoluene	17.94	17.94	10603677	19543171	1973.455	2001.634	
18)	4-Amino-2,6-Dini	17.94	17.94	10603677	19543171	1973.455	2009.284	
19)	m-Nitrotoluene	19.12	19.12	5561506	9558995	1011.245	1012.806	
20)	2-Amino-4,6-Dini	19.78	19.78	8530224	12570318	982.119	1041.938	
21)	PETN	0.00	21.68	0	3238726	N.D.	992.052	m#

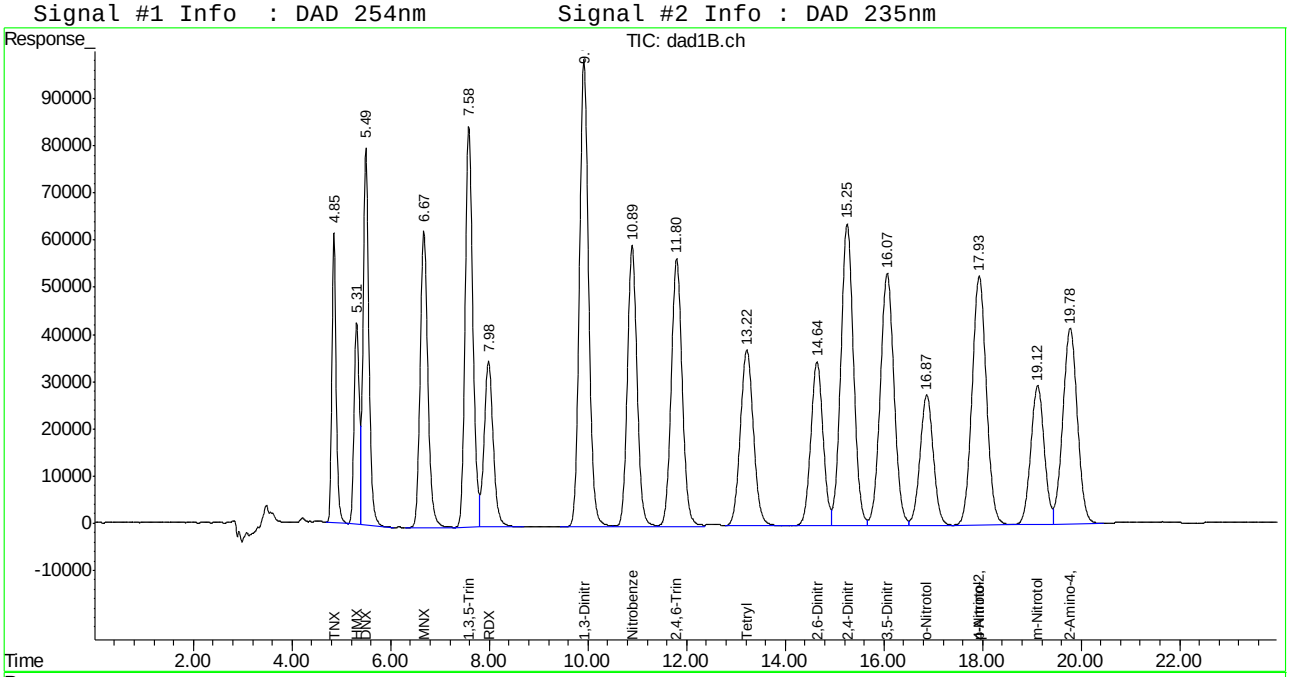
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG623377.D GGG3094_012422.M Thu Jan 27 12:53:47 2022 Page 1

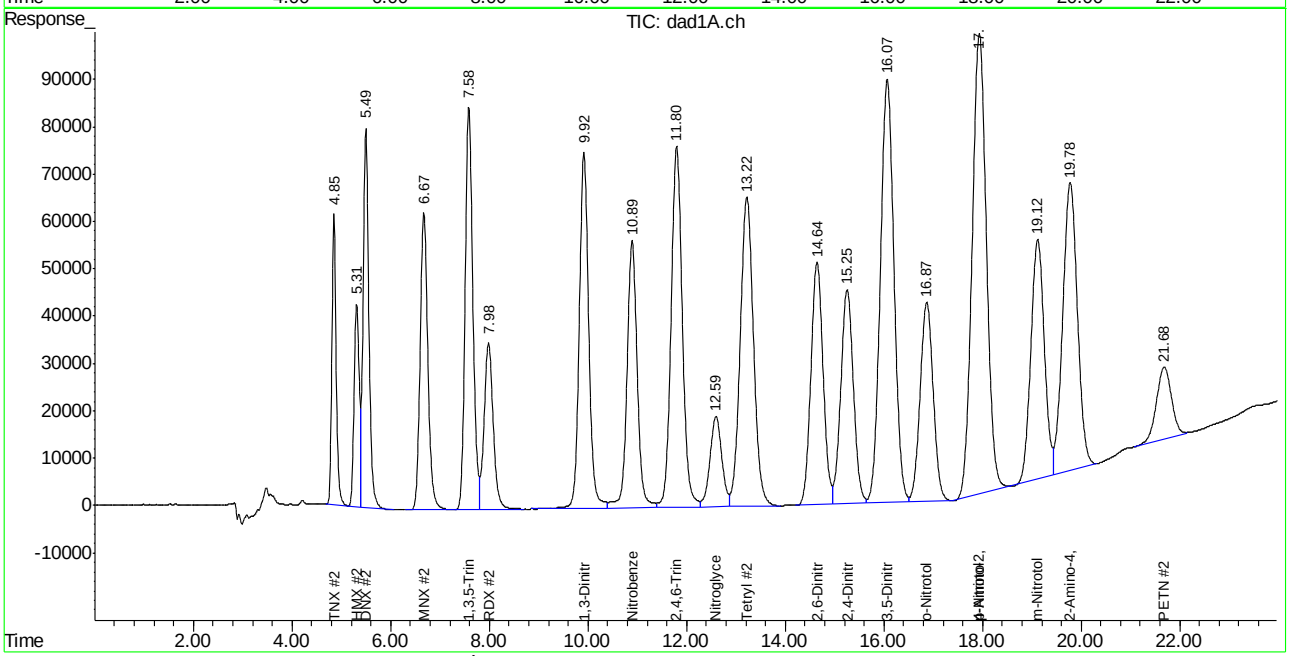
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623377.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623377.D\dad1A.ch
Acq On : 24-Jan-2022, 17:03:37 Operator: jamesb
Sample : icv3094-1000 Inst : G1315B
Misc : op89379,GGG3094,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:47 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:47:18 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

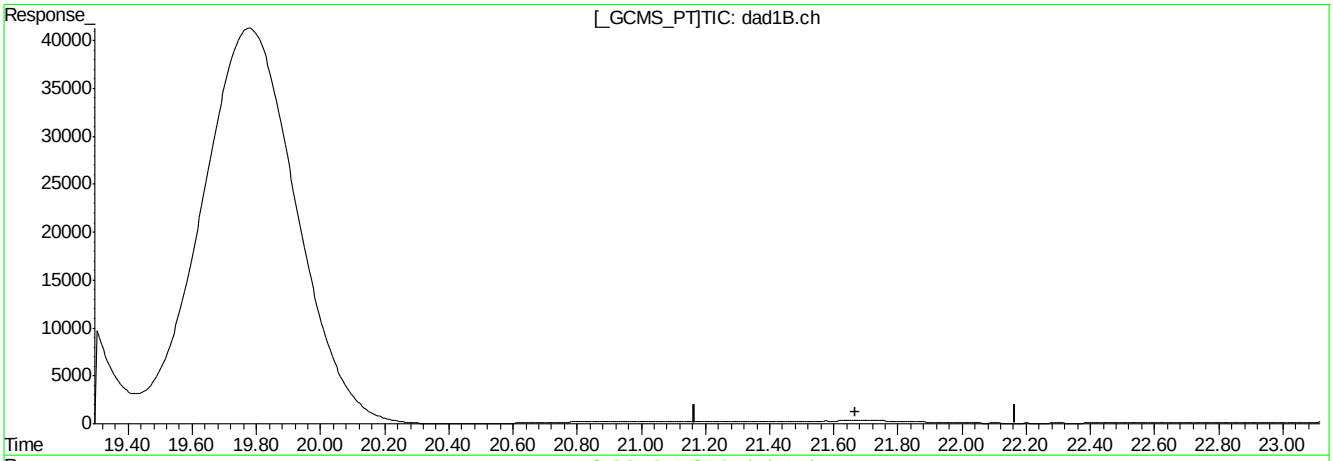
Sample Number: GGG3094-ICV3094 **Method:** SW846 8330A
Lab FileID: GG623377.D **Analyst approved:** 01/27/22 12:56 James Boone
Injection Time: 01/24/22 17:03 **Supervisor approved:** 01/27/22 13:01 Naresh Jiawan

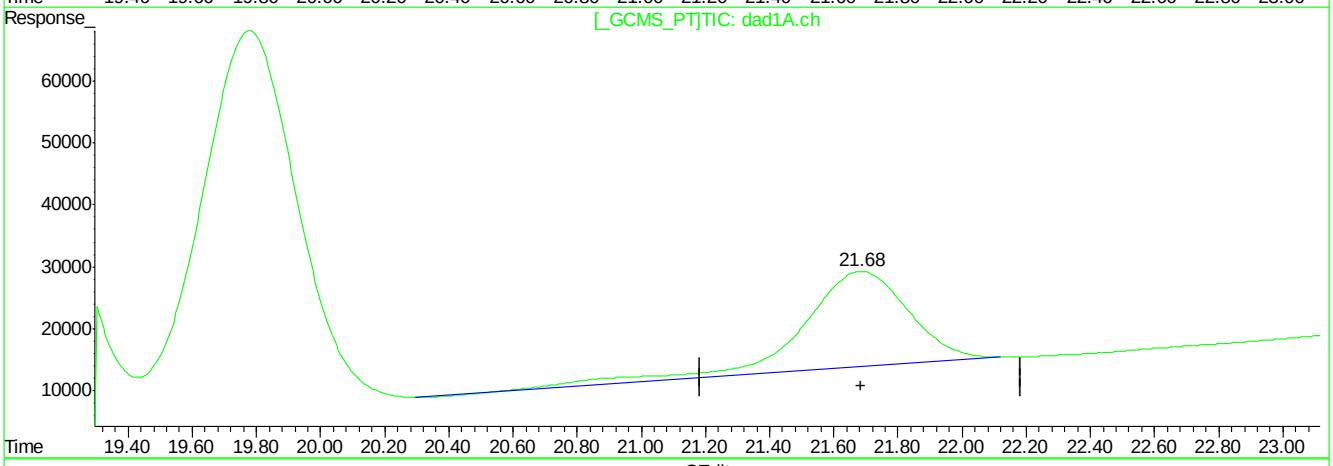
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3094\GG623377.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3094\GG623377.D\dad1A.ch
Acq On : 24-Jan-2022, 17:03:37 Operator: jamesb
Sample : icv3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 27 11:47 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Jan 27 11:47:18 2022
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.69min 1094.777ppb

response 3574090

(+) = Expected Retention Time
GG623377.D GGG3094_012422.M Thu Jan 27 11:47:41 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/05/22 16:07

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1A.ch
Acq On : 04-May-2022, 12:45:45 Operator: fouads
Sample : CC3094-1000 Inst : G1315B
Misc : op90891,GGG3135,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 04 13:15:32 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.65	13.65	4969947	10015118	997.312	1014.156
	Spiked Amount 500.000	Range 70 - 136		Recovery =		199.46%#	202.83%#
	Target Compounds						
1)	TNX	4.69	4.70	3734402	3714400	490.456m	488.018
2)	HMX	5.07	5.08	3080091	3033806	953.046m	938.725
3)	DNX	5.26	5.27	6751899	6518098	1058.392m	1025.782
4)	MNX	6.31	6.31	6761550	6761861	1190.451	1190.311
5)	1,3,5-Trinitrobe	7.20	7.20	9037054	9038207	981.404	981.368
6)	RDX	7.56	7.56	4400578	4399424	987.845	986.751
7)	1,3-Dinitrobenze	9.48	9.48	12561266	9448471	984.566	895.330
8)	Nitrobenzene	10.39	10.39	7325607	7543626	923.205	1015.425
9)	2,4,6-Trinitroto	11.21	11.21	8798337	12044576	982.159	989.002
10)	Nitroglycerin	0.00	11.93	0	3478652	N.D.	1075.097 #
11)	Tetryl	12.46	12.45	6962738	12327121	978.863	941.953
13)	2,6-Dinitrotolue	13.98	13.97	6125407	8601679	953.385	892.502
14)	2,4-Dinitrotolue	14.61	14.61	11341816	8192825	982.472	1017.686
15)	3,5-Dinitroanili	15.39	15.39	9625000	15979243	989.017	931.423
16)	o-Nitrotoluene	16.12	16.12	4551842	6699860	907.433	890.839
17)	p-Nitrotoluene	17.17	17.17	10165621	18653622	1891.929	1910.525
18)	4-Amino-2,6-Dini	17.17	17.17	10165621	18653622	1891.929	1917.827
19)	m-Nitrotoluene	18.36	18.36	4933810	8380418	897.111	887.932
20)	2-Amino-4,6-Dini	19.07	19.08	8459066	12441914	973.926	1031.295
21)	PETN	0.00	20.77	0	3610511	N.D.	1105.933 #

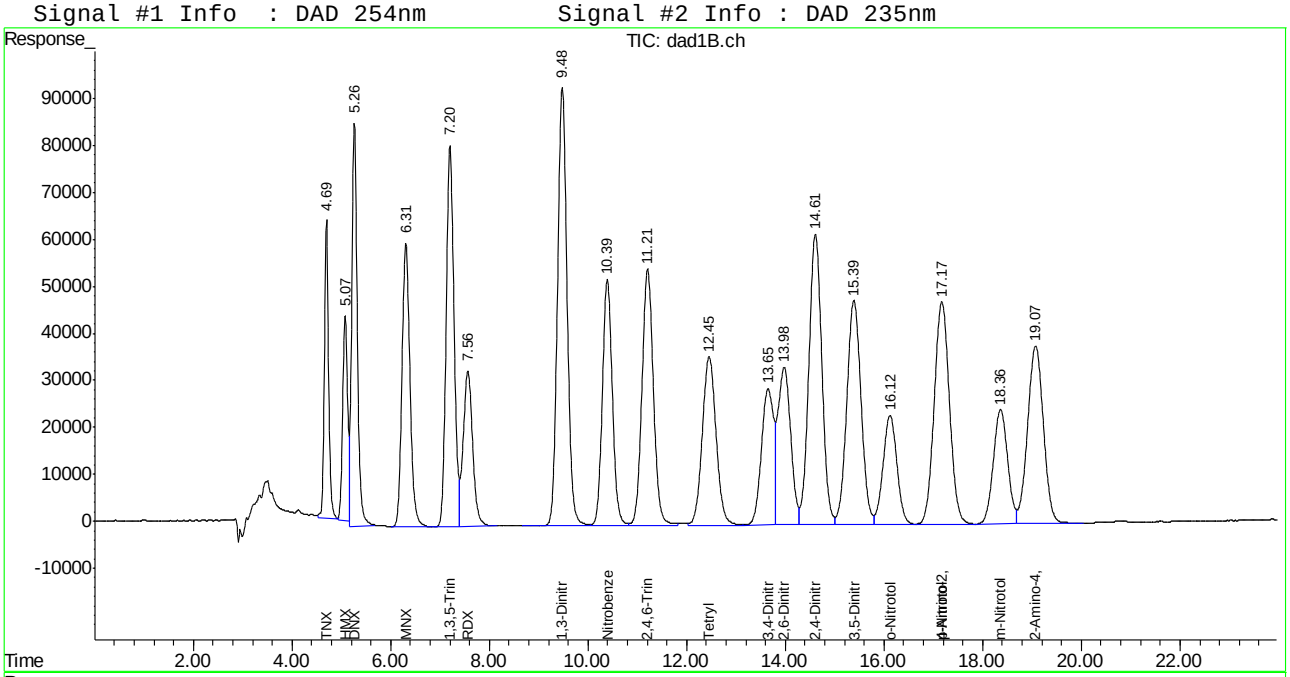
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

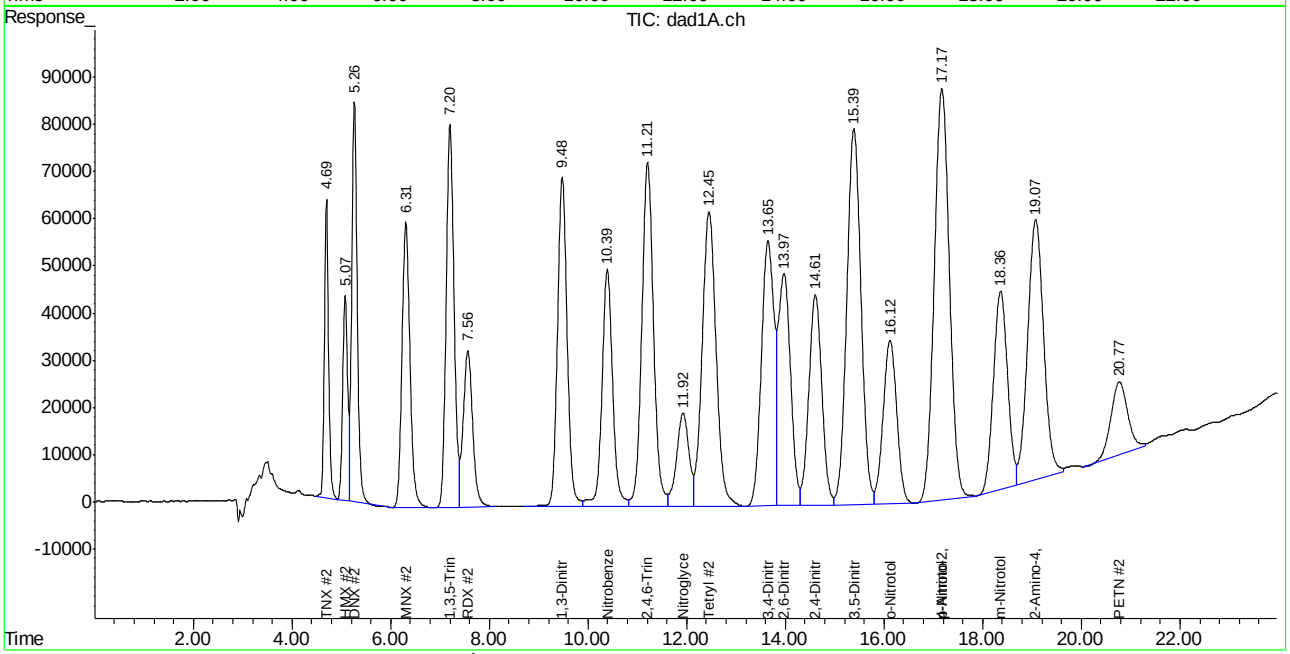
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1A.ch
Acq On : 04-May-2022, 12:45:45 Operator: fouads
Sample : CC3094-1000 Inst : G1315B
Misc : op90891,GGG3135,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 14:54 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

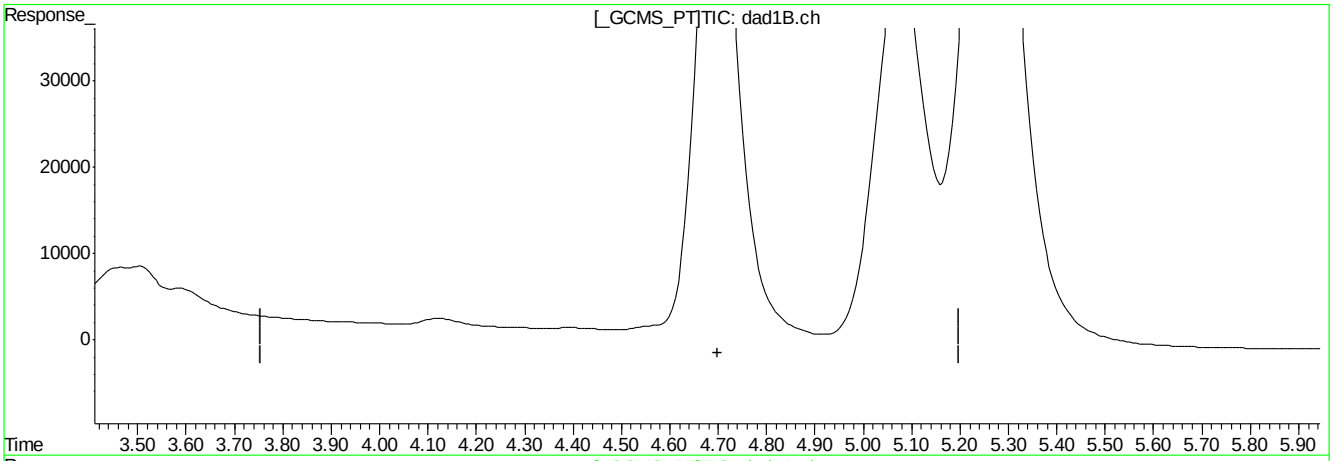
Sample Number: GGG3135-CC3094 **Method:** SW846 8330B
Lab FileID: GG624050.D **Analyst approved:** 05/05/22 15:05 Fouad Sekkar
Injection Time: 05/04/22 12:45 **Supervisor approved:** 05/05/22 16:07 Naresh Jiawan

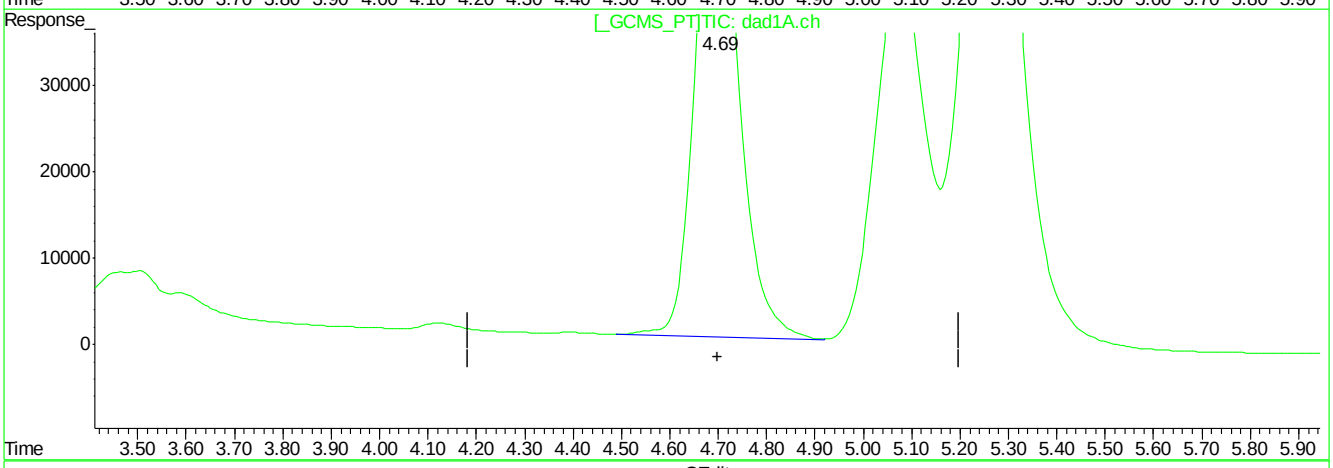
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	4.69	Poor instrument integration
HMX	2691-41-0	1	5.07	Poor instrument integration
DNX		1	5.26	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1A.ch
Acq On : 04-May-2022, 12:45:45 Operator: fouads
Sample : CC3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 4 13:15 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(1) TNX

0.00min 0.000ppb

response 0

(1) TNX #2

4.70min 488.018ppb

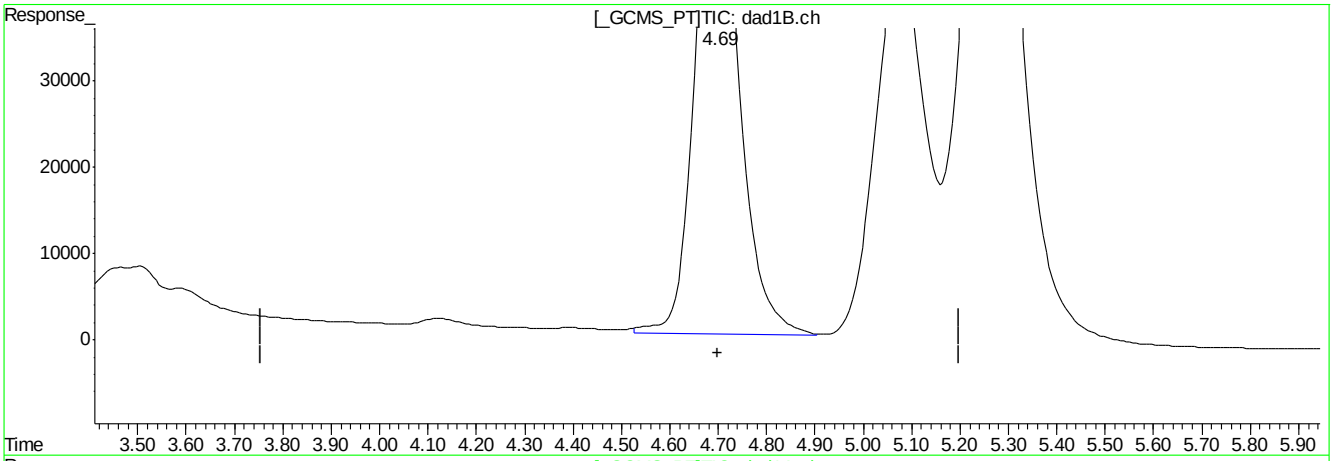
response 3714400

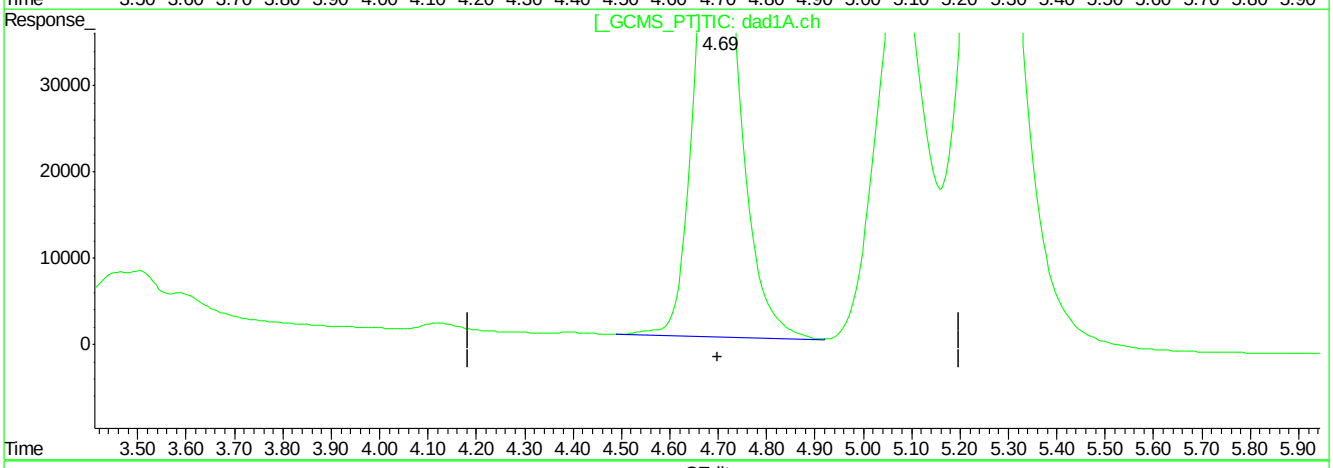
(+) = Expected Retention Time
GG624050.D GGG3094_012422.M Wed May 04 13:15:50 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1A.ch
Acq On : 04-May-2022, 12:45:45 Operator: fouads
Sample : CC3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 4 13:15 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.69min 490.456ppb m

response 3734402

(1) TNX #2

4.70min 488.018ppb

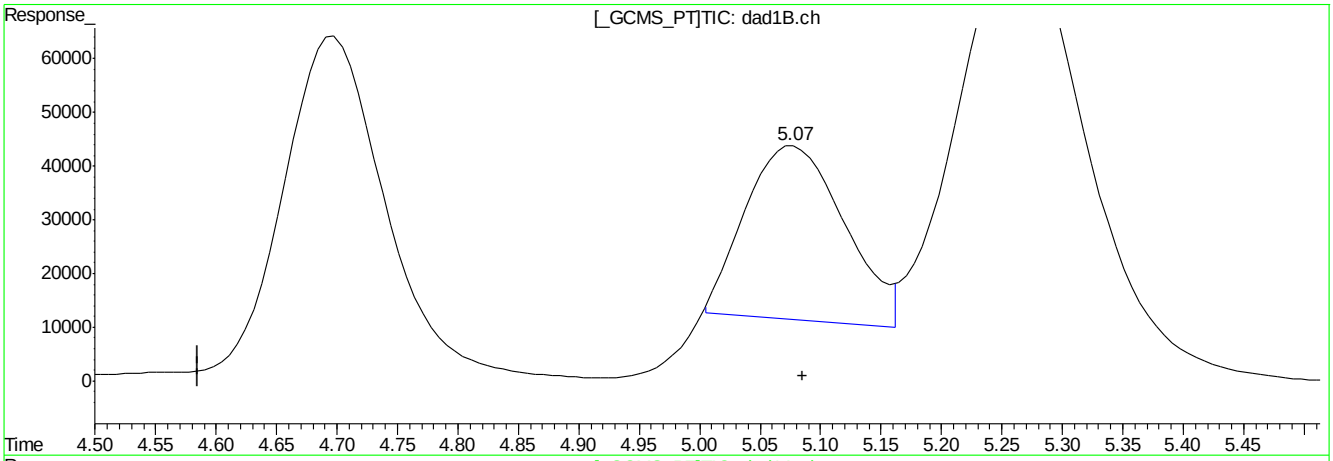
response 3714400

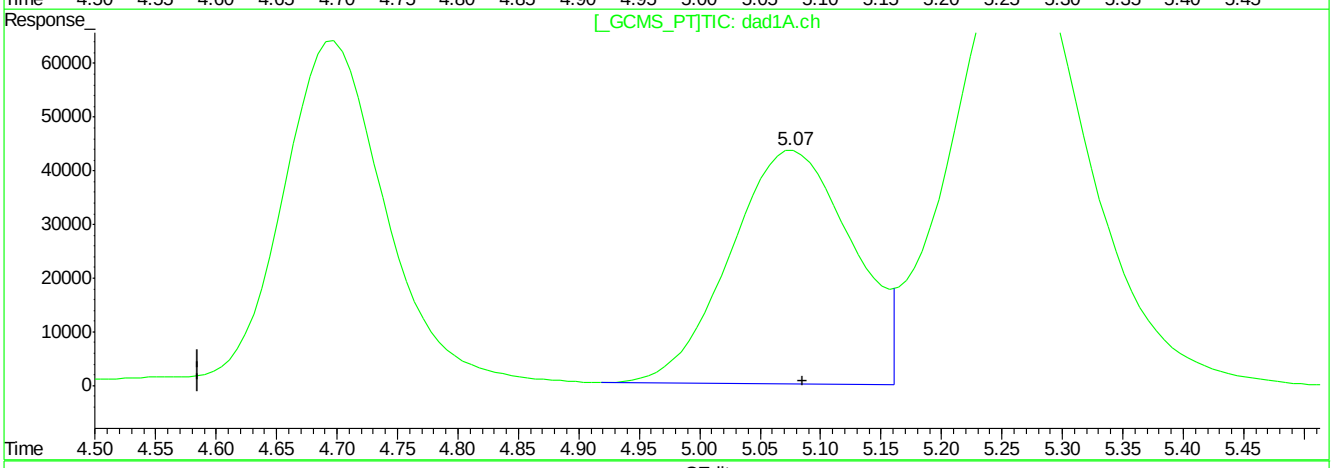
(+) = Expected Retention Time
GG624050.D GGG3094_012422.M Wed May 04 13:15:59 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1A.ch
Acq On : 04-May-2022, 12:45:45 Operator: fouads
Sample : CC3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 4 13:15 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.08min 569.766ppb

response 1841392

(2) HMX #2

5.08min 938.725ppb

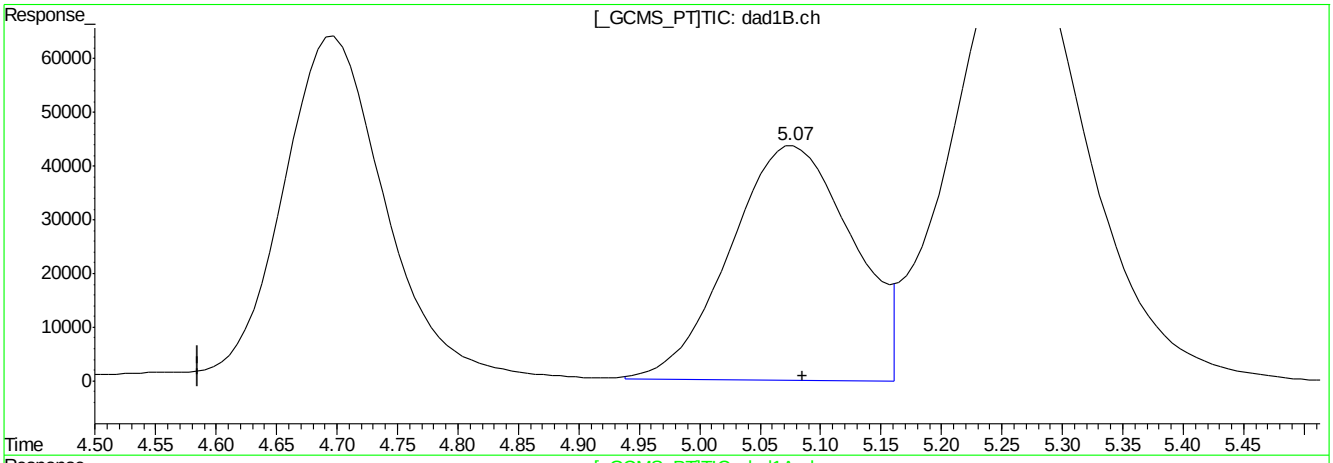
response 3033806

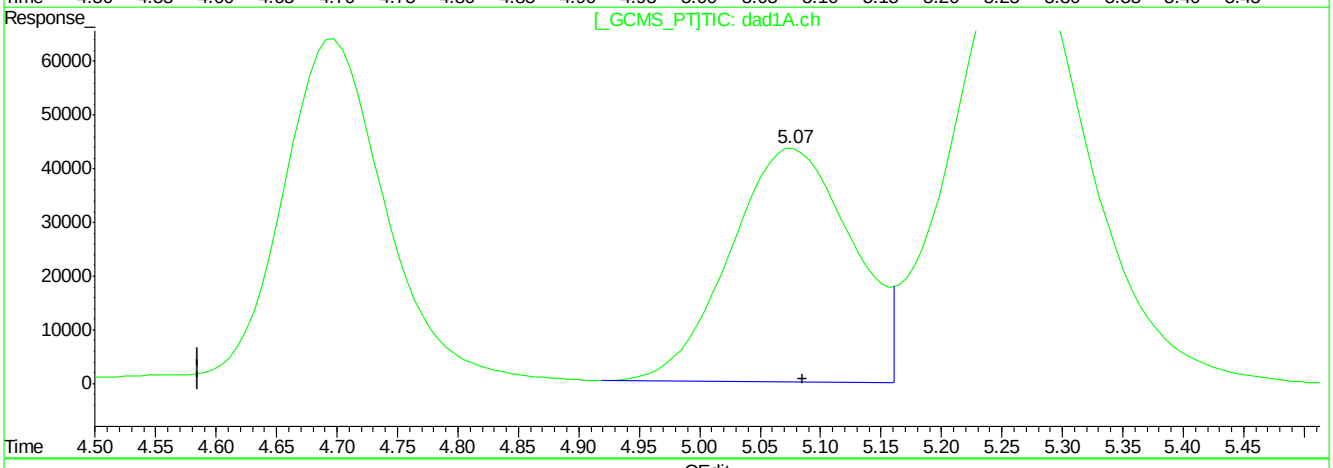
(+) = Expected Retention Time
GG624050.D GGG3094_012422.M Wed May 04 13:16:05 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1A.ch
Acq On : 04-May-2022, 12:45:45 Operator: fouads
Sample : CC3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 4 13:15 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.07min 953.046ppb m

response 3080091

(2) HMX #2

5.08min 938.725ppb

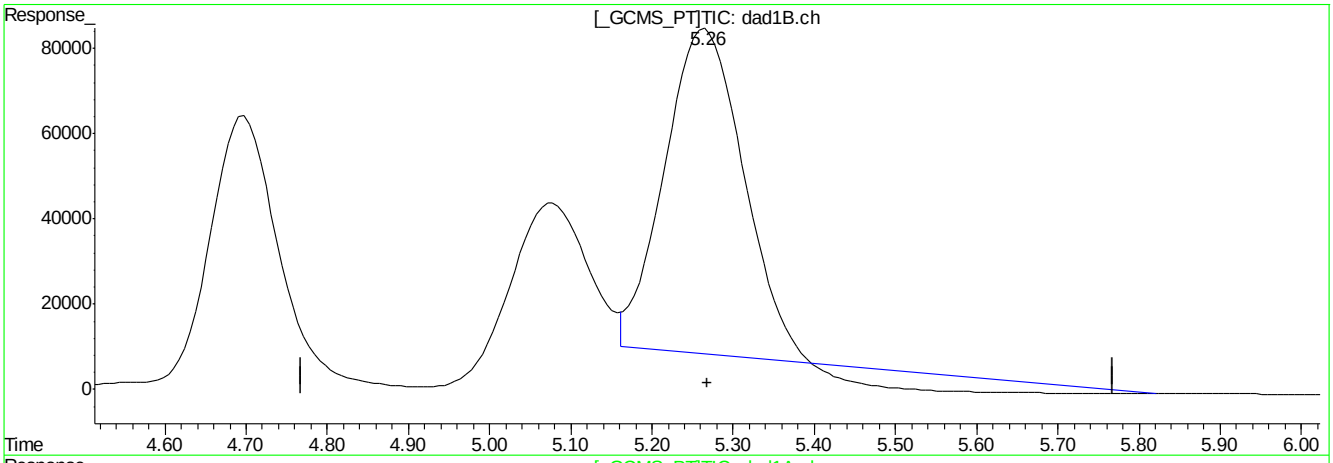
response 3033806

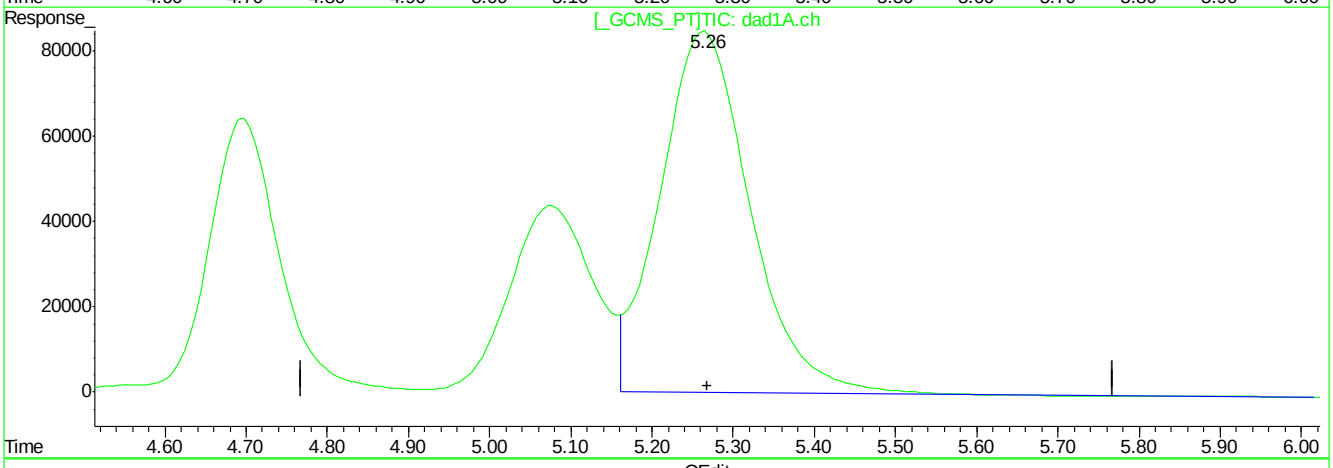
(+) = Expected Retention Time
GG624050.D GGG3094_012422.M Wed May 04 13:16:13 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1A.ch
Acq On : 04-May-2022, 12:45:45 Operator: fouads
Sample : CC3094-1000 Inst : G1315B
Misc : op90891,GGG3135,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 4 13:16 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.27min 721.242ppb

response 4601088

(3) DNX #2

5.27min 1025.782ppb

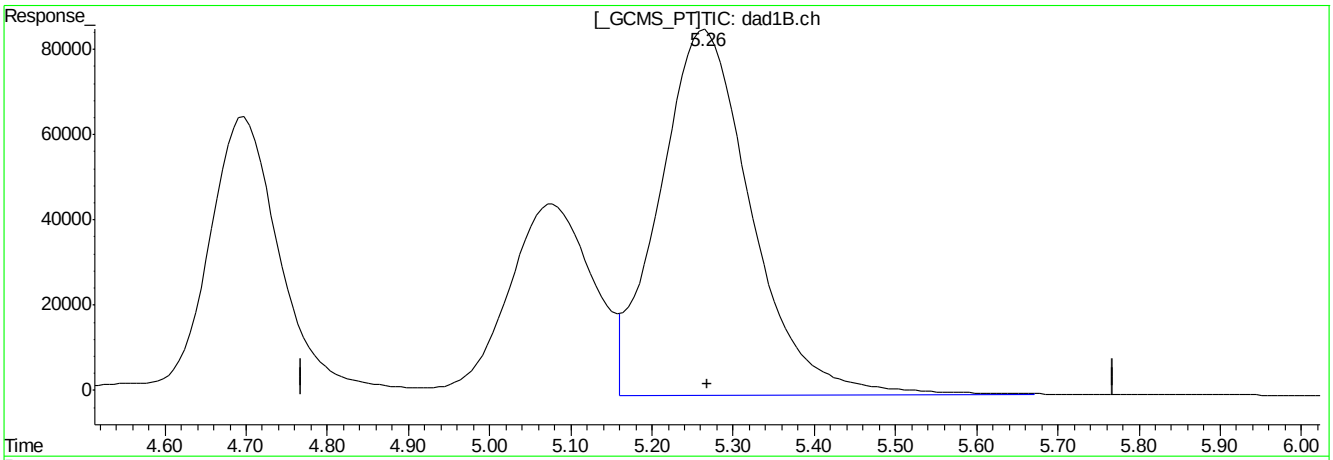
response 6518098

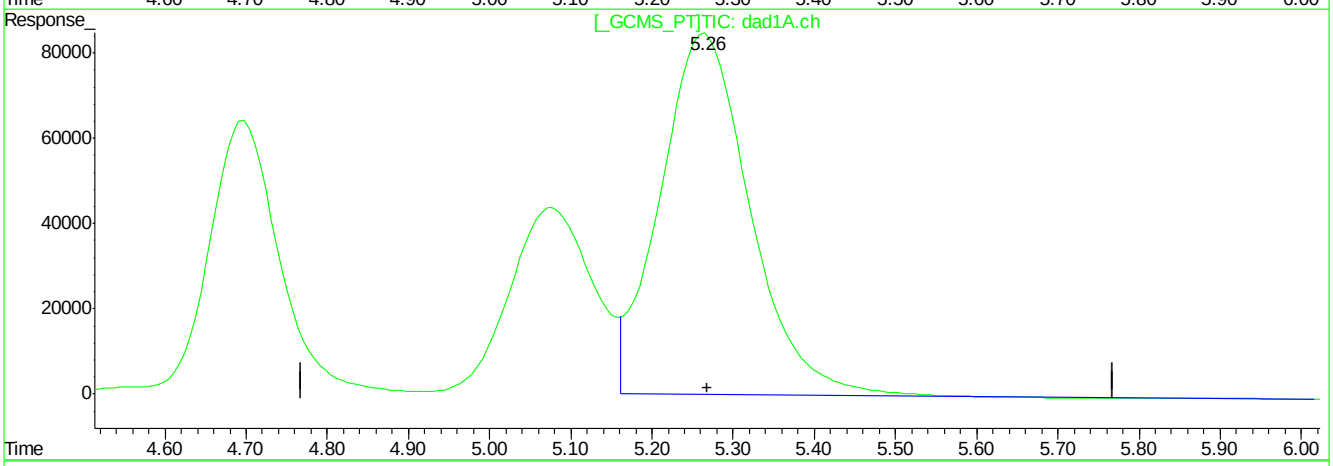
(+) = Expected Retention Time
GG624050.D GGG3094_012422.M Thu May 05 14:54:17 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624050.D\dad1A.ch
Acq On : 04-May-2022, 12:45:45 Operator: fouads
Sample : CC3094-1000 Inst : G1315B
Misc : op90891,GGG3135,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 4 13:16 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.26min 1058.392ppb m

response 6751899

(3) DNX #2

5.27min 1025.782ppb

response 6518098

(+) = Expected Retention Time
GG624050.D GGG3094_012422.M Thu May 05 14:54:23 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
05/05/22 16:07

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1A.ch
Acq On : 04-May-2022, 21:11:59 Operator: fouads
Sample : cc3094-1000 Inst : G1315B
Misc : op90891,GGG3135,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 05 07:37:24 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12) S	3,4-Dinitrotolue	13.70	13.70	4865617	10100723	976.376	1022.825	
	Spiked Amount 500.000	Range 70 - 136		Recovery =		195.28%#	204.57%#	
	Target Compounds							
1)	TNX	4.71	4.71	3622918	3641867	475.814m	478.488	
2)	HMX	5.10	5.10	3194572	2943240	988.469m	910.701	
3)	DNX	5.28	5.28	6708829	6420850	1051.641m	1010.478	
4)	MNX	6.34	6.34	6680897	6680897	1176.252	1176.059	
5)	1,3,5-Trinitrobe	7.22	7.22	8894521	8895761	965.925	965.901	
6)	RDX	7.60	7.60	4355907	4354667	977.817	976.713	
7)	1,3-Dinitrobenze	9.50	9.50	12431050	9990579	974.360	946.700	
8)	Nitrobenzene	10.42	10.42	7535913	7847611	949.708	1056.343	
9)	2,4,6-Trinitroto	11.24	11.24	8667123	12124800	967.511	995.590	
10)	Nitroglycerin	0.00	11.98	0	3393929	N.D.	1048.913	#
11)	Tetryl	12.51	12.51	6963411	12544208	978.958	958.541	
13)	2,6-Dinitrotolue	14.02	14.02	6147394	8779698	956.807	910.973	
14)	2,4-Dinitrotolue	14.65	14.65	11214776	8102445	971.468	1006.459	
15)	3,5-Dinitroanili	15.44	15.44	9499864	15984971	976.159	931.757	
16)	o-Nitrotoluene	16.18	16.18	4688023	7194589	934.581	956.621	
17)	p-Nitrotoluene	17.23	17.23	10126380	18643030	1884.625	1909.441	
18)	4-Amino-2,6-Dini	17.23	17.23	10126380	18643030	1884.625	1916.738	
19)	m-Nitrotoluene	18.42	18.42	5037778	8675990	916.016	919.248	
20)	2-Amino-4,6-Dini	19.13	19.13	8316732	11800771	957.539	978.152	
21)	PETN	0.00	20.85	0	3149837	N.D.	964.824	#

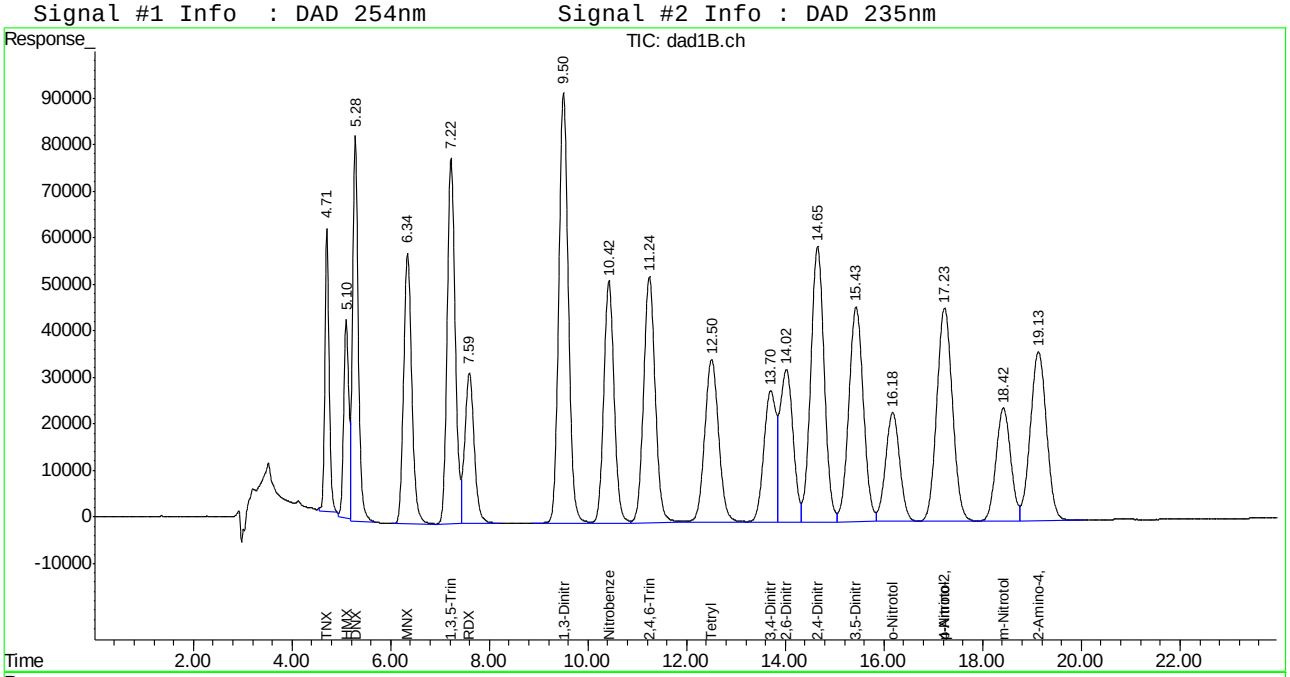
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

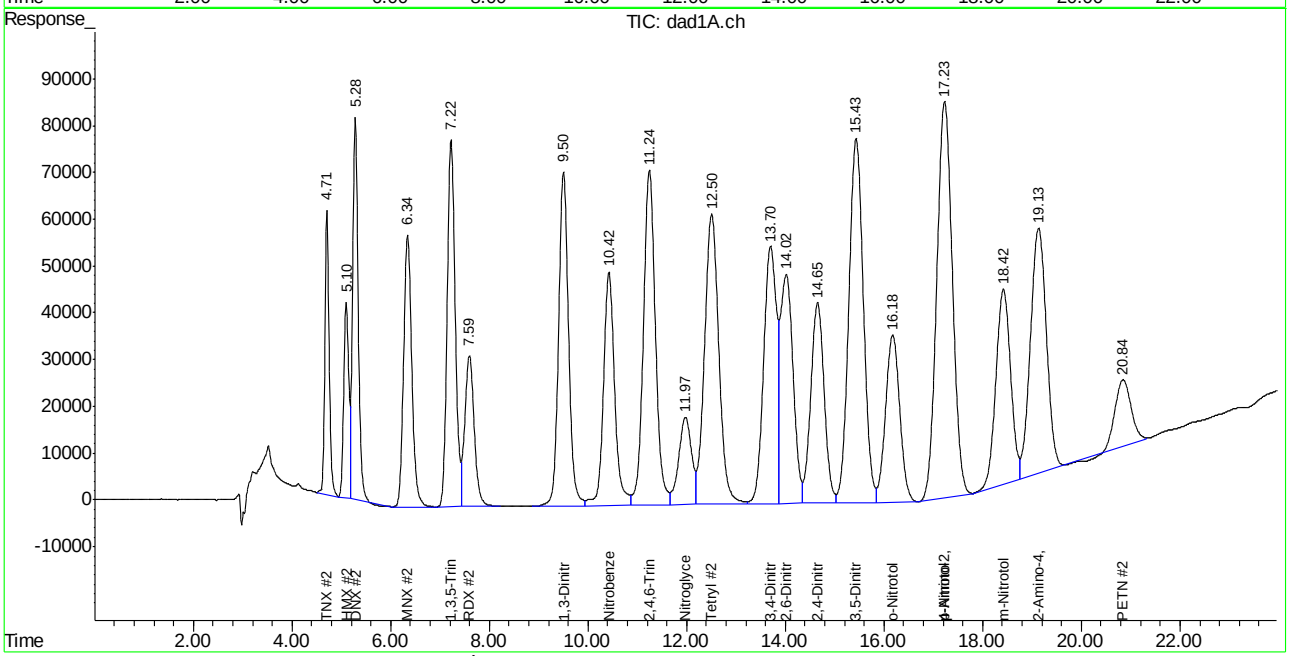
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1A.ch
Acq On : 04-May-2022, 21:11:59 Operator: fouads
Sample : cc3094-1000 Inst : G1315B
Misc : op90891,GGG3135,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 7:38 2022 Quant Results File: GGG3094_012422.RES

Quant Method : C:\MSDCHEM\1...\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

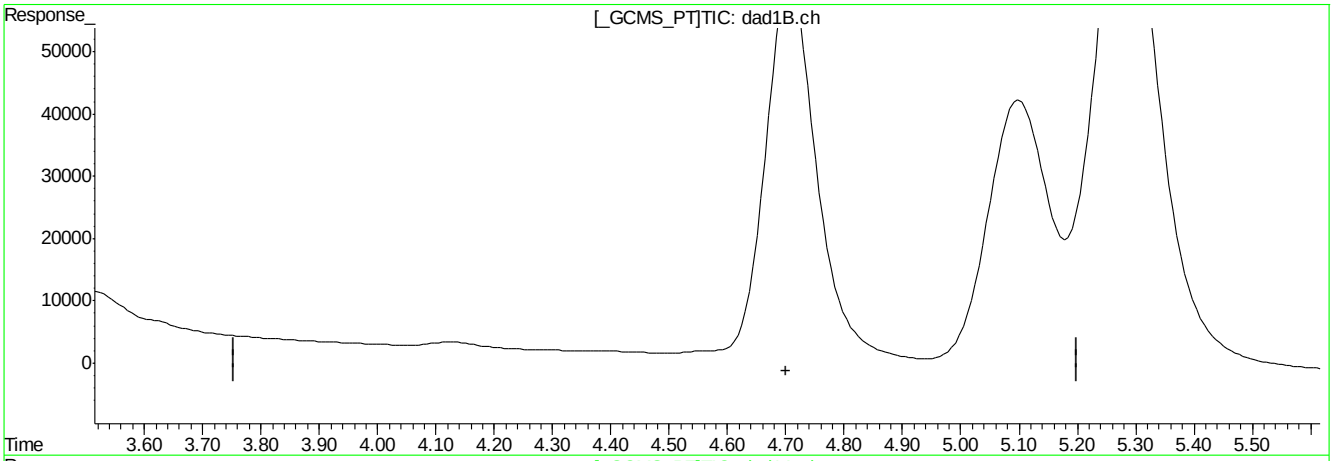
Sample Number: GGG3135-CC3094 **Method:** SW846 8330B
Lab FileID: GG624061.D **Analyst approved:** 05/05/22 15:05 Fouad Sekkar
Injection Time: 05/04/22 21:11 **Supervisor approved:** 05/05/22 16:07 Naresh Jiawan

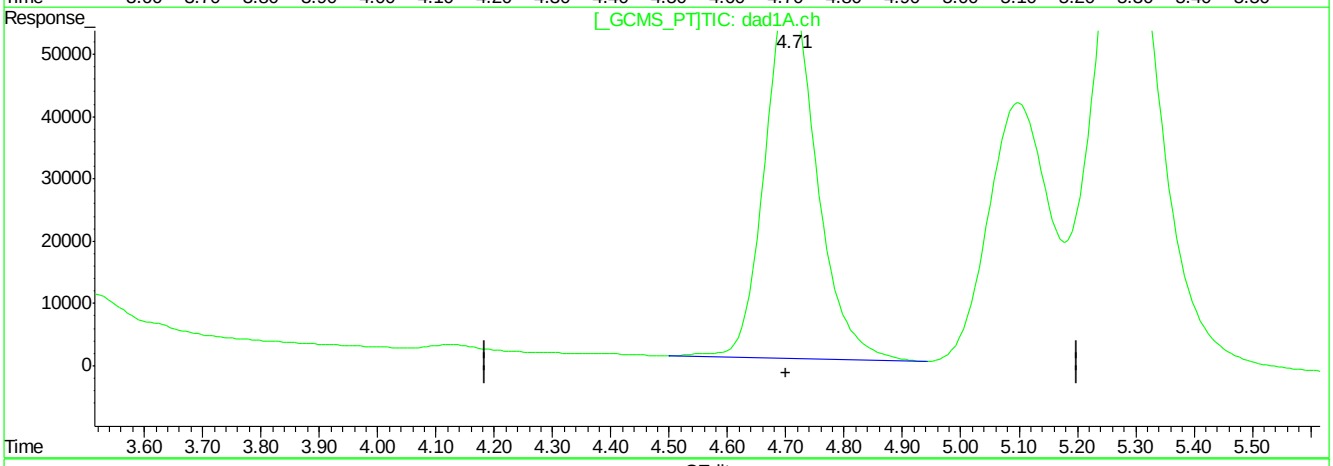
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	4.71	Poor instrument integration
HMX	2691-41-0	1	5.10	Poor instrument integration
DNX		1	5.28	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1A.ch
Acq On : 04-May-2022, 21:11:59 Operator: fouads
Sample : cc3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 7:37 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(1) TNX

0.00min 0.000ppb

response 0

(1) TNX #2

4.71min 478.488ppb

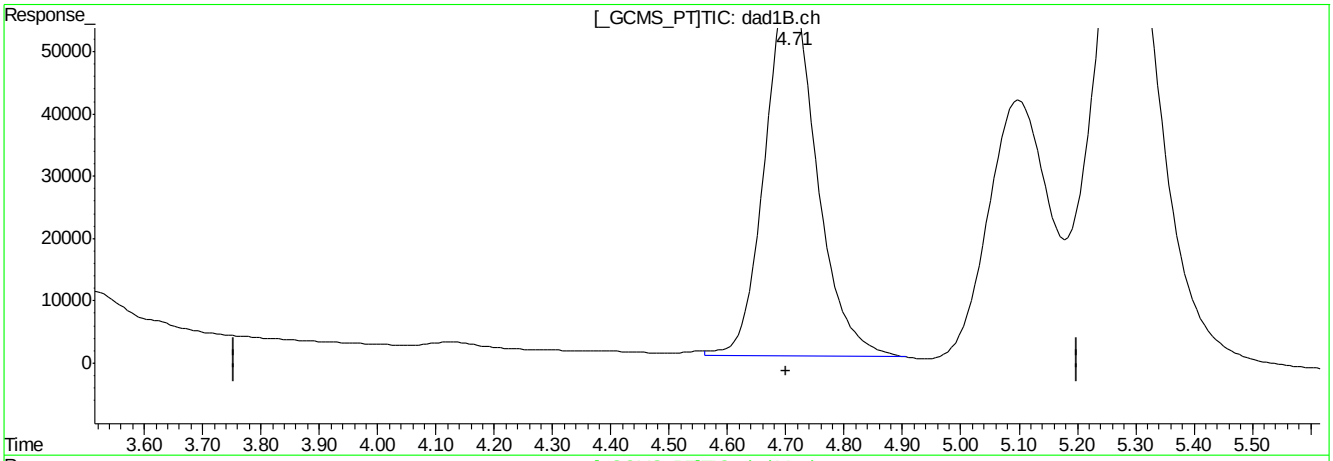
response 3641867

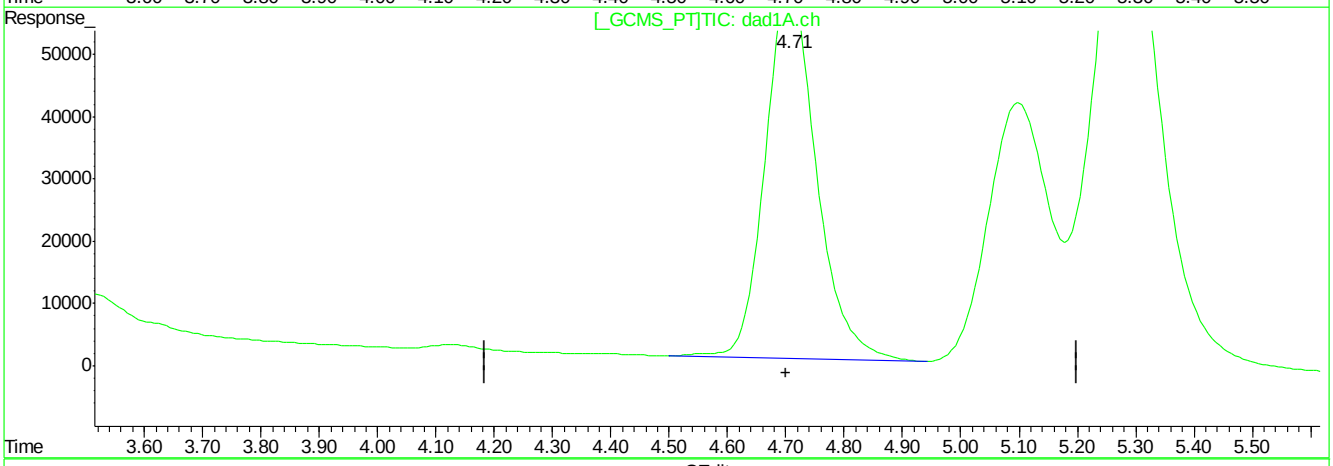
(+) = Expected Retention Time
GG624061.D GGG3094_012422.M Thu May 05 07:37:43 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1A.ch
Acq On : 04-May-2022, 21:11:59 Operator: fouads
Sample : cc3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 7:37 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.71min 475.814ppb m

response 3622918

(1) TNX #2

4.71min 478.488ppb

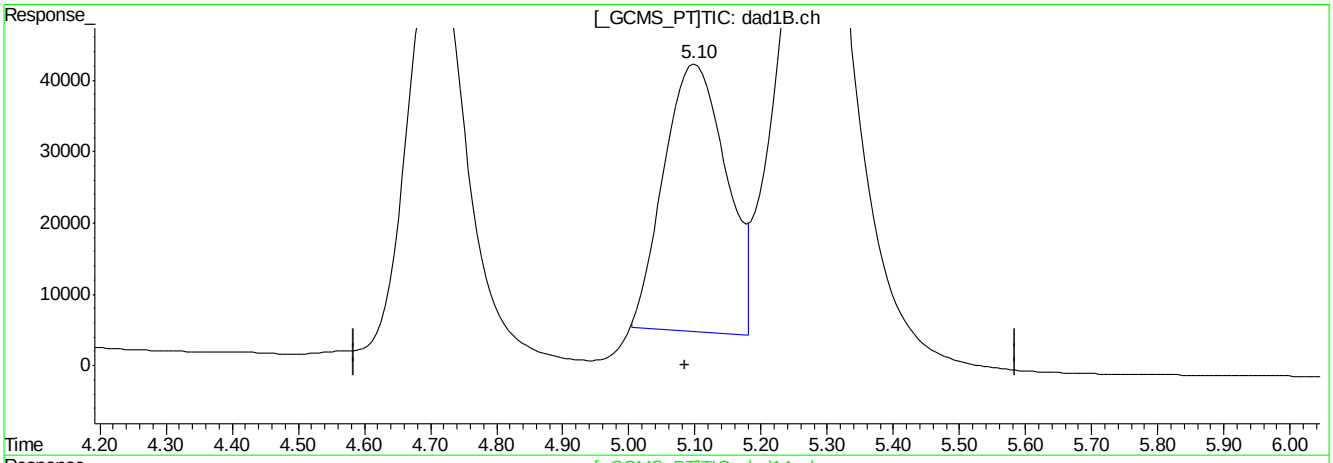
response 3641867

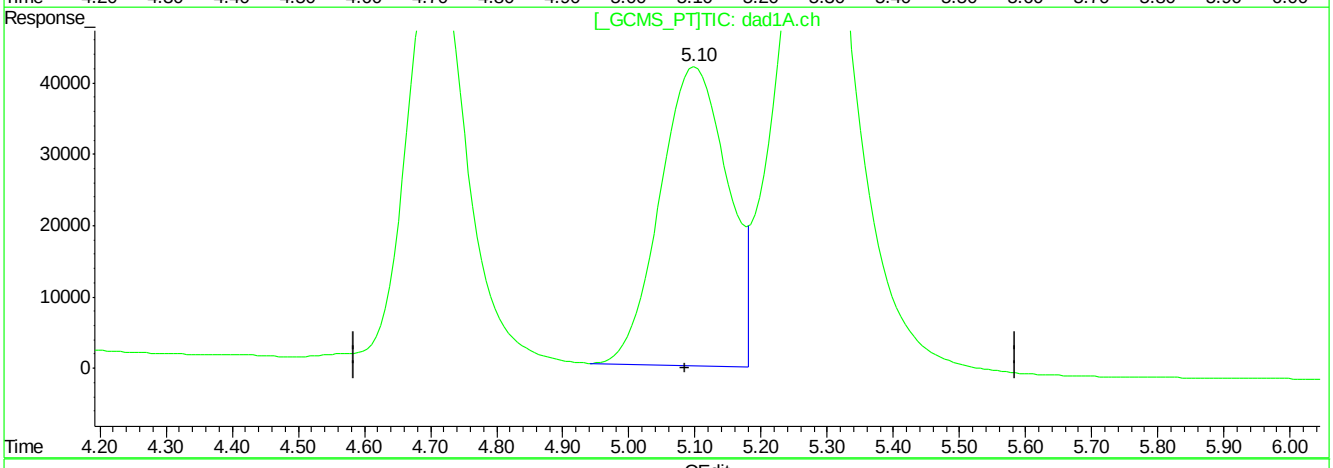
(+) = Expected Retention Time
GG624061.D GGG3094_012422.M Thu May 05 07:37:50 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1A.ch
Acq On : 04-May-2022, 21:11:59 Operator: fouads
Sample : cc3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 7:37 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.10min 753.221ppb

response 2434288

(2) HMX #2

5.10min 910.701ppb

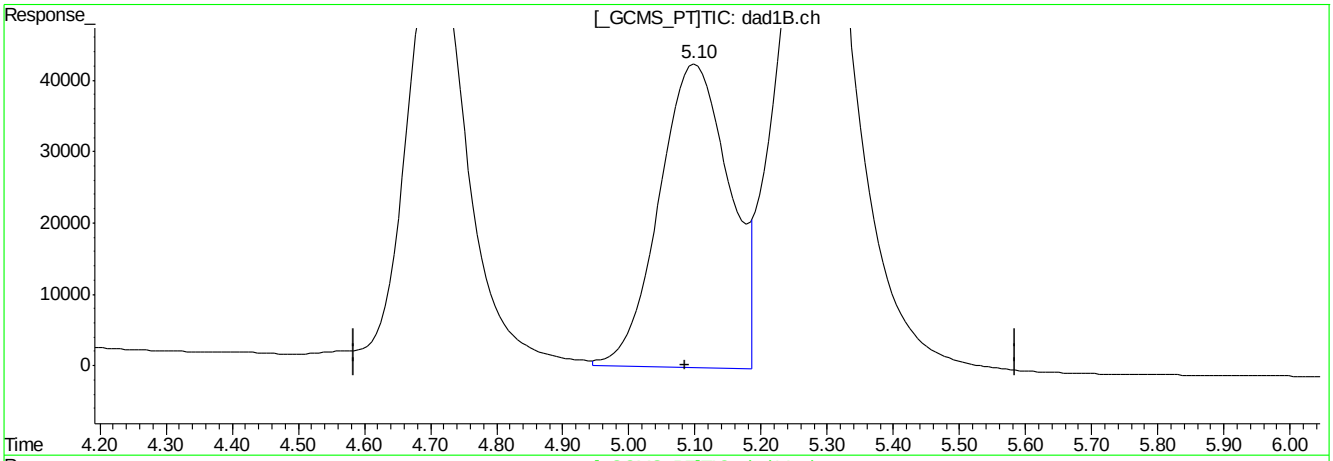
response 2943240

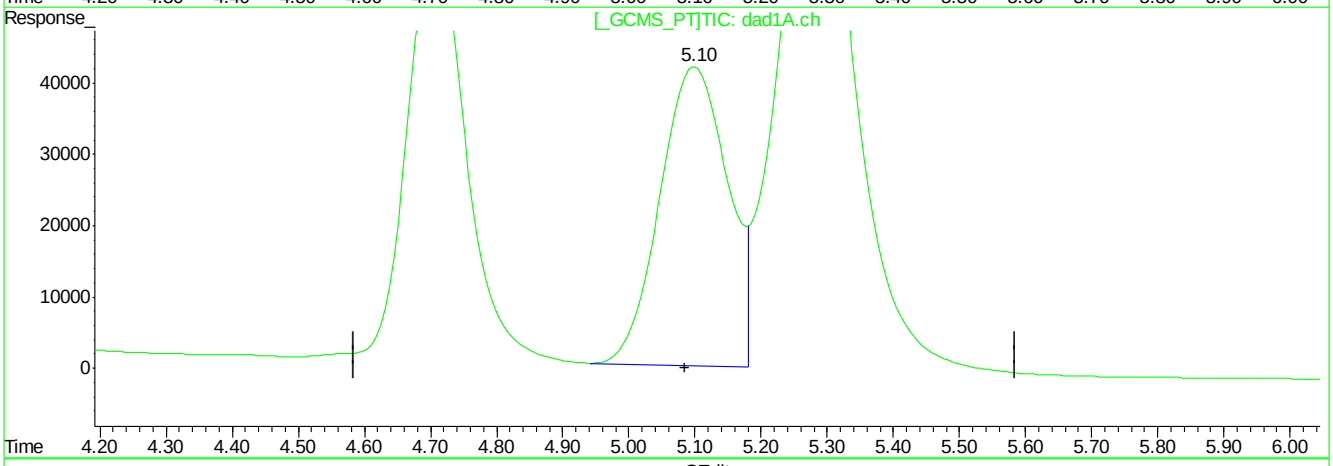
(+) = Expected Retention Time
GG624061.D GGG3094_012422.M Thu May 05 07:37:58 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1A.ch
Acq On : 04-May-2022, 21:11:59 Operator: fouads
Sample : cc3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 7:37 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.10min 988.469ppb m

response 3194572

(2) HMX #2

5.10min 910.701ppb

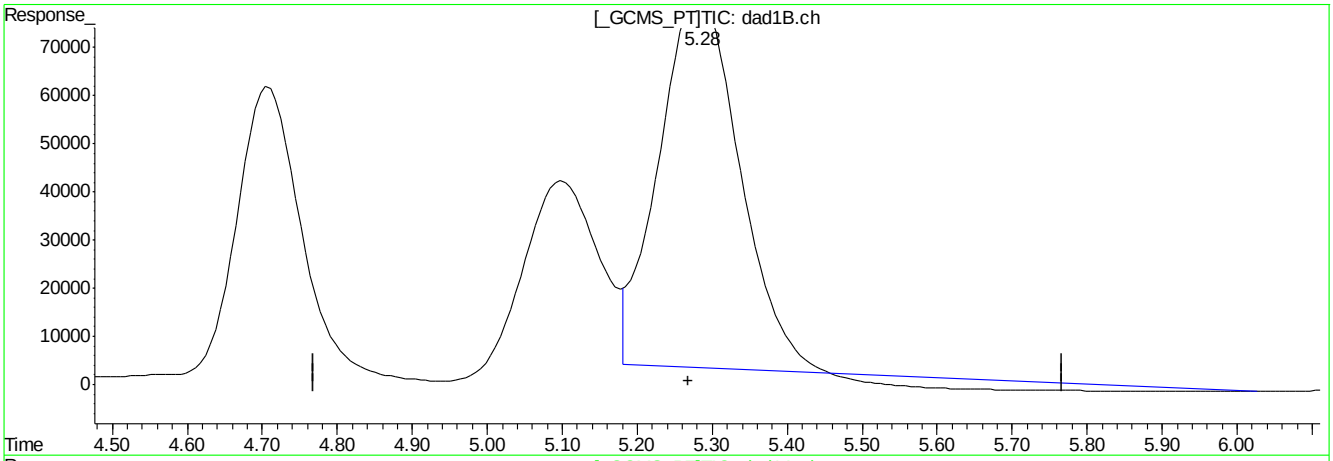
response 2943240

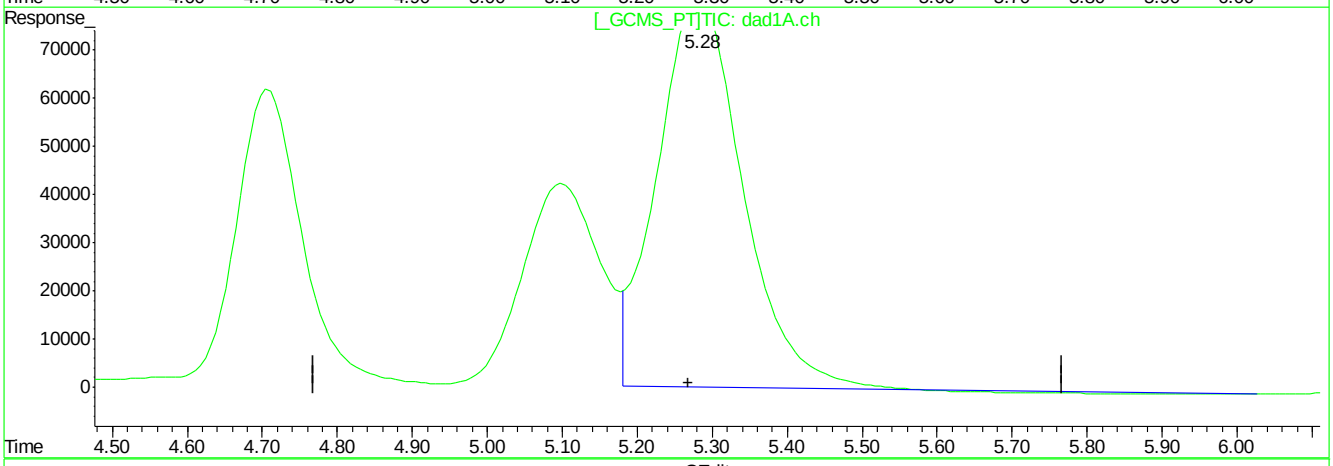
(+) = Expected Retention Time
GG624061.D GGG3094_012422.M Thu May 05 07:38:06 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1A.ch
Acq On : 04-May-2022, 21:11:59 Operator: fouads
Sample : cc3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 7:37 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.28min 845.390ppb

response 5393075

(3) DNX #2

5.28min 1010.478ppb

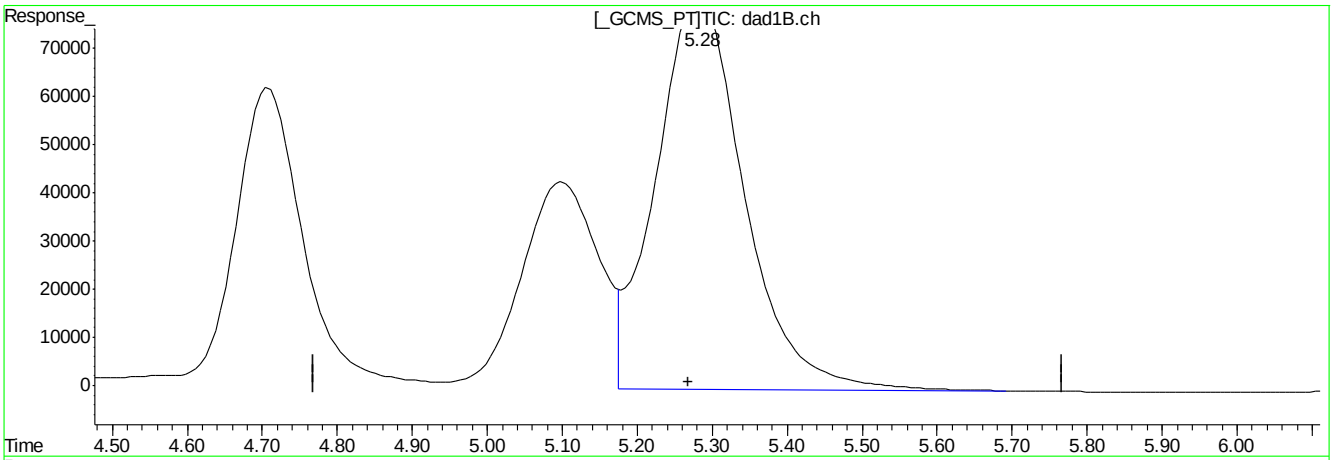
response 6420850

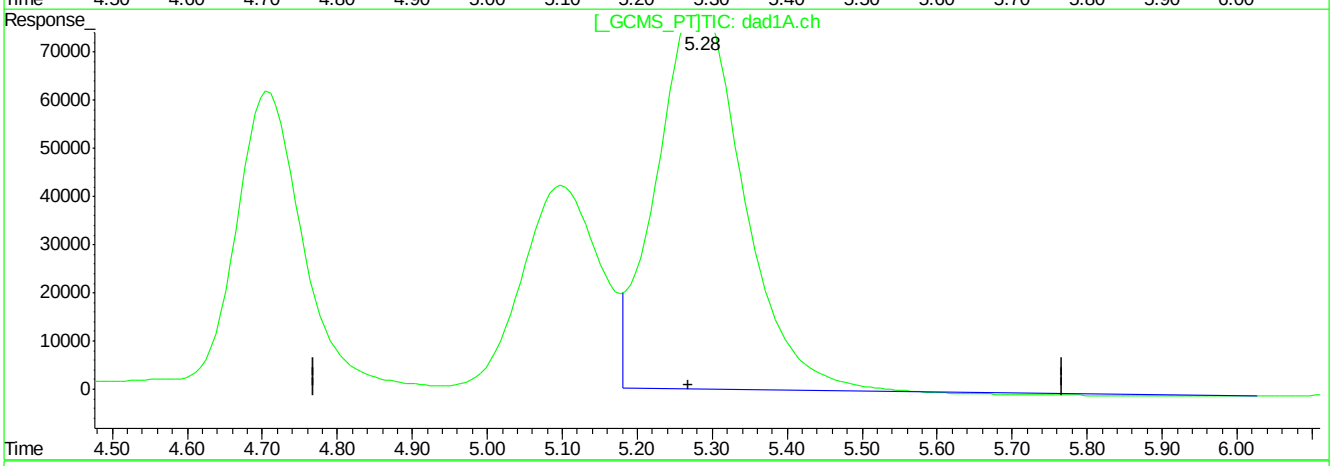
(+) = Expected Retention Time
GG624061.D GGG3094_012422.M Thu May 05 07:38:16 2022

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3135\GG624061.D\dad1A.ch
Acq On : 04-May-2022, 21:11:59 Operator: fouads
Sample : cc3094-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events3.e IntFile Signal #2: events2.e
Quant Time: May 5 7:37 2022 Quant Results File: GGG3094_012422.RES

Method : C:\MSDCHEM\1\METHODS\GGG3094_012422.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue May 03 13:52:20 2022
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.28min 1051.641ppb m

response 6708829

(3) DNX #2

5.28min 1010.478ppb

response 6420850

(+) = Expected Retention Time
GG624061.D GGG3094_012422.M Thu May 05 07:38:23 2022

SGS-ORLANDO HPLC-04 BB ANALYSIS LOG

DATE	4/15/2022	METHODS	8330	IC/ICC STD LOT	LC1599
COLUMN TYPE	Extend C18	ACQ. METHOD	8330B	ICV STD LOT	LC1600
AMOUNT INJ	100ul	PROC. METHOD	BBB2152_04/1522.M	SOLVENT	204903
INSTRUMENT	HPLC05-BB	CALIB. DATE	4/15/2022	SOLVENT	204513
ANALYST	fs	RUN BATCH	GBB2188	HEAD PRESSURE	245

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
BB072462	1	ccb	8330	1	op90239,GBB2188,1000,,,10,1,water	/
BB072463	2	ic2188-20	8330	2/500	op90759,GBB2188,1000,,,10,1,water	
BB072464	3	ic2188-50	8330	5/500	op90759,GBB2188,1000,,,10,1,water	
BB072465	4	ic2188-100	8330	10/500	op90759,GBB2188,1000,,,10,1,water	
BB072466	5	ic2188-200	8330	20/500	op90759,GBB2188,1000,,,10,1,water	
BB072467	6	ic2188-500	8330	50/500	op90759,GBB2188,1000,,,10,1,water	
BB072468	7	icc2188-1000	8330	200/1000	op90759,GBB2188,1000,,,10,1,water	curve passed
BB072469	8	ic2188-2500	8330	250/500	op90759,GBB2188,1000,,,10,1,water	
BB072470	9	ic2188-5000	8330	1x	op90759,GBB2188,1000,,,10,1,water	
BB072471	10	icv2188-1000	8330	1x	op90759,GBB2188,1000,,,10,1,water	icv passed
BB072472	11	op90689-mb	8330	1x	op90689,GBB2188,1000,,,10,1,water	nd
BB072473	12	op90689-bs	8330	1	op90689,GBB2188,1000,,,10,1,water	/
BB072474	13	fa94700-11	8330	1	op90689,GBB2188,1040,,,10,1,water	nd
BB072475	14	fa94700-12	8330	1	op90689,GBB2188,980,,,50,1,soil	hmx
BB072476	15	fa94700-13	8330	1	op90689,GBB2188,1040,,,10,1,water	hmx
BB072477	16	fa94700-14	8330	1	op90689,GBB2188,1010,,,10,1,water	hmx,mnx rdx rr2x
BB072478	17	fa94700-15	8330	1	op90689,GBB2188,1000,,,10,1,water	nd
BB072479	18	fa94700-16	8330	1	op90689,GBB2188,1010,,,10,1,water	nd
BB072480	19	op90689-ms	8330	1	op90689,GBB2188,500,,,10,1,water	/
BB072481	20	op90689-msd	8330	1	op90689,GBB2188,500,,,10,1,water	/
BB072482	1	ccb	8330	1	op90698,GBB2188,1000,,,10,1,water	/
BB072483	7	cc2188-1000	8330	200/1000	op90689,GBB2188,1000,,,10,1,water	passed
BB072484	21	fa92594-11,slot	8330	1	op90689,GBB2188,1000,,,10,1,water	nd solvent lot
BB072485	22	fa94700-17	8330	1	op90689,GBB2188,1000,,,10,1,water	nd
BB072486	23	fa94699-3,2	8330	200/400	op90688,GBB2188,980,,,10,2,water	report rdx
BB072487	24	op90759-mb	8330	1	op90759,GBB2188,1000,,,10,1,water	nd
BB072488	25	op90759-bs	8330	1	op90759,GBB2188,1000,,,10,1,water	/
BB072489	26	fa94818-1	8330	1	op90759,GBB2188,1040,,,10,1,water	rdx
BB072490	27	op90759-ms	8330	1	op90759,GBB2188,500,,,10,1,water	/
BB072491	28	op90759-msd	8330	1	op90759,GBB2188,500,,,10,1,water	/
BB072492	29	fa94818-2	8330	1	op90759,GBB2188,1010,,,10,1,water	rdx,2,4,6
BB072493	30	fa94829-1	8330	1	op90759,GBB2188,1000,,,10,1,water	rdx
BB072494	1	ccb	8330	1	op90760,GBB2188,1000,,,10,1,water	/
BB072495	7	cc2188-1000	8330	200/1000	op90689,GBB2188,1000,,,10,1,water	passed
BB072496	31	fa94829-2	8330	1	op90759,GBB2188,1000,,,10,1,water	rdx
BB072497	32	fa94829-3	8330	1	op90759,GBB2188,1000,,,10,1,water	nd
BB072498	33	fa94829-4	8330	1	op90759,GBB2188,990,,,10,1,water	nd
BB072499	34	fa94829-5	8330	1	op90759,GBB2188,1000,,,10,1,water	hmx,rdx,2,4,6
BB072500	35	fa94829-6	8330	1	op90759,GBB2188,990,,,10,1,water	rdx
BB072501	36	fa94829-7	8330	1	op90759,GBB2188,980,,,10,1,water	hmx,mnx,rdx,2,4,6,2--4,6
BB072502	37	fa94829-8	8330	1	op90759,GBB2188,1000,,,10,1,water	hmx,,rdx,2,4,6,2--4,7
BB072503	38	fa74700-14,2	8330	200/400	op90760,GBB2188,1010,,,10,2,water	report rdx
BB072504	1	ccb	8330	1	op90689,GBB2188,1000,,,10,1,water	/
BB072505	7	cc2188-1000	8330	200/1000	op90690,GBB2188,1000,,,10,1,water	passed

SGS-ORLANDO HPLC-04 BB ANALYSIS LOG

DATE	5/3/2022	METHODS	8330	IC/ICC STD LOT	LC1614
COLUMN TYPE	Extend C18	ACQ. METHOD	8330B	ICV STD LOT	LC1615
AMOUNT INJ	100ul	PROC. METHOD	BBB2152_04/1522.M	SOLVENT	204903
INSTRUMENT	HPLC05-BB	CALIB. DATE	4/15/2022	SOLVENT	204513
ANALYST	fs	RUN BATCH	GBB2196	HEAD PRESSURE	245

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
BB072787	1	ccb	8330	1	op90239,GBB2196,1000,,,10,1,water	/
BB072788	2	cc2188-1000	8330	200/1000	op90781,GBB2196,10,,,50,1,soil	passed
BB072789	3	op90975-mb	8330	1	op90975,GBB2196,1000,,,10,1,water	nd
BB072790	4	op90975-bs	8330	1	op90975,GBB2196,1000,,,10,1,water	/
BB072791	5	fa95194-1	8330	1	op90975,GBB2196,1030,,,10,1,water	nd
BB072792	6	op90975-ms	8330	1	op90975,GBB2196,510,,,10,1,water	/
BB072793	7	op90975-msd	8330	1	op90975,GBB2196,510,,,10,1,water	/
BB072794	8	fa95194-2	8330	1	op90975,GBB2196,990,,,10,1,water	35,2-46.4-26,24,26,o-nitro
BB072795	9	fa95194-3	8330	1	op90975,GBB2196,1000,,,10,1,water	13,246,35,2-46.4-26,24,26,o-nitro,petn
BB072796	10	fa95194-4	8330	1	op90975,GBB2196,970,,,10,1,water	nd
BB072797	11	fa95194-5	8330	1	op90975,GBB2196,1030,,,10,1,water	nd
BB072798	30	test/msd	8330	1	op90981,GBB2196,950,,,10,1,water	na
BB072799	1	ccb	8330	1	op90941,GBB2196,1000,,,50,1,water	/
BB072800	2	cc2188-1000	8330	200/1000	op90781,GBB2196,10,,,50,1,soil	passed
BB072801	12	fa95194-6	8330	1	op90975,GBB2196,950,,,10,1,water	nd
BB072802	13	fa95194-7	8330	1	op90975,GBB2196,950,,,10,1,water	nd
BB072803	14	fa95171-1,10	8330	50/500	op90981,GBB2196,1000,,,10,10,water	report rdx
BB072804	15	fa95171-3,10	8330	50/500	op90981,GBB2196,1000,,,10,10,water	report rdx
BB072805	16	fa95171-4,2	8330	250/500	op90981,GBB2196,990,,,10,2,water	report rdx
BB072806	17	fa95171-5,10	8330	50/500	op90981,GBB2196,970,,,10,10,water	report rdx
BB072807	18	fa95171-6,2	8330	250/500	op90981,GBB2196,1000,,,10,2,water	report rdx
BB072808	19	op91013-mb	8330	1	op91013,GBB2196,1000,,,10,1,water	nd
BB072809	20	op91013-bs	8330	1	op91013,GBB2196,1000,,,10,1,water	/
BB072810	1	ccb	8330	1	op90941,GBB2196,1000,,,10,1,water	na
BB072811	2	cc2188-1000	8330	200/1000	op90781,GBB2196,10,,,50,1,soil	passed
BB072812	21	fa95241-1	8330	1	op91013,GBB2196,980,,,10,1,water	hmx,mnx,rdx,35,246,2-46,4-26
BB072813	22	op91013-ms	8330	1	op91013,GBB2196,480,,,10,1,water	/
BB072814	23	op91013-msd	8330	1	op91013,GBB2196,480,,,10,1,water	/
BB072815	24	fa95241-2	8330	1	op91013,GBB2196,990,,,10,1,water	hmx,rdx,135,35,246,2-46,4-26
BB072816	25	op91049-mb	8330	1	op91049,GBB2196,1000,,,10,1,water	nd,low surrg ,rerun below
BB072817	26	op91049-bs	8330	1	op91049,GBB2196,1000,,,10,1,water	/
BB072818	27	fa95260-1	8330		op91049,GBB2196,1000,,,10,,water	hmx,dnx,mnx,rdx10x,246,2-46,4-26
BB072819	28	fa95260-2	8330		op91049,GBB2196,1000,,,10,,water	nd
BB072820	1	ccb	8330	1	op90941,GBB2196,1000,,,10,1,water	/
BB072821	2	cc2188-1000	8330	200/1000	op90781,GBB2196,10,,,50,1,soil	passed
BB072822	29	op91049-ms	8330	1	op91049,GBB2196,500,,,10,1,water	/
BB072823	30	op91049-msd	8330	1	op91049,GBB2196,500,,,10,1,water	/
BB072824	31	fa95260-3	8330		op91049,GBB2196,990,,,10,,water	tnx,hmx,dnx,mnx,rdx at 4x
BB072825	1	ccb	8330	1	op90941,GBB2196,1000,,,10,1,water	/
BB072826	2	cc2188-1000	8330	200/1000	op90781,GBB2196,10,,,50,1,soil	passed
BB072827	1	ccb	8330		op90782,GBB2196,1000,,,10,,water	/
BB072828	25	op91049-mb	8330		op91049,GBB2196,1000,,,10,,water	nd
BB072829	32	fa95260-1,10	8330		op91050,GBB2196,1000,,,10,,water	report rdx
BB072830	33	fa95260-3,4	8330		op91051,GBB2196,990,,,10,,water	report rdx
BB072831	1	ccb	8330	1	op91052,GBB2196,1000,,,10,1,water	/
BB072832	2	ecc2188-1000	8330	200/1000	op90781,GBB2196,10,,,50,1,soil	passed

DATE	1/24/2022	**METHODS**	8330	**IC/ICC STD LOT**	**LC1584**
COLUMN TYPE	Bonus-RP	**ACQ. METHOD**	8330RPB3	**ICV STD LOT**	**LC1585**
AMOUNT INJ	100uL	**PROC. METHOD**	GGG3094_012422.M	**SOLVENT**	**204903**
INSTRUMENT	HPLC3-GG	**CALIB. DATE**	1/24/2022	**SOLVENT**	**204513**
ANALYST	JB	**RUN BATCH**	GGG3094	**HEAD PRESSURE**	**108**

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG623369	91	ic3094-20	8330	2/500	op89379,GGG3094,1000,,,10,1,water	/
GG623370	92	ic3094-50	8330	5/500	op89379,GGG3094,1000,,,10,1,water	/
GG623371	93	ic3094-100	8330	10/500	op89379,GGG3094,1000,,,10,1,water	/
GG623372	94	ic3094-200	8330	20/500	op89379,GGG3094,1000,,,10,1,water	/
GG623373	95	ic3094-500	8330	50/500	op89379,GGG3094,1000,,,10,1,water	/
GG623374	96	icc3094-1000	8330	100/500	op89379,GGG3094,1000,,,10,1,water	/
GG623375	97	ic3094-2500	8330	250/500	op89379,GGG3094,1000,,,10,1,water	/
GG623376	98	ic3094-5000	8330	1	op89379,GGG3094,1000,,,10,1,water	/
GG623377	99	icv3094-1000	8330	1	op89379,GGG3094,1000,,,10,1,water	Pass

DATE	5/4/2022	METHODS	8330	IC/ICC STD LOT	LC1610
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1585
AMOUNT INJ	100uL	PROC. METHOD	GGG3094_012422.M	SOLVENT	204903
INSTRUMENT	HPLC3-GG	CALIB. DATE	1/24/2022	SOLVENT	204513
ANALYST	fs	RUN BATCH	GGG3135	HEAD PRESSURE	108

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG624049	1	ccb	8330	1	op89982,GGG3135,1000,,,10,1,water	/
GG624050	2	cc3094-1000	8330	100/500	op89982,GGG3135,1000,,,10,1,water	passed
GG624051	3	op90975-mb	8330	1	op90975,GGG3135,1000,,,10,1,water	nd
GG624052	4	fa951194-2cf	8330	1	op90975,GGG3135,990,,,10,1,water	confirmed
GG624053	5	fa951194-3cf	8330	1	op90975,GGG3135,1000,,,10,1,water	confirmed
GG624054	6	op91013-mb	8330	1	op91013,GGG3135,1000,,,10,1,water	nd
GG624055	7	fa95241-1cf	8330	1	op91013,GGG3135,980,,,10,1,water	confirmed
GG624056	8	fa95241-2cf	8330	1	op91013,GGG3135,990,,,10,1,water	confirmed
GG624057	9	op91049-mb	8330	1	op91049,GGG3135,1000,,,10,1,water	nd
GG624058	10	fa95260-1cf	8330	1	op91049,GGG3135,1000,,,10,1,water	confirmed
GG624059	11	fa95260-3cf	8330	1	op91049,GGG3135,990,,,10,1,water	confirmed
GG624060	1	ccb	8330	1	op90981,GGG3135,1000,,,10,1,water	/
GG624061	2	cc3094-1000	8330	100/500	op90891,GGG3135,1000,,,10,1,water	passed
GG624062	12	fa95260-1cf,10	8330	50/500	op91049,GGG3135,1000,,,10,10,water	confirmed
GG624063	13	fa95260-3cf,4	8330	100/400	op91049,GGG3135,990,,,10,4,water	confirmed
GG624064	1	ccb	8330	1	op90981,GGG3135,1000,,,10,1,water	/
GG624065	2	Ecc3094-1000	8330	100/500	op90891,GGG3135,1000,,,10,1,water	passed

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: 5/2/22 8:30 Started {mm/dd/yy 24:00}

Date/Time: 5/3/22 9:40 Finished {mm/dd/yy 24:00}

Prep Method: (3535A) or 537 or 537MOD (circle)

Analytical Method: 8330

Batch#: OP91013 Ext. By: JM Conc. By: — Vialed By: JM

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP91013 MB	X	1000	7	NA	250µl		10ml	AT2	
OP 91013 BS	X	1000	"	"	"	250+200 µl	"	"	
FA95241-1	6	980	"	"	"		"	"	
-2	2	990	"	"	"		"	"	
FA95241-1 MS	4	480	7	NA	250µl	250+200 µl	10ml	AT2	
" MSD	4	480	"	"	"	"	"	"	
DUP									

Comments:

Surr.1 ID: LC1618 Conc: 20ppm Exp. Date: 10/15/22 Inj. By: JM Ver. By JM

Spk.1 ID: LC1619 Conc: 20ppm Exp. Date: 10/26/22 Inj. By: JM Ver. By JM

Spk.2 ID: LC1602 Conc: 25ppm Exp. Date: 8/23/22 Inj. By: JM Ver. By JM

Spk.3 ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

TurboVap Temp (Therm ID): — N-Evap Temp (Therm ID): —

Observed Temp °C: — Corr. Temp °C: — Observed Temp °C: — Corr. Temp °C: —

Methanol Lot #: — SPE Lot #: SZ14-0121 pH Paper #: 226621

Acetonitrile Lot #: 216631 Syringe filter Lot #: — Reagent #: —

Water Lot#: 217575 Pre-filter Lot#: — Reagent #: —

Solvent#: — Carbon Lot#: — Other —

Relinquished By: JM Date: 5/3/22

Accepted By: [signature] Date: 05/03/22

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

APPENDIX B-2
DATA VALIDATION REPORTS

VALIDATA
Chemical Services, Inc.
(770) 232-0130
(770) 232-5082 (Fax)
2159 Wynnton Pointe, Duluth, GA 30097
www.datavalidator.com

DATA VALIDATION SUMMARY REPORT

COMPANY:	Weston Solutions, Inc.
SITE NAME:	Radford Army Ammunitions Plant – October 2021 Sampling
CONTRACTED LAB:	CT Laboratories LLC, Eurofins South Bend, SGS Orlando
QA/QC LEVEL:	EPA Stage 2B and 4
EPA SOW/METHODS:	EPA and SW-846 Methods
VALIDATION GUIDELINES:	*Radford Army Ammunitions Plant, Radford Virginia, SWMU 49 Monitored Natural Attenuation Groundwater Monitoring Work Plan, SWMU 54 Interim Measures Work Plan, QSM 5.1, SW 846 Methods*, *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 2017; *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* 2017
SAMPLE MATRIX:	Water
TYPE OF ANALYSIS:	Volatile Organics (VOA), Dissolved Gases, Perchlorate, Explosives, Total Metals, Total Mercury, Anions, Total Organic Carbon (TOC), Total Inorganic Carbon (TIC), Chlorate*, Chemical Oxygen Demand (COD), pH
SDG NUMBER:	165461
SAMPLING DATES:	October 26-28, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
TB-1	1066466	Water	X	
13MW4	1066467	Water	X	X
13TW4	1066468	Water	X	X
13MW3	1066469	Water	X	X
49MW04	1066470	Water	X	X
13MW2	1066471	Water	X	X
TB-2	1067785	Water	X	

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
48MW1	1067786	Water	X	X
49MW01	1067787	Water	X	X
50MW02	1067788	Water	X	X
48MW2	1067789	Water	X	X
48MW3	1067790	Water	X	X
48MW3DL	1067790DL	Water	X	
49MW02	1067791	Water	X	X
48MW6	1067792	Water	X	X
13MW3MS	1066469MS	Water	X	X
13MW3MSD	1066469MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
49-IDW	1067793	Water	X	X
49-IDWMD	1067793MD	Water	X	
49-IDWMS	1067793MS	Water	X	
49-IDWMSD	1067793MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	Anions	TOC
13MW4	1066467	Water	X	X
13TW4	1066468	Water	X	X
13MW3	1066469	Water	X	X
13MW3DL	1066469DL	Water	X	
49MW04	1066470	Water	X	X
13MW2	1066471	Water	X	X
48MW1	1066854	Water	X	X
49MW01	1067787	Water	X	X
50MW02	1067788	Water	X	X
48MW2	1067789	Water	X	X
48MW3	1067790	Water	X	X
49MW02	1067791	Water	X	X
48MW6	1067792	Water	X	X
48MW6DL	1067792DL	Water	X	
13MW3MS	1066469MS	Water	X	X
13MW3MSD	1066469MSD	Water	X	X
49MW01MS	10667787MS	Water	X	
49MW01MSD	10667787MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	COD	pH
49-IDW	1067793	Water	X	X
49-IDWMD	1067793MD	Water		X
49-IDWMS	1067793MS	Water	X	
49-IDWMSD	1067793MSD	Water	X	

SDG NUMBER: 165486
SAMPLING DATES: October 27, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
54-IDW	1066849	Water	X	X
54-IDWMD	1066849MD	Water	X	X
54-IDWMS	1066849MS	Water	X	X
54-IDWMSD	1066849MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	Chlorate*
54MW13	1066840	Water	X	X
54MW10	1066845	Water	X	X
54MW10DL	1066845DL	Water	X	
54TW10	1066846	Water	X	X
54TW10DL	1066846DL	Water	X	
54MW12	1066847	Water	X	X
54MW1	1066848	Water	X	X
54MW13MS	1066840MS	Water	X	X
54MW13MSD	1066840MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	TOC	TIC
54MW13	1066840	Water	X	X
54MW10	1066845	Water	X	X
54TW10	1066846	Water	X	X
54MW12	1066847	Water	X	X
54MW1	1066848	Water	X	X
54MW13MS	1066840MS	Water	X	

Client Sample #	Lab Sample #	Matrix	TOC	TIC
54MW13MSD	1066840MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	COD	pH
54-IDW	1066849	Water	X	X
54-IDWMD	1066849MD	Water		X
54-IDWMS	1066849MS	Water	X	X
54-IDWMSD	1066849MSD	Water	X	

SDG NUMBER: FA90260
SAMPLING DATES: October 27, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Explosives	Perchlorate
54MW13	FA90260-1	Water	X	X
54MW13MS	FA90260-1MS	Water	X	X
54MW13MSD	FA90260-1MSD	Water	X	X
54MW10	FA90260-2	Water	X	X
54TW10	FA90260-3	Water	X	X
54MW12	FA90260-4	Water	X	X
54MW1	FA90260-5	Water	X	X

* -Analysis reported chlorate and chlorite
**- analysis was for 22 analytes by Method 6010C.

All fractions were validated at Stage 4, except Metals and Mercury, which were validated at Stage 2B.

Suffix Codes: DL = DILUTION, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RA = REANALYSIS

DATA REVIEWERS: Amy L. Hogan, Kevin C. Harmon, Sandra Nacquin

DATA VALIDATION SUMMARY

CT Laboratories LLC – 159400 - Organics & Inorganics

VOLATILE ORGANICS (VOA)

SUMMARY

I.) General:

The analyses for Volatile Organics (VOA) were performed according to SW 846 Method 8260B.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No data qualification was necessary.

III.) Calibration:

Initial Calibration:

The average RRF for 1,4-dioxane (0.006) for the standards analyzed on 10/29/21 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

All other Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

The RRF for 1,4-dioxane (0.0033) for the standards run on 10/29/21 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

Continuing Calibration:

The RRF for 1,4-dioxane (0.0024) for the standards run on 11/01/21 at 09:08 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary. The Percent Difference (%D) for 1,4-dioxane at 33.3% for this standard exceeded the 20% QC limit for opening CCVs. The 1,4-dioxane results for all SDG samples, which consisted entirely of non-detects, were qualified as estimated (UJ).

The RRF for 1,4-dioxane (0.0034) for the standards run on 11/01/21 at 20:07 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

The RRF for 1,4-dioxane (0.0031) for the standards run on 11/02/21 at 08:04 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

The RRF for 1,4-dioxane (0.0036) for the standards run on 11/02/21 at 11:52 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

IV.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Equipment Blank:

There was no equipment blank submitted in association with this data set. No data qualification was necessary.

Trip Blanks:

There were no detections in the associated trip blanks. No data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

VI.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 13MW3. All criteria were met. No data qualification was necessary

VIII.) Field Duplicates:

One set of field duplicate samples (13MW4 / 13TW4) was identified for this SDG. The only calculable Relative Percent Difference (RPD) was 35% for trichloroethene, which was within the QC limit. No data qualification was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

The carbon tetrachloride result for sample 48MW3 was reported from a dilution analysis. Since all criteria were met and the compound was only reported once, no data qualification was necessary.

DISSOLVED GASSES

SUMMARY

I.) General:

The analyses for Dissolved Gases were performed according to Method RSK-175.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Equipment Blank:

There was no equipment blank submitted in association with this data set. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 13MW3. All criteria were met. No data qualification was necessary.

VII.) Field Duplicates:

One set of field duplicate samples (13MW4 / 13TW4) was identified for this SDG. There were no calculable Relative Percent Differences. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

All LLCCV and CRDL criteria were met. No data qualification was necessary

IV.) Blanks:

Method Blanks:

Magnesium (17.3 ug/L) was reported in the associated method blank. Since the magnesium result for the sample was greater than the LOQ and the blank concentration, no data qualification was necessary.

Calibration Blanks:

Antimony (4.69 ug/L), lead (2.4 ug/L) and zinc (8.33 ug/L) were detected in the associated ICB or CCB for this SDG. Since the associated positive sample results were greater than the LOQ and the blank concentrations, no data qualification was necessary.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis was performed using sample 49-IDW. The Percent Difference (%D) for calcium (26%) exceeded the 10% QC limit. The positive calcium result in the sample was qualified as estimated (J).

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 49-IDW. The parent sample result for aluminum and iron were greater than 4X the spike concentrations, so the results for these analytes were not considered meaningful. The Percent Recoveries (%Rs) were below the QC limits for the following analytes: calcium (83%, 81%), manganese (77%, 77%), silver (70%, 70%) and thallium (80%, 81%). Additionally, the post spike %R for silver (71%) was below the QC limits. The positive and non-detect results for these analytes for sample 49-IDW were qualified as estimated (J) and (UJ).

The Relative Percent Differences (RPDs) for aluminum (21%), calcium (200%), iron (21%) and nickel (23%) exceeded the 20% QC limit. The positive and non-detect results for these analytes for the sample were qualified as estimated (J) and (UJ).

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There was no equipment blank submitted in association with this data set. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 13MW3 and 49MW01. The Percent Recovery (%R) for sulfate (85%) for 13MWMS was below the QC limits. The sulfate result for the parent sample was qualified as estimated (J).

VI.) Field Duplicates:

One set of field duplicate samples (13MW4 / 13TW4) was identified for this SDG. The calculable Relative Percent Differences (RPDs) were chloride (2.7%), nitrate (1.6%) and sulfate (2.7%), which were all within the QC limit. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

The sulfate results for samples 13MW3 and 48MW6 were reported from dilution analyses. Since only one sulfate result was reported for each sample, no data qualification was necessary.

TOTAL ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 13MW3. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One set of field duplicate samples (13MW4 / 13TW4) was identified for this SDG. The absolute difference for the two results was less than the LOQ, so no data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses data was not submitted for this fraction of the SDG. Data qualification based on the absence of MS / MSD data was not required. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis was performed using sample 49-IDW. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

CT Laboratories LLC – 165486 - Inorganics

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

All LLCCV and CRDL criteria were met. No data qualification was necessary

IV.) Blanks:

Method Blanks:

Iron (18.90 ug/L) was reported in the associated method blank. Since the associated sample result was greater than the LOQ and the blank concentration, no data qualification was necessary.

Calibration Blanks:

Potassium (311 ug/L, 194 ug/L) was reported in the associated calibration blanks. Since the associated sample result was greater than the LOQ and the blank concentration, no data qualification was necessary.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis was performed using sample 54-IDW. The Percent Differences (%Ds) for barium (33%), calcium (156%) and magnesium (154%) exceeded the 10% QC limit. The positive results for these analytes in the sample were qualified as estimated (J).

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54-IDW. The Percent Recoveries (%Rs) for the following analytes were outside the QC limits: aluminum (116%, 125%), calcium (85%), copper (119%, 124%), iron (77%), mercury (30%, 27%) silver (74%, 71%). The post spike %R for silver (64%) was below the QC limits. The positive aluminum, calcium, copper and iron results for the sample were qualified as estimated (J) and the non-detect mercury and silver results for the sample was qualified as estimated (UJ).

The Relative Percent Differences (RPDs) for lead (22%) and manganese (22%) exceeded the 20% QC limit. The positive lead and manganese results for the sample were qualified as estimated (J).

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data

qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There was no associated equipment rinsate blank for this SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW13. The parent sample result for sulfate was greater than 4X the spike concentration, so the results for this analyte were not considered meaningful. All other criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One sets of field duplicate samples (54MW10 / 54TW10) was identified for this SDG. The calculable Relative Percent Differences (RPDs) for chloride (0%) and sulfate (0%) were within the QC limit. The calculable difference for nitrate was less than the RL, so no data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

TOTAL INORGANIC AND ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Inorganic Carbon (TIC) and Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW13. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One set of field duplicate samples (54MW10 / 54TW10) was identified for this SDG. The calculable Relative Percent Difference (RPD) for TIC at 1.3% was within the QC limit and the calculable difference for TOC was less than the LOQ, so no data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54- IDW. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis was performed using sample 54-IDW. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHLORATE / CHLORITE

SUMMARY

I.) General:

The analyses for Chlorate / Chlorite were performed according to EPA Method 300.0.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There was no associated equipment rinsate blank for this SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 54MW12 and 54MW13. The Percent Recoveries (%Rs) of chlorate for 54MW12MS/MSD (83%, 83%) and 54MW13MS/MSD (84%, 83%) were below the QC limits. The non-detect chlorate results for both samples were qualified as estimated (UJ).

VI.) Field Duplicates:

One sets of field duplicate samples (54MW10 / 54TW10) was identified for this SDG. There were no calculable Relative Percent Differences (RPDs). No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

SGS Orlando, FL – FA90260 - Organics

EXPLOSIVES

SUMMARY

I.) General:

The analyses for Explosives were performed according to SW 846 Method 8330.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

The Percent Recoveries (%Rs) for 3,4-dinitrotoluene exceeded the QC limits for the following samples:

54MW13(conf)	141%
54TW10	143%
54TW10 (conf)	151%
54MW12 (conf)	144%

The positive results for sample 54TW10 were qualified as estimated (J). Since the other listed results are from the confirmation analysis and results were not reported from these analyses, no further data qualification was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW13. The Percent Recoveries (%Rs) for 1,3,5-trinitrotoluene (131%, 169%) exceeded the QC limits. Data qualification based on MS / MSD data alone was not required. No data qualification was necessary.

VII.) Field Duplicates:

One set of field duplicate samples (54MW10 / 54TW10) was identified for this SDG. The calculable Relative Percent Differences (RPDs) were:

HMX	3.9%
RDX	33%
3,5-dinitroaniline	16%
2-amino-4,6-dinitrotoluene	0%
4-amino-2,6-dinitrotoluene	13%
1,3,5-trinitrobenzene	77%
2,4,6-trinitrobenzene	30%

The RPD for 1,3,5-trinitrotoluene exceeded the 50% QC limit, so the positive results for this compound for the two samples were qualified as estimated (J).

VIII.) TCL Compound Identification:

The Column Relative Percent Difference (RPD) exceeded the 40% QC limit for the following compounds:

Sample	Compound	RPD
54MW13	RDX	53.2%
	3,5-dinitroaniline	132%
54MW10	3,5-dinitroaniline	65.5%
54MW12	3,5-dinitroaniline	41.5%

The positive compound results for the listed samples above were qualified as estimated (J).

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

PERCHLORATE

SUMMARY

I.) General:

The analyses for Perchlorate were performed according to SW-846 Method 6350.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW13. The Percent Recoveries (%Rs) at 50% and 55% were below the QC limits. Data qualification based on MS / MSD criteria alone was not required. No data qualification was necessary.

VI.) Field Duplicates:

One set of field duplicate samples (54MW10 / 54TW10) was identified for this SDG. The calculable difference was less than the RL, so no data qualification was necessary.

VII.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

Appendix A
Qualified Form Is

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066471
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 13:55	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066471
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 13:55	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066471
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 13:55	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1066471
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:24	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066469
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 12:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066469
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 12:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	5.3		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	0.70	J	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066469
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 12:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.89	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1066469
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:03	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066467
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 11:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066467
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 11:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066467
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 11:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.2		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1066467
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 14:55	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13TW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066468
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 12:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13TW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066468
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 12:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13TW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066468
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 12:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.7		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13TW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1066468
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 14:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067786
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 14:23	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	0.65	J	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067786
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 14:23	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.71	J	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067786
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 14:23	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.9		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1067786
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1067789
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:42	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.46	J	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067789
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:47	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067789
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:47	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	24		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	3.1		0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067789
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:47	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.7		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067790
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/02/2021 / 10:55	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.1		0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067790
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/02/2021 / 10:55	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	22		0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	0.35	J	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	18		0.39	1.0	1.2	1.2

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067790
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/02/2021 / 10:55	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1067790
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:46	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067790
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	5
Date & Time Analyzed:	11/01/2021 / 16:17	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	74		1.9	5.0	6.0	6.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1067792
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 16:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067792
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 17:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.1		0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067792
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 17:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	2.2		0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067792
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 17:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.5		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067787
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 14:51	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067787
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 14:51	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	2.1		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067787
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 14:51	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1067787
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:35	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1067791
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.91	J	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067791
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 16:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067791
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 16:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067791
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 16:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066470
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 13:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066470
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 13:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.50	J	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066470
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 13:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1066470
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067788
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:20	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067788
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:20	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.2		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067788
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:20	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.1	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	GROUND WATER	SDG No.:	165461
Sample wt/vol:	25.3 (g/mL)	CTL Sample ID:	1067788
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	25.3 (mL)	Date/Time Prepared:	11/01/2021 / 13:05
Analytical Method:	RSK 175	Analytical Prep Batch #	83207
Analytical Run #:	196980	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 15:38	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.78	J	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	TRIP BLANK	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066466
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 10:34	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	TRIP BLANK	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066466
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 10:34	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	TRIP BLANK	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1066466
% Solids:		Date Received:	10/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 10:34	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	TRIP BLANK	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067785
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 11:02	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	TRIP BLANK	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067785
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 11:02	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix:	TRIP BLANK	SDG No.:	165461
Sample wt/vol:	(g/mL)	CTL Sample ID:	1067785
% Solids:		Date Received:	10/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	196904	Dilution Factor:	1
Date & Time Analyzed:	11/01/2021 / 11:02	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W102921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067793
Analytical Method:	EPA 6010C	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196999	Analysis Date/Time	11/03/2021 02:51
Analytical Prep Batch #:	83194	Prep. Date/Time:	11/01/2021 10:11
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	3660	~~Y~~ J	29	60	120	120
7440-36-0	Total Antimony	10	U	4.4	10	20	20
7440-38-2	Total Arsenic	20	U	7.7	20	40	40
7440-39-3	Total Barium	124		0.71	2.0	4.0	4.0
7440-41-7	Total Beryllium	3.0	U	0.95	3.0	8.0	8.0
7440-43-9	Total Cadmium	1.0	U	0.41	1.0	2.0	2.0
7440-47-3	Total Chromium	10.3		1.1	2.5	5.0	5.0
7440-48-4	Total Cobalt	2.4	J	0.55	2.5	5.0	5.0
7440-50-8	Total Copper	12.8	J	5.2	20	40	40
7439-89-6	Total Iron	4990	~~Y~~ J	11	40	80	80
7439-95-4	Total Magnesium	36700		10	25	40	40
7439-96-5	Total Manganese	234	J	1.4	3.0	5.0	5.0
7440-02-0	Total Nickel	7.9	J	1.5	3.0	5.0	5.0
7440-09-7	Total Potassium	3300		120	250	500	500
7782-49-2	Total Selenium	20	U	10	20	40	40
7440-23-5	Total Sodium	35500		200	500	700	700
7440-28-0	Total Thallium	20	U UJ	6.8	20	40	40
7440-62-2	Total Vanadium	5.7		1.3	3.0	5.0	5.0
7440-66-6	Total Zinc	60.3		4.5	10	20	20

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067793
Analytical Method:	EPA 7470A	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197150	Analysis Date/Time	11/05/2021 11:14
Analytical Prep Batch #:	83168	Prep. Date/Time:	11/03/2021 14:45
ICAL Calibration #:	11052021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067793
Analytical Method:	EPA 6010C	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196999	Analysis Date/Time	11/18/2021 14:20
Analytical Prep Batch #:	83194	Prep. Date/Time:	11/01/2021 10:11
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-70-2	Total Calcium	59400	J	17	50	100	100
7439-92-1	Total Lead	9.0		1.4	2.0	4.0	4.0
7440-22-4	Total Silver	2.5	U M-UJ	1.1	2.5	5.0	5.0

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066471
Analytical Method:	EPA 9060A	Date Received:	10/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 17:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066471
Analytical Method:	EPA 9056A	Date Received:	10/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196851	Analysis Date/Time	10/27/2021 23:15
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.22	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	36		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066469
Analytical Method:	EPA 9056A	Date Received:	10/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196851	Analysis Date/Time	10/28/2021 08:04
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.5		0.12	0.20	0.40	0.40

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066469
Analytical Method:	EPA 9060A	Date Received:	10/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 16:29
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066469
Analytical Method:	EPA 9056A	Date Received:	10/27/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196851	Analysis Date/Time	10/27/2021 21:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	97	~~M~~ J	4.0	7.5	15	15

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066467
Analytical Method:	EPA 9060A	Date Received:	10/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 16:04
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.64	J	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066467
Analytical Method:	EPA 9056A	Date Received:	10/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196851	Analysis Date/Time	10/27/2021 19:03
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.65		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	37		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066468
Analytical Method:	EPA 9060A	Date Received:	10/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 16:16
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.63	J	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066468
Analytical Method:	EPA 9056A	Date Received:	10/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196851	Analysis Date/Time	10/27/2021 19:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.64		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	38		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066854
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 18:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066854
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 20:43
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.0		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	62		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067789
Analytical Method:	EPA 9056A	Date Received:	10/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196929	Analysis Date/Time	10/29/2021 13:18
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.9	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.85		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	3.7		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067789
Analytical Method:	EPA 9060A	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 19:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.56	J	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067790
Analytical Method:	EPA 9056A	Date Received:	10/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196929	Analysis Date/Time	10/29/2021 13:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	4.0		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	19		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067790
Analytical Method:	EPA 9060A	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 19:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.53	J	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067792
Analytical Method:	EPA 9056A	Date Received:	10/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196929	Analysis Date/Time	10/29/2021 14:12
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	9.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.95		0.12	0.20	0.40	0.40

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067792
Analytical Method:	EPA 9056A	Date Received:	10/29/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196929	Analysis Date/Time	10/29/2021 14:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	68		4.0	7.5	15	15

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067792
Analytical Method:	EPA 9060A	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 20:15
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.77	J	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067793
Analytical Method:	EPA 410.4	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197021	Analysis Date/Time	11/03/2021 13:03
Analytical Prep Batch #:	83211	Prep. Date/Time:	11/02/2021 10:30
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	120		18	50	75	75

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067793
Analytical Method:	EPA 9040C	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196942	Analysis Date/Time	10/29/2021 15:15
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.58		0.1	0.1	0.1	0.1

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067787
Analytical Method:	EPA 9056A	Date Received:	10/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196929	Analysis Date/Time	10/29/2021 12:42
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.37	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	0.88	J	0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067787
Analytical Method:	EPA 9060A	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 18:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067791
Analytical Method:	EPA 9056A	Date Received:	10/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196929	Analysis Date/Time	10/29/2021 13:54
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.6	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.36	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	12		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067791
Analytical Method:	EPA 9060A	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 19:56
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066470
Analytical Method:	EPA 9060A	Date Received:	10/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/04/2021 17:32
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1066470
Analytical Method:	EPA 9056A	Date Received:	10/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196851	Analysis Date/Time	10/27/2021 22:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.27	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	62		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067788
Analytical Method:	EPA 9060A	Date Received:	10/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197155	Analysis Date/Time	11/05/2021 09:27
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	6.1		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 49
Matrix (soil/water):	GROUND WATER	SDG No.:	165461
% Solids:		Lab Sample ID:	1067788
Analytical Method:	EPA 9056A	Date Received:	10/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196929	Analysis Date/Time	10/29/2021 13:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.9		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	62		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066849
Analytical Method:	EPA 7470A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197150	Analysis Date/Time	11/05/2021 11:08
Analytical Prep Batch #:	83168	Prep. Date/Time:	11/03/2021 14:45
ICAL Calibration #:	11052021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U ~~M~~ UJ	0.020	0.080	0.12	0.12

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066849
Analytical Method:	EPA 6010C	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196907	Analysis Date/Time	10/29/2021 15:08
Analytical Prep Batch #:	83162	Prep. Date/Time:	10/28/2021 16:20
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	312	J	29	60	120	120
7440-36-0	Total Antimony	10	U	4.4	10	20	20
7440-38-2	Total Arsenic	20	U	7.7	20	40	40
7440-39-3	Total Barium	99.9	J	0.71	2.0	4.0	4.0
7440-41-7	Total Beryllium	3.0	U	0.95	3.0	8.0	8.0
7440-43-9	Total Cadmium	1.0	U	0.41	1.0	2.0	2.0
7440-70-2	Total Calcium	76600	J	17	50	100	100
7440-47-3	Total Chromium	2.7	J	1.1	2.5	5.0	5.0
7440-48-4	Total Cobalt	2.5	U	0.55	2.5	5.0	5.0
7440-50-8	Total Copper	23.8	~~J~~ J	5.2	20	40	40
7439-89-6	Total Iron	742	J	11	40	80	80
7439-92-1	Total Lead	8.4	J	1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	30100	J	10	25	40	40
7439-96-5	Total Manganese	18.7	J	1.4	3.0	5.0	5.0
7440-02-0	Total Nickel	3.0	U	1.5	3.0	5.0	5.0
7440-09-7	Total Potassium	1600		120	250	500	500
7782-49-2	Total Selenium	20	U	10	20	40	40
7440-22-4	Total Silver	2.5	U ~~M~~ UJ	1.1	2.5	5.0	5.0
7440-23-5	Total Sodium	27800		200	500	700	700
7440-28-0	Total Thallium	20	U	6.8	20	40	40
7440-62-2	Total Vanadium	3.0	U	1.3	3.0	5.0	5.0
7440-66-6	Total Zinc	11.3	J	4.5	10	20	20

ALH 8/10/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066849
Analytical Method:	EPA 410.4	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197021	Analysis Date/Time	11/03/2021 13:03
Analytical Prep Batch #:	83211	Prep. Date/Time:	11/02/2021 10:30
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	50	U	18	50	75	75

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066849
Analytical Method:	EPA 9040C	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196890	Analysis Date/Time	10/28/2021 14:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.29		0.1	0.1	0.1	0.1

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066848
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/03/2021 00:47
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	60		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066848
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 20:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.3	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	28		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066848
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 22:53
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066845
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/03/2021 00:05
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	77		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066845
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 19:13
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.25	J	0.12	0.20	0.40	0.40

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066845
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 19:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066845
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 21:32
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066847
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/03/2021 00:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	76		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066847
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 20:07
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.66		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	28		0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066847
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 22:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066840
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 17:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.49		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	37	M	0.80	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066840
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 20:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066840
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/02/2021 23:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	91		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066846
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197009	Analysis Date/Time	11/03/2021 00:19
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	76		0.5	1.5	3.0	3.0

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066846
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/29/2021 08:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066846
Analytical Method:	EPA 9056A	Date Received:	10/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	196892	Analysis Date/Time	10/28/2021 19:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.26	J	0.12	0.20	0.40	0.40

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU 54
Matrix (soil/water):	GROUND WATER	SDG No.:	165486
% Solids:		Lab Sample ID:	1066846
Analytical Method:	EPA 9060A	Date Received:	10/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	197156	Analysis Date/Time	11/04/2021 22:24
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0550	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.50	J	0.5	1.5	3.0	3.0

Client Sample Results

Client: CT Laboratories
Project/Site: Chlorite, Chlorate

Job ID: 810-6301-1

Client Sample ID: 1066840 54MW13
Lab Sample ID: 810-6301-1
Date Collected: 10/27/21 09:00
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/05/21 23:03	1
Chlorate	<10	~~F1~~ UJ	10		ug/L			11/05/21 23:03	1

Client Sample ID: 1066845 54MW10
Lab Sample ID: 810-6301-2
Date Collected: 10/27/21 10:40
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/06/21 00:24	1
Chlorate	<10		10		ug/L			11/06/21 00:24	1

Client Sample ID: 106846 54TW10
Lab Sample ID: 810-6301-3
Date Collected: 10/27/21 10:40
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/06/21 00:51	1
Chlorate	<10		10		ug/L			11/06/21 00:51	1

Client Sample ID: 1066847 54MW12
Lab Sample ID: 810-6301-4
Date Collected: 10/27/21 12:10
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/06/21 02:13	1
Chlorate	<10	~~F1~~ UJ	10		ug/L			11/06/21 02:13	1

Client Sample ID: 1066848 54MW1
Lab Sample ID: 810-6301-5
Date Collected: 10/27/21 13:07
Matrix: Water
Date Received: 10/29/21 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	<10		10		ug/L			11/06/21 03:34	1
Chlorate	<10		10		ug/L			11/06/21 03:34	1

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA90260-1
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 10/27/21
Date Received: 10/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86199.D	1	11/15/21 14:41	NG	11/11/21 13:00	OP88299	SQ1871
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.14	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA90260-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 10/27/21
Date Received: 10/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB070813.D	1	11/04/21 14:18	JB	11/02/21 08:00	OP88132	GBB2121
Run #2 [b]	GG622725.D	1	11/05/21 15:58	JB	11/02/21 08:00	OP88132	GGG3063

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2	1020 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	3.9	0.20	0.098	0.078	ug/l	
121-82-4	RDX [c]	0.58 J	0.20	0.098	0.078	ug/l	
	DNX	0.098 U	0.20	0.098	0.078	ug/l	
	MNX	0.098 U	0.20	0.098	0.078	ug/l	
	TNX	0.098 U	0.20	0.098	0.078	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.53 J	0.20	0.098	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.098 U	0.20	0.098	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	2.3	0.20	0.098	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.3	0.20	0.098	0.078	ug/l	
98-95-3	Nitrobenzene	0.098 U	0.20	0.098	0.095	ug/l	
88-72-2	o-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
479-45-8	Tetryl	0.098 U	0.20	0.098	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	22.3	0.20	0.098	0.097	ug/l	
118-96-7	2,4,6-Trinitrotoluene	11.8	0.20	0.098	0.078	ug/l	
55-63-0	Nitroglycerine	0.98 U	2.0	0.98	0.49	ug/l	
78-11-5	PETN	0.98 U	2.0	0.98	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	125%	141% [d]	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Outside control limits due to matrix interference.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 8/10/22

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW10
Lab Sample ID: FA90260-2
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 10/27/21
Date Received: 10/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86174.D	1	11/12/21 18:08	NG	11/11/21 13:00	OP88299	SQ1870
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.072	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA90260-2	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB070814.D	1	11/04/21 14:49	JB	11/02/21 08:00	OP88132	GBB2121
Run #2 [b]	GG622726.D	1	11/05/21 16:30	JB	11/02/21 08:00	OP88132	GGG3063

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2	1020 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	2.6	0.20	0.098	0.078	ug/l	
121-82-4	RDX	1.4	0.20	0.098	0.078	ug/l	
	DNX	0.098 U	0.20	0.098	0.078	ug/l	
	MNX	0.098 U	0.20	0.098	0.078	ug/l	
	TNX	0.098 U	0.20	0.098	0.078	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.40	0.20	0.098	0.078	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.098 U	0.20	0.098	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.5	0.20	0.098	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.6	0.20	0.098	0.078	ug/l	
98-95-3	Nitrobenzene	0.098 U	0.20	0.098	0.095	ug/l	
88-72-2	o-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
479-45-8	Tetryl	0.098 U	0.20	0.098	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	2.2	0.20	0.098	0.097	ug/l	J
118-96-7	2,4,6-Trinitrotoluene	5.4	0.20	0.098	0.078	ug/l	
55-63-0	Nitroglycerine	0.98 U	2.0	0.98	0.49	ug/l	
78-11-5	PETN	0.98 U	2.0	0.98	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	123%	132%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 8/10/22

SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW10		
Lab Sample ID:	FA90260-3	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86175.D	1	11/12/21 18:17	NG	11/11/21 13:00	OP88299	SQ1870
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.076	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW10		
Lab Sample ID:	FA90260-3	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB070815.D	1	11/04/21 15:20	JB	11/02/21 08:00	OP88132	GBB2121
Run #2 [b]	GG622727.D	1	11/05/21 17:01	JB	11/02/21 08:00	OP88132	GGG3063
Run #3 [b]	PP391676.D	1	11/11/21 12:55	JB	11/08/21 06:00	OP88250	GPP2493

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2	1020 ml	10.0 ml
Run #3	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	2.5 J	0.20	0.098	0.078	ug/l	
121-82-4	RDX	1.0 J	0.20	0.098	0.078	ug/l	
	DNX	0.098 U	0.20	0.098	0.078	ug/l	
	MNX	0.098 U	0.20	0.098	0.078	ug/l	
	TNX	0.098 U	0.20	0.098	0.078	ug/l	
618-87-1	3,5-Dinitroaniline	0.47 J	0.20	0.098	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.098 U	0.20	0.098	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.5 J	0.20	0.098	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.4 J	0.20	0.098	0.078	ug/l	
98-95-3	Nitrobenzene	0.098 U	0.20	0.098	0.095	ug/l	
88-72-2	o-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
479-45-8	Tetryl	0.098 U	0.20	0.098	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.98 J	0.20	0.098	0.097	ug/l	
118-96-7	2,4,6-Trinitrotoluene	4.0 J	0.20	0.098	0.078	ug/l	
55-63-0	Nitroglycerine	0.98 U	2.0	0.98	0.49	ug/l	
78-11-5	PETN	0.98 U	2.0	0.98	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
610-39-9	3,4-Dinitrotoluene	143% [c]	151% [c]	111%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Outside control limits due to matrix interference.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 8/10/22

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA90260-4	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86176.D	1	11/12/21 18:25	NG	11/11/21 13:00	OP88299	SQ1870
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.44	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA90260-4	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB070816.D	1	11/04/21 15:51	JB	11/02/21 08:00	OP88132	GBB2121
Run #2 [b]	GG622728.D	1	11/05/21 17:33	JB	11/02/21 08:00	OP88132	GGG3063

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	10.1	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.63	0.19	0.096	0.077	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	3.3	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.9	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	12.8	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	9.3	0.19	0.096	0.077	ug/l	
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	135%	144% [d]	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Outside control limits due to matrix interference.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 8/10/22

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW1		
Lab Sample ID:	FA90260-5	**Date Sampled:**	10/27/21
Matrix:	AQ - Ground Water	**Date Received:**	10/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q86177.D	1	11/12/21 18:33	NG	11/11/21 13:00	OP88299	SQ1870
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.10 U	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA90260-5
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 10/27/21
Date Received: 10/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB070817.D	1	11/04/21 16:22	JB	11/02/21 08:00	OP88132	GBB2121
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.098 U	0.20	0.098	0.078	ug/l	
121-82-4	RDX	0.098 U	0.20	0.098	0.078	ug/l	
	DNX	0.098 U	0.20	0.098	0.078	ug/l	
	MNX	0.098 U	0.20	0.098	0.078	ug/l	
	TNX	0.098 U	0.20	0.098	0.078	ug/l	
618-87-1	3,5-Dinitroaniline	0.098 U	0.20	0.098	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.098 U	0.20	0.098	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
98-95-3	Nitrobenzene	0.098 U	0.20	0.098	0.095	ug/l	
88-72-2	o-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
479-45-8	Tetryl	0.098 U	0.20	0.098	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.098 U	0.20	0.098	0.097	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.098 U	0.20	0.098	0.078	ug/l	
55-63-0	Nitroglycerine	0.98 U	2.0	0.98	0.49	ug/l	
78-11-5	PETN	0.98 U	2.0	0.98	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	129%		70-136%

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

VALIDATA
Chemical Services, Inc.
(770) 232-0130
(770) 232-5082 (Fax)
2159 Wynnton Pointe, Duluth, GA 30097
www.datavalidator.com

DATA VALIDATION SUMMARY REPORT

COMPANY:	Weston Solutions, Inc.
SITE NAME:	Radford Army Ammunitions Plant – April 2022 Sampling
CONTRACTED LAB:	CT Laboratories LLC, Eurofins South Bend, SGS Orlando
QA/QC LEVEL:	EPA Stage 2B and 4
EPA SOW/METHODS:	EPA and SW-846 Methods
VALIDATION GUIDELINES:	*Radford Army Ammunitions Plant, Radford Virginia, SWMU 49 Monitored Natural Attenuation Groundwater Monitoring Work Plan, SWMU 54 Interim Measures Work Plan, QSM 5.1, SW 846 Methods*, *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 2017; *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* 2017
SAMPLE MATRIX:	Water
TYPE OF ANALYSIS:	Volatile Organics (VOA), Dissolved Gases, Perchlorate, Explosives, Total Metals, Total Mercury, Anions, Total Organic Carbon (TOC), Total Inorganic Carbon (TIC), Chlorate*, Chemical Oxygen Demand (COD), pH
SDG NUMBER:	169098
SAMPLING DATES:	April 25-29, 2022

SAMPLES:

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
TB1	1136202	Water	X	
13MW5	1136203	Water	X	X
13MW4	1136204	Water	X	X
13MW3	1136205	Water	X	X
49MW04	1136206	Water	X	X
49TW04	1136207	Water	X	X
13MW2	1136208	Water	X	X

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
49MW05	1136213	Water	X	X
49MW02	1136214	Water	X	X
48MW3	1136215	Water	X	X
48MW2	1136216	Water	X	X
48MW6	1136217	Water	X	X
TB2	1136587	Water	X	
50MW2	1136588	Water	X	X
50TW2	1136671	Water	X	X
49MW01	1136672	Water	X	X
49MW03	1136673	Water	X	X
48MW7	1136674	Water	X	X
TB3	1137437	Water	X	
48MW1	1137438	Water	X	X
13MW5MS	1136203MS	Water	X	X
13MW5MSD	1136203MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
54IDW	1136212	Water	X	X
49IDW	1137439	Water	X	X
54IDWMS	1136212MS	Water	X	X
54IDWMSD	1136212MSD	Water	X	X
49IDWMS	1137439MS	Water	X	
49IDWMSD	1137439MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	Anions	TOC
54MW13	1134804	Water	X	X
54MW10	1134805	Water	X	X
13MW5	1136203	Water	X	X
13MW5DL	1136203DL	Water	X	
13MW4	1136204	Water	X	X
13MW3	1136205	Water	X	X
13MW3DL	1136205DL	Water	X	
49MW04	1136206	Water	X	X
49TW04	1136207	Water	X	X
49TW04DL	1136207DL	Water	X	
13MW2	1136208	Water	X	X
54MW12	1136209	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	TOC
54TW12	1136210	Water	X	X
54MW1	1136211	Water	X	X
49MW05	1136213	Water	X	X
49MW02	1136214	Water	X	X
48MW3	1136215	Water	X	X
48MW3DL	1136215DL	Water	X	
48MW2	1136216	Water	X	X
48MW6	1136217	Water	X	X
48MW6DL	1136217DL	Water	X	
50MW2	1136588	Water	X	X
50MW2DL	1136588DL	Water	X	
50TW2	1136671	Water	X	X
50TW2DL	1136671DL	Water	X	
49MW01	1136672	Water	X	X
49MW03	1136673	Water	X	X
48MW7	1136674	Water	X	X
48MW1	1137438	Water	X	X
48MW1DL	1137438DL	Water	X	
13MW5MS	1136203MS	Water	X	X
13MW5MSD	1136203MSD	Water	X	X
54MW13MS	1134804MS	Water	X	X
54MW13MSD	1134804MSD	Water	X	X
48MW7MS	1136674MS	Water	X	
48MW7MSD	1136774MSD	Water	X	
48MW1MS	1137438MS	Water	X	
48MW1MSD	1137438MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	COD	pH
54IDW	1136212	Water	X	X
49IDW	1137439	Water	X	X
54IDWMS	1136212MS	Water	X	
54IDWMSD	1136212MSD	Water	X	
49IDWMD	1137439MD	Water		X
49IDWMS	1137439MS	Water	X	
49IDWMSD	1137439MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	TIC	Chlorate*
54MW13	1134804	Water	X	X
54MW10	1134805	Water	X	X
54MW12	1136209	Water	X	X
54TW12	1136210	Water	X	X
54MW1	1136211	Water	X	X
54MW13MS	1134804MS	Water		X
54MW13MSD	1134804MSD	Water		X
54TW12MS	1136210MS	Water		X
54TW12MSD	1136210MSD	Water		X

SDG NUMBER: FA95241
SAMPLING DATES: April 25, 2022

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Explosives	Perchlorate
54MW13	FA95241-1	Water	X	X
54MW13MS	FA95241-1MS	Water	X	X
54MW13MSD	FA95241-1MSD	Water	X	X
54MW10	FA95241-2	Water	X	X

* -Analysis reported chlorate and chlorite
**- analysis was for 22 analytes by Method 6010C.

All fractions were validated at Stage 4, except Metals and Mercury, which were validated at Stage 2B.

Suffix Codes: DL = DILUTION, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RA = REANALYSIS

DATA REVIEWERS: Amy L. Hogan, Kevin C. Harmon, Sandra Nacquin

DATA VALIDATION SUMMARY

CT Laboratories LLC – 169098 - Organics & Inorganics

VOLATILE ORGANICS (VOA)

SUMMARY

I.) General:

The analyses for Volatile Organics (VOA) were performed according to SW 846 Method 8260B.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No data qualification was necessary.

III.) Calibration:

Initial Calibration:

The average RRF for 1,4-dioxane (0.004) for the standards analyzed on 4/28/22 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

All other Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

The RRF for 1,4-dioxane (0.0043) for the standards run on 4/28/22 at 19:37 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

Continuing Calibration:

The RRF for 1,4-dioxane (0.0041) for the standards run on 5/5/22 at 07:54 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

The RRF for 1,4-dioxane (0.0044) for the standards run on 5/5/22 at 11:21 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

The RRF for 1,4-dioxane (0.0039) for the standards run on 5/5/22 at 12:28 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

The RRF for 1,4-dioxane (0.0043) for the standards run on 5/5/22 at 22:39 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

The RRF for 1,4-dioxane (0.0039) for the standards run on 5/6/22 at 07:54 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

The RRF for 1,4-dioxane (0.0042) for the standards run on 5/6/22 at 09:53 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

IV.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Equipment Blank:

There was no equipment blank submitted in association with this data set. No data qualification was necessary.

Trip Blanks:

There were no detections in the associated trip blanks. No data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

VI.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 13MW5. All criteria were met. No data qualification was necessary

VIII.) Field Duplicates:

Two sets of field duplicate samples (49MW04 / 49TW04 and 50MW02 / 50TW02) were identified for this SDG. The differences for carbon tetrachloride for the first set and carbon tetrachloride and trichloroethene for the second set were less than 3X the LOQ, so no data qualification was necessary

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met. No data qualification was necessary.

DISSOLVED GASSES

SUMMARY

I.) General:

The analyses for Dissolved Gases were performed according to Method RSK-175.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Equipment Blank:

There was no equipment blank submitted in association with this data set. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 13MW5. All criteria were met. No data qualification was necessary.

VII.) Field Duplicates:

Two sets of field duplicate samples (49MW04 / 49TW04 and 50MW02 / 50TW02) were identified for this SDG. There were no calculable Relative Percent Differences. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

The Percent Recovery (%R) for the LLCCV standard analyzed on 5/9/22 was 125% for selenium, which exceeded the QC limits. Since the selenium result for the associated sample was non-detect, no data qualification was necessary.

IV.) Blanks:

Method Blanks:

There were no detections in the associated method blanks. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis was performed using sample 49IDW. All criteria were met. No data qualification was necessary.

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 49IDW and 54IDW. The Percent Recoveries (%Rs) for aluminum (223%, 350%) and iron (200%, 363%) for 49IDW exceeded the QC limits. All post spike criteria were met. The positive aluminum and iron results for the parent sample were qualified as estimated (J). The Percent Recoveries (%RSs) for mercury (5%, 26%) and the Relative Percent Difference (RPD) at 137% for 54IDW were outside the QC limits. The non-detect mercury result for the parent sample was qualified as estimated (UJ).

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

The 49 to 50 hours for samples 13MW4 and 13MW5 exceeded the 48-hour QC limit for nitrate. The positive nitrate results for these 2 samples were qualified as estimated (J).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

Sulfate (0.8302 mg/L, 0.8811 mg/L, 0.8190 mg/L and 0.8078 mg/L) was detected in several of the associated CCB for this SDG. Since the blank concentrations were less than half the LOQ, no

data qualification was necessary.

Equipment Rinsate Blank:

There was no equipment blank submitted in association with this data set. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 13MW5, 54MW13, 48MW7 and 48MW1. The sulfate result for parent sample 54MW13 was greater than 4X the spike concentration, so the results for this analyte in the sample were not considered meaningful. The Percent Recoveries (%Rs) for sulfate were below the QC limits for the following samples: 48MW1 (80%, 78%), 48MW7 (81%, 79%) and 13MW5 (82%). The positive sulfate results for the parent samples were qualified as estimated (J).

VI.) Field Duplicates:

Three sets of field duplicate samples (54MW12 / 54TW12, 49MW04 / 49TW04 and 50MW2 / 50TW2) were identified for this SDG. The calculable Relative Percent Differences (RPDs) for the first stet were chloride (2.7%), nitrate (2.7%) and sulfate (0%). The RPDs for the second set were chloride (8.4%) nitrate (2.5%) and sulfate (2.9%). The RPDs for the third set were chloride (0%), nitrate (0%) and sulfate (2.4%). All RPD were within the QC limit, so no data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

The sulfate and or chloride results for samples 13MW3, 13W5, 48MW3, 48MW6, 49TW04, 50MW2, 50TW2 and 48MW1 were reported from dilution analyses. Since only one sulfate result was reported for each sample, no data qualification was necessary.

TOTAL INORGANIC AND ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Inorganic Carbon (TIC) and Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 54MW13 and 13MW5. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

Three sets of field duplicate samples (54MW12 / 54TW12, 49MW04 / 49TW04 and 50MW2 / 50TW2) were identified for this SDG. There were no calculable RPD or differences, so no data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 49IDW and 54IDW. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis was performed using sample 49IDW. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHLORATE / CHLORITE

SUMMARY

I.) General:

The analyses for Chlorate / Chlorite were performed according to EPA Method 300.0.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There was no associated equipment rinsate blank for this SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 54MW13 and 54TW12. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One sets of field duplicate samples (54MW12 / 54TW12) was identified for this SDG. There were no calculable Relative Percent Differences (RPDs). No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

SGS Orlando, FL – FA95241 - Organics

EXPLOSIVES

SUMMARY

I.) General:

The analyses for Explosives were performed according to SW 846 Method 8330.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

It was noted in the sample receipt section of the lab report that samples 54MW12, 54TW12 and 54MW1 were listed on the COC but were not received by the laboratory for analysis.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No data qualification was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW13. The Percent Recoveries (%Rs) for tetryl (59%) and 2,4,6-trinitrotoluene (60%) were below the QC limits. Data qualification based on MS / MSD data alone was not required. No data qualification was necessary.

VII.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VIII.) TCL Compound Identification:

The Column Relative Percent Difference (RPD) exceeded the 40% QC limit for the following compounds:

Sample	Compound	RPD
54MW13	3,5-dinitroaniline	118.4%
	4-amino-2,6-dinitrotoluene	44.1%
54MW10	3,5-dinitroaniline	59.5%
	4-amino-2,6-dinitrotoluene	42.4%

The positive compound results for the listed samples above were qualified as estimated (J).

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

PERCHLORATE

SUMMARY

I.) General:

The analyses for Perchlorate were performed according to SW-846 Method 6350.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

It was noted in the sample receipt section of the lab report that samples 54MW12, 54TW12 and 54MW1 were listed on the COC but were not received by the laboratory for analysis.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW13. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

Appendix A
Qualified Form Is

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136208
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:50	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136208
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:51	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136208
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:51	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136208
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:51	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136205
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:30	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136205
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:24	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136205
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:24	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	6.0		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	0.61	J	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136205
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:24	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	0.95	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136204
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:26	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136204
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 13:55	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136204
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 13:55	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136204
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 13:55	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	0.68	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136203
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:05	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136203
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:52	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136203
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:52	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136203
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:52	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1137438
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 11:02	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137438
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 21:11	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	0.61	J	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137438
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 21:11	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.73	J	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137438
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 21:11	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	2.4		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136216
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:07	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.58	J	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136216
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 17:47	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136216
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 17:47	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	29		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	3.4		0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136216
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 17:47	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.7		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136215
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/06/2022 / 09:24	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136215
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/06/2022 / 09:24	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	75		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	10		0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136215
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/06/2022 / 09:24	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	13		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136215
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:03	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136217
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:38	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:		Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136217
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:15	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	J	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136217
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:15	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	2.0		0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136217
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:15	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.4		0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136674
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:59	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136674
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:42	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136674
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:42	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136674
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:42	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136672
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:50	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136672
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:43	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136672
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:43	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	3.0		0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136672
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:43	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136214
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:58	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	2.7		0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136214
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:49	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136214
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:49	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136214
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:49	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136673
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:55	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136673
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:13	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136673
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:13	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136673
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 20:13	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136206
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:42	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136206
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:53	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136206
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:53	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	0.74	J	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136206
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 14:53	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136213
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:55	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136213
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:20	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136213
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:20	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136213
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 16:20	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136207
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 09:46	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136207
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136207
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:22	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	0.70	J	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136207
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 15:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136588
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:42	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136588
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:45	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136588
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:45	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	0.71	J	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136588
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 18:45	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	0.72	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	22.5 (g/mL)	CTL Sample ID:	1136671
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	22.5 (mL)	Date/Time Prepared:	05/04/2022 / 08:50
Analytical Method:	RSK 175	Analytical Prep Batch #	95280
Analytical Run #:	211667	Dilution Factor:	1
Date & Time Analyzed:	05/04/2022 / 10:46	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: P4DG070121 Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136671
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:14	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136671
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:14	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	0.78	J	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	GROUND WATER	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136671
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 19:14	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	0.70	J	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description: **TB1**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136202
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:23	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136202
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:23	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136202
% Solids:		Date Received:	04/28/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:23	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136587
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:53	GPC (3640A) Cleanup Date/Time:	/

TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*): /

ICAL Calibration #: W042822. Concentration Units: ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136587
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:53	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1136587
% Solids:		Date Received:	04/29/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 09:53	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137437
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	1.0	U	0.38	1.0	1.2	1.2
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	0.36	1.0	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.0	U	0.27	1.0	1.1	1.1
75-34-3	1,1-Dichloroethane	1.0	U	0.28	1.0	1.1	1.1
75-35-4	1,1-Dichloroethene	1.0	U	0.49	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	1.0	U	0.43	1.0	2.0	2.0
120-82-1	1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	2.0	2.0
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	0.35	1.0	2.0	2.0
106-93-4	1,2-Dibromoethane	1.0	U	0.33	1.0	1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.0	U	0.35	1.0	1.1	1.1
107-06-2	1,2-Dichloroethane	2.0	U	0.69	2.0	2.1	2.1
78-87-5	1,2-Dichloropropane	1.0	U	0.37	1.0	1.2	1.2
541-73-1	1,3-Dichlorobenzene	1.0	U	0.30	1.0	1.1	1.1
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	10	U	2.9	10	11	11
591-78-6	2-Hexanone	10	U	3.3	10	11	11
108-10-1	4-Methyl-2-pentanone	10	U	3.7	10	12	12
67-64-1	Acetone	10	U	4.1	10	20	20
71-43-2	Benzene	1.0	U	0.47	1.0	2.0	2.0
74-97-5	Bromochloromethane	1.0	U	0.26	1.0	1.1	1.1
75-27-4	Bromodichloromethane	0.25	U	0.080	0.25	0.50	0.50
75-25-2	Bromoform	1.0	U	0.50	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137437
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-83-9	Bromomethane	1.0	U	0.49	1.0	2.0	2.0
75-15-0	Carbon disulfide	2.0	U	0.83	2.0	4.0	4.0
56-23-5	Carbon tetrachloride	1.0	U	0.37	1.0	1.2	1.2
108-90-7	Chlorobenzene	1.0	U	0.37	1.0	1.2	1.2
75-00-3	Chloroethane	1.0	U	0.36	1.0	2.0	2.0
67-66-3	Chloroform	1.0	U	0.46	1.0	1.4	1.4
74-87-3	Chloromethane	1.0	U	0.39	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	1.0	U	0.41	1.0	1.3	1.3
10061-01-5	cis-1,3-Dichloropropene	1.0	U	0.34	1.0	1.1	1.1
110-82-7	Cyclohexane	2.0	U	0.71	2.0	2.2	2.2
124-48-1	Dibromochloromethane	1.0	U	0.35	1.0	1.1	1.1
75-71-8	Dichlorodifluoromethane	2.0	U	0.63	2.0	2.1	2.1
100-41-4	Ethylbenzene	1.0	U	0.42	1.0	1.3	1.3
76-13-1	Freon 113	4.0	U	1.5	4.0	4.5	4.5
98-82-8	Isopropylbenzene	1.0	U	0.39	1.0	1.2	1.2
179601-23-1	m & p-Xylene	2.0	U	0.74	2.0	2.3	2.3
79-20-9	Methyl Acetate	1.0	U	0.34	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	1.0	U	0.28	1.0	1.1	1.1
108-87-2	Methylcyclohexane	2.0	U	0.78	2.0	2.4	2.4
75-09-2	Methylene chloride	4.0	U	1.2	4.0	4.1	4.1
95-47-6	o-Xylene	2.0	U	0.72	2.0	2.2	2.2
100-42-5	Styrene	1.0	U	0.33	1.0	1.1	1.1
127-18-4	Tetrachloroethene	1.0	U	0.54	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix:	TRIP BLANK	SDG No.:	169098
Sample wt/vol:	(g/mL)	CTL Sample ID:	1137437
% Solids:		Date Received:	04/30/2022
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	211603	Dilution Factor:	1
Date & Time Analyzed:	05/05/2022 / 10:22	GPC (3640A) Cleanup Date/Time:	/
TCLP (1311)/ SPLP (1312)/ MLP (1320) or ASTM (D3987-85) Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W042822.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-88-3	Toluene	1.0	U	0.27	1.0	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.0	U	0.35	1.0	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	2.0	U	0.56	2.0	2.1	2.1
79-01-6	Trichloroethene	1.0	U	0.39	1.0	1.2	1.2
75-69-4	Trichlorofluoromethane	1.0	U	0.41	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.25	U	0.12	0.25	0.50	0.50

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 7470A	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211699	Analysis Date/Time	05/04/2022 10:41
Analytical Prep Batch #:	95243	Prep. Date/Time:	05/03/2022 14:15
ICAL Calibration #:	05042022	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 6010C	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211628	Analysis Date/Time	05/09/2022 12:34
Analytical Prep Batch #:	95267	Prep. Date/Time:	05/02/2022 09:24
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-22-4	Total Silver	2.5	U	1.1	2.5	5.0	5.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 6010C	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211628	Analysis Date/Time	05/03/2022 22:11
Analytical Prep Batch #:	95267	Prep. Date/Time:	05/02/2022 09:24
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	329	~~Y~~ J	29	60	120	120
7440-36-0	Total Antimony	10	U	4.4	10	20	20
7440-38-2	Total Arsenic	20	U	7.7	20	40	40
7440-39-3	Total Barium	34.9		0.71	2.0	4.0	4.0
7440-41-7	Total Beryllium	3.0	U	0.95	3.0	8.0	8.0
7440-43-9	Total Cadmium	1.0	U	0.41	1.0	2.0	2.0
7440-70-2	Total Calcium	67800		17	50	100	100
7440-47-3	Total Chromium	3.4	J	1.1	2.5	5.0	5.0
7440-48-4	Total Cobalt	0.67	J	0.55	2.5	5.0	5.0
7440-50-8	Total Copper	5.3	J	5.2	20	40	40
7439-89-6	Total Iron	678	J	11	40	80	80
7439-92-1	Total Lead	3.1	J	1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	32800		10	25	40	40
7439-96-5	Total Manganese	81.2		1.4	3.0	5.0	5.0
7440-02-0	Total Nickel	3.0	U	1.5	3.0	5.0	5.0
7440-09-7	Total Potassium	1810		120	250	500	500
7782-49-2	Total Selenium	20	U	10	20	40	40
7440-23-5	Total Sodium	27100		200	500	700	700
7440-28-0	Total Thallium	20	U	6.8	20	40	40
7440-62-2	Total Vanadium	3.0	U	1.3	3.0	5.0	5.0
7440-66-6	Total Zinc	51.2		4.5	10	20	20

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

ALH 8/11/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 7470A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211699	Analysis Date/Time	05/04/2022 10:38
Analytical Prep Batch #:	95243	Prep. Date/Time:	05/03/2022 14:15
ICAL Calibration #:	05042022	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U M,Y--UJ	0.020	0.080	0.12	0.12

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

ALH 8/11/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 6010C	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211581	Analysis Date/Time	05/09/2022 13:18
Analytical Prep Batch #:	95236	Prep. Date/Time:	04/29/2022 10:19
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7782-49-2	Total Selenium	20	U	10	20	40	40
7440-22-4	Total Silver	2.5	U	1.1	2.5	5.0	5.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 6010C	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211581	Analysis Date/Time	05/03/2022 15:57
Analytical Prep Batch #:	95236	Prep. Date/Time:	04/29/2022 10:19
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	171		29	60	120	120
7440-36-0	Total Antimony	10	U	4.4	10	20	20
7440-38-2	Total Arsenic	20	U	7.7	20	40	40
7440-39-3	Total Barium	78.5		0.71	2.0	4.0	4.0
7440-41-7	Total Beryllium	3.0	U	0.95	3.0	8.0	8.0
7440-43-9	Total Cadmium	1.0	U	0.41	1.0	2.0	2.0
7440-70-2	Total Calcium	58700		17	50	100	100
7440-47-3	Total Chromium	3.1	J	1.1	2.5	5.0	5.0
7440-48-4	Total Cobalt	2.5	U	0.55	2.5	5.0	5.0
7440-50-8	Total Copper	8.7	J	5.2	20	40	40
7439-89-6	Total Iron	209		11	40	80	80
7439-92-1	Total Lead	2.0	U	1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	24500		10	25	40	40
7439-96-5	Total Manganese	8.6		1.4	3.0	5.0	5.0
7440-02-0	Total Nickel	3.0	U	1.5	3.0	5.0	5.0
7440-09-7	Total Potassium	828		120	250	500	500
7440-23-5	Total Sodium	25800		200	500	700	700
7440-28-0	Total Thallium	20	U	6.8	20	40	40
7440-62-2	Total Vanadium	3.0	U	1.3	3.0	5.0	5.0
7440-66-6	Total Zinc	51.6		4.5	10	20	20

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136208
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 11:35
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.9		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.30	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	45		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136208
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 16:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136205
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 10:52
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.9		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136205
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 15:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136205
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 15:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136204
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 14:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description: **13MW4**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136204
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 14:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.57	~~H~~ J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	51		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

ALH 8/11/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description: **13MW5**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136203
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/29/2022 08:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120	--~~M~~-- J	4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

ALH 8/11/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136203
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 13:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136203
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 14:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.82	~~H~~ J	0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

ALH 8/11/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137438
Analytical Method:	EPA 9056A	Date Received:	04/30/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211602	Analysis Date/Time	05/02/2022 10:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	63	J	4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

ALH 8/11/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137438
Analytical Method:	EPA 9060A	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/05/2022 11:16
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137438
Analytical Method:	EPA 9056A	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211602	Analysis Date/Time	04/30/2022 12:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	9.9		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.5		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136216
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 13:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.3	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.78		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	3.4		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136216
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 18:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136215
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/29/2022 01:48
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14797-55-8	Nitrate Nitrogen	6.5		0.60	1.0	2.0	2.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136215
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 13:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.3		1.0	1.5	3.0	3.0
14808-79-8	Sulfate	35		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136215
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 18:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136217
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 14:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	12		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.0		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136217
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 15:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	74		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136217
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 19:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.50	J	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description: **48MW7**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136674
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 16:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.6	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	4.1	~~M~~ J	0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

ALH 8/11/22

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW7

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136674
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 21:02
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 410.4	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211650	Analysis Date/Time	05/03/2022 13:32
Analytical Prep Batch #:	95270	Prep. Date/Time:	05/03/2022 08:31
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	85		18	50	75	75

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1137439
Analytical Method:	EPA 9040C	Date Received:	04/30/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211639	Analysis Date/Time	05/02/2022 15:20
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.61		0.1	0.1	0.1	0.1

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136672
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 15:43
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.41		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	3.0		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136672
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 20:27
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136214
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 12:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.6	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.35	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	13		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136214
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 17:42
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136673
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 16:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.2		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	4.6		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136673
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 20:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136206
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 11:06
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.40		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	69		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136206
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 15:48
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136213
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 12:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.4		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	53		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136213
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 17:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136207
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/29/2022 01:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	67		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136207
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 11:20
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.39	J	0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136207
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 16:02
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136588
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 14:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.2		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136588
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 15:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	80		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136588
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 19:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136671
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 15:14
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.2		0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136671
Analytical Method:	EPA 9056A	Date Received:	04/29/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211592	Analysis Date/Time	04/29/2022 15:28
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	82		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

50TW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136671
Analytical Method:	EPA 9060A	Date Received:	04/29/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211697	Analysis Date/Time	05/04/2022 20:16
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 9040C	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211555	Analysis Date/Time	04/28/2022 15:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.37		0.1	0.1	0.1	0.1

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136212
Analytical Method:	EPA 410.4	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211565	Analysis Date/Time	04/29/2022 16:52
Analytical Prep Batch #:	95239	Prep. Date/Time:	04/29/2022 09:05
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	160		18	50	75	75

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136211
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211613	Analysis Date/Time	05/02/2022 10:53
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	60		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136211
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 12:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.13	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	31		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136211
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 17:07
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134805
Analytical Method:	EPA 9060A	Date Received:	04/26/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211530	Analysis Date/Time	04/28/2022 10:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	78		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134805
Analytical Method:	EPA 9060A	Date Received:	04/26/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 13:20
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134805
Analytical Method:	EPA 9056A	Date Received:	04/26/2022
Dilution Factor:	1.0000	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211440	Analysis Date/Time	04/26/2022 19:08
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.30	J	0.12	0.20	0.40	0.40

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134805
Analytical Method:	EPA 9056A	Date Received:	04/26/2022
Dilution Factor:	5	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211440	Analysis Date/Time	04/26/2022 19:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	72		4.0	7.5	15	15

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136209
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211613	Analysis Date/Time	05/02/2022 10:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	82		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136209
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 11:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.5		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.73		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136209
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 16:37
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134804
Analytical Method:	EPA 9060A	Date Received:	04/26/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211530	Analysis Date/Time	04/28/2022 10:12
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	83		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134804
Analytical Method:	EPA 9060A	Date Received:	04/26/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 12:22
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1134804
Analytical Method:	EPA 9056A	Date Received:	04/26/2022
Dilution Factor:	1.0000	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211440	Analysis Date/Time	04/26/2022 17:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.5		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.64		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33	M	0.80	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136210
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211613	Analysis Date/Time	05/02/2022 10:40
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	83		0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136210
Analytical Method:	EPA 9056A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211534	Analysis Date/Time	04/28/2022 12:03
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.75		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33		0.8	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMUs 49&54
Matrix (soil/water):	GROUND WATER	SDG No.:	169098
% Solids:		Lab Sample ID:	1136210
Analytical Method:	EPA 9060A	Date Received:	04/28/2022
Dilution Factor:	1	TCLP (1311) / SPLP (1312) Extraction Date/time:	
Analytical Run #:	211696	Analysis Date/Time	05/04/2022 16:52
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0590	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

Unless noted to the contrary, i.e., no % solids reported, then results for solid matrices are reported on a dry weight basis

Client Sample Results

Client: CT Laboratories
Project/Site: 169098

Job ID: 810-22631-1

Client Sample ID: 1134804/54MW13

Lab Sample ID: 810-22631-1

Date Collected: 04/25/22 12:10

Matrix: Water

Date Received: 04/28/22 08:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			04/28/22 21:56	1
Chlorite	<10		10		ug/L			04/28/22 21:56	1

Client Sample ID: 1134805/54MW10

Lab Sample ID: 810-22631-2

Date Collected: 04/25/22 14:55

Matrix: Water

Date Received: 04/28/22 08:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			04/28/22 23:27	1
Chlorite	<10		10		ug/L			04/28/22 23:27	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 810-18080/12
Matrix: Water
Analysis Batch: 18080

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorate	<10		10		ug/L			05/02/22 21:42	1
Chlorite	<10		10		ug/L			05/02/22 21:42	1

Lab Sample ID: LCS 810-18080/13
Matrix: Water
Analysis Batch: 18080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			250	248		ug/L		99	90 - 110		
Chlorite			250	243		ug/L		97	90 - 110		

Lab Sample ID: LLCS 810-18080/9
Matrix: Water
Analysis Batch: 18080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate			10.0	10.7		ug/L		107			
Chlorite			10.0	13.3		ug/L		133			

Lab Sample ID: 810-22876-2 MS
Matrix: Water
Analysis Batch: 18080

Client Sample ID: 1136210/54TW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorate	<10		250	230		ug/L		92	90 - 110		
Chlorate	<10		250	230		ug/L		92	90 - 110		
Chlorite	<10		250	271		ug/L		108	90 - 110		
Chlorite	<10		250	271		ug/L		108	90 - 110		

Lab Sample ID: 810-22876-2 MSD
Matrix: Water
Analysis Batch: 18080

Client Sample ID: 1136210/54TW12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorate	<10		250	241		ug/L		97	90 - 110	5	20
Chlorate	<10		250	241		ug/L		97	90 - 110	5	20
Chlorite	<10		250	274		ug/L		110	90 - 110	1	20
Chlorite	<10		250	274		ug/L		110	90 - 110	1	20

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW13		
Lab Sample ID:	FA95241-1	**Date Sampled:**	04/25/22
Matrix:	AQ - Ground Water	**Date Received:**	04/28/22
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q90935.D	1	05/19/22 15:22	NG	05/19/22 10:30	OP91294	SQ1967
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.26	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA95241-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/25/22
Date Received: 04/28/22
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB072812.D	1	05/03/22 23:17	FS	05/02/22 08:30	OP91013	GBB2196
Run #2 [b]	GG624055.D	1	05/04/22 18:03	FS	05/02/22 08:30	OP91013	GGG3135

	Initial Volume	Final Volume
Run #1	980 ml	10.0 ml
Run #2	980 ml	10.0 ml

CAS No.	Compound	Result		LOQ	LOD	DL	Units	Q
2691-41-0	HMX	2.5		0.20	0.10	0.082	ug/l	
121-82-4	RDX	2.0		0.20	0.10	0.082	ug/l	
	DNX	0.10 U		0.20	0.10	0.082	ug/l	
	MNX	0.10 U		0.20	0.10	0.082	ug/l	
	TNX	0.10 U		0.20	0.10	0.082	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.41	J	0.20	0.10	0.082	ug/l	
99-65-0	1,3-Dinitrobenzene	0.10 U		0.20	0.10	0.082	ug/l	
606-20-2	2,6-Dinitrotoluene	0.10 U		0.20	0.10	0.082	ug/l	
121-14-2	2,4-Dinitrotoluene	0.10 U		0.20	0.10	0.082	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.2		0.20	0.10	0.082	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	0.83	J	0.20	0.10	0.082	ug/l	
98-95-3	Nitrobenzene	0.10 U		0.20	0.10	0.099	ug/l	
88-72-2	o-Nitrotoluene	0.10 U		0.20	0.10	0.082	ug/l	
99-08-1	m-Nitrotoluene	0.10 U		0.20	0.10	0.082	ug/l	
99-99-0	p-Nitrotoluene	0.10 U		0.20	0.10	0.082	ug/l	
479-45-8	Tetryl	0.10 U		0.20	0.10	0.082	ug/l	
99-35-4	1,3,5-Trinitrobenzene	10.6		0.20	0.10	0.10	ug/l	
118-96-7	2,4,6-Trinitrotoluene	5.8		0.20	0.10	0.082	ug/l	
55-63-0	Nitroglycerine	1.0 U		2.0	1.0	0.51	ug/l	
78-11-5	PETN	1.0 U		2.0	1.0	0.51	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	101%	112%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 8/11/22

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA95241-2	**Date Sampled:**	04/25/22
Matrix:	AQ - Ground Water	**Date Received:**	04/28/22
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q90938.D	1	05/19/22 15:48	NG	05/19/22 10:30	OP91294	SQ1967
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.12	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA95241-2	**Date Sampled:**	04/25/22
Matrix:	AQ - Ground Water	**Date Received:**	04/28/22
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	BB072815.D	1	05/04/22 00:52	FS	05/02/22 08:30	OP91013	GBB2196
Run #2 [b]	GG624056.D	1	05/04/22 18:34	FS	05/02/22 08:30	OP91013	GGG3135

	Initial Volume	Final Volume
Run #1	990 ml	10.0 ml
Run #2	990 ml	10.0 ml

CAS No.	Compound	Result		LOQ	LOD	DL	Units	Q
2691-41-0	HMX	1.5		0.20	0.10	0.081	ug/l	
121-82-4	RDX	1.8		0.20	0.10	0.081	ug/l	
	DNX	0.10 U		0.20	0.10	0.081	ug/l	
	MNX	0.10 U		0.20	0.10	0.081	ug/l	
	TNX	0.10 U		0.20	0.10	0.081	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.26	J	0.20	0.10	0.081	ug/l	
99-65-0	1,3-Dinitrobenzene	0.10 U		0.20	0.10	0.081	ug/l	
606-20-2	2,6-Dinitrotoluene	0.10 U		0.20	0.10	0.081	ug/l	
121-14-2	2,4-Dinitrotoluene	0.10 U		0.20	0.10	0.081	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.1		0.20	0.10	0.081	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	0.78	J	0.20	0.10	0.081	ug/l	
98-95-3	Nitrobenzene	0.10 U		0.20	0.10	0.098	ug/l	
88-72-2	o-Nitrotoluene	0.10 U		0.20	0.10	0.081	ug/l	
99-08-1	m-Nitrotoluene	0.10 U		0.20	0.10	0.081	ug/l	
99-99-0	p-Nitrotoluene	0.10 U		0.20	0.10	0.081	ug/l	
479-45-8	Tetryl	0.10 U		0.20	0.10	0.081	ug/l	
99-35-4	1,3,5-Trinitrobenzene	1.9		0.20	0.10	0.10	ug/l	
118-96-7	2,4,6-Trinitrotoluene	3.0		0.20	0.10	0.081	ug/l	
55-63-0	Nitroglycerine	1.0 U		2.0	1.0	0.51	ug/l	
78-11-5	PETN	1.0 U		2.0	1.0	0.51	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	93%	99%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 8/11/22

APPENDIX C
MANN-KENDALL TEST RESULTS

54MW10

Quarter	Date	Well	Units	54MW10: 2,4,6-TNT	54MW10: 2,4,6-TNT DL	54MW10: RDX	54MW10: RDX DL	54MW10: Perchlorate	54MW10: Perchlorate DL	Perchlorate NMV	2,4,6-TNT RG	RDX RG	Perchlorate RG	GW Elevation
Q01		54MW10	µg/L	0.305		ND		ND			7.82	6.1	10.9	1673.55
Q02		54MW10	µg/L	5.84		3.24		0.325			7.82	6.1	10.9	1673.36
Q03		54MW10	µg/L	4.05		2.95		0.258			7.82	6.1	10.9	1676.41
Q04		54MW10	µg/L	ND		ND		ND			7.82	6.1	10.9	1675.58
Q05		54MW10	µg/L	**9.17**		**7.84**		3.74			7.82	6.1	10.9	1673.85
Q06		54MW10	µg/L	1.59		1.35		0.344			7.82	6.1	10.9	1675.52
Q07		54MW10	µg/L	1.88		2.36		0.832			7.82	6.1	10.9	1675.78
Q08		54MW10	µg/L	0.637		1.29		0.835			7.82	6.1	10.9	1676.9
Q09		54MW10	µg/L	ND		2.23		0.365			7.82	6.1	10.9	1676.79
Q10		54MW10	µg/L	**50**		**21**		2.3			7.82	6.1	10.9	1673.85
Q11		54MW10	µg/L	**13**		5.3		0.42			7.82	6.1	10.9	1675.1
Q12		54MW10	µg/L	**11**		**8.7**		0.44			7.82	6.1	10.9	1674.39
Q13		54MW10	µg/L	6.6		2.1		ND			7.82	6.1	10.9	1679.77
Q14		54MW10	µg/L	4.1		3.1		0.326			7.82	6.1	10.9	1677.16
Q15		54MW10	µg/L	2.7		1.8		0.082			7.82	6.1	10.9	1675.47
Q16		54MW10	µg/L	24.2		6.6		0.84			7.82	6.1	10.9	1674.72
Q17		54MW10	µg/L	1.6		0.4		0.12			7.82	6.1	10.9	1675.58
Q18		54MW10	µg/L	4.2		1,1		0.1		0,1	7.82	6.1	10.9	1673.6
Q19		54MW10	µg/L	1		ND		0.24			7.82	6.1	10.9	1675.53
Q20		54MW10	µg/L	0.44		0.76		0.2			7.82	6.1	10.9	1674.6
Q21		54MW10	µg/L	11.2		1.8		0.23			7.82	6.1	10.9	1677.14
Q22		54MW10	µg/L	ND		0.1		ND			7.82	6.1	10.9	1674.43
Q23		54MW10	µg/L	0.67		ND		0.5			7.82	6.1	10.9	1677.55
Q24		54MW10	µg/L	3.5		4.4		ND			7.82	6.1	10.9	1674.04
Q25		54MW10	µg/L	1		1.4		0.65			7.82	6.1	10.9	1676.58
Q26		54MW10	µg/L	0.88		0.88		0.34			7.82	6.1	10.9	1676.7
Q27		54MW10	µg/L	0.74		0.32		0.35			7.82	6.1	10.9	1676.42
Q28		54MW10	µg/L	18.6		3.9		0.45			7.82	6.1	10.9	1674.76
Q29	10/14/2019	54MW10	µg/L	4		2.1		0.025	0.05		7.82	6.1	10.9	1671.26
Q30	1/27/2020	54MW10	µg/L	8.4		1.9		0.25			7.82	6.1	10.9	1677.44
Q31	4/28/2020	54MW10	µg/L	20.5		5.1		0.61			7.82	6.1	10.9	1678.19
Q32	7/21/2020	54MW10	µg/L	0.04	0.08	0.025	0.05	0.025	0.05		7.82	6.1	10.9	1675.45
Q33	10/26/2020	54MW10	µg/L	11.4		1.8		6.2			7.82	6.1	10.9	
Q34	1/26/2021	54MW10	µg/L	39.4		5.8		0.62			7.82	6.1	10.9	
Q35	4/12/2021	54MW10	µg/L	30.3		3.8		0.38			7.82	6.1	10.9	
Q36	7/27/2021	54MW10	µg/L	13		0.48		0.19			7.82	6.1	10.9	
Q37	10/01/2021	54MW10	µg/L	5.4		1.4		0.072			7.82	6.1	10.9	
Q38	04/01/2022	54MW10	µg/L	3		1.8		0.12			7.82	6.1	10.9	

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 2/21/2023 11:39:48
From File	54MW10.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

54MW10: 2,4,6-TNT

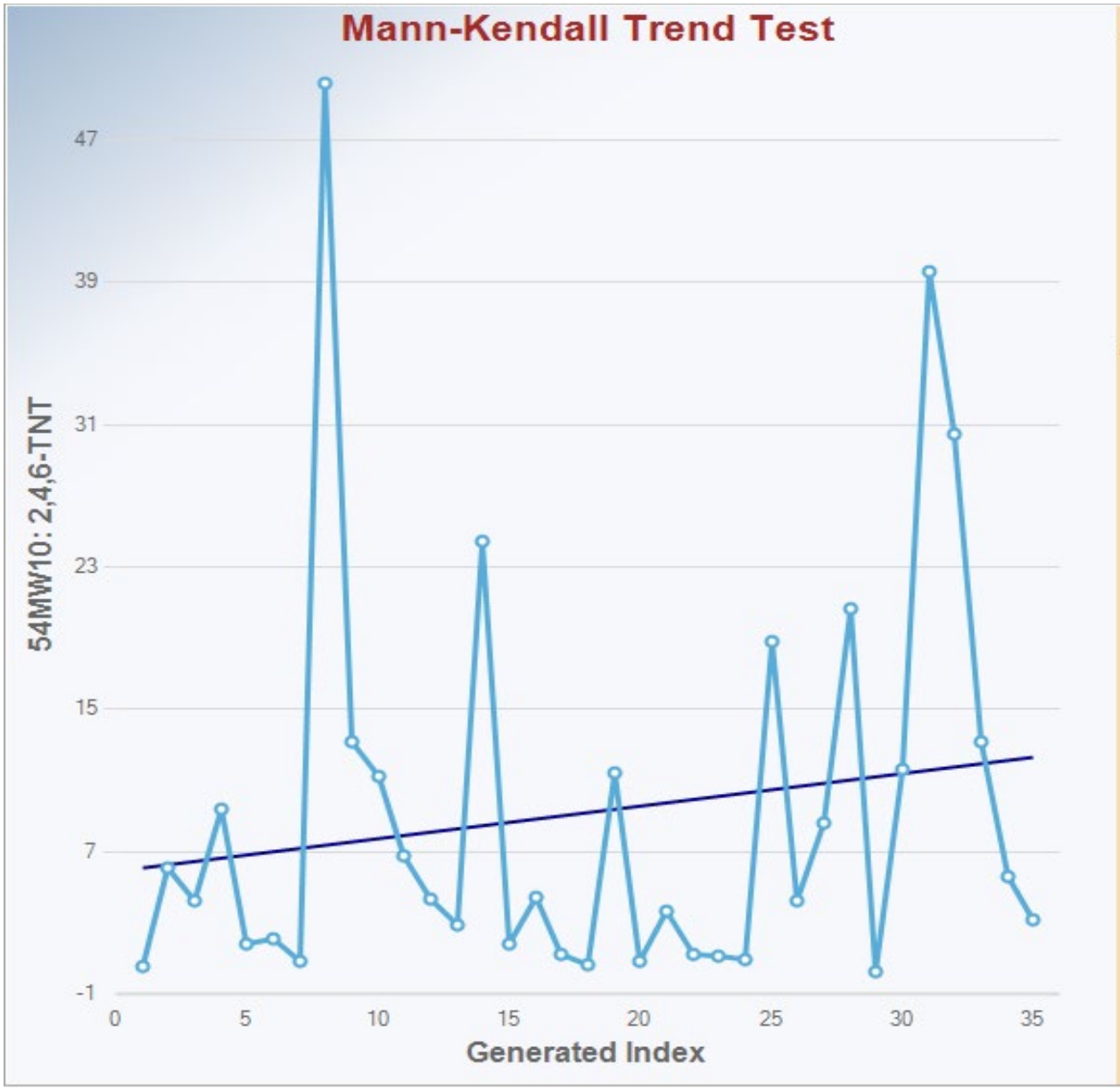
General Statistics

Number or Reported Events Not Used	0
Number of Generated Events	35
Number Values Reported (n)	38
Number Values Missing	3
Number Values Used	35
Minimum	0.04
Maximum	50
Mean	8.981
Geometric Mean	3.746
Median	4.1
Standard Deviation	11.61
Coefficient of Variation	1.293

Mann-Kendall Test

M-K Test Value (S)	61
Critical Value (0.05)	1.645
Standard Deviation of S	70.4
Standardized Value of S	0.852
Approximate p-value	0.197

Insufficient evidence to identify a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	35
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	70.4012
Standardized Value of S	0.8523
M-K Test Value (S)	61
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.1970

OLS Regression Line (Blue)

OLS Regression Slope	0.1811
OLS Regression Intercept	5.7219

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 2/21/2023 11:43:22
From File	54MW10.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

54MW10: RDX

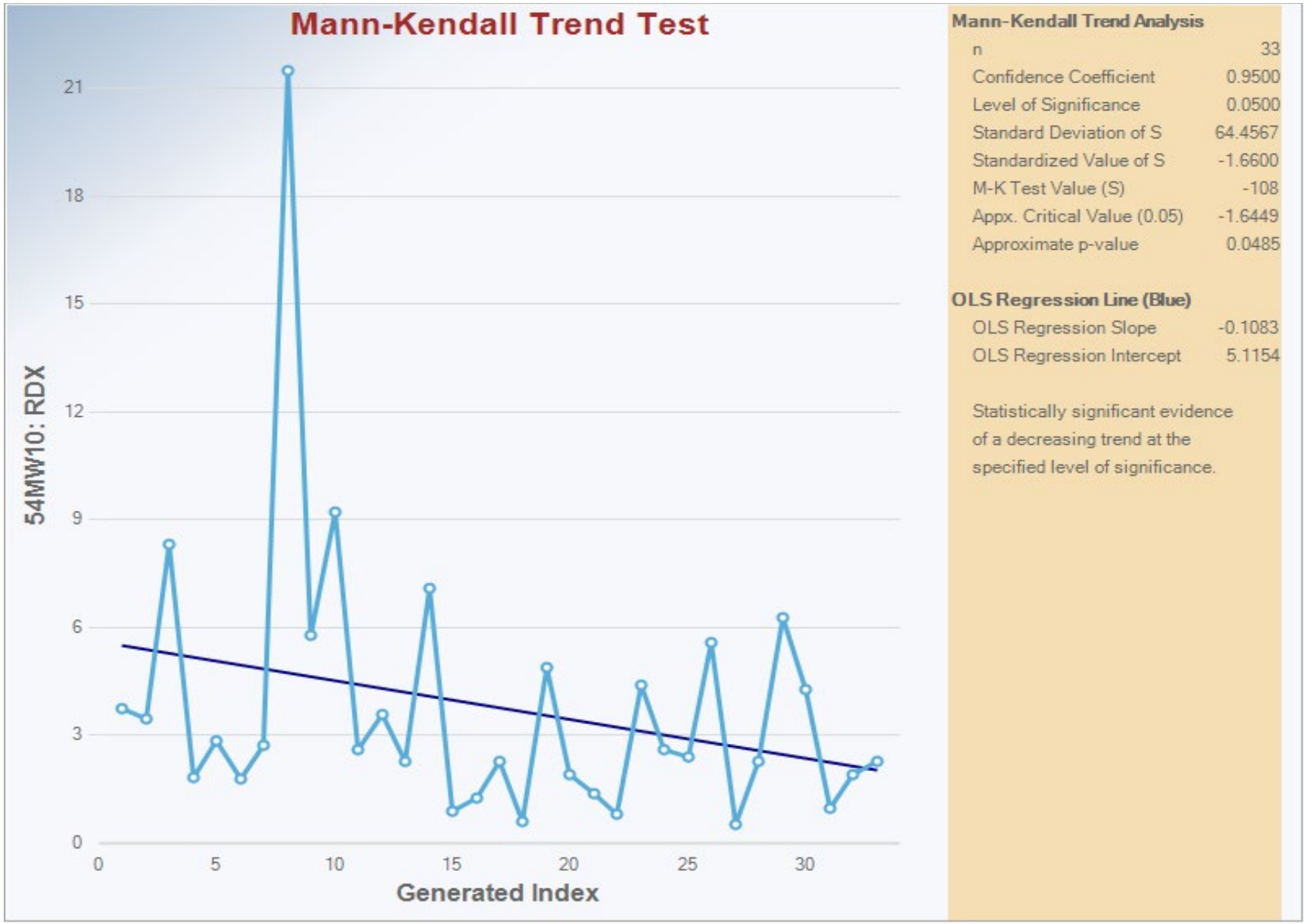
General Statistics

Number or Reported Events Not Used	0
Number of Generated Events	33
Number Values Reported (n)	38
Number Values Missing	5
Number Values Used	33
Minimum	0.025
Maximum	21
Mean	3.273
Geometric Mean	1.831
Median	2.1
Standard Deviation	3.868
Coefficient of Variation	1.182

Mann-Kendall Test

M-K Test Value (S)	-108
Critical Value (0.05)	-1.645
Standard Deviation of S	64.46
Standardized Value of S	-1.66
Approximate p-value	0.0485

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	33
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	64.4567
Standardized Value of S	-1.6600
M-K Test Value (S)	-108
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0485

OLS Regression Line (Blue)

OLS Regression Slope	-0.1083
OLS Regression Intercept	5.1154

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 2/21/2023 11:45:47
From File	54MW10.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

54MW10: Perchlorate

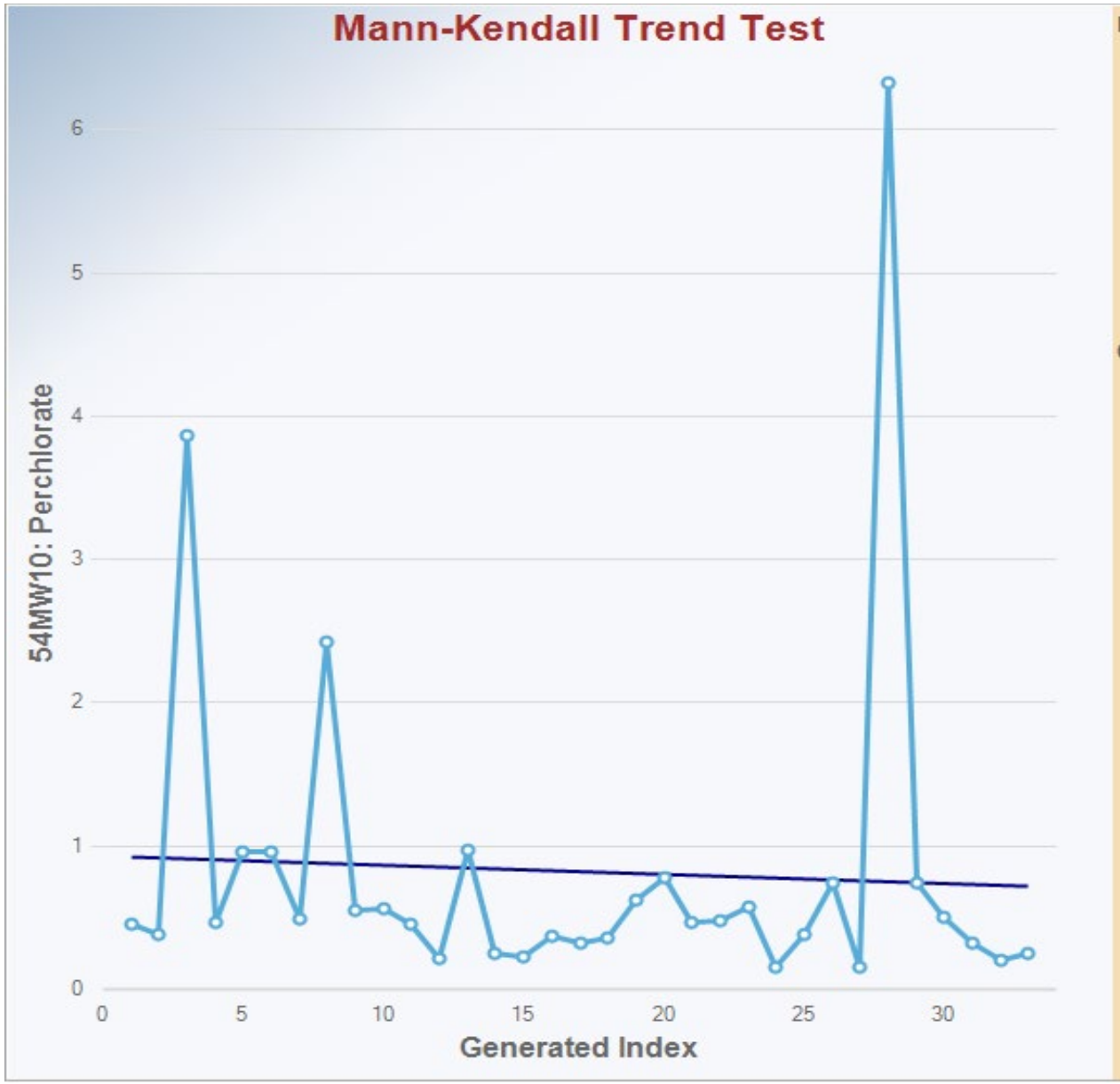
General Statistics

Number or Reported Events Not Used	0
Number of Generated Events	33
Number Values Reported (n)	38
Number Values Missing	5
Number Values Used	33
Minimum	0.025
Maximum	6.2
Mean	0.69
Geometric Mean	0.331
Median	0.344
Standard Deviation	1.216
Coefficient of Variation	1.761

Mann-Kendall Test

M-K Test Value (S)	-92
Critical Value (0.05)	-1.645
Standard Deviation of S	64.52
Standardized Value of S	-1.41
Approximate p-value	0.0792

Insufficient evidence to identify a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	33
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	64.5239
Standardized Value of S	-1.4103
M-K Test Value (S)	-92
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0792

OLS Regression Line (Blue)

OLS Regression Slope	-0.0064
OLS Regression Intercept	0.7996

Insufficient statistical evidence of a significant trend at the specified level of significance.

Quarter	Date	Tdate	Well	Units	54MW12: 2,4,6-TNT	54MW12: RDX	54MW12: RDX DL	54MW12: Perchlorate	2,4,6-TNT RG	RDX RG	Perchlorate RG	GW Elevation
Q01			54MW12	µg/L	15.9	ND		ND	7.82	6.1	10.9	1676.92
Q02			54MW12	µg/L	16.1	9.77		**0.726**	7.82	6.1	10.9	1676.56
Q03			54MW12	µg/L	19.4	13.2		**10.5**	7.82	6.1	10.9	1678.28
Q04			54MW12	µg/L	48	18.4		22.8	7.82	6.1	10.9	1678.09
Q05			54MW12	µg/L	10.1	**1.95**		**2**	7.82	6.1	10.9	1676.74
Q06			54MW12	µg/L	**7.62**	6.59		**5.31**	7.82	6.1	10.9	1676.05
Q07			54MW12	µg/L	**6.29**	**3.79**		**2.98**	7.82	6.1	10.9	1678.7
Q08			54MW12	µg/L	108	25		22.7	7.82	6.1	10.9	1682.61
Q09			54MW12	µg/L	65.9	14.6		**9.88**	7.82	6.1	10.9	1681.74
Q10			54MW12	µg/L	17	**0.54**		**1.1**	7.82	6.1	10.9	1676.77
Q11			54MW12	µg/L	29	8.7		**4**	7.82	6.1	10.9	1676.91
Q12			54MW12	µg/L	10	**2**		**1.7**	7.82	6.1	10.9	1674.92
Q13			54MW12	µg/L	11	3.9		0.737	7.82	6.1	10.9	1676.95
Q14			54MW12	µg/L	110	30		8.85	7.82	6.1	10.9	1679.59
Q15			54MW12	µg/L	11	0.62		1.2	7.82	6.1	10.9	1678.69
Q16			54MW12	µg/L	7.4	0.37		0.56	7.82	6.1	10.9	1677.16
Q17			54MW12	µg/L	10.6	6		1.6	7.82	6.1	10.9	1676.78
Q18			54MW12	µg/L	28.1	4.8		2.9	7.82	6.1	10.9	1676.41
Q19			54MW12	µg/L	78.6	51.4		4.3	7.82	6.1	10.9	1678.21
Q20			54MW12	µg/L	8.7	ND		1.1	7.82	6.1	10.9	1677.54
Q21			54MW12	µg/L	39	14		1.4	7.82	6.1	10.9	1678.2
Q22			54MW12	µg/L	22.3	13.4		1.9	7.82	6.1	10.9	1676.47
Q23			54MW12	µg/L	52.3	33.3		2.8	7.82	6.1	10.9	1689.25
Q24			54MW12	µg/L	29.7	8.2		1.7	7.82	6.1	10.9	1676.81
Q25			54MW12	µg/L	13.3	3.6		1.4	7.82	6.1	10.9	1679.74
Q26			54MW12	µg/L	164	13.5		3.7	7.82	6.1	10.9	1680.12
Q27			54MW12	µg/L	39.5	4.8		2	7.82	6.1	10.9	1680.53
Q28			54MW12	µg/L	13.6	ND		0.61	7.82	6.1	10.9	1677.58
Q29	10/14/2019		54MW12	µg/L	10.1	0.04	0.08	0.53	7.82	6.1	10.9	1671.26
Q30	1/27/2020		54MW12	µg/L	10.2	0.56		0.49	7.82	6.1	10.9	1678.74
Q31	4/28/2020		54MW12	µg/L	8.3	0.17		0.73	7.82	6.1	10.9	1680.42
Q32	7/21/2020		54MW12	µg/L	4.1	0.04	0.08	0.75	7.82	6.1	10.9	1678.92
Q33	10/26/2020		54MW12	µg/L	7.8	0.038	0.076	8.2	7.82	6.1	10.9	
Q34	1/26/2021		54MW12	µg/L	8.6	0.095	0.19	0.46	7.82	6.1	10.9	
Q35	4/12/2021		54MW12	µg/L	51.4	0.095	0.19	1.5	7.82	6.1	10.9	
Q36	07/01/2021		54MW12	µg/L	10	0.047	0.094 u	0.3	7.82	6.1	10.9	
Q37	10/01/2021		54MW12	µg/L	9.3	0.048	0.096 u	0.44	7.82	6.1	10.9	

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 2/21/2023 11:48:06
From File	54MW12.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

54MW12: 2,4,6-TNT

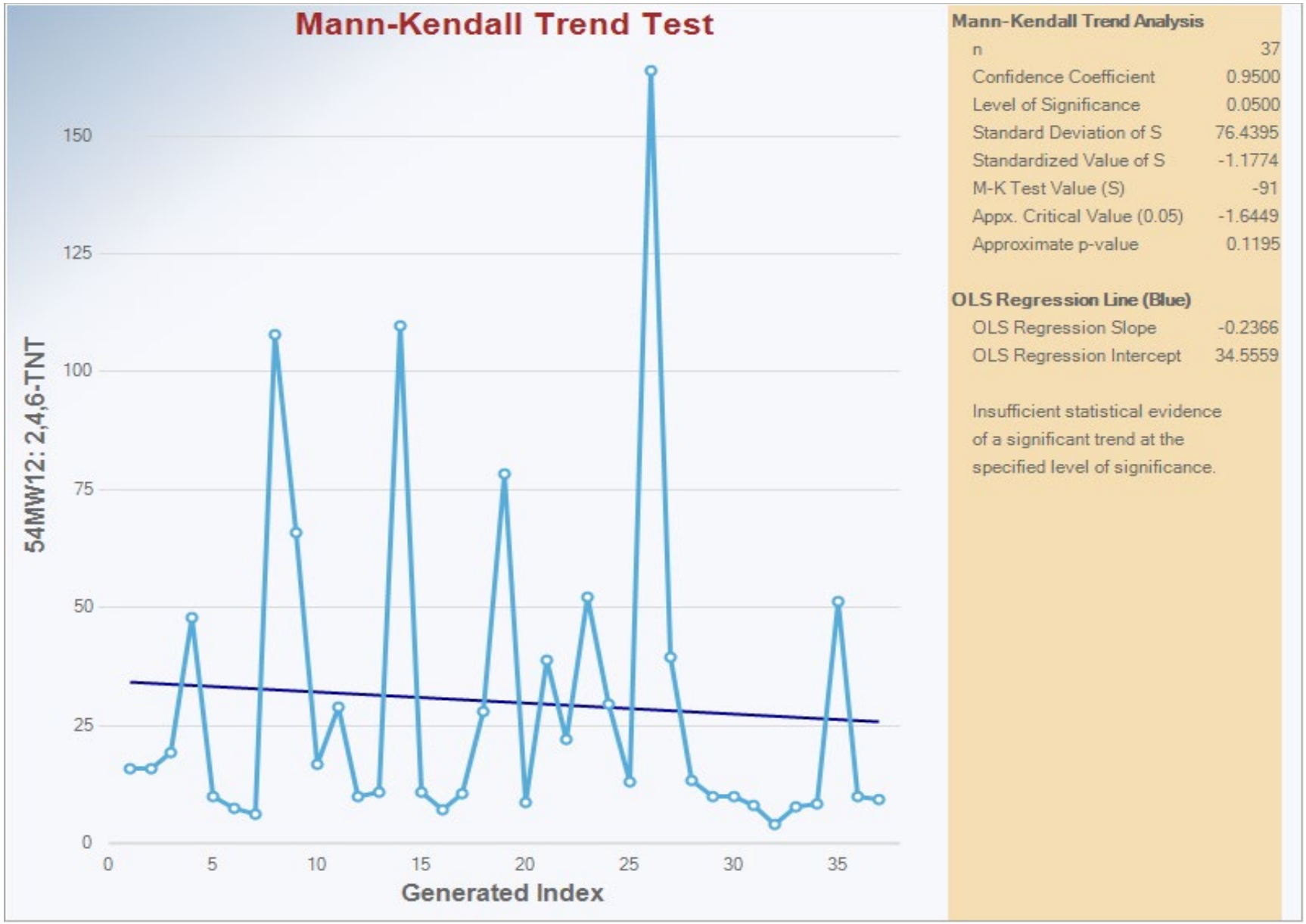
General Statistics

Number or Reported Events Not Used	0
Number of Generated Events	37
Number Values Reported (n)	37
Minimum	4.1
Maximum	164
Mean	30.06
Geometric Mean	18.82
Median	13.6
Standard Deviation	35.14
Coefficient of Variation	1.169

Mann-Kendall Test

M-K Test Value (S)	-91
Critical Value (0.05)	-1.645
Standard Deviation of S	76.44
Standardized Value of S	-1.177
Approximate p-value	0.12

Insufficient evidence to identify a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	37
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	76.4395
Standardized Value of S	-1.1774
M-K Test Value (S)	-91
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.1195

OLS Regression Line (Blue)

OLS Regression Slope	-0.2366
OLS Regression Intercept	34.5559

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 2/21/2023 11:49:40
From File	54MW12.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

54MW12: RDX

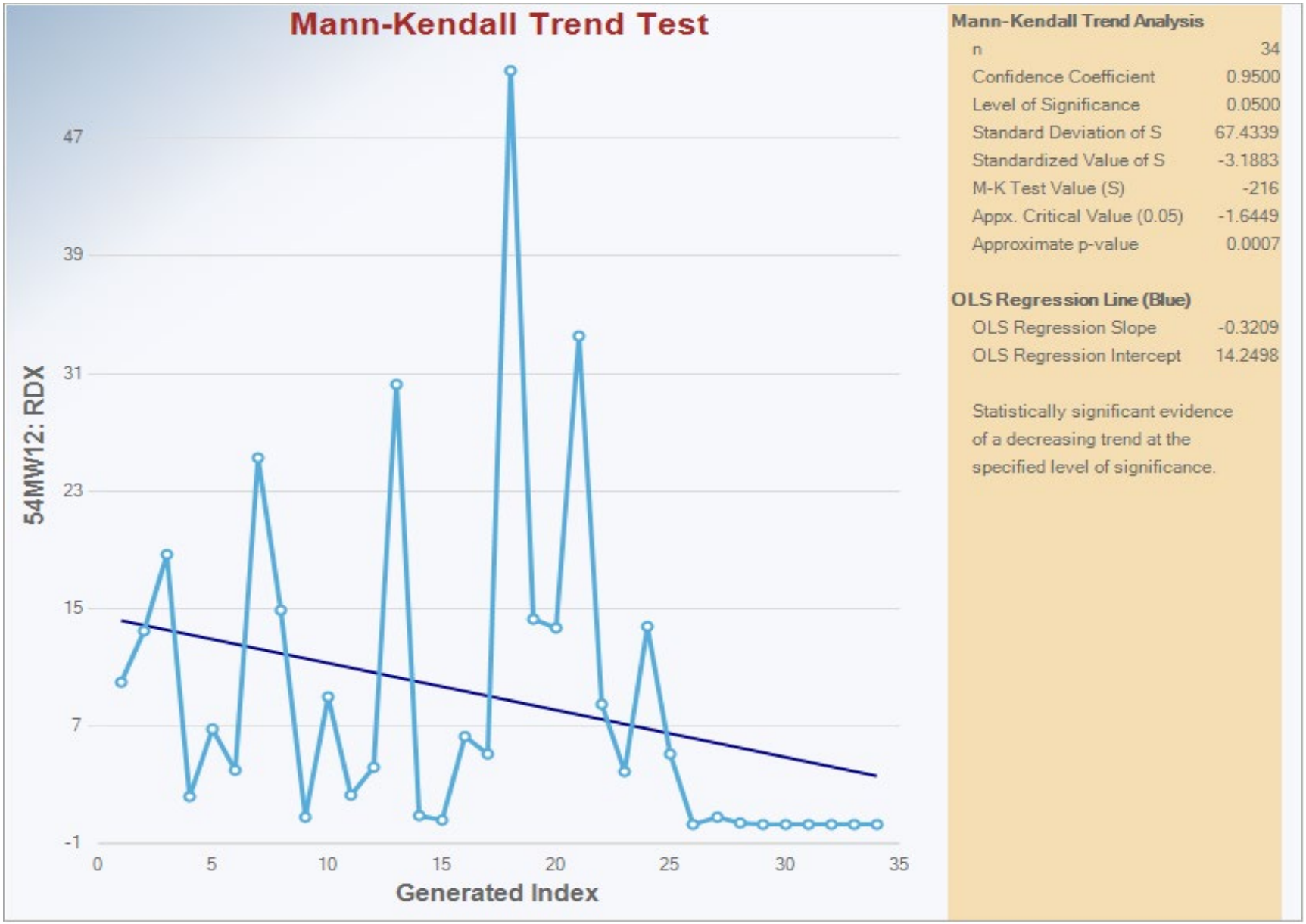
General Statistics

Number or Reported Events Not Used	0
Number of Generated Events	34
Number Values Reported (n)	37
Number Values Missing	3
Number Values Used	34
Minimum	0.038
Maximum	51.4
Mean	8.634
Geometric Mean	2.015
Median	4.35
Standard Deviation	11.6
Coefficient of Variation	1.343

Mann-Kendall Test

M-K Test Value (S)	-216
Critical Value (0.05)	-1.645
Standard Deviation of S	67.43
Standardized Value of S	-3.188
Approximate p-value	7.1554E-4

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	34
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	67.4339
Standardized Value of S	-3.1883
M-K Test Value (S)	-216
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0007

OLS Regression Line (Blue)

OLS Regression Slope	-0.3209
OLS Regression Intercept	14.2498

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 2/21/2023 11:51:16
From File	54MW12.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

54MW12: Perchlorate

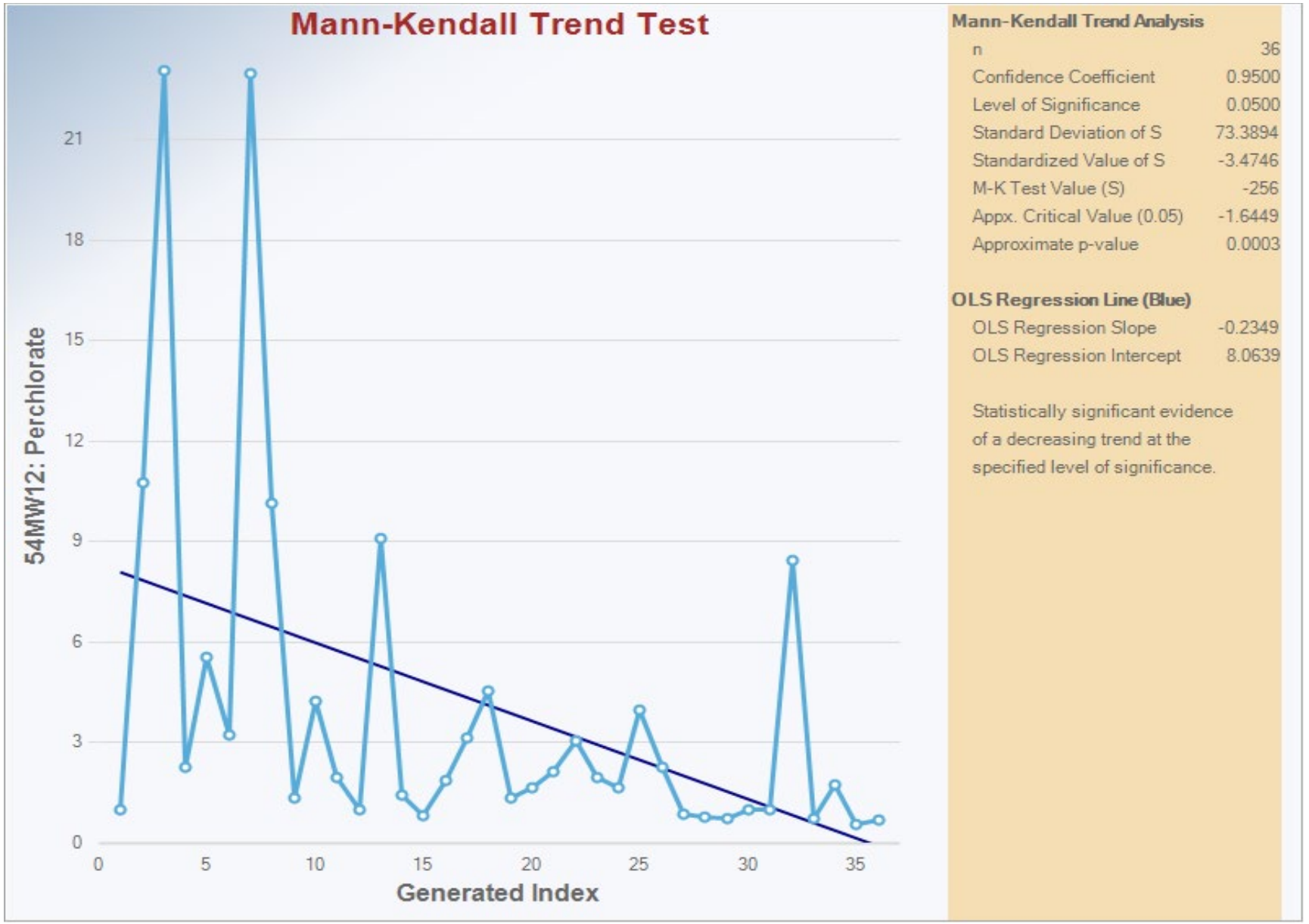
General Statistics

Number or Reported Events Not Used	0
Number of Generated Events	36
Number Values Reported (n)	37
Number Values Missing	1
Number Values Used	36
Minimum	0.3
Maximum	22.8
Mean	3.718
Geometric Mean	1.881
Median	1.65
Standard Deviation	5.415
Coefficient of Variation	1.456

Mann-Kendall Test

M-K Test Value (S)	-256
Critical Value (0.05)	-1.645
Standard Deviation of S	73.39
Standardized Value of S	-3.475
Approximate p-value	2.5579E-4

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	36
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	73.3894
Standardized Value of S	-3.4746
M-K Test Value (S)	-256
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0003

OLS Regression Line (Blue)

OLS Regression Slope	-0.2349
OLS Regression Intercept	8.0639

Statistically significant evidence of a decreasing trend at the specified level of significance.

Quarter	Date	Well	54MW13: 2,4,6-TNT	54MW13: RDX	54MW13: RDX DL	54MW13: Perchlorate	2,4,6-TNT RG	RDX RG	Perchlorate RG	GW Elevation
Q1		54MW13	ND	ND		ND	7.82	6.1	10.9	1677.1
Q02		54MW13	**4.09**	**2.59**		**0.244**	7.82	6.1	10.9	1676.6
Q03		54MW13	**0.699**	**0.614**		**0.206**	7.82	6.1	10.9	1678.35
Q04		54MW13	**0.979**	**1.14**		**0.243**	7.82	6.1	10.9	1678.8
Q05		54MW13	9.4	**4.77**		**0.627**	7.82	6.1	10.9	1676.68
Q06		54MW13	**0.843**	**0.855**		**0.308**	7.82	6.1	10.9	1678.69
Q07		54MW13	**0.318**	**0.642**		**0.313**	7.82	6.1	10.9	1676.68
Q08		54MW13	**4.91**	**3.2**		**0.64**	7.82	6.1	10.9	1680.58
Q09		54MW13	**3.81**	**1.46**		**0.477**	7.82	6.1	10.9	1679.98
Q10		54MW13	9.8	**4**		**0.43**	7.82	6.1	10.9	1677.8
Q11		54MW13	**2.5**	**0.88**		**0.32**	7.82	6.1	10.9	1678.19
Q12		54MW13	**5.8**	**2.5**		**0.37**	7.82	6.1	10.9	1676.69
Q13		54MW13	5.4	2.6		0.27	7.82	6.1	10.9	1676.88
Q14		54MW13	1.4	0.54		0.216	7.82	6.1	10.9	1679.52
Q15		54MW13	0.79	0.17		0.18	7.82	6.1	10.9	1678.61
Q16		54MW13	13.9	0.86		0.33	7.82	6.1	10.9	1677.09
Q17		54MW13	8	0.7		0.21	7.82	6.1	10.9	1676.8
Q18		54MW13	5.9	ND		0.29	7.82	6.1	10.9	1675.45
Q19		54MW13	1.8	1		0.23	7.82	6.1	10.9	1678.26
Q20		54MW13	8.2	ND		0.45	7.82	6.1	10.9	1677.43
Q21		54MW13	3	0.48		0.2	7.82	6.1	10.9	1678.24
Q22		54MW13	4.4	ND		0.25	7.82	6.1	10.9	1676.44
Q23		54MW13	2	ND		0.33	7.82	6.1	10.9	1689.22
Q24		54MW13	10.9	ND		0.45	7.82	6.1	10.9	1676.79
Q25		54MW13	1.6	0.38		0.25	7.82	6.1	10.9	1679.8
Q26		54MW13	2.3	0.46		0.29	7.82	6.1	10.9	1680.13
Q27		54MW13	5.1	0.32		0.47	7.82	6.1	10.9	1680.45
Q28		54MW13	15.5	1.3		0.4	7.82	6.1	10.9	1677.45
Q29	10/14/2019	54MW13	12.5	1.1		0.55	7.82	6.1	10.9	1674.79
Q30	1/27/2020	54MW13	4.1	0.55		0.26	7.82	6.1	10.9	1678.69
Q31	4/28/2020	54MW13	5.5	1.5		0.34	7.82	6.1	10.9	1680.09
Q32	7/21/2020	54MW13	8.3	0.43		0.3	7.82	6.1	10.9	1680.09
Q33	10/26/2020	54MW13	12.7	0.58		7.9	7.82	6.1	10.9	
Q34	1/26/2021	54MW13	10.7	0.83		0.29	7.82	6.1	10.9	
Q35	4/12/2021	54MW13	17.7	0.57		0.34	7.82	6.1	10.9	
Q36	7/27/2021	54MW13	17	0.38		0.26	7.82	6.1	10.9	
Q37	10/01/2021	54MW13	11.8	0.58		0.14	7.82	6.1	10.9	
Q38	04/01/2022	54MW13	5.8	2		0.26	7.82	6.1	10.9	

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 2/21/2023 11:53:07
From File	54MW13.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

54MW13: 2,4,6-TNT

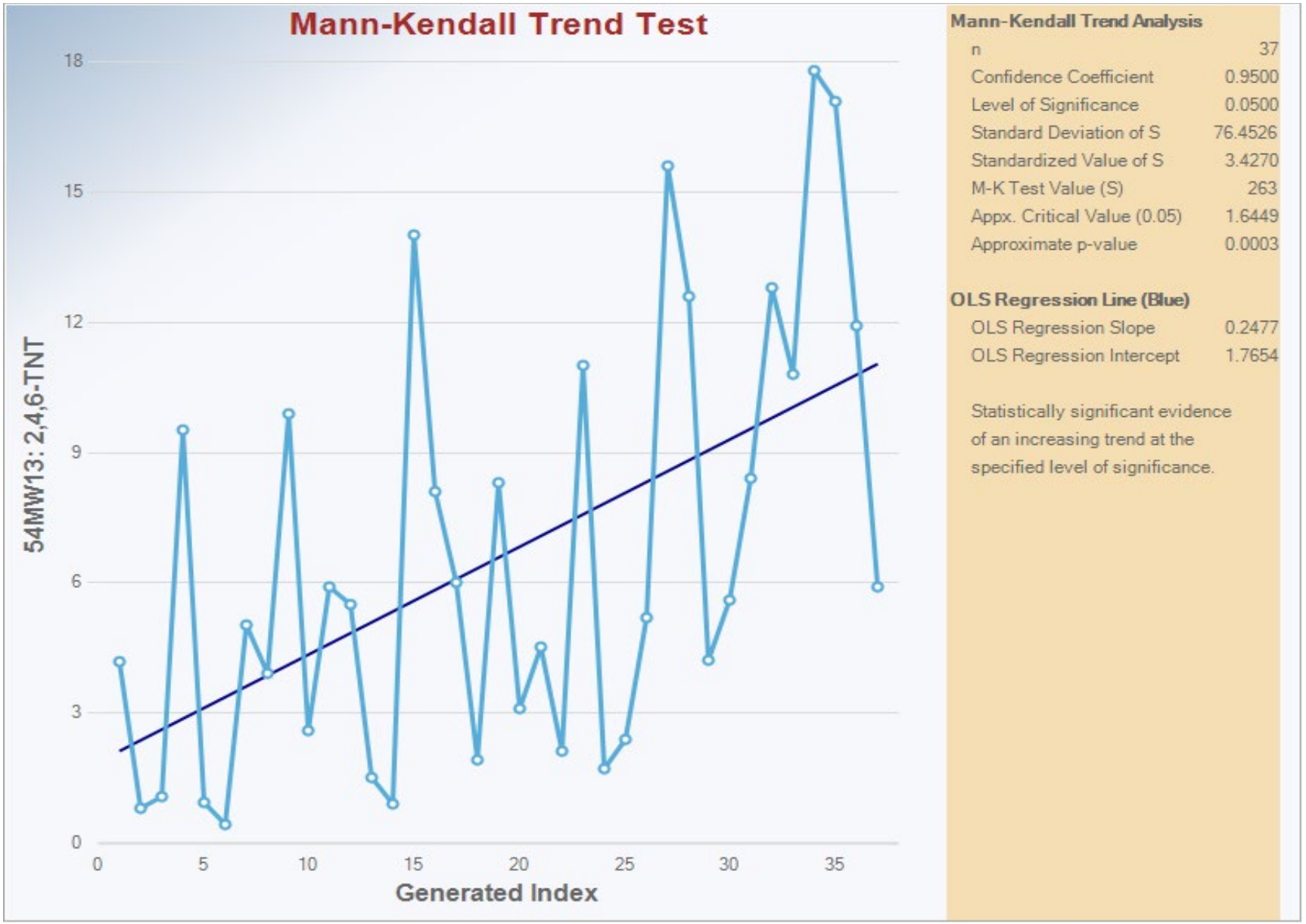
General Statistics

Number or Reported Events Not Used	0
Number of Generated Events	37
Number Values Reported (n)	38
Number Values Missing	1
Number Values Used	37
Minimum	0.318
Maximum	17.7
Mean	6.471
Geometric Mean	4.391
Median	5.4
Standard Deviation	4.93
Coefficient of Variation	0.762

Mann-Kendall Test

M-K Test Value (S)	263
Critical Value (0.05)	1.645
Standard Deviation of S	76.45
Standardized Value of S	3.427
Approximate p-value	3.0519E-4

Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	37
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	76.4526
Standardized Value of S	3.4270
M-K Test Value (S)	263
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0003

OLS Regression Line (Blue)

OLS Regression Slope	0.2477
OLS Regression Intercept	1.7654

Statistically significant evidence of an increasing trend at the specified level of significance.

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 2/21/2023 11:55:01
From File	54MW13.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

54MW13: RDX

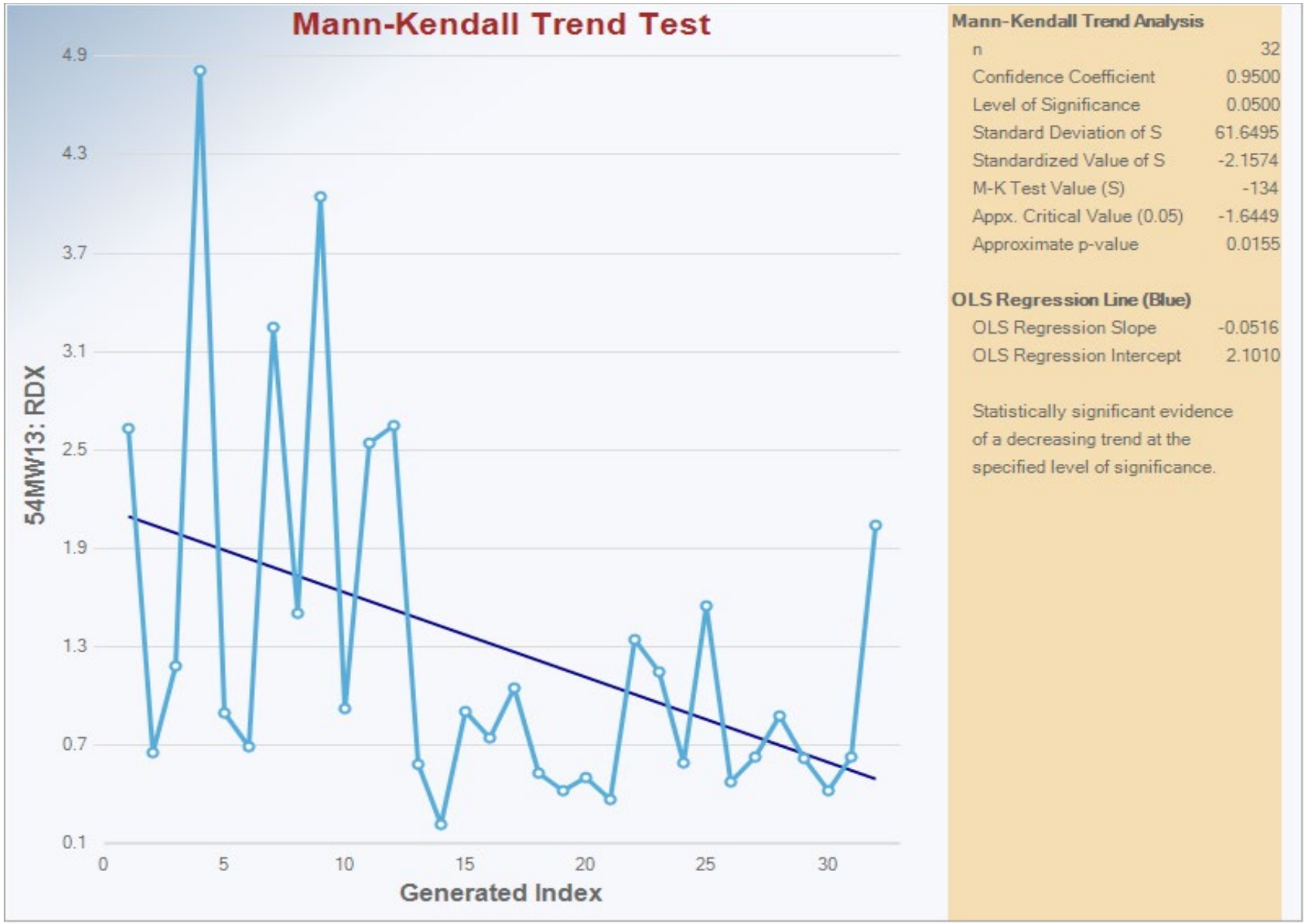
General Statistics

Number or Reported Events Not Used	0
Number of Generated Events	32
Number Values Reported (n)	38
Number Values Missing	6
Number Values Used	32
Minimum	0.17
Maximum	4.77
Mean	1.249
Geometric Mean	0.908
Median	0.843
Standard Deviation	1.124
Coefficient of Variation	0.9

Mann-Kendall Test

M-K Test Value (S)	-134
Critical Value (0.05)	-1.645
Standard Deviation of S	61.65
Standardized Value of S	-2.157
Approximate p-value	0.0155

Statistically significant evidence of a decreasing trend at the specified level of significance.


Mann-Kendall Trend Test
54MW13: RDX
Generated Index
4.9
4.3
3.7
3.1
2.5
1.9
1.3
0.7
0.1
0
5
10
15
20
25
30
Mann-Kendall Trend Analysis
n 32
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 61.6495
Standardized Value of S -2.1574
M-K Test Value (S) -134
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.0155
OLS Regression Line (Blue)
OLS Regression Slope -0.0516
OLS Regression Intercept 2.1010
Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 2/21/2023 11:56:20
From File	54MW13.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

54MW13: Perchlorate

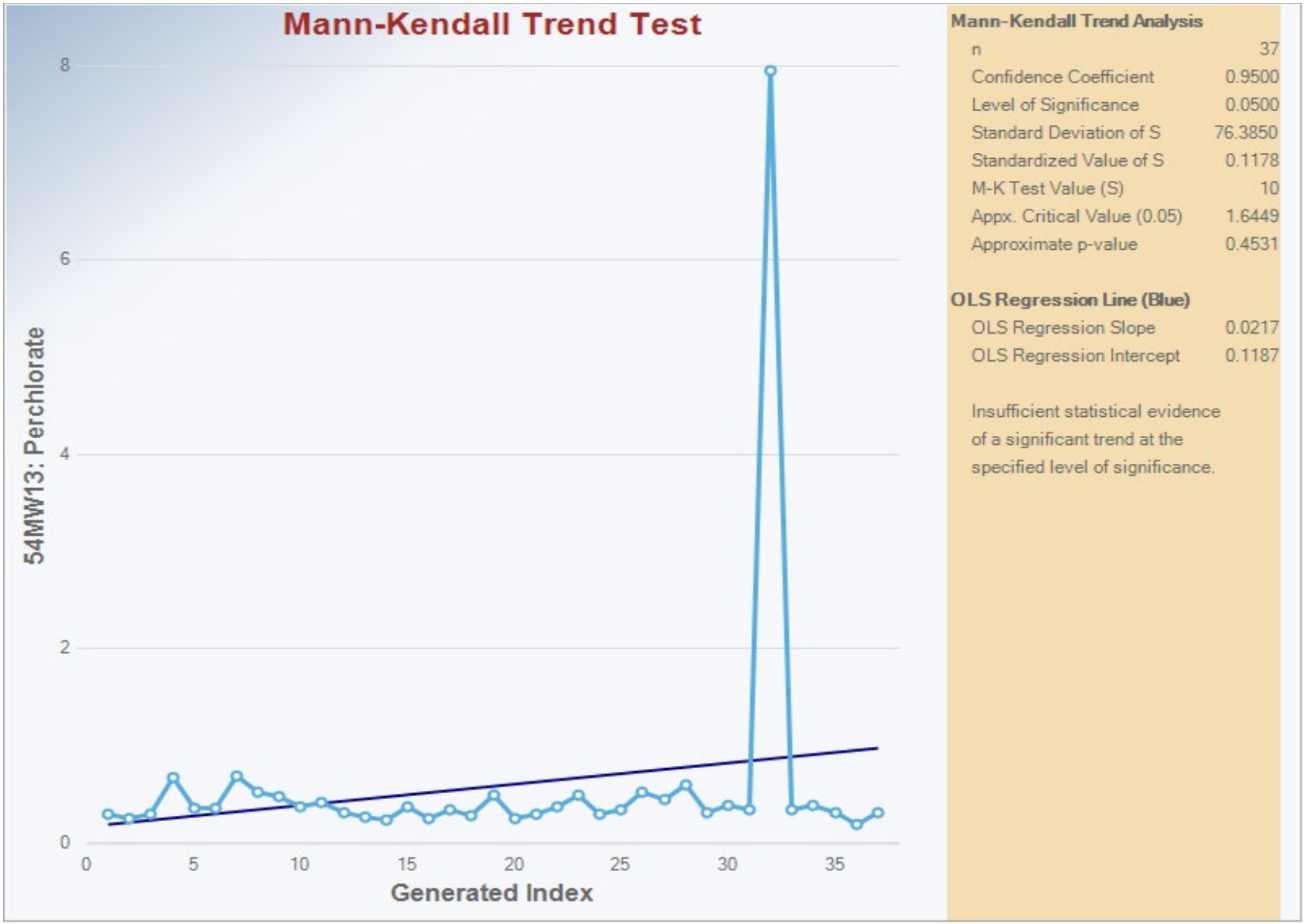
General Statistics

Number or Reported Events Not Used	0
Number of Generated Events	37
Number Values Reported (n)	38
Number Values Missing	1
Number Values Used	37
Minimum	0.14
Maximum	7.9
Mean	0.531
Geometric Mean	0.335
Median	0.3
Standard Deviation	1.251
Coefficient of Variation	2.357

Mann-Kendall Test

M-K Test Value (S)	10
Critical Value (0.05)	1.645
Standard Deviation of S	76.38
Standardized Value of S	0.118
Approximate p-value	0.453

Insufficient evidence to identify a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	37
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	76.3850
Standardized Value of S	0.1178
M-K Test Value (S)	10
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.4531

OLS Regression Line (Blue)

OLS Regression Slope	0.0217
OLS Regression Intercept	0.1187

Insufficient statistical evidence of a significant trend at the specified level of significance.